

CITY BOROUGH OF JUNEAU BOARD OF EQUALIZATION
Thursday October 28, 2021 at 5:30 PM via Zoom Webinar
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AGENDA
BOARD OF EQUALIZATION
THE CITY AND BOROUGH OF JUNEAU, ALASKA
Thursday, October 28, 2021 at 5:30 PM
Virtual Meeting Only via Zoom Webinar
<https://juneau.zoom.us/j/99741860260>
or call: 1-253-215-8782 Webinar ID: 997 4186 0260

- I. Call to Order**
- II. Roll Call**
- III. Selection of Presiding Officer**
- IV. Approval of Agenda**

V. Property Appeals

Attached is 2021 commercial property appeals being brought before the Board of Equalization for final value determination. The Appellant and the Assessor were unable to reach an agreement for the parcel values. You will find for each parcel the following –

- Appellant's Appeal
- Appellant's Documentation at the time of Appeal
- Board of Equalization Presentation

GROUP 1

Appeal No. 2021-0460

Appellant: Ken Williamson
Parcel No.: 4B1701050091

Location: NBN Bentwood Place/Industrial Blvd
Type: Commercial – Vacant

Appellant's Estimate of Value

Site: Not Provided
Buildings: Not Provided
Total: \$86,900

Original Assessed Value

Site: \$130,350
Buildings: \$0
Total: \$130,350

Recommended Value

Site: \$130,350
Buildings: \$0
Total: \$130,350

Appeal No. 2021-0461

Appellant: Ken Williamson
Parcel No.: 4B1701050131

Location: NBN Camden Pl/NBN Industrial Blvd
Type: Commercial – Vacant

Appellant's Estimate of Value

Site: Not Provided
Buildings: Not Provided
Total: \$86,600

Original Assessed Value

Site: \$125,400
Buildings: \$0
Total: \$125,400

Recommended Value

Site: \$125,400
Buildings: \$0
Total: \$125,400

Appeal No. 2021-0457

Appellant: Ken Williamson
Parcel No.: 5B1201010050

Location: 5452/5454 Jenkins Dr
Type: Commercial-Warehouse

Appellant's Estimate of Value

Site: \$ 258,500
Buildings: \$ 105,300
Total: \$ 363,800

Original Assessed Value

Site: \$387,750
Buildings: \$105,300
Total: \$ 493,050

Recommended Value

Site: \$ 387,750
Buildings: \$105,300
Total: \$493,050

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GROUP 1B

Appeal No. 2021-0456

Appellant: Ken Williamson

Parcel No.: 5B1201010060

Location: 5448/5450/5450B Jenkins Dr.

Type: Commercial-Warehouse

Appellant's Estimate of Value

Site: Not Provided

Buildings: Not Provided

Total: \$440,500

Original Assessed Value

Site: \$387,500

Buildings: \$182,000

Total: \$569,750

Recommended Value

Site: \$387,500

Buildings: \$182,000

Total: \$569,750

Appeal No. 2021-0451

Appellant: Ken Williamson

Parcel No.: 5B1201020010

Location: 5461 Shaune Dr

Type: Commercial

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$482,300

Original Assessed Value

Site: \$701,850

Buildings: \$14,400

Total: \$716,250

Recommended Value

Site: \$701,850

Buildings: \$14,400

Total: \$716,250

Appeal No. 2021-0452

Appellant: Ken Williamson

Parcel No.: 5B1201020021

Location: 5449 Shaune Dr

Type: Commercial - Warehouse

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$278,600

Original Assessed Value

Site: \$228,300

Buildings: \$126,400

Total: \$354,700

Recommended Value

Site: \$228,300

Buildings: \$126,400

Total: \$354,700

GROUP 1C

Appeal No. 2021-0453

Appellant: Ken Williamson

Parcel No.: 5B1201020022

Location: 5449 Shaune Dr

Type: Commercial - Warehouse

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$196,800

Original Assessed Value

Site: \$162,900

Buildings: \$88,200

Total: \$251,100

Recommended Value

Site: \$162,900

Buildings: \$88,200

Total: \$251,100

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Appeal No. 2021-0454

Appellant: Ken Williamson
Parcel No.: 5B1201020023

Location: 5445 Shaune Dr
Type: Commercial - Warehouse

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$272,600

Original Assessed Value

Site: \$199,500
Buildings: \$139,600
Total: \$339,100

Recommended Value

Site: \$199,500
Buildings: \$139,600
Total: \$339,100

Appeal No. 2021-0455

Appellant: Ken Williamson
Parcel No.: 5B1201020030

Location: NBN Shaune Dr
Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$196,900

Original Assessed Value

Site: \$295,350
Buildings: \$0
Total: \$295,350

Recommended Value

Site: \$295,350
Buildings: \$0
Total: \$295,350

GROUP 1D

Appeal No. 2021-0458

Appellant: Ken Williamson
Parcel No.: 5B1201390010

Location: NBN Commercial Blvd
Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$290,000

Original Assessed Value

Site: \$435,000
Buildings: \$0
Total: \$435,000

Recommended Value

Site: \$435,000
Buildings: \$0
Total: \$435,000

Appeal No. 2021-0459

Appellant: Ken Williamson
Parcel No.: 5B1201390020

Location: 5446 Commercial Blvd
Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$193,300

Original Assessed Value

Site: \$289,950
Buildings: \$0
Total: \$289,950

Recommended Value

Site: \$289,950
Buildings: \$0
Total: \$289,950

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GROUP 2A

Appeal No. 2021-0436

Appellant: Ken Williamson

Parcel No.: 4B1701030081

Location: NBN Bentwood Place

Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$562,500

Original Assessed Value

Site: \$781,350

Buildings: \$0

Total: \$781,350

Recommended Value

Site: \$781,350

Buildings: \$0

Total: \$781,350

Appeal No. 2021-0444

Appellant: Ken Williamson

Parcel No.: 4B1701030090

Location: NBN Asbury Place

Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$54,700

Original Assessed Value

Site: \$76,050

Buildings: \$0

Total: \$76,050

Recommended Value

Site: \$76,050

Buildings: \$0

Total: \$76,050

Appeal No. 2021-0443

Appellant: Ken Williamson

Parcel No.: 4B1701030100

Location: NBN Asbury Place

Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$78,400

Original Assessed Value

Site: \$108,900

Buildings: \$0

Total: \$108,900

Recommended Value

Site: \$108,900

Buildings: \$0

Total: \$108,900

GROUP 2B

Appeal No. 2021-0437

Appellant: Ken Williamson

Parcel No.: 4B1701030110

Location: NBN Asbury Place

Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$70,700

Original Assessed Value

Site: \$98,250

Buildings: \$0

Total: \$98,250

Recommended Value

Site: \$98,250

Buildings: \$0

Total: \$98,250

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Appeal No. 2021-0441

Appellant: Ken Williamson
Parcel No.: 4B1701030120

Location: NBN Asbury Place
Type: Commercial - Vacant

Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site: Not provided	Site: \$108,750	Site: \$108,750
Buildings: Not provided	Buildings: \$0	Buildings: \$0
Total: \$78,300	Total: \$108,750	Total: \$108,750

Appeal No. 2021-0442

Appellant: Ken Williamson
Parcel No.: 4B1701030130

Location: NBN Asbury Place
Type: Commercial - Vacant

Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site: Not provided	Site: \$77,100	Site: \$77,100
Buildings: Not provided	Buildings: \$0	Buildings: \$0
Total: \$55,500	Total: \$77,100	Total: \$77,100

GROUP 2C

Appeal No. 2021-0445

Appellant: Ken Williamson
Parcel No.: 4B1701030140

Location: NBN Asbury Place
Type: Commercial - Vacant

Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site: Not provided	Site: \$76,350	Site: \$76,350
Buildings: Not provided	Buildings: \$0	Buildings: \$0
Total: \$55,000	Total: \$76,350	Total: \$76,350

Appeal No. 2021-0446

Appellant: Ken Williamson
Parcel No.: 4B1701030150

Location: NBN Asbury Place
Type: Commercial - Vacant

Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site: Not provided	Site: \$77,850	Site: \$77,850
Buildings: Not provided	Buildings: \$0	Buildings: \$0
Total: \$56,100	Total: \$77,850	Total: \$77,850

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Appeal No. 2021-0438

Appellant: Ken Williamson
Parcel No.: 4B1701030160

Location: NBN Industrial Blvd
Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$68,500

Original Assessed Value

Site: \$95,250
Buildings: \$0
Total: \$95,250

Recommended Value

Site: \$95,250
Buildings: \$0
Total: \$95,250

GROUP 2D

Appeal No. 2021-0439

Appellant: Ken Williamson
Parcel No.: 4B1701030170

Location: NBN Industrial Blvd
Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$46,600

Original Assessed Value

Site: \$64,800
Buildings: \$0
Total: \$64,800

Recommended Value

Site: \$64,800
Buildings: \$0
Total: \$64,800

Appeal No. 2021-0440

Appellant: Ken Williamson
Parcel No.: 4B1701030180

Location: NBN Industrial Blvd
Type: Commercial - Vacant

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$57,500

Original Assessed Value

Site: \$79,800
Buildings: \$0
Total: \$79,800

Recommended Value

Site: \$79,800
Buildings: \$0
Total: \$79,800

GROUP 3

Appeal No. 2021-0447

Appellant: Ken Williamson
Parcel No.: 1C070A090040

Location: 227 Fourth St/229 Fourth St/350 N Franklin St
Type: Commercial – Office Building

Appellant's Estimate of Value

Site: Not provided
Buildings: Not provided
Total: \$ 1,023,000 (combined
w/ 1C070A090050)

Original Assessed Value

Site: \$367,500
Buildings: \$541,500
Total: \$909,000

Recommended Value

Site: \$367,500
Buildings: \$541,500
Total: \$909,000

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Appeal No. 2021-0448

Appellant: Ken Williamson

Parcel No.: 1C070A090050

Location: NBN Fourth St

Type: Commercial – Parking Lot

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$ 1,023,000 (combined
w/ 1C070A090040)

Original Assessed Value

Site: \$354,750

Buildings: \$0

Total: \$354,750

Recommended Value

Site: \$354,750

Buildings: \$0

Total: \$354,750

GROUP 4

Appeal No. 2021-0449

Appellant: Ken Williamson

Parcel No.: 1C070K820021

Location: 236, 238, 240/244 S Franklin St 245/251 Marine Way

Type: Commercial –Retail w/ Apartments

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$ 2,963,100(combined
w/ 1C070K820022)

Original Assessed Value

Site: \$2,020,200

Buildings: \$412,200

Total: \$2,432,400

Recommended Value

Site: \$2,020,200

Buildings: \$412,200

Total: \$2,432,400

Appeal No. 2021-0450

Appellant: Ken Williamson

Parcel No.: 1C070K820022

Location: 245/259/263 Marine Way

Type: Commercial – Retail w/ Apartments

Appellant's Estimate of Value

Site: Not provided

Buildings: Not provided

Total: \$ 2,963,100(combined
w/ 1C070K820021)

Original Assessed Value

Site: \$1,063,200

Buildings: \$495,300

Total: \$1,558,500

Recommended Value

Site: \$1,063,200

Buildings: \$495,300

Total: \$1,558,500

VI. Adjournment

BOARD OF EQUALIZATION ORIENTATION

NOTE: Members are encourage to review, from your training material, the April 19, 2013 Memorandum prepared by former City Attorney John Hartle, for further helpful guidance.

A. Quasi-Judicial Role & Responsibilities - CBJ 15.05.185

1. Be a fair & impartial tribunal - no bias/preconceived ideas; no ex parte contact
 - a. Member may not deliberate or vote on any matter in which member has a personal or financial interest (defined in CBJ 01.45.360); conflict of interest check needed prior to hearing to allow substitution; may call legal advisor
 - b. **Avoid expressing opinions or including commentary in questions to the parties.**
 - c. **Opinions on the evidence/position of parties should await BOE deliberations.**
2. Afford both parties due process - fair notice and opportunity to be heard

Must allow both sides time to review new evidence presented at hearing
3. Decide appeals on *evidence presented* in packet and at hearing.
4. Make record of proceeding that clearly and accurately reflects:
 - a. Taxpayer/Appellant's claim and factual evidence offered to support it
 - b. Assessor's process/position and factual evidence offered to support both
 - c. That each side had adequate opportunity to present relevant evidence/review & rebut other party's evidence
 - d. BOE's thorough deliberations & consideration of the evidence
 - e. BOE's findings of fact & conclusions of law re burden of proof & the evidence relied on as basis of decision
 - f. Rationale & evidentiary basis of BOE's decision, to enable meaningful review by the Superior Court in the event of an appeal

B. Legal Standard for Granting Appeal on Merits for Error in Valuation

1. Starting point: under AK law, Assessor's **assessments are presumed to be correct.**
2. **Burden of proof on Appellant to prove error - unequal, excessive, improper, or under valuation based on facts** that are stated in a valid written appeal or proven at the appeal hearing
3. If and only if Appellant meets burden does burden shift to Assessor to rebut Appellant's evidence of error

4. Law does not bind Assessor to follow a particular formulas, rules or methods of valuation, but grants broad discretion in selecting valuation methods-as long as reasonable basis
5. Technical evidentiary rules don't apply
Relevant evidence admissible if sort relied on by responsible persons
May exclude irrelevant, repetitious evidence
6. **Only grounds for adjustment of assessment are proof of unequal, excessive, improper, or under valuation based on facts**

C. Alternative Actions for Appeals Heard on the Merits

- a. **Deny appeal** because Appellant failed to prove error in valuation with factual evidence.
- b. **Grant appeal & adjust assessment *as requested by Appellant***. (only if Appellant's valuation evidence supports proposed assessment value)
- c. **Grant appeal & *adjust (lower or raise) assessment differently***. (if and only if supported by sufficient evidence of value in record.)
- d. **Grant appeal & *remand to Assessor for reconsideration of value*** (remand is mandatory if error found, but insufficient evidence of value in record.)

D. LATE-FILED APPEALS – Legal Standard for Accepting

1. Potential *merit* of appeal is irrelevant.
2. Jurisdictional authority to hear only *timely-filed appeals*
3. Appeal must be filed w/in 30 days from date assessment notice is mailed
4. Only “accepted” late-filed appeals may proceed to a hearing on the merits.
5. If 30 day deadline missed, RIGHT to appeal CEASES and BOE **cannot accept or hear** appeal, **unless BOE finds that taxpayer was unable to comply due to situation beyond taxpayer's control** (See Hartle memo)
6. Burden to prove inability to comply is on Taxpayer.
7. BOE Action Alternatives: **Deny** Late-file or **Accept, so hearing can be scheduled.**

BOE HEARING GUIDELINE

- I. Call to Order
 - II. Roll Call - Chairs asks clerk to call the roll
 - III. Appeals will be heard first, followed by *Timeliness* Hearings on Late-filed Appeals
 - IV. Introduce first Appeal case for hearing:

We're on the record with respect to 'Petition for Review of Assessed Value' filed by _____ with respect to Parcel Id. No. _____
 - IV. Review Hearing Rules/Procedure (For each appeal, unless all in attendance at beginning)
 - A. Time allocated to each side: approx. 15 min, including BOE questions
 - B. State name for record and speak clearly in to mic, use surnames/maintain decorum
 - C. Appellant taxpayer goes 1st
Has **burden to prove an error—an unequal, excessive, improper or under valuation** based on presented factual evidence
 - D. Assessor - presents Assessor's evidence in response
 - E. Appellant rebuttal, if time reserved
 - F. Hearing closes after presentations
 - G. BOE action/deliberation
 - H. Any questions? Parties ready to proceed?
 - V. Hearing - party presentations & all BOE questioning
 - VI. Close Hearing, move to BOE action
 - A. BOE reviews/discusses evidence presented, or goes directly to B.
 - B. Member makes motion, Chair restates motion
 - C. Members speak to the motion/make findings
 - D. BOE votes/takes action on motion
 - E. Chair announces whether motion carries/fails
 - VII. Call next appeal, repeat IV – VI
 - VIII. Late-Filed Appeals, if any (SEE LATE-FILED APPEALS – PROCESS)
 - IX. Adjourn
-

BOE Action Options:

1. **Deny appeal** because Appellant failed to prove error in valuation with factual evidence.
2. **Grant appeal & adjust assessment as requested by Appellant.** (if Appellant's evidence supports proposed assessment value)
3. **Grant appeal & adjust (lower or raise) assessment differently.** (if and only if supported by sufficient evidence of value in record.)
4. **Grant appeal & remand to Assessor for reconsideration of value** (remand is mandatory if error found, but insufficient evidence of value in record.)

SAMPLE MOTIONS

1. To DENY appeal

I MOVE that the Board *GRANT* the appeal and I ASK for a NO VOTE

Because . . .

Appellant didn't prove/provide evidence of error in assessment
and/or

For the evidence/reasons provided by the Assessor . . .

2. To GRANT appeal & ADJUST assessment AS REQUESTED

**I MOVE that the Board *GRANT* the appeal and ADJUST the assessment AS
REQUESTED BY APPELLANT to \$_____, and I ask for a YES VOTE**

Because . . .

Appellant proved there was error . . .

[specify . . . **unequal, excessive, improper, or under valuation**]
based on facts

AND

We find requested assessment is supported by sufficient evidence in the record

3. To GRANT appeal & ADJUST assessment OTHERWISE

**I MOVE that the Board *GRANT* the appeal and ADJUST the assessment to
\$_____, and I ASK FOR A YES VOTE**

Because . . .

Appellant proved there was error . . .

[specify . . . **unequal, excessive, improper, or under valuation**]
based on facts

AND

We find sufficient evidence of value in record to support this assessment

4. To GRANT appeal & REMAND for RECONSIDERATION of ASSESSMENT

**I MOVE that the Board *GRANT* the appeal and REMAND to the ASSESSOR for
RECONSIDERATION of the ASSESSMENT, and I ASK FOR A YES VOTE**

Because . . .

Appellant proved there was error . . .

[specify . . . **unequal, excessive, improper, or under valuation**]
based on facts

AND

We find insufficient evidence of value in the record

Board of Equalization hearing for Ken Williamson
Scheduled: November 28, 2021

20, Oct. 2021

Juneau has proclaimed commercial land had been assessed at less than half value. We may never know how this idea was hatched; it's possible someone at the Assessor's office noticed when the last few undeveloped parcels at Thane sold significantly above assessed value. Without a better understanding of the unique character of those tracts it's easy to assume that all commercial land in Juneau is under-assessed.

Juneau's commercial property has been stagnant for a number of years. Assessments generally mirrored market value until Assessment Year 2021 (AY 2021). This year, the increase in commercial property was huge: 50% increase in land value. Initially, the City's explanations capitalized on the stagnant commercial market as proof of the need to increase values. *We have neglected to do our job properly* – a plausible explanation:

Compounding this situation is the fact that it has become recognized and documented that most of the commercial assessed values have not changed in ten plus years while the actual market values have increased during that time. So, we need to take steps to correct that neglect.

2021 Summary Report- Commercial 20210528a.PDF; May 28, 2021 version; Page 2, emphasis added.

That characterization of the previous assessor is inaccurate and offensive; she was diligent, hard working and as honest as the day is long. To bolster its innuendo, the City purports to explain the justification for the increase in its 2021 Summary Report. The report is perfectly unhelpful. It is based on a continuously changing list of property sales with concealed sales prices. The City is exploiting every opportunity to stonewall, discourage and mislead taxpayer appellants. Initially it refused to disclose any specific information about how it calculated the increase in value:

- What is the exact formula you are using when you say you mix cost, market, and income approaches?
 - There is not an exact formula and the approaches are not really mixed, however, all three approaches are considered and the indications of the various approaches are reconciled. The reconciliation process discourages use of formulas such as an average and relies upon appraisal judgement. In general, in the mass appraisal process, through that reconciliation process, a preferred approach is selected for each class of properties and applied to all properties within that class.

Question posed by PeggyAnn McConnochie on June 14, 2021; Email response from Michael Dahle on June 18, 2021.

Commercial land was targeted first. It was an opportunity to gauge the response and reap the largest reward from the fewest number of taxpayers. Unfortunately, commercial real estate is expensive. Many owners are at midlife or later before being able to purchase anything. Elderly owners are an easier target and are less likely to

make a timely appeal to their property tax assessments. The Summary Report acknowledges there will be additional opportunity for those who were left out:

This year will just be a first step. For most properties the increase will be applied to just the land component. For some classes of properties that have no land component or only a token land value, the increase will be applied to the buildings. This will bring all commercial properties closer to market. Next year we will take another step towards parity with residential properties. This will likely involve a further increase in land and, at least in some cases, a reduction in the building component.

2021 Summary Report- Commercial 20210528a.PDF; May 28, 2021 version; Page 2.

A number of taxpayer appellants contributed money for an attorney. In response to the attorney's request, the City acknowledged it had used a ratio study to determine the 2021 increase. The ratio is created by dividing the prior assessed value by its sales price. In example: If property was assessed at \$100,000 and the sales price (in an arm's length transaction) is \$200,000, the ratio is .5; an indicator that this property was only assessed at 50% of its actual value. When utilizing a ratio study, it is extremely important to use a database of current sales which accurately reflect current market conditions. The International Association of Assessing Officers (IAAO) publishes several standards to help. A ratio study amplifies any error and is inherently unreliable unless there are a significant number of recent sales of similar property. Any inconsistency in the dataset used for a ratio study is expanded. The IAAO Standard on Ratio Studies requires verification that the sales are a represent current market conditions. The samples the City has used are inconsistent and not compliant with several IAAO requirements. I have attached some of the IAAO standards in a separate file for the Board's convenience.

The City's study is largely based on false values, incorrect and unacceptable sales information. By definition, a ratio study is a comparison of the prior assessed value to the sales price received in an arm's length transaction. The City included an odd sale in its study: the Mental Health Trust (MHT) sale to Norwegian Cruise Lines. The sales price was beyond anyone's wildest imagination: +/- \$20M – four or five times greater than City's own bid. The price does not reflect real estate value; it was based on the site's potential use as a dock for large cruise ships. There is no other equivalent site in Juneau. It cannot be used in any valid ratio study since it never had an assessed value prior to the sale. The City's explanation confirms and then disregards the problem. The sales price is significantly larger than all other vacant land sales combined and the ratio is falsified since there was no prior assessed value. In this instance, the City decided to create a ratio of +/- .25:

We did not create a false assessed value for the former Mental Health Trust parcel (1C060K010031). The assessed value prior to the 2021 trending was determined based on the same land model that was used to value all of the surrounding parcels. If there were no increase to

commercial property values, this parcel would have been valued at \$5,016,200. After trending, this parcel has an A/S ratio of less than 40%. This individual sale was not the basis for increasing commercial land values for 2021, rather, all known and verifiable sales information from January, 2016 through December 2020 were considered.

Email from Mary Hammond to Ken Williamson, August 24, 2021.

The City is now including an enhanced explanation to the Board. The explanation reminds me of a speech by President Nixon:

... let us make a few very clear statements.

- We did not cherry pick sales. We applied appropriate validation standards.
- Nothing nefarious or underhanded was done.
- We did not do anything fraudulent.
- While people may not understand the assessment process, everything we did was within what is normal.
- It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.

Page 635 of Coogan appeal packet; Addendum A – General Information, item 6, emphasis added

The City continues to reduce, adjust and distort the sales it used to create the April 2021 property tax increase. Additional errors appear each time I look at any one of the documents the City provided as justification for the increase. Here's the chart from Page 2 of the Summary Report. The City claims it used this study to identify the need to increase commercial land values. The first line in this chart states land values are under assessed. There is no calculation or other support for the statement. Instead, the report includes an analysis of 57 property sales; those sales include numerous condos without any valid land values:

Below is a table that summarizes some of the ratios from comparing assessed values to sales. A ratio of 1.00 would be right at market, a ratio under 1.00 indicates that properties are undervalued. This analysis compares 01/01/2020 assessed values to 01/01/2021 market value.

<i>Property Class</i>	<i>Count</i>	<i>Mean</i>	<i>Median</i>
Commercial Land	12	0.4095	0.3928
Commercial Improved Properties (Core Types)	35	0.7748	0.8112
Commercial Properties Overall	57	0.7149	0.7411
Residential Properties (for class equity comparison)	1025	0.9629	0.9653

2021 Summary Report- Commercial 20210528a.PDF; May 28, 2021 version; Page 2.

On more than one occasion, I encouraged the Assessor's office to meet with the Law Department and identify all known errors, incorrect, misleading and false statements. Instead, it chose to double down. I've attached the most recent example; the comparison chart it included in the new addendums to the Board.

If a valid ratio study was actually used to determine the need for the increase in 2021 land values, this needs to be a comparison to the values prior to the 2021 increase since

the ratio study itself is determining the increase. Each attempt to legitimize past decisions raises additional questions of credibility.

Why were more sales added before removing the MHT property sale?

- What are the “new” sales?
- How long has the City known about these sales?
- Why weren’t they included in the calculation which created the increase?
- Are the disqualified properties (by footnotes) used in the original 53?
- The NCL sale was used to skew land values. Where is that analysis?

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

Page 640 of Coogan appeal packet; Addendum B – Analysis; Review of Particular Sales.

The Assessor’s office has threatened and intimidated appellants if they continue to the BOE. In some cases, the Assessor has calculated the amount of increase it will suggest to the BOE. The City needs to disclose the algorithm to create the new values.

Year	Parcel	Owner	Total	Land	Bldg
2020	1C060K630020	Alaskan Kiwis Llc	1,074,600	308,700	765,900
2021	1C060K630020	ALASKAN KIWIS LLC	1,228,950	463,050	765,900
	Threat		1,365,000	599,100	765,900

Attachment: 1C060K630020 – Response to Petition for Review in tabular form.
Michael Dahle to PeggyAnn McConnochie on June 18, 2021.

Mr. Dahle’s presentation to the Board taints its independence and integrity. I request a delay in my hearing until those members are replaced.

There is continuous stream of inaccurate information from the City. I will provide supplement my information to the Board as it becomes available. In addition, I have attached a list of points to preserve for appeal and reference documents.

Sincerely yours,

Ken Williamson

CBJ 15.05.200 preserves de novo review. In the event review on the record is helpful; incorporate answers to following questions:

When did CBJ learn commercial land was at 40% of full values?
Why was 1.5x chosen instead of 1.75 (per Mary)?
When did City begin using Reonomy?
Which parcels are confirmed or removed based on Reonomy?
Why were token land values of condo properties used to set ratio, yet not applied to condos?
List all commercial property sales and their sales prices (5 yrs)?
Why buildings on City were owned land included in ratio calc?
What is detailed explanation of each property not included in List of 74?
What is individual explanation for each property not included I List of 74?
What is explanation for individual properties which were removed to create List of 57?
Identify contact and communications with State Assessor's office (2020-21)?
Identify any employees in Finance dept who have knowledge of assessments (2020-21)?
Hire date and termination dates?
Status of Jenna Mallinger?
Produce copy of resume and prehire info for Michael Dahle?
Were letters sent to prior employers for verification?
Why no abstraction of land values?
Why land only commercial increase?
Is Thane commercial land in separate group – why not?
What standard valuation guides were used: Marshall Swift, others?
Why does City refuse to release CAMA data and algorithm?
What CAMA software is used?
If in-house, what error checking?
Developed on the job?
What liability to the City?
When was it first used?
Is it copied, pirated or plagiarized?
What is proof of 5% annual increase?
Did law dept decide to prevent release of sales data (per Mary)?
No Information No meaningful opportunity to be heard?
Due process denied/obstructed?
Equal protection denied/obstructed?
Arbitrary and capricious?
Misfeasance or malfeasance?
Any RICO violation?
Has City commissioned an internal investigation?
What research was done to determine Covid impact on Juneau's business?
Why were multiple tract sales included and others excluded?
Which properties have adjustments to sales prices and amounts?
Why was ex parte contact with Board allowed?
Full explanation of Ray center adjustments ant removal?
Was the extreme increase to force owners to supply information to City?
Did assessor's office watch: IAAO Commercial Properties in a Declining Market?
Preserve all records and communication.
Why is BOE changing order of appellants?
Is City Law dept providing guidance or legal advice to BOE?
Which tax assessments which were not mailed before April 3, 2021?

From: [Ken](#)
To: [City Clerk](#)
Subject: FW: Ebner Bldg assessment
Date: Sunday, August 9, 2020 10:03:06 PM
Attachments: [image004.png](#)

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Beth:

I don't have enough time at the moment to make a more thorough presentation for the Board of Equalization. Please include a copy of the attached emails in the Board's informational packet.

Thanks,

Ken Williamson

From: Ken [mailto:deltaak@ptialaska.net]
Sent: Sunday, August 09, 2020 9:42 PM
To: 'Michael Dahle'
Subject: RE: Ebner Bldg assessment

Michael:

I have a couple of projects which are weather sensitive and are consuming all my time. Please forward this summary and our string email as documentation for the Board of Equalization. I would like the Board to hear my appeal on the Ebner Building: CBJ parcel 1C070A090040. Please provide me with the information and calculations which you used to justify the tax assessment on this property so I also have that information available in advance of the hearing.

I believe your last email identifies the issues:

- 1) I used the Assembly Building as a comparison since it adjacent, it leases to the same type of tenant, it is also has high vacancy rate and it a current sale (2018). The disparity in assessed value is large:
 - a) The Ebner Bldg CBJ assessment is \$70/sq ft. 7,643 sq ft building assessed at \$541,500.
 - b) The Assembly Bldg CBJ assessment is \$33/sq ft. 23,840 sq ft building assessed at \$778,300.
 - c) I the Assembly Bldg was first listed for sale in 2017 (2016?) at about \$2.5M. It was actively marketed for a couple of years and had several price reductions before it sold for less than \$700K.
 - d) The sales price reflects current, fair market value.
- 2) Depreciation was discussed because the CBJ has depreciated the value of the Assembly Bldg by 91%. It appears the value of that building was adjusted to reflect current market by depreciating the building's remaining value to 9%. Although I don't believe this is best practice, I didn't object to it; I did point out some of the inherent risks.
- 3) I didn't dispute that Ratio Studies may useful to the Assessor's Office. In my case, the CBJ's justification for its assessment was a chart (attached) indicating the CBJ is generally close to actual value. I have no way of knowing the accuracy or if the chart or if it is based on downtown office buildings; however, it doesn't provide any support for the large discrepancy in value between two similar properties.
- 4) I realize it may be more convenient to obtain sales information in Washington State which

has mandatory disclosure of real estate sales prices. Washington has a real estate transfer tax (REET) based on the mandatory disclosure. The CBJ Assessor's Office has notice of each sale from the Alaska DNR Recorder's Office. The Assessor's Office can contact the parties to determine sales price.

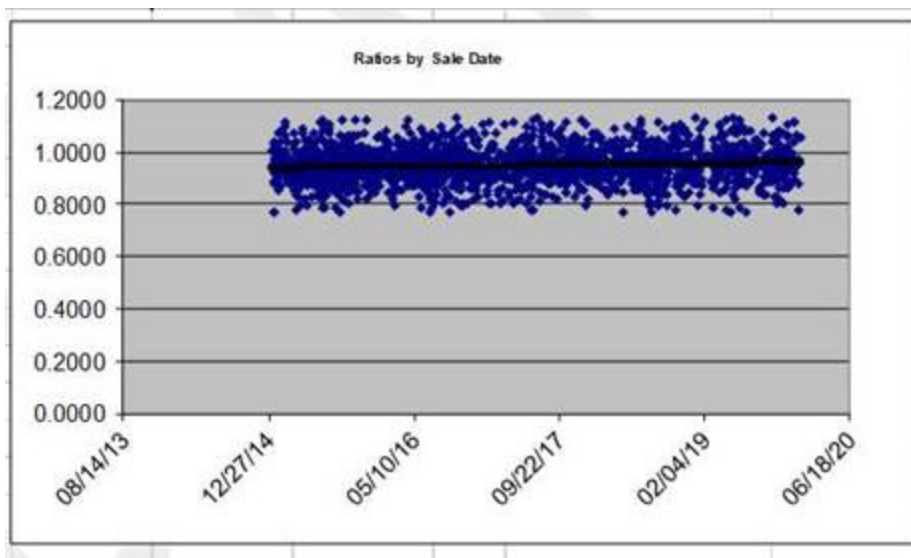
5) In our phone conversation, I mentioned a couple of sales which could provide some guidance. We had already discussed the Assembly Building. The Bill Ray Center sold a year or two ago after being actively marketed for about a year. The First National Bank building on Front street was marketed and sold by a real estate office (upper floor were offices but are now converted to Air BNB units). The Triangle Building on Front Street has been listed intermittently for the last several years. It recently sold (upper floors are office space).

6) I believe the value of office space has dropped primarily because the State of Alaska dramatically has reducing the office space which it leased for many years. State leases in the Assembly Bldg were not renewed. Those areas remain vacant. To the best of my knowledge, the Bill Ray Center is still vacant. I believe the upper floors of the Triangle Bldg remain vacant. The Seward Street building with the Wells Fargo branch has one small tenant in the upstairs office area. I believe the Fifth and Franklin Building (a few hundred feet from my building) is almost entirely vacant.

The value of downtown office space has been dropping for the last several years. I suspect some of the area can be transitioned into other uses, but in the meantime values should be adjusted to reflect prevailing market conditions using by using actual sales prices of those properties.

Of course, I am happy to continue this discussion with you. Again, I ask that you and the Assessor take another look at the Ebner Bldg assessment. Thanks for your attention on this matter.

Sincerely,
Ken Williamson



From: Michael Dahle [mailto:Michael.Dahle@juneau.org]

Sent: Monday, August 03, 2020 4:29 PM

To: Ken

Subject: RE: Ebner Bldg assessment

Ken,

I appreciate the opportunity to discuss your property valuations and the Juneau commercial

property market in general. I am working on improving the sales, rental rate, vacancy and other data that CBJ has to work with in arriving at assessed values. One aspect of that is to increase the opportunity to have conversations with the commercial property owners and to hear their perspectives.

You raised the possibility that the assessor's office was simply inflating the amount of depreciation on sold properties to make it look like we were not overvaluing commercial properties. From the review and analysis that I have done over the past year I do not believe that is the case.

In the case of the Assembly Building the high rate of depreciation was applied in 2018 as a result of an inspection and building conditions including issues on vacant floors from the past tenant(s). This adjustment occurred prior to the sale of the building. Some additional depreciation was applied in 2019 as a result of an appeal which included income and expense information for the property.

What does raise red flags is that there seems to be a pattern of values being lowered and taken out of uniformity in response to appeals, likely to try to appease appellants. This creates inequities that become problematic.

You also seemed to question the validity of ratio studies. Ratio studies are valid and they are a recognized part of assessment practices and mass appraisal standards. The ratio studies done over the past year would indicate that we are at about 90% of market overall. Narrowing the focus to the downtown area it seems to maybe be a little softer but still not overvalued.

This would be an area I would like to study more including pursuing more information on the office lease market in particular given your statements regarding changes in State leasing. One challenge is that being that we are not a full disclosure state we do not get information on all sales. In the data I currently have to work with narrowing the focus to downtown commercial properties results in only 4 sales from the past 5 years showing as being market sales for which we have confirmed sales information. Obtaining additional sales data would allow for greater accuracy but in the meantime we have to do the best we can with the information that we have.

The vast majority of commercial properties have seen no or minimal value increase over the past 10 years. Market indicators including property sales would indicate that there has been an increase in value during that same time period.

This last year I started a review of all of our commercial valuation models and will likely be making changes in the future to better reflect the market, however, that is a project that will take some time.

I would appreciate the opportunity to continue conversations on what you see in the Juneau market. It appears to me that your building is fairly and equitably assessed and so I would recommend no change.

Sincerely,

Michael Dahle

Deputy Assessor

City & Borough of Juneau

907-586-0334

Michael.Dahle@juneau.org



From: Ken

Sent: Wednesday, July 29, 2020 6:51 PM

To: Michael Dahle

Subject: RE: Ebner Bldg assessment

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Michael:

Sure – give me a shout at your convenience.

Thx,

Ken

From: Michael Dahle [<mailto:Michael.Dahle@juneau.org>]

Sent: Wednesday, July 29, 2020 3:46 PM

To: Ken

Subject: RE: Ebner Bldg assessment

Hi Ken.

Yes, I made it back and am now isolating.

Regarding the sale. When you mentioned the Assembly building I was not sure of the address or parcel number so I looked at a map of sales to see if I could figure out which property you were referencing. The Assembly Building does not show up in our sales list but the sale at Third and Franklin does so that is the one that I thought you were referring to. That is the one that we show as a foreclosure sale. The parcel number is 1C070A090032. I believe it was called the MacKinnon Building.

I have been doing additional review of your parcels between time spent responding to an attorney on another matter. Doing more review this afternoon.

I have a conference call at 9:00 tomorrow morning that will probably run to about 9:30. Could we touch base via phone call after that? Because I am having to work from home the 360-419-6867 number is still best or we could do a video web call.

Michael Dahle

Deputy Assessor

City & Borough of Juneau

907-586-0334

Michael.Dahle@juneau.org



From: Ken <deltaak@ptialaska.net>

Sent: Wednesday, July 29, 2020 10:33 AM

To: Michael Dahle <Michael.Dahle@juneau.org>

Subject: FW: Ebner Bldg assessment

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Michael:

Did you make it back to town? Have you had a chance to take a look at this yet? Please give me a shout when it's convenient for you.

In your email, you reference another office building which sold recently: "Foreclosure sales do

not qualify In spite of that, the sale price was 21% above our assessed value”

What you describe is inconsistent with Juneau’s market condition during the last few years; an office building in this area sold at a foreclosure sale for 21% more than the CBJ assessment?

What is the tax parcel number of this sale?

Thanks,

Ken Williamson

Cell: (503) 789-9630

:

From: Ken [<mailto:deltaak@ptialaska.net>]

Sent: Monday, July 20, 2020 11:32 AM

To: 'Michael Dahle'

Subject: Ebner Bldg assessment

Mike:

Can you take another look at the Ebner Building assessment? Office space in Juneau hasn’t fared well since the State made drastic cuts to leased space beginning in 2015. In this area of Juneau, office rent is lower and office buildings have significant, long term vacancies.

The Assembly Building is adjacent to the one I am appealing. Last year, the Assembly Bldg sold for less than \$700K. It had been listed and actively marketed for at least two years. I don’t see any indication it was sold at a foreclosure sale – please double check and let me know if it actually was sold at a foreclosure sale.

The two buildings are similar except the Ebner Bldg is older, smaller and doesn’t have sprinklers or an elevator. Both buildings have the same type of tenants: professional offices which need close proximity to the Capitol and/or the Courthouse. The Assembly Bldg is slightly closer to both destinations and has some underground parking available from Seward Street.

There is a significant difference in the City’s assessments of the two buildings. The Assembly Bldg is assessed at \$33/sq ft (\$778,300/23,840 sq ft); however, the Ebner Bldg is assessed at \$70/sq ft (\$541,500/7,643 sq ft– although its actual area is less). In my appeal, I asked the City to drop the valuation of the Ebner Bldg to \$50/sq ft.

Please take another look at reducing the assessment for the Ebner Bldg. I believe \$50/sq ft reflects current market for a building of this age and condition. Let me know if there is something unique about the Ebner Bldg which makes it more valuable than the adjacent building.

Sincerely,

Ken Williamson



The City and Borough of Juneau is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the City and Borough of Juneau, including the installation of the data or information, its use, or the results obtained from its use. ANY DATA OR INFORMATION PROVIDED BY THE City Borough of Juneau IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the City Borough of Juneau shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the City Borough of Juneau, its officials, officers and employees from any liability arising out of the use of the data/information provided. NOT FOR ENGINEERING PURPOSES.

From: Michael Dahle [<mailto:Michael.Dahle@juneau.org>]

Sent: Thursday, July 16, 2020 9:33 AM

To: deltaak@ptialaska.net

Subject: FW: Petition for Review for parcels 1C070A090040, 1C070A090050 and 1070K820021

Here is the email.

Phone number while in Washington is 360-419-6867.

Michael Dahle

Deputy Assessor

City & Borough of Juneau

907-586-0334

Michael.Dahle@juneau.org



From: Michael Dahle

Sent: Thursday, June 25, 2020 8:19 AM

To: 'deltaak@ptialaska.net' <deltaak@ptialaska.net>

Subject: Petition for Review for parcels 1C070A090040, 1C070A090050 and 1070K820021

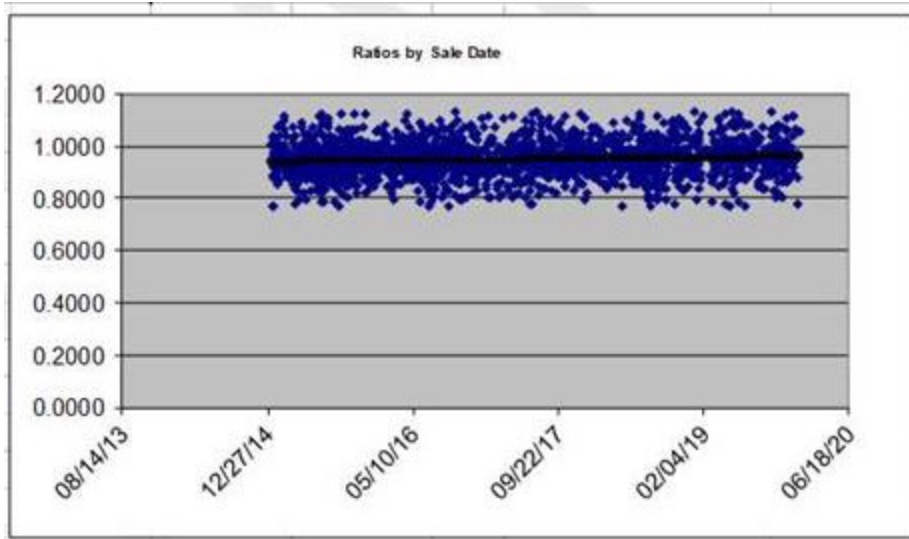
Dear Mr. Williamson,

This email is in response to your Petitions for Review for parcels 1C070A090040, 1C070A090050 and

1070K820021.

The assessed value for this year reflects the market value as of January 1, 2020. Influences after that date will be taken into account for next year.

A recent ratio study that we did on commercial property indicated that our valuation models are valuing commercial property at 90% of market value. A review of individual sales supported this finding.



In your petitions you mention a sale as a comparison. If I have correctly identified the sale that you are referring to it was a bank sale following a foreclosure. Foreclosure sales do not qualify as market sales and are considered to not be indicators of market value. In spite of that, the sale price was 21% above our assessed value.

We do not adjust based on one particular sale but analyze all of the transactions and market indicators.

Our appraisal model takes into account effective age, deferred maintenance, quality, condition, square footage, and other attributes.

I have done a review of the valuations for each of your three parcels and, off hand, did not see anything that appeared to be amiss. Therefore, it would be my recommendation that there is no basis for change to the assessed value.

I am available to discuss this further, to further explain the review or to answer any questions that you may have.

Besides the option of further discussion, there are two other options for you at this point. You can accept the findings of the review which would close the review or you can reject the findings at which point we convert the review into a formal appeal to the Board of Equalization.

I am available via either phone or email.

Sincerely,

Michael Dahle

Deputy Assessor

City & Borough of Juneau

907-586-0334

Michael.Dahle@juneau.org

**FROM THE OFFICE OF THE CITY CLERK
LINKS TO BOE HEARING PACKETS FROM OCTOBER 20 & 21, 2021**

At the request of the Appellant – Ken Williamson, below are links to access the BOE Hearing Packets from October 20 & 21, 2021. Each packet is over 600 pages so it requires downloading the packet through a file-share program.

Hard copies of the October 20 & 21 BOE packets are available in the City Clerk's Office at City Hall, 155 S. Seward St Room 202. Below are links to the Zend To file-share that will allow you to download the packet to your computer as well as a link to the BOE website with the same links and the Zoom link for BOE Hearings.

For any additional needs please contact the City Clerk's Office at 907-586-5278 or city.clerk@juneau.org

Link to October 21, 2021 BOE Hearing Packet:

<https://fileshare.ci.juneau.ak.us/pickup.php?claimID=t9rvw39WeSy9qyQj&claimPasscode=8a2VKBVqe5vQ2krr> (live until 10/27)

Zoom Cloud Recording of October 21, 2021 BOE Hearing:

Available beginning October 22, 2021 – contact the City Clerk's Office for link

Link to October 20, 2021 BOE Hearing Packet:

<https://fileshare.ci.juneau.ak.us/pickup.php?claimID=igxGWTRiJGiuiuimN&claimPasscode=joSGSiJ9xX7g7tRu> (live until 10/26)

Zoom Cloud Recording of October 20, 2021 BOE Hearing:

https://juneau.zoom.us/rec/share/u5rwjVBRagO3YJYCvn1VkjVHRjED5a5Gtmc-dBKLxBg_X19tpq6RzRDMk7JAkIYc.SjNY2FAzl0MkhGSy

Access Passcode: 0ZkV3*@*

Zoom Webinar Link for BOE Hearings: <https://juneau.zoom.us/j/99741860260> or to call in: 1-253-215-8782 Webinar ID: 997 4186 0260

Board of Equalization webpage: <https://juneau.org/clerk/boards-committees/boards-master-list/boe>

Reference Manual

Property Tax Division

November 2019

County Assessor's Manual

FOREWORD

The county assessor is responsible for determining the true and fair value of locally assessed properties, real and personal. The wellbeing of local government and of the taxpayers it serves depends on the thoroughness and fairness of the assessor.

Responsibilities of the assessor are many, varied, and changing. Newly elected or appointed officials and staff may require assistance in learning and mastering the myriad concepts, terms, laws, rules, policies, and procedures that apply. Even experienced assessors need occasional reference material.

The Washington State Association of County Assessors (WSACA) was appointed and assigned the duty of developing a manual for the office of County Assessor.

This manual, which was originally approved by WSACA, is maintained and periodically updated by the Property Tax Division of the Department of Revenue (DOR). It serves as a reference guide for assessors and is intended for practical use.

For General Information pertinent to laws or rules relating to the duties of the assessor, refer to the Revised Code of Washington (RCW), the Washington Administrative Code (WAC), and Property Tax Advisories (PTA).

If Specific Information is Necessary relative to state laws or judicial rulings, contact your Prosecuting Attorney. Some areas have court cases listed, which were linked in older versions of the Manual, there are no links in this version.

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CHAPTER 1 – General Information

1.1 State Government

At the state level, the government of Washington is organized along the same lines as the federal model with three branches of government. The underlying theory is the power to govern is divided into three parts in order to provide checks and balances and to prevent the centralization. The government is composed of the legislative branch, the executive branch, and the judicial branch.

Legislative Branch

The legislative branch is made up of the House of Representatives and the Senate. The Senate has 49 elected members corresponding to the number of legislative districts in the state. The House of Representatives has 98 elected members, two for each district. The general functions of the Legislature are to provide funding through the appropriations and budgeting process and to pass legislation, which becomes the statutory law of Washington. Legislation may originate in either house, but it must be passed by both houses before the bill passes to the governor. The governor can either sign the bill into law, veto portions of the bill before signing, or decide not to sign the bill. If the governor does not act on a bill that passed both houses, the bill becomes law without a signature.

More information about the legislative process is available through the [Washington State Legislature](http://leg.wa.gov/) website at <http://leg.wa.gov/>.

Executive Branch

The executive branch of government is represented by the Governor, the appointed state officials who form a cabinet, and the elected state officials. The Governor is charged with enforcing the laws of the state. To do this, they appoint a number of officials with statewide jurisdiction who are the heads of the administrative state agencies. These administrative agencies fall into the general categories of natural resources, general government, transportation, human services, education, and economic development. In addition to the Governor and the agency heads, executive power is also shared by various independently elected statewide officials:

- **Lieutenant governor:** The president of the Senate who serves as Governor when the incumbent is out of state or incapacitated.
- **Treasurer:** The chief fiscal officer for the state. The treasurer is responsible for collecting, safeguarding, and investing the state's monies and attending to other financial matters which affect the state.
- **Attorney general** - The lawyer for the state. The office represents the various divisions and departments of the state, prosecutes and defends actions pertaining to the state, and has a limited authority to prosecute crime.
- **State auditor** - Audits state agencies and divisions of local government. The office is responsible for preparing a uniform budgeting, accounting, and reporting system and issues advisory opinions on the propriety of financial record keeping.

- **Secretary of state** - Charged with four major areas of responsibility: election supervision, corporation and limited partnership filings, the state archives, and charitable solicitation registrations. The office is the custodian of The Seal of the State of Washington, the State Constitution, and all original session laws passed by the Legislature.
- **Superintendent of public instruction** - Created to centralize the operation of the former elected county superintendents of schools. The office is responsible for working with local school boards and educational service districts to provide primary and secondary education throughout the state.
- **Insurance commissioner** - Responsible for registering insurance companies operating in the state and overseeing the compliance and penalty provisions of the state insurance code. The office also supervises the formation of insurance locally and generally oversees the reinsurance market.
- **Commissioner of public lands** - Oversees the Department of Natural Resources. The office has the responsibility of keeping the state trust land productive and able to provide financial support for the state's educational and other institutions. The department has several regulatory and service-related duties concerning natural resources and must develop plans for the management of the state's three million upland acres.

Judicial Branch

The judicial branch of government is composed of the Supreme Court, Court of Appeals, and the lesser courts organized after these two. The Supreme Court is the ultimate arbiter of state law and has the responsibility to interpret state statutes and the State Constitution. It promulgates the common law through its decisions and decisions of the lower courts. The Court of Appeals is an intermediate appellate body which reviews decisions by the state's trial courts and is, subject to review by the Supreme Court.

Below the level of the Court of Appeals are the:

- **Superior court** - The countywide trial court of primary jurisdiction, its judges are both state and county officers. It handles all matters criminal and civil and often acts as an appellate body to review decisions of lower courts.
- **District court** - Operated by the county, and its jurisdiction extends only to that portion of the county which is within its judicial district. It is empowered to consider minor criminal and civil matters and provides the public with judicial recourse which is less expensive and more accessible than the superior court.
- **Municipal court** - Organized under the jurisdiction of the city, and its authority does not reach outside the city limits. It is principally responsible for considering violations of city ordinances.

1.2 County Government

A county is defined as an administrative subdivision of a state and, in the United States, is the next subdivision below the state. A county government is made up of a number of offices and agencies charged with the responsibilities of carrying out the requirements of the State Constitution as they pertain to taxation, licensing, judicial, police, and essential services to the public.

The state of Washington has 39 counties. A county's system of government follows the standard form of county government, except those counties that have adopted through a public vote to operate under the "Home Rule" charter form of county government. The major difference involves greater flexibility in the structuring of the local government through use of a charter. Home Rule Charter counties are allowed to pass ordinances and

resolutions on matters not addressed by the Washington Constitution, while counties not under such a system must rely on the Legislature to enact such matters.

Standard Form of County Government (non-charter)

- Controlled by state laws [Chapter 36.32 RCW](#)
- 32 counties use this form of government
- County legislative authority is 3 elected county commissioners
- County legislative authority may appoint a county administrator or manager

Home Rule Charter Form of County Government

- Article XI Section 4 of the Washington State Constitution permits a county to establish a "Home Rule" charter. The charter permits flexibility in the form of local government.
- 7 counties (Clallam, Clark, King, Pierce, San Juan, Snohomish, and Whatcom)
- According to the charter, county officials may be elected or appointed and the positions of elected officials may be partisan or non-partisan.
- Based on each county's charter, the county legislative authority includes the elected county council (currently 3-9 members) and may include the elected county executive in some counties. Clallam County is a charter county with three county commissioners.
- Most charter counties without an elected county executive appoint a county administrator or manager.

Generally within a county, "offices" are headed by elected officials, while "agencies" or "departments" are usually a branch of an elected office, most often under the jurisdiction of the county legislative authority.

More information about county government is available through the following organizations:

[Washington Association of County Officials \(WACO\)](#)

[Washington State Association of Counties \(WSAC\)](#)

[Municipal Research and Services Center \(MRSC\)](#)

The following sections summarize the structure and duties of each elected county office.

1.3 County Assessor

The assessors' primary duty is to determine the value of all taxable real and personal property within their jurisdiction for the purpose of equitable distribution of the tax liabilities of property owners for various districts. The amount of taxes to be paid or amount of levy required is determined by the various taxing district officials such as the state of Washington, county and city legislative bodies, school boards, fire district commissioners, junior taxing districts, and even the voting public for special levies.

State law requires the county assessor to revalue real property on an annual basis. The frequency of physical inspection of property, must be at least once every six years. Revaluation of properties in the interval years between each physical inspection is accomplished by means of statistical analysis. Any taxpayer that disagrees with the value determined by the assessor has the right to appeal the valuation to the county board of equalization.

In addition to property record inventory and appraisal reports maintained on properties in the counties, the assessor is required to keep numerous other records. A detailed series of maps showing all properties in the county must be maintained. A geographic information system (GIS) and set of aerial survey photos are also a vital part of the mapping system in most counties. Each time a parcel of property is sold or divided, or a new plat is filed, the transaction is shown in the assessor's records. The assessor maintains the assessment roll of the county, listing ownership, description, tax code area, location, and the assessed valuation for all property in the county.

1.3.1 County Assessor – Election or Appointment

The Territorial Assembly in 1854 created the office of county assessor. Some counties abolished the office in 1925, then the state Legislature restored it to all counties in 1937. The assessor is not a constitutional office. In the state of Washington, all assessors are elected with one variation. In Pierce County, the elected positions of assessor and treasurer is combined. The Pierce County Assessor-Treasurer oversees one office that conducts all assessor and treasurer functions.

In "Home Rule" counties, an assessor could be elected or appointed, partisan or nonpartisan. A county could have prerequisites for a position even if it is an elected position (like the prerequisite that a person must pass the state bar exam to run for prosecuting attorney). A county could also combine offices (as in the case of Pierce County) with a Home Rule charter.

In all 39 counties, the assessor (assessor-treasurer in Pierce County) is elected for a four-year term. The four-year terms are as follows:

33 Counties:	January 1, 2015, 2019, 2023, etc.
King, Snohomish, and Whatcom Counties:	January 1, 2012, 2016, 2020, etc.
Pierce County:	January 1, 2017, 2021, 2025, etc.
Clallam and San Juan Counties:	January 1, 2015, 2019, 2023, etc.

For information on an appointment to fill a term following a vacancy in office, refer to [RCW 36.16.110](#) and [RCW 36.16.115](#). Refer to Chapter 42.12 RCW concerning vacancies caused by death or disqualification.

The central committee of the political party of the vacated position will submit three names of candidates to the county commissioners (in the 32 counties without Home Rule) and the county commissioners will then appoint the new assessor. If the appointee does not run for office at the next general election or does not win the election, they are immediately replaced by the winner. Note: Home Rule counties may have some revisions of the procedure noted above.

1.3.2 County Assessor – Oath of Office and Bonding

The following are references to oath of office for assessor (county elected officials) in the Revised Code of Washington and State Constitution:

RCW 36.16.040	Oath of Office.
RCW 36.16.050	Official Bonds.
RCW 36.16.060	Place of Filing Oaths and Bonds.
Chapter 5.28 RCW	Oaths and Affirmations.
RCW 5.28.010	Who May Administer.
State Constitution, Art. I, Sec. 6	Oaths – Mode of Administering.

1.3.3 County Assessor – Public Disclosure

RCW 42.17A.001	Definitions.
RCW 42.56	Public Records Act
RCW 84.08.210	Confidentiality and privilege of tax information – Exceptions – Penalty.
RCW 84.40.020	Assessment date – Average inventory basis may be used – Public inspection of listing, documents, and records.
RCW 84.40.340	Verification by assessor of any list, statement, or schedule – Confidentiality, penalty.
WAC 458-297	Access to public records

Other References

AGO 1975, No. 15	Offices and officers – State – Department of Motor Vehicles – Public records – Access to lists of individuals under Initiative No. 276.
AGLO 1975, No. 38	Initiative No. 276 – Public records – Access to lists of individuals.
AGLO 1977, No. 21	Offices and officers – County – Assessor – Taxation – Property – Public Records – Access to comparable leases.
AGLO 1979, No. 16	Districts – Fire protection – Public meetings – Procedure for calling special meetings of fire protection district commissioners.
AGLO 1979, No. 18	(Withdrawing AGLO 1979 No. 16). Districts – Fire protection – Public meetings – Procedure for calling special meeting of fire protection district commissioners.
AGO 1980, No. 1	Offices and officers – County – Assessor – Public records – Taxation – Public access to property tax assessment rolls.
AGO 1983, No. 9	Districts – Public utility – Records – Access to certain records of public utility districts under state public disclosure law.
AGO 1986, No. 7	Public records - statutes - taxation
AGO 1991, No. 5	Public records - open public meetings act - corporations - small business export finance assistance center
AGO 1991, No. 6	Public records - initiative no. 276
AGO 1998, No. 2	Public disclosure law – Authority of public agencies to allow inspection and copying of lists of individuals.

AGO 2000, No. 3	Public disclosure law - public records - conservation districts
AGO 2002, No. 2	Counties - cities - port districts - state agencies - public disclosure act - public records
AGO 2005, No. 4	Public disclosure law - public disclosure commission - counties - cities and towns

1.3.4 County Assessor – Budget

The due dates for submitting annual budgets (for the 32 non-Home Rule counties)*:

To county auditor:	Second Monday in August	(RCW 36.40.010)
To county commissioners:	First Tuesday in September	(RCW 36.40.050)
Final budget due:	First Monday in December	(RCW 36.40.080 and RCW 36.40.071)

****Home Rule counties may have similar or different due dates.***

[RCW 84.41.050](#) states that each county assessor shall make adequate provision in budgets to effect countywide revaluation as directed. In passing the budgets submitted by the assessors, the boards of county commissioners shall authorize and levy amounts which in the judgment of the board will suffice to carry out the direction of this chapter. (Also see [RCW 84.41.060](#) – Assistance by department of revenue at request of assessor; [RCW 84.41.070](#) – Finding of unsatisfactory progress – Notice – Duty of county legislative authority; and [RCW 84.41.080](#) – Contracts for special assistance.)

The Washington State Auditor is required by state law to issue accounting and reporting requirements for local governments. Most counties in the state of Washington use a budget/accounting system known as BARS ([Budgeting, Accounting and Reporting System](#)). To review the entire BARS manual, see your county auditor or website of the [Washington State Auditor \(SAO\)](#).

In many counties, the legislative body (commissioners or council) requires a written narrative with the budget request. It is often helpful to review prior successful budget request. It is also helpful to spend some time with your county auditor to review the budget process early in the year.

There are three methods of presenting a budget:

1. Written outlines.
2. Written narratives.
3. Oral presentations at public hearings or finance committee hearings, or before the county commissioners or county council.

Supporting documentation could include letters from other assessors, letters from the Department of Revenue, written or oral support from your local taxing districts, etc.

Methods of illustrating your budget might include:

- Cost per parcel.
- Cost per population.
- Number of parcels per staff member.
- Number of population per staff member.

If your employees belong to a union, review the union contract from beginning to end. In most cases, you may have little control over the salary or benefit levels from one year to the next.

Your budget will determine the level of service your office will have for the following year. Remind the county commissioners or county council that the assessor can obtain new revenue (through new construction) and that the assessor's office is one of the few mandated offices in the courthouse.

The Department of Revenue report, [A Comparison of County Assessor Statistics](#) includes various workload metrics and budget information for all assessors' offices in the state.

The following is an example of the BARS Chart of Accounts used by counties.

CLASSIFICATION OF EXPENDITURES BY OBJECT

Definitions

00 Reclassifications and Cost Allocations

Depreciation, Amortization, and Depletion Expense

Bad Debt Expense

Inventory Write-Offs

Reallocated Costs (Debit and Credit)

Other Cost Reclassifications (Debit and Credit)

10 Salaries and Wages

20 Personnel Benefits

Pension and Disability Payments

30 Supplies

Office and Operating Supplies

Fuel Consumed

Power/Water/Gas Purchased for Resale

Supplies Purchased for Inventory or Resale

Small Tools and Minor Equipment

40 Services

Professional Services

Communication

Travel

Advertising

Operating Rentals and Leases

Insurance

Utility Services

Repairs and Maintenance

Miscellaneous

50 Intergovernmental Services and Other Interfund Payments

Intergovernmental Professional Services

Intergovernmental Payments from Federal, State, or Local Funds

External Taxes and Operating Assessments

Interfund Taxes and Operating Assessments

Interfund Subsidies

60 Capital Outlays

Land and Land Improvements

Buildings and Structures

Other Improvements

Machinery and Equipment

Construction of Capital Assets

Capital Leases

70 Debt Service: Principal

General Obligation Bonds

Revenue Bonds

Special Assessment Bonds

Revenue Warrants

Capital Leases & Installment Purchases

Anticipation Notes/Warrants

Other Notes

Intergovernmental Loans

Other Debt

80 Debt Service: Interest and Related Costs

Interest on Short-term External Debt

Interest on Interfund Debt

Interest on Long-term External Debt

Debt Issue Costs

Debt Registration Costs

Other Interest and Debt Service Costs

90 Interfund Payments for Services

Professional Services
 Communications
 Supplies
 Capital Outlays
 Operating Rentals and Leases
 Insurance Services
 Repairs and Maintenance
 Other Services and Charges

1.3.5 County Assessor – Assessor's Deputies/Appraisers

RCW 36.16.070	Deputies and employees.
RCW 36.21.011	Appointment of deputies and assistants – Engaging expert appraisers – Employment and classification plans for appraisers.
RCW 36.21.015	Qualifications for persons assessing real property – Examination – Examination waiver – Continuing education requirement.
WAC 458-10-010	Accreditation of real property appraisers – Implementation – Definitions.
WAC 458-10-020	Application for accreditation.
WAC 458-10-030	Accreditation examination – Prerequisites – Waiver or exemption – Reexamination.
WAC 458-10-040	Accreditation certificate.
WAC 458-10-050	Continuing education requirements – Appraisal practice and ethics.
WAC 458-10-060	Standards of practice.
WAC 458-10-070	Denial, suspension, or revocation of accreditation.

1.3.6 County Assessor – Appointment of Deputy

APPOINTMENT OF DEPUTY

STATE OF WASHINGTON,)
) ss. _____ Office
 County of)
 I, _____, of _____ County,
 Washington, reposing special confidence in _____ do hereby constitute and
 appoint him or her Deputy _____ of _____ County, Washington, until
 _____, 20____, after which date said appointment shall cease and be null and void.

IN TESTIMONY WHEREOF, I have hereunto set my hand

_____, 20____.

.

 _____ of County and State aforesaid.

STATE OF WASHINGTON,)
) ss.

County of _____)

I, _____, being first duly sworn, upon oath do
 depose and say that I will support the Constitution of the United States and the laws of the State of Washington,
 and faithfully discharge and perform the duties of Deputy _____ of _____ County,
 Washington, according to the best of my ability. So help me God.

Subscribed and sworn to before me _____, 20____.

1.4 Other Elected Officials

County Auditor

The duties and responsibilities of the county auditor cover a large and varied field. These duties each require skill and know-how in many different areas so that the office can be run efficiently and effectively. The major duties of the auditor are as follows:

Recording - Documents recorded by the auditor include, but are not limited to, deeds, real estate contracts, liens, and other written instruments which are required by law to be filed in the county. The records become public upon filing and are indexed accordingly.

Auditing - The county auditor must audit all bills approved for payment by the county legislative authority before warrants are issued. It must be confirmed that charges are legitimate and ascertained that there are adequate funds to cover the payments in the proper departmental budgets.

Licensing - As an agent of the Washington State Department of Licensing, the auditor is responsible for vehicle licensing and title transfers, watercraft titling and registration, and issuing marriage licenses as well as other types of licenses. As an agent for the Department of Revenue, the auditor collects sales tax on the transfer of vehicles between individuals.

The auditor also serves as the ex-officio supervisor of all elections and is the chief registrar of voters within the county.

County Clerk

The county clerk is one of several independent, elected officials provided by the Washington State Constitution, with specific and special duties assigned by statute and by local and state court rules. The position of county clerk is best characterized as the administrative and financial officer of the Superior Court. The purpose of the office of county clerk is to ensure the separation of powers among the three branches of government by preserving the integrity of the judiciary. This is accomplished in the following ways:

1. By being independent of the judicial branch of government, the clerk protects the judiciary from the appearance of impropriety or unfairness in the setting of cases, selection of jurors, implementation of orders, or investment of funds.
2. The clerk is located in the executive branch of government and provides the avenue for external oversight of the judiciary without legislative or executive branch interference with its actions, integrity, or independence.
3. As an independent elected official, the clerk preserves for the public unfettered access to a fair, accurate, and independently established record of the opinions, decisions, and judgments of the court.

Specific functions of the county clerk include:

- **Administrator of the Court Records and Exhibits:** All documents presented in a superior court cause of action must be received and processed by the clerk. The processing of court documents involves record classification, assignment of cause number, computerized docketing, and manual filing of hard copy records. Records must be maintained, retained, and purged in accordance with statutory time constraints and required archival standards.
- **Financial Officer for the Courts:** As the court's agent, the clerk collects statutory fees, fines, trust funds, and support funds; maintains a trust account for monies received; establishes an accounting system for receipting and disbursing monies ordered by the court; and provides an investment plan for monies held.
- **Quasi-judicial Officer:** For the issuance of writs, subpoenas, and other court-related orders, the clerk serves a quasi-judicial function (to exercise discretion of judicial nature). Duties include reviewing court documents for possible judicial or attorney errors, performing acts required by law, issuing letters of testamentary; warrants (civil and criminal), and writs of execution, garnishment, attachments, restitution, and orders of sale.
- **Ex Officio Clerk of the Court:** Under the constitution of the State of Washington, the clerk has the title of "Ex Officio Clerk of the Court." This requires the clerk's presence at all court sessions for the purpose of receiving and recording court documents and exhibits, and to establish an independent record of court proceedings.
- **Justice System Administrator:** In this role, the clerk identifies and articulates the changing needs of the court record processing, storage, retrieval, and disposal of documents, records, and exhibits, and the collection, accounting, and investment of court monies to ensure that the interests of the public and the county are secured.
- **Departmental Administrator:** As the administrator of a county department, the clerk has the responsibility to establish office policies, budgets, and procedures in accordance with the established guidelines and policies of the Board of County Commissioners.

Accuracy and efficiency are critical to the clerk's office, as even the slightest error or omission in indexing, posting, filing, preparation of writs or disbursements of funds affects the life or property of members of the public and makes the clerk personally liable for damages and subject to monetary fines.

County Legislative Authority

Standard County Government

In 33 of Washington State's 39 counties, the board of county commissioners is the county's legislative body (including Clallam, a Home Rule County). The commissioners serve as the chief administrators for several important county operations and have some quasi-judicial duties.

The county commissioners' primary duty is to levy the taxes to operate the county and to adopt a balanced budget for each calendar year. The commissioners fix the budget amount for each department within the county, but variances and increases can be permitted during the year if extraordinary circumstances can be shown. Other elected officials in the county are responsible for their own adopted budget, and the commissioners themselves are responsible for the operation of budgets under the control of appointed department heads.

Also within their legislative capacity, the commissioners are responsible for adopting, amending, and repealing all county ordinances which are essentially the laws of the county.

As administrators, the commissioners are responsible for the public roads and public works programs, public health services, planning and zoning of unincorporated areas, emergency services or civil defense programs, county park and recreation system, and other services and programs which are clearly not the responsibility of another elected county official.

In their judicial capacity, the commissioners are often called upon as the first level of appeal to sit in judgment of decisions made by other county officials.

Home Rule Charter County

In six of the seven counties (Clark, King, Pierce, San Juan, Snohomish and Whatcom), a county council is the legislative body, made possible by Home Rule Charter. The seventh, Clallam County, has also adopted a charter but retains the three-member board of commissioners. King, Pierce, Snohomish, and Whatcom counties have an elected County Executive that may or may not have legislative authority functions. Refer to the specific county's charter for more information about the county's legislative authority, county council, elected county executive, and appointed county executive, administrator, or manager.

County Coroner

Deaths occurring in Washington State must be investigated and certified by a medical-legal officer. This individual is most often the county coroner, usually a nonmedical officer, who retains the services of a qualified pathologist when an autopsy is needed to determine cause of death. In many smaller counties, the prosecuting attorney also serves as the county coroner. Larger counties may have a full-time coroner or medical examiner.

It is also the duty and responsibility of the coroner to locate and notify next of kin, dispose of the deceased person's body, have custody of money and property found on the body of the deceased, and prepare reports to governmental agencies. While not a common occurrence, the county coroner is authorized by law to serve as county sheriff under certain circumstances. The coroner may also serve subpoenas on the sheriff or sheriff's deputies.

County Prosecuting Attorney

The county prosecuting attorney has major responsibilities, such as a legal advisor, a prosecutor of criminal matters, a representative of the county in civil cases, and in smaller counties, ex-officio coroner.

State statutes fix the following duties for the prosecuting attorney:

- Be legal advisor to the board of county commissioners, school directors, and other county and precinct officers in all matters relating to their official business.
- Appear for and represent the state, county, and all school districts in all criminal and civil proceedings in which the state or county or any school district in the county may be a party.
- Prosecute all criminal and civil actions in which the state or county may be a party.
- Defend all suits brought against the county; review and approve all cost bills in criminal cases and take care that no useless witness fees and other charges are greater than allowed by law; attend and appear before and give advice to the grand jury when cases are presented for consideration,

make an annual report to the Governor at the end of each year and submit to the State Liquor Control Board a written report of all prosecutions brought under state liquor laws in the county during the year.

- Serve as coroner in certain counties.
- Provide legal guidance on a twenty-four hour basis to law enforcement agencies investigating felonies, which may require advice or assistance in obtaining search warrants or warrants for the arrest of a suspect.

County Sheriff

State statutes provide that the sheriff is the chief executive officer and conservator of the peace of the county. The law assigns certain general duties to the sheriff and these duties are governed by hundreds of statutes and judicial opinions, all intended to protect the individual citizen and safeguard his or her rights. The sheriff's duties include law enforcement, crime prevention, confinement of prisoners, execution of certain civil and legal processes, and in many cases, direct emergency services.

County Treasurer

The county treasurer is the custodian of all funds for the county and governmental subdivisions; receipting, and disbursing all funds of the county. The treasurer receives the general property tax collections for cities, schools, and many other units of local government. The office handles special assessment funds, justice court fines, certain state and federal funds allocated to local government, and fees collected in county offices such as those of auditor, clerk, sheriff, and engineer.

Upon receipt of the tax rolls from the county assessor, the treasurer is required to send all property owners a statement by February 15 of each year showing all real and personal property taxes due. Although the tax is due and payable on April 30 when the amount payable is \$50 or more, one half may be paid on or before April 30, with the second half due on or before October 31. Upon payment of the property taxes, the treasurer is required to furnish a receipt and credit the payment to the property owner's account. Another tax received by the treasurer is the real estate excise tax. Every conveyance of real property, before recording in the auditor's office, must be presented to the treasurer for payment of the "excise" tax.

It is the treasurer's duty to enforce the state's laws on collection of taxes. Personal property taxes are required to be paid each year, and, if delinquent, the treasurer is directed to seize the property and offer it for public sale to collect the taxes due. Real property taxes may remain delinquent for three years before the treasurer can begin foreclosure action.

The treasurer is responsible for depositing money collected daily in local banks, separating those monies at the end of each month so each unit of government receives its proper proportional share. They must maintain accurate journals and prepare monthly reports, and, upon direction, invest funds not required for immediate expenditure.

1.5 Washington Association of County Assessors

CONSTITUTION AND BYLAWS

of the

WASHINGTON STATE ASSOCIATION OF COUNTY ASSESSORS

(Last amended January 27, 2011 at the Legislative Conference in Olympia)

ARTICLE I - Name

The name of this organization shall be the "WASHINGTON STATE ASSOCIATION OF COUNTY ASSESSORS," hereinafter known as "Association."

ARTICLE II - Purpose

The purposes of the Association shall be:

- (1) coordination of uniform assessment practices and administrative policy between each of the assessors of the state;
- (2) promotion of beneficial legislation as deemed necessary;
- (3) cooperation with the Washington State Department of Revenue and;
- (4) advancement of the policies set forth as Appendix A to these bylaws.

ARTICLE III - Membership

Section 1. Any duly elected or appointed county assessor shall be a Regular member of the Association. Former assessors shall be ex-officio members.

Section 2. Associate members of the Association shall be as follows: any employee of the State Department of Revenue; any deputy assessor.

ARTICLE IV - Government

Section 1. The government of the Association shall be vested in the membership thereof, except as otherwise provided in these bylaws.

Section 2. Except as otherwise provided, only Regular members shall be qualified to hold office, vote or otherwise participate in the government of the Association; provided, however, that Associate members shall have the privilege of the floor.

Section 3. The Executive Board shall have control and management of the property and finances of the Association, and shall set the policy of the Association between conferences.

Section 4. No proxy shall be voted, nor any ballots cast except in person by a Regular member; provided, however, if a Regular member is not present, such member may, upon notice to the President, appoint an Associate member from his or her office to cast a ballot for the county.

Section 5. Associate members may serve on regular committees with the consent of their Assessor.

ARTICLE V - District Organization

Section 1. The Association shall be divided into four districts as follows:

The Eastern District which shall be composed of the following counties: Adams, Asotin, Columbia, Garfield, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla and Whitman.

The Central District which shall be composed of the following counties: Benton, Chelan, Douglas, Ferry, Franklin, Kittitas, Klickitat, Okanogan, Grant and Yakima.

The Puget Sound District which shall be composed of the following counties: Skagit, Whatcom, San Juan, Island, Snohomish, King, Kitsap, Pierce and Thurston.

The Western District which shall be composed of the following counties: Clallam, Mason, Jefferson, Grays Harbor, Pacific, Lewis, Wahkiakum, Cowlitz, Skamania and Clark.

Section 2. These Districts shall have the authority to set their own meeting schedules and elect officers. A copy of all minutes of all meetings shall be filed with the President of the Association who shall be notified of all District meetings prior to the meeting being held.

Section 3. The Districts shall abide by the constitution and bylaws of the Association, and shall not adopt any policy contrary to that of the Association.

ARTICLE VI - Officers

Section 1. The officers of the Association shall be the President, Vice President, Secretary-Treasurer, Immediate Past President, WACO and IAAO representatives, and the chairpersons of the four Districts.

Section 2. The officers shall constitute the Executive Board.

Section 3. A quorum shall consist of five members of the Executive Board.

Section 4. The officers of the Association shall serve terms of one year without salary and until their successors are elected. Resignations shall become effective upon notice to the Executive Board.

Section 5. The President, Vice President and Secretary-Treasurer shall perform the duties ascribed to these offices, and shall be ex-officio members of all committees; the Immediate Past President shall perform such duties as the Executive Board assigns. In the event any of these offices or the position of the Association's representative to the Board of Trustees of the Washington Association of County Officials is vacated, a majority of the Executive Board may fill the vacancy subject to the approval of the Association at its next regular meeting. Should a vacancy occur in any of the district chairpersons, such vacancy shall be filled by the District at its next regular or special meeting.

Section 6. The Secretary-Treasurer shall be the custodian of the funds of the Association, and shall keep an adequate set of books and collect any monies due from members. The Secretary-Treasurer shall report annually on the final day of the annual Association conference, and a financial report shall be available at each Executive Board meeting.

Section 7. The President shall preside over the Executive Board and all meetings of the Association. The President shall also work with the Annual Conference Committee on programs, meetings and education for the annual conference and shall officiate at said conference.

Section 8. The Vice President shall officiate at association meetings in the absence of the President.

ARTICLE VII - Nominations and Elections

Section 1. Not less than ninety (90) days prior to the annual Association Legislative conference (normally held in January or February), the President shall appoint a Nominating Committee to consist of five Regular members. The Committee shall be the four district chairpersons of the Association and the Immediate Past President. The President shall at the time of the appointment also designate the chairperson of the Committee. The Committee shall meet not less than sixty (60) days prior to the conference for the purpose of nominating a slate of candidates for the Association offices in the following manner:

For the office of President, the Committee may nominate the present Vice President and at least one other candidate. For the office of Vice President, the Committee may nominate the present Secretary-Treasurer and at least one other candidate. For the office of Secretary-Treasurer, the Committee shall nominate at least two candidates. If three candidates are nominated on the first ballot, and if one receives a 50% margin on the first ballot, then that candidate receiving a 50% margin shall be considered elected to the position of Secretary - Treasurer. If no one receives a 50% margin, then the top 2 candidates in total vote tally proceed to a final election ballot. No assessor may serve more than two consecutive terms in any of the above mentioned offices. In odd numbered years, the Committee shall nominate at least two candidates, each of whom must be a Regular member, for a two-year term as the Association's representative on the Board of Trustees of the Washington Association of County Officials. Every two (2) years the Education Committee shall recommend to the Nominating Committee (the first year of implementation will be 1998 and every other year thereafter) one or more candidates to serve as WSACA representatives to IAAO. The IAAO representative may or may not be a member of the Association but shall be an active member of IAAO. These nominations shall be made a part of the Committees chairperson's report to the annual conference where the office shall be filled by a vote of the membership.

Section 2. The Districts shall certify to the Association at its annual conference the names of their District officers who shall take office at the same time as the President, Vice President, Secretary-Treasurer, and Association representative to the IAAO.

ARTICLE VIII - Finance

Section 1. The funds of the Association shall not be expended, nor any financial obligations of the Association be incurred, without the approval of the Executive Board.

Section 2. The funds of the Association shall be deposited in a bank or other insured financial institution immediately upon receipt thereof, and shall not be withdrawn except by signature of the Secretary-Treasurer; provided that if the Secretary-Treasurer should become incapacitated, the Executive Board is given the authority to appoint an acting Secretary-Treasurer.

All funds in excess of \$4,000 shall be deposited in a savings account and shall not be withdrawn without the approval of the President and by signature of the Secretary-Treasurer and the Executive Director of the Washington Association of County Officials.

Section 3. The Secretary-Treasurer shall keep the records of the Association as to show, under classified headings, the amounts received and expended in any month or year, and maintain a record of receipted bills.

Section 4. The Secretary-Treasurer, immediately upon election of a successor, shall turn over to his or her successor all monies, records and materials pertaining to the Association.

Section 5. Each Regular member shall be charged annual dues as specified by the membership, to be paid not later than February 15 of each year. The Secretary-Treasurer shall mail notices of dues payable not later than January 1 of each year. No dues shall be charged to Associate members.

ARTICLE IX - Annual Conference

Section 1. There shall be an annual conference of the Association. Such conference shall be held, to the extent possible, in accordance with the provision of RCW 84.08.190 and the President shall cause notice to be given to all Regular members at least two weeks in advance of the conference.

Section 2. At each annual conference, the Regular members shall select the site of the conference which will be held two years following the year in which such selection is made.

ARTICLE X - Committees

Section 1. It shall be the duty of the President to make appointments to all committees deemed necessary and to name the chairpersons thereof.

Section 2. The duration of appointments to committees shall be for the same period as that for the Association's officers; provided, that when deemed advisable, the Executive Board may authorize the appointment of any committee for a longer period of time.

ARTICLE XI - Meetings and Records

Section 1. The conference and all other meetings shall be conducted in accordance with "Robert's Rules of Order."

Section 2. All meetings of the Association shall be open to the public, but the Association may at any meeting, on a majority vote of Regular members, resolve itself into executive session.

Section 3. All records of the Association shall be open to inspection and copying, pursuant to chapter 42.17 RCW.

Section 4. During any annual or special meeting, after a two week notice, those qualified members attending shall constitute a quorum and any action taken will be legal and binding upon the Association if approved by a simple majority.

ARTICLE XII - Education Committee

Section 1. In order to coordinate the Association's in-service training program, designed for the purpose of providing well-qualified appraisal personnel, nine persons, who shall be Regular or Associate Members, shall be appointed by the President to an Education Committee. There shall also be a member who is the designee of the IAAO Chapters in Washington State.

Section 2. Except for the initial terms, which shall be staggered so that at least two positions on the Education Committee will expire each year, the members on the committee will serve three-year terms. The expiring terms each shall terminate on the date the President is installed at the annual Association conference.

Section 3. The President shall make any necessary Education Committee appointments within thirty days following his or her election at the annual conference. Vacancies occurring during a term shall be filled by the President within sixty days, and such appointments shall be only for the balance of the unexpired term. If the President refuses or neglects to make the appointment within the time required, the Executive Board shall make the appointment.

Section 4. All school instructors shall be appointed and serve at the discretion of the Education Committee, and shall be either a Regular member, an Associate member or other specially-qualified person selected by the committee.

Section 5. The Education Committee is granted authority to establish registration fees and other necessary school charges, and shall approve a custodian of all such funds. The Education Committee shall be responsible for the agenda, supervision, and selection of educational courses and materials used in the schools, subject to the approval of the Executive Board.

Section 6. The Education Committee, in approving training programs, will plan the curriculum so as to assist in meeting the requirements of RCW 36.21.015, which establishes the qualifications for persons assessing property.

ARTICLE XIII - Bylaws Amendments

Section 1. Any Regular member, or the Executive Board, may propose amendments to these bylaws.

Section 2. Any amendments to these Bylaws must be approved by a majority vote of the Regular members, with written notice of any proposed amendments to be sent to all county assessors at least two weeks prior to any regular meeting at which changes shall be considered.

Section 3. A copy of these Bylaws shall be mailed by the Secretary-Treasurer to each newly-elected or appointed county assessor shortly after the new official assumes office.

APPENDIX A

"Policy"

1. We shall actively promote any and all legislation that enables us to do a more efficient job of appraising property and equalizing values.
2. We shall continuously strive for uniformity of appraisals and ratios within our respective counties and between counties within the state.
3. We shall cooperate with the Washington State Department of Revenue in all matters pertaining to uniformity of appraisal methods and procedures, providing they conform with the statutes of the State of Washington.
4. We shall continue to promote and sponsor appraisal schools for assessors and their deputies, and the Education Committee shall approve the curriculum.
5. We shall work constantly for and with the Washington Association of County Officials so that we might have a better understanding of mutual problems experienced by the Association and other county officials.
6. We shall continue our Association's affiliation with the International Association of Assessing Officers, and urge each assessor to become a member.
7. We reaffirm our policy of requesting the support of the Washington State Department of Revenue, the Washington State Legislature, and any and all public and governmental bodies interested in the implementation of the statutes that will make possible the practical fulfillment of the provisions of Chapter 84.41 RCW and Article VII, Section 2, of the Constitution of the State of Washington.

8. The statewide publicity of this Association shall be released by the Executive Director of the Washington Association of County Officials, from time to time, with the approval of the officers of this Association.
9. This Association shall never interfere in any of the methods, procedures, or problems of individual assessors in their respective counties, unless requested to do so.
10. We shall take no action which promotes or condones discrimination in violation of State or Federal laws.

It is the expressed belief of the charter members of this Association that the meetings of this Association must be kept free from the influence of special interest groups and their representatives.

Washington Associations of County Assessors Standing Rules

1. All vendors wanting to display any message or promotion at any WSACA meetings must pay full registration for each person associated with their display. (All arrangements for location and equipment needed with displays are the responsibility of the vendor in conjunction with the motel or building manager).
2. Any vendor or association wanting to have either a hospitality room, or host function cannot be denied that function; however, WSACA will not publicize the event in any of the agendas. (The vendor or association hosting the function can distribute or have available their own announcements of the event).
3. Sponsors for an activity such as a boat trip or golf tournament will only be allowed by a vendor that does not have a potential vested interest in a concern or an issue relating to an assessed value.
4. Small donated items included with registration packages, raffled off or given as prizes (typically with a company logo) are allowed, as long as the item or items are not excessive in value.
5. In the event a decision needs to be reached concerning a vendor or any association participating in a conference, the event chairperson and the WSACA President will confer and make a final decision between the two of them concerning the propriety of the participation.

1.6 Washington Association of County Officials

During the 1953 Annual Convention of the Washington State Association of Auditors and Treasurers, a resolution was adopted to create an association of elected county officials. The purpose of this organization is "to promote more uniform procedure in respective county offices in order to better serve the public". The association began its early stages of development in 1954 with all elected officials extended an invitation to join through their respective associations.

By January of 1955, county officials drafted a formation bill for presentation to the Legislature. This organization bill did not pass in 1955; nor did it pass in 1956, 1957 or 1958. Still not discouraged, determined county officials continued their efforts, redrafted the bill, and ultimately won passage in the 1959 legislative session. Actual commencement of the Washington State Association of Elected County Officials' operations began March 1, 1960, in Olympia.

Many things have changed over the years, but the main objective of the [Washington Association of County Officials](#) (WACO) is still clear: ***Working to improve county government through better service to all taxpayers.***

CONSTITUTION AND BYLAWS**of the****WASHINGTON ASSOCIATION****of****COUNTY OFFICIALS****206 Tenth Avenue SE, Suite B****Olympia, Washington 98501-1311****(360) 753-7319 FAX (360) 664-2812**

Originally adopted in Seattle on November 17, 1959, and last amended November 16, 2017 in King County.

ARTICLE I -- Name and Objectives

Section 1.1. The operating name of this organization shall be the Washington Association of County Officials (WACO), herein referred to as "the Association." The legal corporate name of this Association is the Washington State Association of County Officials.

Section 1.2. The purpose of the Association is to support, as described in Article II of the Articles of Incorporation, each county official as he/she executes the constitutional and statutory duties and responsibilities of his/her office. The Board of Trustees shall be responsible for establishing a strategic plan to further identify the Association's support of county officials. The Board of Trustees shall be responsible for updating the strategic plan as necessary.

ARTICLE II -- Membership

Section 2.1. The membership of the Association shall consist of the following county elected and/or appointed officials:

Assessor,

Auditor,

Clerk,

Coroner/Medical Examiner,

Prosecuting Attorney,

Sheriff, and

Treasurer

The Board of Trustees shall be responsible for establishing criteria to maintain membership in good standing.

Section 2.2. In the event that a county shall have officials with similar responsibilities but with other titles or designations than those listed in Section 2.1 of this Article, then those officers, whether elected or appointed, shall be members in the Association.

Section 2.3. In case of any question of eligibility for membership or question of good standing, the Board of Trustees shall have the authority to determine the eligibility or standing.

ARTICLE III -- Government

Section 3.1. The governing authority of the Association shall be vested in the membership thereof, except as otherwise provided herein.

Section 3.2. The control and management of the property, finances and general supervision of all of the affairs of the Association shall be under the supervision of the Board of Trustees answerable to the membership. The Board of Trustees shall be comprised of:

- (a) President,
- (b) Vice-President,
- (c) Second Vice-President,
- (d) Secretary-Treasurer,
- (e) Trustees, one for each affiliate group identified in Article IV, Section 4.2 of these ByLaws,
- (f) Trustees-At-Large, one for each county category defined in Article IV, Section 4.1 of these ByLaws, and
- (g) the two most recent Past Presidents.

Section 3.3. No loans shall be made by the corporation to any Trustee or Officer.

ARTICLE IV -- Terms of Office and Duties

Section 4.1. Six Trustees-at-Large shall be elected from each county category listed below:

- (a) I - Counties with population above 1,000,000;
- (b) II - Counties with population 400,001 through 1,000,000; *
- (c) III - Counties with population 100,001 through 400,000; *
- (d) IV - Counties with population 50,001 through 100,000;
- (e) V - Counties with population 20,000 through 50,000;
- (f) VI – Counties with population less than 20,000.

(* NOTE: Reflects change that is effective January 1, 2018. Language until effective date remains:

- (b) II - Counties with population 500,001 through 1,000,000;
- (c) III - Counties with population 100,001 through 500,000;

Each county's designation to a county category is determined by the most recent population estimate by the state Office of Financial Management.

The terms of office for the six Trustees-at-large shall be for two years and start on the date of their election to the Board of Trustees and continue until their successors have been elected or appointed. Trustees-at-Large

representing counties in categories II, IV, and VI shall be elected in odd numbered years; Trustees-at-Large representing counties in categories I, III, and V shall be elected in even numbered years.

Section 4.2. Trustees. The Association recognizes the following affiliate groups:

- (a) The Washington State Association of County Assessors;
- (b) The Washington State Association of County Auditors;
- (c) The Washington State Association of County Clerks;
- (d) The Washington Association of Coroners and Medical Examiners
- (e) The Washington Association of Prosecuting Attorneys
- (f) The Washington State Sheriffs' Association; and
- (g) The Washington State Association of County Treasurers. The Trustees selected to represent these affiliate groups will be elected or appointed in a manner determined by each respective affiliate group.

Section 4.3. Executive Officers. The Executive Officers shall be:

- (a) President;
- (b) Vice President;
- (c) 2nd Vice-President;
- (d) Secretary/Treasurer; and
- (e) Immediate Past President.

The terms of office for the Executive Officers shall be for one year, starting on the date of the election of those officers and continuing until their successors have been elected or appointed.

All Executive Officers, Trustees-at-Large and Trustees will serve without compensation except for reimbursement of costs and travel expenses awarded pursuant Article VII, Section 7.2.

Section 4.4. Delegation. If any Executive Officer is absent or unable to act and no other person is authorized to act in such Officer's place by the provisions of these ByLaws, the Board of Trustees may from time to time delegate the powers or duties of such Officer to any other officer, Board member, or any other person it may select.

Section 4.5. Removal. The Executive Officers and Trustees-At-Large may be removed at any time, with cause, by the affirmative vote of two-thirds (2/3) of the Board of Trustees. Affiliate Trustees are subject to removal by action of their respective affiliate organization in accordance with the rules of that organization.

Section 4.6. Vacancies. Vacancies for Trustees-At-Large and Executive Officers shall be filled by the Board of Trustees for the remainder of the term, except as otherwise provided herein. An appointment to fill a vacancy shall occur within 120 days from the position becoming vacant.

ARTICLE V -- Duties of the Executive Officers

Section 5.1. The President shall:

- (a) Preside at all meetings of the Association;
- (b) Call special meetings of the Board of Trustees as needed;
- (c) Appoint and remove all standing and special committee members and name the chair thereof, except as otherwise provided herein;
- (d) Appoint and remove members of the Association to represent the Association on boards, commissions, committees, etc. convened outside the Association;
- (e) Preside at meetings of the Board of Trustees;
- (f) Be an ex-officio member of all standing committees and special committees which he or she appoints, except for the Audit Committee as specified in Sec. 8.1; and
- (g) Shall only cast a ballot to break a tie vote within the Association, Board or Committee.

Section 5.2. The Vice President shall:

- (a) Perform the duties of the President in the absence of the President;

(b) Automatically become President in the event of a vacancy in the office of President, unless the Board of Trustees, with the consent of the Vice President and the Immediate Past President, chooses to have the Immediate Past President fill the vacancy; and

(c) Serve as co- chair of the WACO Legislative Committee.

Section 5.3. The 2nd Vice President shall:

(a) Perform the duties of the Vice President in the absence of the Vice President;

(b) Automatically become Vice President in the event of a vacancy in the office of Vice President, and

(c) In the event of vacancies in the offices of both the President and Vice President, shall automatically become the President.

(d) Shall compose with the assistance of the other executive officers, the annual performance evaluation of the Executive Director.

(e) Chair the Education Committee

Section 5.4. The Secretary-Treasurer shall:

(a) Review for approval the minutes of the annual meeting and special meetings of the Association;

(b) Review for approval the minutes of all meetings of the Board of Trustees; and

(c) Review for approval a record of the finances of the Association from the certification by the Executive Director, as provided in Article VI, Section 6.1, Subsection (c);

(d) Chair the Audit Committee;

(e) Automatically become 2nd Vice President in the event of a vacancy in the office of 2nd Vice President; and

(f) In the event of vacancies in the offices of the President, Vice President and 2nd Vice President, shall automatically become the President.

ARTICLE VI – Board of Trustees

Section 6.1.

(a) The Board of Trustees shall establish guidelines for regularly scheduled meetings of the Board;

(b) Special meetings of the Board of Trustees may be held at any time upon the call of the President, or upon the request of a majority of the Board of Trustees; and

(c) The attendance of 10 members of the Board of Trustees constitutes a quorum.

All members of the Board of Trustees shall have the powers to vote in the Board of Trustees meetings except for the President, who shall vote only to break a tie.

Section 6.2. The Board of Trustees shall:

- (a) Have general governance over the affairs of the Association and may formulate such policies as it determines necessary;
- (b) Appoint or terminate at any time, with or without cause, the Executive Director. The Board shall maintain a job description for the position of Executive Director;
- (c) Have the power to do any and all things necessary to accomplish the purposes of the Association;
- (d) Adopt an annual budget for the Association; and
- (e) Establish a Strategic Plan as specified in Article 1.

The membership may overturn any Board of Trustees' decision at any special meeting or annual meeting with a majority vote where a quorum is present at such meeting.

Section 6.3. The Executive Director shall:

- (a) Act as secretary of the Board of Trustees, the Legislative Committee, and such other committees as the Board of Trustees may determine;
- (b) Represent the Association before any federal or state legislative body, or other body or hearing upon the direction of the Board of Trustees;
- (c) Prepare, or cause to be prepared, data and reports as required;
- (d) Have sole responsibility for direction and supervision over the office and employees of the Association, and shall have the power to hire, discipline, evaluate, and dismiss personnel at any time, with or without cause, consistent with any personnel policy adopted by the Board;
- (e) Take other actions which are necessary to the successful execution of his or her duties herein; and
- (f) Perform duties as assigned by the Board for the smooth operation of the Association.

ARTICLE VII -- Finances

Section 7.1. The Board of Trustees shall establish a financial policy to ensure that all financial operations are conducted in an accurate, accountable, transparent, and efficient manner. The funds of the Association shall be handled as follows:

- (a) No financial obligation outside of the adopted budget may be incurred for the Association without the approval of the Board of Trustees; and
- (b) Not later than the fifteenth day of each month, the Executive Director shall make available to the Secretary-Treasurer a complete list of deposits and disbursements of the preceding month, and a duplicate copy of the preceding monthly bank statement.

Section 7.2. The Board of Trustees and any member of the Association, while attending any authorized meeting other than the annual meeting of the Association membership, are eligible to be reimbursed for travel expenses, which may include lodging, meals or other costs, consistent with a policy established by the Board of Trustees.

Section 7.3. The Board of Trustees shall establish a formula to apportion the costs of reimbursement to the Association for professional services rendered to counties, and adopt an amount to be collected from counties

in the annual Association budget. The Association shall prepare an invoice and submit the request for reimbursement to each county consistent with the adopted budget and the approved apportioned formula. Nothing in this section shall be interpreted to prohibit the Association from generating revenues in addition to reimbursements for professional services from counties.

Section 7.4. The fiscal year of the Association shall start January 1 and end December 31 of each year.

ARTICLE VIII -- Committees

Section 8.1. Member Selection

It shall be the duty of the President to make appointments of all committees deemed necessary, and to name the chair or co-chair thereof. The President shall be an ex officio member of all committees, except for the Audit Committee. The Board may adopt a policy or policies describing the specific duties and responsibilities of the standing or special committees as required.

Section 8.2. Terms

Duration of appointments to all committees shall extend pas the appointing President term up to the first quarterly association meeting following the annual meeting of the association.

Section 8.3. Committee Types

Standing committees shall be as follows:

- (a) Audit Committee
- (b) Budget Committee
- (c) Education Committee
- (d) Legislative Committee
- (e) Nominating Committee
- (f) Personnel Committee

Special Committees: The President, at his or her pleasure, may create additional special committees.

ARTICLE IX -- Elections

Section 9.1. An election shall be held for President, Vice President, 2nd Vice President, Secretary-Treasurer and Trustees-at-Large at each annual meeting of the Association.

Section 9.2. The Nominating Committee shall establish written policies and procedures approved by the Board of Trustees addressing the solicitation, nomination and election of Association officers and Trustees-at-Large and arrange in advance for the immediate installation of the duly elected officers and Trustees-at-Large whose terms are specified herein.

Section 9.3. Proxy voting is prohibited.

Section 9.4. Membership voting by alternative means. Whenever matters are to be voted on by the membership, the Board may authorize that the vote may be taken by mail or electronic means as allowed in RCW 24.03.085.

ARTICLE X – Meetings of the Association Membership

Section 10.1. The annual meeting of the Association shall be held each year at a time and location to be determined by the Association membership.

Section 10.2. Special meetings of the Association may be called:

- (a) by the President,
- (b) upon the request of a majority of the Board of Trustees, or
- (c) by a minimum of four affiliate groups; provided, that sufficient notice is given to the members of the Association.

Requests made under Section 10.2 (b) or (c) of this Article shall be made to the President and may be submitted in hard copy, electronic format or by any other means. Upon receipt of a request made under Section 10.2 (b) or (c) of this Article, the President must call a special meeting.

Section 10.3. During any annual or special meeting of the Association, those members attending shall constitute a quorum. If voting by alternate means is authorized under section 9.4, members voting by mail or electronic transmission are present for all purposes of quorum, count of votes, and percentages of total voting power present.

Section 10.4. The meetings and special meetings of the Board of Trustees and the annual meeting of the Association shall meet all the requirements set forth in the Open Public Meetings Act. The Board may establish such rules and procedures as it deems necessary for conduct of such meeting, supplemented as necessary by reference to Robert's Rules of Order.

Section 10.5. Annually there shall be four scheduled meetings of the Board of Trustees and one meeting of the Association membership.

Section 10.6. Meetings of the Board of Trustees. Unless otherwise deemed appropriate, and with proper notice, meetings of the Board of Trustees will be held at the WACO office, currently located at 206 Tenth Ave SE, Olympia, WA, except that one meeting shall be held at the location of, and in conjunction with, the annual meeting of the membership.

ARTICLE XI – Amendments

Section 11.1. Any and all amendments to this Constitution and Bylaws must be approved by majority vote of the general membership of the Association in attendance at any annual meeting or properly called special meeting; provided, however, that sufficient notice is given to the membership of the Association.

Section 11.2. The Board may adopt a policy describing the procedures for amending the Bylaws.

1.7 International Association of Assessing Officers

General Information

The [International Association of Assessing Officers](#) (IAAO) is an educational and research association of individuals in the assessment profession and others with an interest in property tax. Membership is open to anyone, and includes individuals working in government, private industry, academia, and the general public. Its mission is to promote innovation and excellence in property appraisal and property tax policy and administration through professional development, education, research, and technical assistance.

Founded in 1934, the association's objectives are:

- To improve the standards of assessment practice.
- To educate those engaged in assessment practice.
- To elevate the standards of personnel requirements in assessment offices.
- To educate the general public in matters relating to assessment practice.
- To engage in research and to publish the results of studies in assessment administration.
- To provide a clearinghouse for the collection and distribution of useful information relating to assessment practice.
- To cooperate with other public and private agencies interested in improving assessment administration.
- To promote justice and equity in the distribution of the property tax burden.

IAAO's fundamental strength is in the collective knowledge and experience of its membership. While IAAO has come to be regarded as the foremost organization in its field, the association needs to grow in membership to be able to successfully meet the challenges that are confronting the field. New members are welcome, and current members are urged to continue their membership.

Membership in IAAO signifies a professional attitude toward the important work of property tax administration. The association constantly strives to provide its members with information that they can use in their work. The knowledge gained from IAAO membership can save employers substantial amounts of money, as well as further careers of individuals in property appraisal and property tax administration.

The IAAO Executive Board, consisting of 14 persons elected by the membership, is the legislative and policy-making body of the association. The board includes the Executive Committee, which is composed of the president, the president-elect, the vice-president, and the immediate past president, and which acts on behalf of the association between meetings of the board. The Executive Board is assisted in its work by member committees and by IAAO Representatives appointed by the president from among the membership. Some of the standing and special committees include the Research and Technology, Outreach, Professional Development, Legal, Councils and Sections, Ethics, Planning and Operations, Associate Member, Nominating, Local Host, and Resolution Committees.

IAAO executive offices are located in Kansas City, Missouri where the executive director and staff carry out a diversified program of member services and activities.

Members of IAAO enjoy all of the benefits of affiliation with a prestigious organization recognized throughout the world. They enjoy good fellowship, make important professional contacts, and profit from the many fine

programs and publications. Nonmembers should consider joining IAAO today. Members should make sure they take full advantage of the opportunities membership affords.

Education and Training

The education programs of IAAO are structured to reflect the association's view that the development of mature fee appraisal, mass appraisal, and administrative skills are crucial for the successful functioning of the property tax professional. Mass appraisal skills are essential to the production of initial values as part of a revaluation effort. Fee appraisal skills are necessary in order to properly defend a jurisdiction's assessed values, while administrative skills are needed to properly manage the human and physical resources needed to successfully carry out a tax jurisdiction's assessment function.

The education programs made available by IAAO include courses, workshops, programmed self-study courses, audio-visuals, internet courses, an annual conference, and a number of special workshops and seminars on selected topics of interest to the membership. Each of these programs are designed to meet a specific objective in the professional development of assessing officers and assessment personnel.

The IAAO's Professional Designation Program confers five internationally recognized professional designations: the Certified Assessment Evaluation (CAE), the Residential Evaluation Specialist (RES), the Cadastral Mapping Specialist (CMS), the Personal Property Specialist (PPS), the Assessment Administration Specialist (AAS) and the Mass Appraisal Specialist (MAS).

Publications

IAAO publishes books, periodicals, and other publications relating to the association's field of interest. Book titles range from basic textbooks on property valuation to analytical studies that can be useful in policy deliberations. Membership periodicals include the quarterly Journal of Property Tax Assessment & Administration and the monthly Fair & Equitable. Membership falls into one of four categories:

- Regular
- Associate
- Affiliate
- Retired

CHAPTER 2 – Department of Revenue

2.1 Summary of Duties and Powers

[Chapter 84.08 RCW](#) addresses specifically some of the powers and duties of the Department of Revenue as they relate to the administration of property tax laws.

RCW 84.08.010	Powers of department of revenue – General supervision – Rules and processes – Visitation of counties.
RCW 84.08.020	Additional powers – To advise county and local officers – Books and blanks – Reports.
RCW 84.08.030	Additional powers – To test work of assessors – Supplemental assessment lists – Audits.
RCW 84.08.040	Additional powers – To keep valuation records – Access to files of other public offices.
RCW 84.08.050	Additional powers – Access to books and records – Hearings – Investigation of complaints.
RCW 84.08.060	Additional powers – Power over county boards of equalization – Reconvening – Limitation on increase in property value in appeals to board of tax appeals from county board of equalization.
RCW 84.08.070	Rules and regulations authorized.
RCW 84.08.080	Department to decide questions of interpretation.
RCW 84.08.115	Department to prepare explanation of property tax system.
RCW 84.08.120	Duty to obey orders of department of revenue.
RCW 84.08.140	Appeals from levy of taxing district to department of revenue.
RCW 84.08.190	Assessors to meet with department of revenue.

[Chapter 84.12](#) and [84.16 RCW](#) require that the Department of Revenue annually make an assessment of the operating property of all companies and prepare an assessment roll of the true cash value of the property each year. [RCW 84.12.200](#) (12) states: "'Operating property' means and includes all property, real and personal, owned by any company, or held by it as occupant, lessee or otherwise, including all franchises and lands, buildings, rights-of-way, water powers, motor vehicles, wagons, horses, aircraft, aerodromes, hangars, office furniture, water mains, gas mains, pipe lines, pumping stations, tanks, tank farms, holders, reservoirs, telephone lines, telegraph lines, transmission and distribution lines, dams, generating plants, poles, wires, cables, conduits, switch boards, devices, appliances, instruments, equipment, machinery, landing slips, docks, roadbeds, tracks, terminals, rolling stock equipment, appurtenances and all other property of a like or different kind, situate within the state of Washington, used by the company in the conduct of its operations; and, in case of personal property used partly within and partly without the state, it means and includes a proportion of such personal property to be determined as in this chapter provided."

[RCW 82.45.060](#) imposes an excise tax upon each sale of real property. The county treasurer is an agent for the collection of the real estate excise tax. The Department of Revenue (Department) is charged with the promulgation of the rules and with the general administration of the tax.

The Department administers the nonprofit exemptions included in [chapter 84.36 RCW](#). The Department is the granting authority for exemptions such as cemeteries, churches, character-building properties, public assembly

halls, libraries, orphanages, day care centers, nursing homes, hospitals, nonpermanent indigent homes, nonprofit organizations for medical research and training, schools, colleges, art, scientific, historic, water distribution, sheltered workshops for handicapped, and certain conservation organizations.

The Department administers the grant assistance program for widows and widowers of veterans. Although the assessor administers the deferral program for senior citizens and disabled persons and the deferral program for homeowners with limited incomes, the Department audits the approved applications, notifies the assessor of any disqualifying factors, and certifies to the state treasurer the amounts due to the respective county, city, or special district treasurers. The Department also has authority to conduct audits of the assessor's administration of the property tax exemption program for senior citizens and disabled persons.

The Forest Tax Section of the Department of Revenue collects the timber excise tax on a quarterly basis on timber harvested from state, federal, and private lands. Semi-annually, the section determines and reports WAC rules containing the stumpage value of the various species of timber, which provides the basis for tax assessment and collection. In addition, the section annually determines bare forest land values according to a statutory formula for use by the county assessors in assessing designated forest land.

Each county's 4 percent portion of the excise tax collected from private timber harvest, less administrative fees, is distributed to the county of origin quarterly. Distribution to local taxing districts is based on their portion of the assessed value of designated forest lands in their local district. The district Timber Assessed Value (TAV) is part of the county TAV, which is computed annually by the Department. In some instances, the district TAV is used as part of the base to determine bond and school maintenance and operation levy rates.

The Department provides assistance to counties in other matters, including forest land designation, compensating tax assessment for removal from designation, and statistical data on timber harvest, tax collections, and harvest projections. For questions or information about specific programs, call the Department's Property Tax Division at (360) 534-1400.

Other References

[AGO 2010 No. 5](#)

Taxation - Tax Levies - Timber - Treasurer

Court Cases

Andrews v. Munro (1984) 102 Wn.2d 761

Carpenter v. Franklin County Assessor, (1981) 30 WA 826, 638 P2d 619.

Makah Indian Tribe v. Clallam County, (1968) 73 W2d 677, 440 P2d 442.

Sohol v. Clark, (1971) 78 W2D 813, 479 P2d 925.

Timber Traders v. Johnston, (1975) 13 WA 607, 636 P2d 655.

Wasser & Winters v. Jefferson County, (1974) 84 W2d 597, 528 P2d 479.

2.2 General Provisions

RCW 84.09.010	Nomenclature – Taxes designated as taxes of year in which payable.
RCW 84.09.020	Abbreviations authorized.
RCW 84.09.030	Taxing district boundaries – Establishment.
RCW 84.09.035	Withdrawal of certain areas of a library district, metropolitan park district, fire protection district, or public hospital district – Date effective.
RCW 84.09.037	School district boundary changes.
RCW 84.09.040	Penalty for nonperformance of duty by county officers.
RCW 84.09.050	Fees and costs allowed in civil actions against county officers.
RCW 84.09.070	Authority of operating agencies to levy taxes.

Other References

AGO 1989 No. 6	Fire protection districts - boundary review boards - municipal corporations - taxation - boundaries - annexation
AGO 2000 No. 1	Boundary review boards - cities and towns - annexation
AGO 2006 No. 9	Fire protection districts - cities and towns - annexation - taxation

CHAPTER 3 – Taxable Property

3.1 General Information

RCW 84.09.010	Nomenclature – Taxes designated as taxes of year in which payable.
RCW 84.36.005	Property subject to taxation.
RCW 84.36.010	Public, certain public-private property exempt.
RCW 84.40.025	Access to property required.
RCW 84.41.041	Physical inspection and valuation of taxable property required – Adjustments during intervals based on statistical data.
RCW 84.60.020	Attachment of tax liens.
WAC 458-07-010	Valuation and revaluation of real property – Introduction.
WAC 458-07-015	Revaluation of real property – Annual counties.
WAC 458-07-025	Revaluation of real property – Plan submitted to department of revenue.
WAC 458-07-030	True and fair value – Defined – Criteria – Highest and best use – Data from property owner.
WAC 458-07-035	Listing of property – Subdivisions and segregation of interests.

3.1.1 State Constitution – Article VII

WASHINGTON STATE CONSTITUTION

ARTICLE VII

REVENUE AND TAXATION

Section 1. Taxation. The power of taxation shall never be suspended, surrendered or contracted away. All taxes shall be uniform upon the same class of property within the territorial limits of the authority levying the tax and shall be levied and collected for public purposes only. The word "property" as used herein shall mean and include everything, whether tangible or intangible, subject to ownership. All real estate shall constitute one class: *Provided*, that the legislature may tax mines and mineral resources and lands devoted to reforestation by either a yield tax or an ad valorem tax at such rate as it may fix, or by both. Such property as the legislature may by general laws provide shall be exempt from taxation. Property of the United States and of the state, counties, school districts and other municipal corporations, and credits secured by property actually taxed in this state, not exceeding in value the value of such property, shall be exempt from taxation. The legislature shall have power, by appropriate legislation, to exempt personal property to the amount of fifteen thousand (\$15,000.00) dollars for each head of a family liable to assessment and taxation under the provisions of the laws of this state of which the individual is the actual bona fide owner. [AMENDMENT 98, 2006 House Joint Resolution No. 4223, p 2117. Approved November 7, 2006.]

Section 2. Limitations on Levies. Except as hereinafter provided and notwithstanding any other provision of this Constitution, the aggregate of all tax levies upon real and personal property by the state and all taxing districts now existing or hereafter created, shall not in any year exceed one percent of the true and fair value of such property in money. Nothing herein shall prevent levies at the rates now provided by law by or for any port or public utility district. The term "taxing district" for the purposes of this section shall mean any political subdivision, Municipal Corporation, district, or other governmental agency authorized by law to levy, or have levied for it, ad valorem taxes on property, other than a port or public utility district. Such aggregate limitation or any specific limitation imposed by law in conformity therewith may be exceeded only as follows:

(a) By any taxing district when specifically authorized so to do by a majority of at least three-fifths of the voters of the taxing district voting on the proposition to levy such additional tax submitted not more than twelve months prior to the date on which the proposed initial levy is to be made and not oftener than twice in such twelve month period, either at a special election or at the regular election of such taxing district, at which election the number of voters voting "yes" on the proposition shall constitute three-fifths of a number equal to forty percent of the total number of voters voting in such taxing district at the last preceding general election when the number of voters voting on the proposition does not exceed forty percent of the total number of voters voting in such taxing district in the last preceding general election; or by a majority of at least three-fifths of the voters of the taxing district voting on the proposition to levy when the number of voters voting on the proposition exceeds forty percent of the number of voters voting in such taxing district in the last preceding general election. Notwithstanding any other provision of this Constitution, any proposition pursuant to this subsection to levy additional tax for the support of the common schools or fire protection districts may provide such support for a period of up to four years and any proposition to levy an additional tax to support the construction, modernization, or remodeling of school facilities or fire facilities may provide such support for a period not exceeding six years. Notwithstanding any other provision of this subsection, a proposition under this subsection to levy an additional tax for a school district shall be authorized by a majority of the voters voting on the proposition, regardless of the number of voters voting on the proposition;

(b) By any taxing district otherwise authorized by law to issue general obligation bonds for capital purposes, for the sole purpose of making the required payments of principal and interest on general obligation bonds issued solely for capital purposes, other than the replacement of equipment, when authorized so to do by majority of at least three-fifths of the voters of the taxing district voting on the proposition to issue such bonds and to pay the principal and interest thereon by annual tax levies in excess of the limitation herein provided during the term of such bonds, submitted not oftener than twice in any calendar year, at an election held in the manner provided by law for bond elections in such taxing district, at which election the total number of voters voting on the proposition shall constitute not less than forty percent of the total number of voters voting in such taxing district at the last preceding general election. Any such taxing district shall have the right by vote of its governing body to refund any general obligation bonds of said district issued for capital purposes only, and to provide for the interest thereon and amortization thereof by annual levies in excess of the tax limitation provided for herein. The provisions of this section shall also be subject to the limitations contained in Article VIII, Section 6, of this Constitution;

(c) By the state or any taxing district for the purpose of preventing the impairment of the obligation of a contract when ordered so to do by a court of last resort. **[AMENDMENT 101, 2007 Engrossed House Joint Resolution No. 4204, pp 3143-3145. Approved November 6, 2007.]**

3.1.2 RCW Numbering and Citation System

The Revised Code of Washington (RCW) is the compilation of all permanent laws now in force. It is a collection of Session Laws (enacted by the Legislature, and signed by the Governor, or enacted via the initiative process), arranged by topic, with amendments added and repealed laws removed. It does not include temporary laws such as appropriations acts. The RCW is published by the Statute Law Committee and the Code Reviser and is the official version of the code. The online version of the RCW is updated twice a year, once in the early fall following the legislative session, and again at the end of the year if a ballot measure that changes the law passed at the general election. ([RCW 1.04.010](#))

Numbering System

The number of each section of this code is made up of three parts, in sequence as follows: Number of title, number of chapter within the title, number of section within the chapter. Thus, RCW 1.04.020 is Title 1, chapter 4, section 20. The section part of the number (.020) is initially made up of three digits, constitutes a true decimal, and provides a facility for numbering new sections to be inserted between old sections already consecutively numbered, merely by adding one or more digits, at the end of the number. In most chapters of the code, sections have been numbered by tens (.010, .020, .040, etc.) leaving nine vacant number between original sections so that for a time new sections may be inserted without extension of the section number beyond three digits.

Citation to the Revised Code of Washington

The code should be cited as RCW; see [RCW 1.04.040](#). An RCW title should be cited Title 7 RCW; an RCW chapter as chapter 7.24 RCW, and an RCW section as RCW 7.24.010. An inclusive string should be cited as RCW 7.24.010 through 7.24.100. A series of sections should be cited as RCW 7.24.010, 7.24.020, and 7.24.030.

In searching for a law regarding a specific subject, it is necessary to refer to the [Revised Code of Washington](#). Locate the title and chapter which contains your subject.

For instance, Title 84 RCW is entitled Property Taxes, and if you were searching for the definition of real property, you would find that it is contained under Taxation with reference to RCW 84.04.090 which means Title 84, chapter .04 and section .090, or properly referenced as RCW 84.04.090.

Here is a list of the chapters contained in Title 84 RCW, Property Taxes. Title 84 RCW and many other titles are involved in the administration of property taxes, and these will be referenced in this procedural manual under their respective subjects.

3.1.3 Title 84 RCW – Property Tax Laws

Chapter 84.04 RCW	Definitions.
Chapter 84.08 RCW	General powers and duties of department of revenue.
Chapter 84.09 RCW	General provisions.
Chapter 84.12 RCW	Assessment and taxation of public utilities.
Chapter 84.14 RCW	New and rehabilitated multiple-unit dwellings in urban centers.
Chapter 84.16 RCW	Assessment and taxation of private car companies.

Chapter 84.20 RCW	Easements of public utilities.
Chapter 84.25 RCW	Targeted urban areas—Exemption.
Chapter 84.26 RCW	Historic property.
Chapter 84.33 RCW	Timber and forest lands.
Chapter 84.34 RCW	Open space, agricultural, timber lands – Current use – Conservation futures.
Chapter 84.36 RCW	Exemptions.
Chapter 84.37 RCW	Property Tax Deferral program.
Chapter 84.38 RCW	Deferral of special assessments and/or property taxes.
Chapter 84.39 RCW	Property tax exemption — widows or widowers of veterans
Chapter 84.40 RCW	Listing of property.
Chapter 84.41 RCW	Revaluation of property.
Chapter 84.44 RCW	Taxable situs.
Chapter 84.48 RCW	Equalization of assessments.
Chapter 84.52 RCW	Levy of taxes.
Chapter 84.55 RCW	Limitations upon regular property taxes.
Chapter 84.56 RCW	Collection of taxes.
Chapter 84.60 RCW	Lien of taxes.
Chapter 84.64 RCW	Lien foreclosure.
Chapter 84.68 RCW	Recovery of taxes paid or property sold for taxes.
Chapter 84.69 RCW	Refunds.
Chapter 84.70 RCW	Destroyed property – Abatement or refund.
Chapter 84.72 RCW	Federal payments in lieu of taxes.
Chapter 84.98 RCW	Construction.

3.1.4 Title 458 WAC – Property Tax Rules

[Washington Administrative Code](#) (WAC) rules have been adopted by the Department of Revenue in accordance with the authority contained in Title 34 RCW.

These rules are developed by title, chapter, and section and have been adopted governing the formal and informal procedures regarding the administration of property taxes.

The following chapters have been adopted:

Chapter 458-02 WAC	Consolidated licensing system.
Chapter 458-07 WAC	Valuation and revaluation of real property.

Chapter 458-10 WAC	Accreditation of real property appraisers.
Chapter 458-12 WAC	Property tax division – Rules for assessors.
Chapter 458-14 WAC	County boards of equalization.
Chapter 458-15 WAC	Historic property.
Chapter 458-16 WAC	Property tax – Exemptions.
Chapter 458-16A WAC	Property tax – Exemptions – Homes for the aging, senior citizens and disabled persons.
Chapter 458-17 WAC	Assessment and taxation of ships and vessels.
Chapter 458-18 WAC	Property tax – Abatements, credits, deferrals and refunds.
Chapter 458-18A WAC	Limited income deferral program
Chapter 458-19 WAC	Property tax levies, rates, and limits.
Chapter 458-20 WAC	Excise tax rules.
Chapter 458-28 WAC	Taxation of financial businesses by cities or towns
Chapter 458-29A WAC	Leasehold excise tax.
Chapter 458-30 WAC	Open space taxation act rules.
Chapter 458-40 WAC	Taxation of forest land and timber.
Chapter 458-50 WAC	Inter-county utilities and transportation companies – Assessment and taxation.
Chapter 458-53 WAC	Property tax annual ration study
Chapter 458-57 WAC	State of Washington Estate and Transfer Tax Reform Act rules
Chapter 458-61A WAC	Real estate excise tax.
Chapter 458-276 WAC	Access to public records

3.2 Real Property

RCW 84.04.090	"Real property." (Defined.)
RCW 84.40.020	Assessment date – Average inventory basis may be used – Public inspection of listing, documents, and records.
RCW 84.40.030	Basis of valuation, assessment, appraisal – One hundred percent of true and fair value – Exceptions – Leasehold estates – Real property – Appraisal – Comparable Sales
RCW 84.40.040	Time and manner of listing.
RCW 84.40.175	Listing of exempt property – Proof of exemption – Valuation of publicly owned property.
WAC 458-07-030	True and fair value – Defined – Criteria – Highest and best use – Data from property owners.
WAC 458-12-010	Definition – Property – Real.
WAC 458-12-012	Definition – Irrigation systems – Real – Personal.
WAC 458-12-055	Taxable situs – Real Property.

Other References

[AGO 1995 No. 5](#) Taxation – Property – Valuation – Constitutional requirements on imposition of ad valorem property tax.

3.2.1 Real Property Revaluation

[RCW 36.21.011](#) Appointment of deputies and assistants – Engaging expert appraisers – Employment and classification plans for appraisers.

[RCW 84.40.0301](#) Determination of value by public official – Review – Revaluation - Presumptions.

[RCW 84.40.178](#) Exempt residential property – Maintenance of assessed valuation – Notice of change.

[RCW 84.41.030](#) Revaluation program to be on continuous basis – Revaluation schedule – Effect of other proceedings on valuation.

[RCW 84.41.041](#) Physical inspection and valuation of taxable property required – Adjustments during intervals based on statistical data.

[RCW 84.41.050](#) Budget, levy, to provide funds.

[RCW 84.41.060](#) Assistance by department of revenue at request of assessor.

[RCW 84.41.070](#) Finding of unsatisfactory progress – Notice – Duty of county legislative authority.

[RCW 84.41.080](#) Contracts for special assistance.

[RCW 84.41.090](#) Department to establish statistical methods – Publication of rules, regulations, and guides – Compliance required.

[RCW 84.41.100](#) Assessor may appoint deputies and engage expert appraisers.

[RCW 84.41.110](#) Appraisers to act in advisory capacity.

[RCW 84.41.120](#) Assessor to keep records – Orders of department of revenue, compliance enjoined, remedies.

[RCW 84.41.130](#) Assessor's annual reports.

[WAC 458-07-025](#) Revaluation of real property – Plan submitted to department of revenue.

[WAC 458-07-030](#) True and fair value – Defined – Criteria – Highest and best use – Data from property owners.

[WAC 458-07-035](#) Listing of property – Subdivision and segregation of interests.

Other References

[State Constitution, Art. VII](#) Revenue and Taxation.

[AGO 1957-58, No. 2](#) Tax Commission, County assessors, Tax Commission's authority over assessors.

[AGO 1979, No. 17](#) Taxation – Property – Valuation of new construction by county assessors.

[AGLO 1980, No. 25](#) Offices and officers – County – Assessors – Taxation – Property – Necessity for physical inspection.

AGO 1986, No. 3	Counties – Assessor – Taxes – Valuation of property – Presumption of correctness.
AGO 1965, No. 31	Office and officers – County – Assessors – Taxation – Real property – Maximum level of assessment – Blanket percentage increase without physical inspection of property – Fair market value.
AGO 1995, No. 5	Taxation – Property – Valuation – Constitutional requirements on imposition of ad valorem property tax.
Court Cases	Advance Silicon Materials v. Grant County 75641-4 (2015) Belas v. Kiga 1997135 Wn.2d 913 (1998) Carpenter v. Franklin County Assessor, (1981) 30 WA 826, 638 P2d 619. Carkonen v. Williams 76 Wn.2d 617, 458 p.2d 280 (1969) Dore v. Kinnear 79 Wn.2d 755, 489 P 2d 898 (1971). Island County on Assessment Ratios v. Dept. of Revenue, (1972) 81 W2d 193, 500 P2d 756. Niichel v Lancaster 97 Wn. 2d 620, 647 P.2d 1021 (1982) Sator v. Department of Revenue, 89 Wn.2d 338 (1977). Schreiber v. Riemcke, 11 Wn. App., 873, 526 P 2d 904 (1974).

3.2.2 REAL PROPERTY – New Construction

RCW 36.21.070	New construction building permits – Appraisal of building.
RCW 36.21.080	New construction building permits – When property placed on assessment rolls.
RCW 36.21.090	Initial placement of mobile home on assessment roll.
RCW 84.40.040	Time and manner of listing.
WAC 458.12.342	New construction – Assessment.
WAC 458-12-343	New construction – Reports.

Other References

AGO 1979, No. 17	Taxation – Property – Valuation of new construction by county assessors.
Special Notices	Adding New Value to the Assessment Roll (Issued November 27, 2017) Building Permits In Relationship to Adding Value of New Construction (Issued September 15, 2008)

3.2.3 REAL PROPERTY – Notice of Change in Value

RCW 84.08.115	Department to prepare explanation of property tax system.
RCW 84.34.160	Information on current use classification – Publication and dissemination.
RCW 84.40.045	Notice of change in valuation of real property to be given taxpayer – Copy to person making payments pursuant to mortgage, contract, or deed of trust – Procedure – Penalty.

RCW 84.40.178	Exempt residential property – Maintenance of assessed valuation – Notice of change.
RCW 84.60.020	Attachment of tax liens.
WAC 458-12-360	Notice of change in value of real property.
WAC 458-30-265	Valuation cycle.

3.3 Mobile Homes

RCW 6.13.010	Homestead, what constitutes – "Owner," "net value" defined.
RCW 36.21.090	Initial placement of mobile home on assessment roll.
RCW 46.04.302	Mobile home, manufactured home.
RCW 46.04.622	Park trailer.
RCW 46.12.105	Transfer of ownership of mobile home, county assessor notified – Evidence of taxes paid.
RCW 46.12.290	Mobile or manufactured homes, application of chapter to – Rules.
RCW 46.44.170	Mobile home or park model trailer movement special permit and decal – Responsibility for taxes – License plates – Rules.
RCW 46.44.173	Notice to treasurer and assessor of county where mobile home or park trailer to be located.
RCW 82.50.010	Definitions.
RCW 82.50.530	Ad valorem taxes prohibited as to mobile homes, travel trailers or campers – Loss of identity, subject to property tax.
RCW 84.36.383	Residences – Definitions.
RCW 84.36.510	Mobile homes in dealer's inventory.
RCW 84.38.020	Definitions.
RCW 84.40.343	Mobile homes – Identification of.
RCW 84.40.344	Mobile homes – Avoidance of payment of tax – Penalty.
RCW 84.60.010	Priority of tax lien.
RCW 84.60.020	Attachment of tax liens.

3.4 Current Use

WAC 458-30-200	Definitions.
WAC 458-30-205	Department of revenue – Duties.
WAC 458-30-215	Application process.
WAC 458-30-220	Application fee.
WAC 458-30-225	Application for farm and agricultural classification.
WAC 458-30-230	Application for open space classification.
WAC 458-30-232	Application for timber land classification.

<u>WAC 458-30-240</u>	Agreement relating to open space and timber land classifications.
<u>WAC 458-30-242</u>	Application for open space/farm and agricultural conservation land classification.
<u>WAC 458-30-245</u>	Recording of documents.
<u>WAC 458-30-250</u>	Approval or denial and appeal.
<u>WAC 458-30-260</u>	Valuation procedures for farm and agricultural land.
<u>WAC 458-30-262</u>	Agricultural land valuation – Interest rate – Property tax component. (Updated annually.)
<u>WAC 458-30-265</u>	Valuation cycle.
<u>WAC 458-30-267</u>	Valuation procedures for open space and timber land.
<u>WAC 458-30-270</u>	Data relevant to continuing eligibility – Assessor may require owner to submit.
<u>WAC 458-30-275</u>	Continuing classification upon sale or transfer of ownership of classified land – Actions of landowner and county officials to be taken prior to recording a conveyance of classified land.
<u>WAC 458-30-280</u>	Notice to withdraw from classification.
<u>WAC 458-30-285</u>	Withdrawal from classification.
<u>WAC 458-30-295</u>	Removal of classification.
<u>WAC 458-30-300</u>	Additional tax – Withdrawal or removal from classification.
<u>WAC 458-30-305</u>	Due date of additional tax, interest, and penalty upon withdrawal or removal.
<u>WAC 458-30-310</u>	County recording authority – County financial authority – Duties.
<u>WAC 458-30-317</u>	Principal residence of farm operator or housing for farm and agricultural employees.
<u>WAC 458-30-320</u>	Assessment and tax rolls.
<u>WAC 458-30-325</u>	Transfers between classifications – Application for reclassification.
<u>WAC 458-30-330</u>	Rating system – Authorization to establish.
<u>WAC 458-30-345</u>	Advisory committee.
<u>WAC 458-30-355</u>	Agreement may be abrogated by legislature.
<u>WAC 458-30-500</u>	Definitions of terms used in WAC 458-30-500 through 458-30-590.
<u>WAC 458-30-510</u>	Creation of district – Protest – Adoption of final assessment roll.
<u>WAC 458-30-520</u>	Notification of district – Certification by assessor – Estimate by district.
<u>WAC 458-30-525</u>	Notification of final assessment roll.
<u>WAC 458-30-530</u>	Notification of owner regarding creation of district.
<u>WAC 458-30-540</u>	Waiver of exemption.
<u>WAC 458-30-550</u>	Exemption – Removal or withdrawal.
<u>WAC 458-30-560</u>	Partial special benefit assessment – Computation.
<u>WAC 458-30-570</u>	Connection subsequent to final assessment roll – Interest – Connection charge.

[WAC 458-30-590](#) Rate of inflation – Publication – Interest rate – Calculation.

[WAC 458-30-700](#) Designated forest land – Removal – Change in status – Compensating tax.

3.4.1 Current Use – Open Space, Farm, Agricultural, and Timber Land

[RCW 84.34.010](#) Legislative declaration.

[RCW 84.34.020](#) Definitions.

[RCW 84.34.030](#) Applications for current use classification – Forms - Fee – Times for making.

[RCW 84.34.035](#) Applications for current use classification – Approval or denial – Appeal – Duties of assessor upon approval.

[RCW 84.34.037](#) Applications for current use classification – To whom made – Factors – Review.

[RCW 84.34.041](#) Application for current use classification – Forms – Public hearing – Approval or denial.

[RCW 84.34.050](#) Notice of approval or disapproval – Procedure when approval granted.

[RCW 84.34.055](#) Open space priorities – Open space plan and public benefit ratings system.

[RCW 84.34.060](#) Determination of true and fair value of classified land – Computation of assessed value.

[RCW 84.34.065](#) Determination of true and fair value of farm and agricultural land – Definitions.

[RCW 84.34.070](#) Withdrawal from classification.

[RCW 84.34.080](#) Change in use.

[RCW 84.34.090](#) Extension of additional tax and penalties on tax roll – Lien.

[RCW 84.34.100](#) Payment of additional tax, penalties, and/or interest.

[RCW 84.34.108](#) Removal of classification – Factors – Notice of continuance – Additional tax – Lien – Delinquencies – Exemptions.

[RCW 84.34.111](#) Remedies available to owner liable for additional tax.

[RCW 84.34.121](#) Information required.

[RCW 84.34.131](#) Valuation of timber not affected.

[RCW 84.34.141](#) Rules and regulations.

[RCW 84.34.145](#) Advisory committee.

[RCW 84.34.150](#) Reclassification of land classified under prior law which meets definition of farm and agricultural land.

[RCW 84.34.155](#) Reclassification of land classified as timber land which meets definition of forest land under chapter [84.33](#) RCW.

[RCW 84.34.160](#) Information on current use classification – Publication and dissemination.

[RCW 84.34.200](#) Acquisition of open space, etc., land or rights to future development by counties, cities, or metropolitan municipal corporations – Legislative declaration – Purposes.

RCW 84.34.400	County option to merge timberland and designated forestland programs.
RCW 84.34.410	Application – Marijuana land uses.
RCW 84.40.045	Notice of change in valuation of real property to be given taxpayer – Copy to person making payments pursuant to mortgage, contract, or deed of trust – Procedure – Penalty.

Other References

AGO 1977, No. 16	Taxation – Property – Farm and agricultural land – Valuation of perennial crops.
AGO 1978, No. 23	Taxation – Property – Current use value of farm and agricultural land as related to its value based upon highest and best use.
AGLO 1977, No. 21	Offices and officers – County – Assessor – Taxation – Property – Public records – Access to comparable leases.
AGO 1981, No. 15	Taxation – Property – Mineral rights – Forest land – Open space, agricultural and farm land.
AGO 1991, No. 11	Taxation - property - agricultural - open space - timber land - forest land - assessor
PTA 4.3.2012	Specific question pertaining to the Administration and Qualification of the land on which a residence is sited for property classified as farm and agricultural land under Chapter 84.34 RCW.
PTA 5.1.2009	Land Classified as Farm and Agricultural Land Under Chapter 84.34 RCW, when the Land Qualifies for Classification because of the Commercial Agricultural Activity Produced from Perennial Plantings.
PTA 12.3.2014	Classification of Land Used for Christmas Tree Production.
PTA 14.2.2009	Transfer or Removal of Land Owned by a Federally Recognized Indian Tribe Classified Under Chapters 84.33 or 84.34 RCW.
PTA 16.1.2011	Establishing Additional Eligibility Requirements for the Current Use Program
Court Case	Van Buren v. Miller, (1979) 22 Wn. App. 836, 592 P.2d 671
Special Notices	Eliminating the requirement that an owner must give 2 yr. notice to withdraw from Current Use (Issued December 20, 2017) Land Containing Historical Sites Classified as Open Space Land (Issued June 8, 2010 and reissued April 8, 2011) Distribution of Additional Tax and Compensating Tax (Issued May 17, 2010) Wheat Prices Used to Determine the Assessed Value of Farm & Agricultural Land (Issued October 2, 2009)

3.4.2 Current Use – Special Benefit Assessments

RCW 84.34.300	Special benefit assessments for farm and agricultural land or timber land – Legislative findings – Purpose.
RCW 84.34.310	Special benefit assessments for farm and agricultural land or timber land – Definitions.
RCW 84.34.320	Special benefit assessments for farm and agricultural land or timber land – Exemption from

assessment – Procedures relating to exemption – Constructive notice of potential liability – Waiver of exemption.

[RCW 84.34.330](#)

Special benefit assessments for farm and agricultural land or timber land – Withdrawal from classification or change in use – Liability – Amount – Due date – Lien.

[RCW 84.34.340](#)

Special benefit assessments for farm and agricultural land or timber land – Withdrawal or removal from classification – Notice to local government – Statement to owner of amounts payable – Delinquency date – Enforcement procedures.

[RCW 84.34.350](#)

Special benefit assessments for farm and agricultural land – Use of payments collected.

[RCW 84.34.360](#)

Special benefit assessments for farm and agricultural land or timber land – Rules to implement [RCW 84.34.300](#) through [84.34.380](#).

[RCW 84.34.370](#)

Special benefit assessments for farm and agricultural land or timber land – Assessments due on land withdrawn or changed.

[RCW 84.34.380](#)

Special benefit assessments for farm and agricultural land or timber land – Application of exemption to rights and interests preventing nonagricultural or nonforest uses.

[RCW 84.34.390](#)

Application – Chapter [79.44](#) RCW – Assessments against public lands.

[WAC 458-30-500](#)

Definitions of terms used in WAC [458-30-500](#) through [458-30-590](#).

[WAC 458-30-510](#)

Creation of district – Protest – Adoption of final assessment roll.

[WAC 458-30-520](#)

Notification of district – Certification by assessor – Estimate by district.

[WAC 458-30-525](#)

Notification of final assessment roll.

[WAC 458-30-530](#)

Notification of owner regarding creation of district.

[WAC 458-30-540](#)

Waiver of exemption.

[WAC 458-30-550](#)

Exemption – Removal or withdrawal.

[WAC 458-30-560](#)

Partial special benefit assessment – Computation.

[WAC 458-30-570](#)

Connection subsequent to final assessment roll – Interest – Connection charge.

[WAC 458-30-590](#)

Rate of inflation – Publication – Interest rate – Calculation. (Updated annually.)

Other References

Court Case

Ferndale v. Friberg, (1987) 107 Wn. 2d 602, 732 P.2d 143

3.4.3 Open Space – Conservation Futures

[RCW 64.04.130](#)

Interests in land for purposes of conservation, protection, preservation, etc. – Ownership by certain entities – Conveyances.

[RCW 84.34.200](#)

Acquisition of open space, etc., land or rights to future development by counties, cities, or metropolitan municipal corporations – Legislative declaration – Purposes.

[RCW 84.34.210](#)

Acquisition of open space, land, or rights to future development by certain entities – Authority to acquire – Conveyance or lease back.

[RCW 84.34.220](#)

Acquisition of open space, land, or rights to future development by certain entities – Developmental rights – "Conservation futures" – Acquisition – Restrictions.

- [RCW 84.34.230](#) Acquisition of open space, etc., land or rights to future development by counties, cities, metropolitan municipal corporations or nonprofit nature conservancy corporation or association – Additional property tax levy authorized.
- [RCW 84.34.240](#) Acquisition of open space, etc., land or rights to future development by counties, cities, metropolitan municipal corporations or nonprofit nature conservancy corporation or association – Conservation futures fund.
- [RCW 84.34.250](#) Nonprofit nature conservancy corporation or association defined.

3.5 Timber and Forest Land – Reforestation Lands

- [RCW 84.33.010](#) Legislative findings.
- [RCW 84.33.035](#) Definitions.
- [RCW 84.33.040](#) Timber on privately or federally owned land exempted from ad valorem taxation.
- [RCW 84.33.041](#) State excise tax on harvesters of timber imposed – Credit for county tax – Deposit of moneys in timber tax distribution account.
- [RCW 84.33.046](#) Excise tax rate July 1, 1988, and thereafter.
- [RCW 84.33.051](#) County excise tax on harvesters of timber authorized – Rate – Administration and collection – Deposit of moneys in timber tax distribution account – Use.
- [RCW 84.33.074](#) Excise tax on harvesters of timber – Calculation of tax by small harvesters – Election – Filing form.
- [RCW 84.33.075](#) Excise tax on harvesters of timber – Exemption for certain nonprofit organizations, associations, or corporations.
- [RCW 84.33.077](#) Credit for property taxes paid on timber on public land.
- [RCW 84.33.0775](#) Timber harvest tax credit.
- [RCW 84.33.0776](#) Timber harvest excise tax agreement credit.
- [RCW 84.33.078](#) Sale of timber on non-federally owned public land – Notice of sale or prospectus to indicate tax treatment.
- [RCW 84.33.081](#) Distributions from timber tax distribution account – Distributions from county timber tax account.
- [RCW 84.33.086](#) Payment of tax.
- [RCW 84.33.088](#) Reporting requirements on timber purchase. (*Expires July 1, 2014.*)
- [RCW 84.33.091](#) Tables of stumpage values – Revised tables – Legislative review – Appeal.
- [RCW 84.33.096](#) Application of excise taxes' administrative provisions and definitions.
- [RCW 84.33.130](#) Forest land valuation – Application by owner that land be designated and valued as forest land – Hearing – Rules – Approval, denial of application – Appeal.
- [RCW 84.33.140](#) Forest land valuation – Notation of forest land designation upon assessment and tax rolls – Notice of continuance – Removal of designation – Compensating tax.
- [RCW 84.33.145](#) Compensating tax.

RCW 84.33.170	Application of chapter to Christmas trees.
RCW 84.33.175	Application of tax – Sale of land to governmental agency with reservation of rights to timber – Conveyance by governmental agency of trees.
RCW 84.33.200	Legislative review of timber tax system – Information and data to be furnished.
RCW 84.33.210	Forest land valuation – Special benefit assessments.
RCW 84.33.220	Forest land valuation – Withdrawal from designation or change in use –Liability.
RCW 84.33.230	Forest land valuation – Change in designation – Notice.
RCW 84.33.240	Forest land valuation – Change in classification or use – Application of payments.
RCW 84.33.250	Forest land valuation – Special benefit assessments.
RCW 84.33.260	Forest land valuation – Withdrawal from designation or change in use – Benefit assessments.
RCW 84.33.270	Forest land valuation – Government future development right – Conserving forest land – Exemptions.
RCW 84.33.280	Applicant for forest riparian easement program — Department to rely on certain documents.

Other References

AGO 1981, No. 15	Taxation – Property – Mineral rights – Forest land – Open space, agricultural and farm land.
AGO 1991, No. 11	Taxation - property - agricultural - open space - timber land - forest land – assessor – inheritance of classified or designated land
Special Notice	Distribution of Additional Tax and Compensating Tax (Issued May 17, 2010)
Court Cases	Ancich v. Turner, (1983) 35 Wn. App. 487, 667 P2d 1112. Klassen v. Skamania County, (1992) 66 Wn. App. 127 Manke Lumber v. Diehl, (1998) 91 Wn. App. 793 Weyerhaeuser Company v. Cowlitz County, (1986) 109 Wn. 2d 363

3.6 Personal Property

RCW 84.04.080	"Personal Property"
RCW 84.04.150	"Computer software" and allied terms.
RCW 84.36.005	Property subject to taxation.
RCW 84.36.070	Intangible personal property – Appraisal.
RCW 84.36.110	Household goods and personal effects – Three thousand dollars actual value to head of family.
RCW 84.36.120	Household goods and personal effects – Definitions.
RCW 84.36.600	Computer software.
RCW 84.40.020	Assessment date – Average inventory basis may be used – Public inspection of listing, documents, and records.

RCW 84.40.037	Valuation of computer software – Embedded software.
RCW 84.40.040	Time and manner of listing.
RCW 84.40.060	Personal property assessment.
RCW 84.40.070	Companies, associations – Listing.
RCW 84.40.110	Examination under oath – Default listing.
RCW 84.40.120	Oaths, who may administer – Criminal penalty for willful false listing.
RCW 84.40.130	Penalty for failure or refusal to list – False or fraudulent listing, additional penalty.
RCW 84.40.185	Individuals, corporations, limited liability companies, associations, partnerships, trusts, or estates required to list personalty.
RCW 84.40.190	Statement of personal property.
RCW 84.40.200	Listing of personalty on failure to obtain statement – Statement of valuation to person assessed or listing – Exemption.
RCW 84.40.340	Verification by assessor of any list, statement, or schedule -- Confidentiality, penalty.
RCW 84.44.010	Situs of personalty generally.
RCW 84.44.020	Gas, electric, water companies – Mains and pipes, as personalty.
RCW 84.44.030	Lumber and sawlogs.
RCW 84.44.050	Personalty of automobile transportation companies – Vessels, boats and small craft.
RCW 84.44.080	Owner moving into state or to another county after January 1st.
RCW 84.44.090	Disputes over situs to be determined by department of revenue.
WAC 458-12-005	Definition – Property – Personal.
WAC 458-12-012	Definition – Irrigation systems – Real – Personal.
WAC 458-12-060	Listing of personal property.
WAC 458-12-110	Listing of personalty – Estimate listing penalty.
WAC 458-12-115	Personalty – Taxable situs – In general.
WAC 458-12-120	Situs of personalty – Beer kegs.
WAC 458-12-155	Listing of property – Public lands – Federal lands – Exclusive or concurrent jurisdiction.
WAC 458-12-251	Computer software – Definitions – Valuation.

Other References

AGO 1965, No. 4	Offices and officers – County – Assessor – Tax rolls – Listing of property – Authority to correct possible error.
AGO 1977, No. 8	Taxation – Property – Excise – Leases – Taxation of improvements to leaseholds of public property.
AGO 1980, No. 1	Offices and officers – County – Assessor – Public records – Taxation – Public access to property tax assessment rolls.

[PTA 6.2.2011](#) Property Taxability of Motor Vehicles.

[PTA 7.1.2009](#) Sales Tax as an Element of Value.

[PTA 8.1.2009](#) Appraisal of Bed and Breakfast Establishments.

[PTA 9.1.2009](#) Assessment of Supplies.

[PTA 10.1.2009](#) "True Lease" or Security Agreement.

Court Cases

Automat Co., Inc. v. Yakima County, (1972) 6 WA 991, 497 P2d 617.

Longview Co. v. Cowlitz, (1939) 1 W2d 64, 95 P2d 376.

New Tacoma Parking v. Johnston, (1975) 85 W2d 707, 538 P2d 1232.

Niichel v. Lancaster, (1982) 97 W2d 620, 647 P2d 1021.

Northern Commercial Co. v. King County, (1964) 63 W2d 639, 388 P2d 546.

P. B. Investment Company, Inc. v. King County, (1970) 78 W2d 81, 469 P2d 893.

Timber Traders v. Johnston, (1975) 13 WA 607, 536 P2d 655.

Timber Traders, Inc. v. Johnston, (1976) 87 W2d 42, 548 P2d 1080.

3.7 State Assessed Property

3.7.1 State Assessed Property – Centrally Assessed Property

RCW 84.12.200	Definitions.
RCW 84.12.210	Property used but not owned deemed sole operating property of owning company.
RCW 84.12.220	Jurisdiction to determine operating, nonoperating property.
RCW 84.12.230	Annual reports to be filed.
RCW 84.12.240	Access to books and records.
RCW 84.12.250	Depositions may be taken.
RCW 84.12.260	Default valuation by department of revenue – Penalty – Estoppel.
RCW 84.12.270	Annual assessment – Sources of information.
RCW 84.12.280	Classification of real and personal property.
RCW 84.12.300	Valuation of interstate utility – Apportionment of system value to state.
RCW 84.12.310	Deduction of nonoperating property.
RCW 84.12.320	Persons bound by notice.
RCW 84.12.330	Assessment roll – Notice of valuation.
RCW 84.12.340	Hearings on assessment, time and place of.
RCW 84.12.350	Apportionment of value by department of revenue.
RCW 84.12.360	Basis of apportionment.
RCW 84.12.370	Certification to county assessor – Entry upon tax rolls.
RCW 84.12.380	Assessment of nonoperating property.
RCW 84.12.390	Rules and regulations.
WAC 458-50-020	Annual reports – Duty to file.
WAC 458-50-030	Annual reports – Contents.
WAC 458-50-040	Annual reports – Time of filing – Extension of time.
WAC 458-50-060	Failure to make report – Default valuation – Penalty – Estoppel.
WAC 458-50-070	Annual assessment – Procedure.
WAC 458-50-080	True cash value – Criteria.
WAC 458-50-085	Computer software – Definitions – Valuation – Centrally assessed utilities.
WAC 458-50-090	Methods of valuation.
WAC 458-50-100	Apportionment of operating property to the various counties and taxing districts.
WAC 458-50-110	Apportionment reports.
WAC 458-50-120	Notification of real estate transfers.

[WAC 458-50-130](#)

Taxing district boundary changes – Estoppel.

Other References**Court Cases**

Burlington Northern, Inc. v. Johnston, (1977) 89 W2d 321, 572 P2d 1085.

Island County on Assessment Ratios v. Dept. of Revenue, (1972) 81 W2d 193, 500 P2d 756.

Northwest Natural Gas v. Clark County, (1983) 98 W2d 739, 658 P2d 669.

3.7.2 State Assessed Property – Private Car Companies[RCW 84.16.010](#)

Definitions.

[RCW 84.16.020](#)

Annual statement of private car companies.

[RCW 84.16.030](#)

Annual statement of railroad companies.

[RCW 84.16.032](#)

Access to books and records.

[RCW 84.16.034](#)

Depositions may be taken, when.

[RCW 84.16.036](#)

Default valuation by department of revenue – Penalty – Estoppel.

[RCW 84.16.040](#)

Annual assessment – Sources of information.

[RCW 84.16.050](#)

Basis of valuation – Apportionment of system value to state.

[RCW 84.16.090](#)

Assessment roll – Notice of valuation.

[RCW 84.16.100](#)

Hearings, time and place of.

[RCW 84.16.110](#)

Apportionment of value to counties by department of revenue.

[RCW 84.16.120](#)

Basis of apportionment.

[RCW 84.16.130](#)

Certification to county assessors – Apportionment to taxing districts – Entry upon tax rolls.

[RCW 84.16.140](#)

Assessment of nonoperating property.

Other References**Court Cases**

Burlington Northern, Inc. v. Johnston, (1977) 89 W2d 321, 572 P2d 1085.

Island County on Assessment Ratios v. Dept. of Revenue, (1972) 81 W2d 193, 500 P2d 756.

3.7.3 State Assessed Property – Easements of Public Utilities[RCW 84.20.010](#)

Easements taxable as personalty.

[RCW 84.20.020](#)

Servient estate taxable as realty.

[RCW 84.20.030](#)

Sale for taxes – Realty to be sold subject to easement.

[RCW 84.20.040](#)

Realty not subject to tax on easement or property thereon.

[RCW 84.20.050](#)

Railroads excepted.

3.7.4 State Assessed Property – PUD Privilege Tax

RCW 54.28.010	Definitions.
RCW 54.28.011	"Gross revenue" defined.
RCW 54.28.020	Tax imposed – Rates – Additional tax imposed.
RCW 54.28.025	Tax imposed with respect to thermal electric generating facilities – Rate – Additional tax imposed.
RCW 54.28.030	Districts' report to department of revenue.
RCW 54.28.040	Tax computed – Payment – Penalties – Disposition.
RCW 54.28.050	Distribution of tax.
RCW 54.28.055	Distribution of tax proceeds from thermal electric generating facilities.
RCW 54.28.060	Interest.
RCW 54.28.070	Municipal taxes – May be passed on.
RCW 54.28.080	Additional tax for payment on bonded indebtedness of school districts.
RCW 54.28.090	Deposit of funds to credit of certain taxing districts.
RCW 54.28.100	Use of moneys received by taxing district.
RCW 54.28.110	Voluntary payments by district to taxing entity for removal of property from tax rolls.
RCW 54.28.120	Amount of tax if district acquires electric utility property from public service company.

3.7.5 State Assessed Property – Ships and Vessels

RCW 82.49.020	Exemptions.
RCW 82.49.060	Disputes as to appraised value or status as taxable – Petition for conference or reduction of tax – Appeal to board of tax appeals – Independent appraisal.
RCW 84.12.200	Definitions.
RCW 84.12.370	Certification to county assessor – Entry upon tax rolls.
RCW 84.16.120	Basis of apportionment.
RCW 84.16.130	Certification to county assessors – Apportionment to taxing districts – Entry upon tax rolls.
RCW 84.16.140	Assessment of nonoperating property.
RCW 84.36.070	Intangible personal property -- Appraisal.
RCW 84.36.080	Certain ships and vessels.
RCW 84.36.090	Exemption for other ships and vessels.
RCW 84.36.100	Size of vessel immaterial.
RCW 84.40.036	Valuation of vessels – Apportionment.
RCW 84.40.065	Listing of taxable ships and vessels with department – Assessment – Rights of review.

[RCW 88.02.030](#) Exceptions from vessel registration – Use of excess document identification fee for boating safety programs – Rules.

[WAC 458-17-101](#) Assessment and taxation of ships and vessels.

3.8 Other Property

3.8.1 Other Property – Nonoperating Property

[RCW 84.12.200](#) Definitions.

[RCW 84.12.220](#) Jurisdiction to determine operating, nonoperating property.

[RCW 84.12.380](#) Assessment of nonoperating property.

3.8.2 Other Property – Motor Vehicles (Exemption)

[RCW 84.36.595](#) Motor vehicles, travel trailers, and campers.

3.9 In Lieu of Property Tax

3.9.1 In Lieu of Property Tax – Game Lands

[RCW 77.12.170](#) State wildlife fund – Deposits.

[RCW 77.12.201](#) Counties may elect to receive an amount in lieu of taxes – County to record collections for violations of law or rules – Deposit.

[RCW 77.12.203](#) In lieu payments authorized – Procedure – Game lands defined.

3.9.2 In Lieu of Property Tax – Fire/Forest Protection

[RCW 52.16.170](#) Taxation and assessment of lands lying both within a fire protection district and forest protection assessment area.

[RCW 52.20.027](#) Lands subject to forest fire protection assessments exempt – Separation of forest-type lands for tax and assessment purposes.

[RCW 76.04.610](#) Forest fire protection assessment.

3.9.3 Federal Payments In Lieu Of Taxes

[RCW 84.72.010](#) State treasurer authorized to receive in lieu payments – Department of revenue to apportion.

[RCW 84.72.020](#) Basis of apportionment.

[RCW 84.72.030](#) Certification of apportionment to state treasurer – Distribution to county treasurers.

3.10 Public Lands

RCW 79.02.010	Definitions.
RCW 84.04.080	"Personal property."
RCW 84.36.010	Public, certain public-private property exempt.
RCW 84.40.175	Listing of exempt property – Proof of exemption – Valuation of publicly owned property.
RCW 84.40.230	Contract to purchase public land.
RCW 84.40.240	Annual list of lands sold or contracted to be sold to be furnished assessor.
RCW 84.40.315	Federal agencies and property taxable when federal law permits.
RCW 84.60.050	Acquisition by governmental unit of property subject to tax lien or placement under agreement or order of immediate possession or use – Effect.
RCW 84.60.070	Acquisition by governmental unit of property subject to tax lien or placement under agreement or order of immediate possession or use – Segregation of taxes if only part of parcel required.
RCW 36.35.100	County held tax-title property exempt.
WAC 458-12-045	Listing of real property – Contracts for sale of public lands.
WAC 458-12-155	Listing of property – Public lands – Federal lands – Exclusive or concurrent jurisdiction.
WAC 458-12-160	Listing of property – Public land – Conveyances.
WAC 458-12-165	Listing of property – Public lands – Purchase by state, county or city.
WAC 458-12-170	Listing of property – Public lands – Possessory rights.
WAC 458-12-175	Listing of property – Public lands – Leasehold interests and improvements.
WAC 458-12-180	Listing of property – Public lands – Public body as lessee – Improvements.

3.10.1 Public Lands – Assessments Against Public Lands

RCW 79.44.003	"Assessing district" defined.
RCW 79.44.010	Lands subject to local assessments.
RCW 79.44.060	Payment procedure – State lands not subject to lien, exception.
RCW 79.44.090	Payment by state after forfeiture of lease or contract.
RCW 79.44.100	Assignment of lease or contract to purchaser at foreclosure sale.
RCW 79.44.120	When assessments need not be added in certain cases.
RCW 79.44.130	Local provisions superseded.
RCW 79.44.140	Application of chapter – Eminent domain assessments.
RCW 79.44.190	Acquisition of property by state or political subdivision which is subject to unpaid assessments or delinquencies – Payment of lien or installments.

3.11 Leases

3.11.1 Railroad Leases

- [RCW 84.12.200](#) Definitions.
- [RCW 84.12.220](#) Jurisdiction to determine operating, nonoperating property.
- [RCW 84.12.380](#) Assessment of nonoperating property.

3.11.2 State Leases

- [RCW 79.13.010](#) Lease of state lands – General.
- [RCW 79.10.125](#) Land open to public for fishing, hunting, and nonconsumptive wildlife activities.
- [RCW 79.13.110](#) Types of lease authorization.
- [RCW 79.13.120](#) Notice of leasing.
- [RCW 79.13.130](#) Lease procedure – Scheduling auctions.
- [RCW 79.13.140](#) Public auction procedure.
- [RCW 79.13.150](#) Lease/rent of acquired lands.
- [RCW 79.13.160](#) Appraisement of improvement before lease.
- [RCW 79.13.170](#) Water right for irrigation as improvement.
- [RCW 79.13.180](#) Record of leases.
- [RCW 79.02.280](#) Assignment of contracts or leases.
- [RCW 79.13.370](#) Grazing leases – Restrictions.
- [RCW 79.11.290](#) Leased lands reserved from sale.
- [WAC 332-22-010](#) Promulgation.
- [WAC 332-22-020](#) Definitions.
- [WAC 332-22-030](#) Applications to lease.
- [WAC 332-22-040](#) Lease auction procedure.
- [WAC 332-22-050](#) Lease procedure – Amendment.
- [WAC 332-22-060](#) Lease procedure – Rental adjustments.
- [WAC 332-22-070](#) Lease procedure – Notice.
- [WAC 332-22-080](#) Rights to re-lease denied.
- [WAC 332-22-090](#) Notice to lessee of public auction.
- [WAC 332-22-100](#) Existing lease negotiation.
- [WAC 332-22-105](#) Initial lease for commercial, industrial, or residential uses by negotiation.
- [WAC 332-22-110](#) Mandatory lease terms.

WAC 332-22-120	Assignment.
WAC 332-22-130	Residential leases.
WAC 332-22-140	Expired leases – Occupancy.
WAC 332-22-150	Temporary use permits.

3.11.3 Leaseholds

RCW 82.29A.010	Legislative findings and recognition.
RCW 82.29A.020	Definitions.
RCW 82.29A.030	Tax imposed – Credit – Additional tax imposed.
RCW 82.29A.040	Counties and cities authorized to impose tax – Maximum rate – Credit – Collection.
RCW 82.29A.050	Payment – Due dates – Collection and remittance – Liability – Reporting.
RCW 82.29A.060	Administration – Appraisal appeal – Audits.
RCW 82.29A.070	Disposition of revenue.
RCW 82.29A.080	Counties and cities to contract with state for administration and collection – Local leasehold excise tax account.
RCW 82.29A.090	Distributions to counties and cities.
RCW 82.29A.100	Distributions by county treasurers.
RCW 82.29A.110	Consistency and uniformity of local leasehold tax with state leasehold tax – Model ordinance.
RCW 82.29A.120	Allowable credits.
RCW 82.29A.130	Exemptions.
RCW 82.29A.132	Exemptions -- Operation of state route No. 16.
RCW 82.29A.134	Exemptions -- Sales/leasebacks by regional transit authorities.
RCW 82.29A.135	Exemptions – Property used to manufacture alcohol, biodiesel, or wood biomass fuel.
RCW 82.29A.140	Rules and regulations.
RCW 82.29A.150	Cancellation of taxes levied for collection in 1976.
RCW 82.29A.160	Improvements not defined as contract rent taxable under Title 84 RCW.
RCW 84.36.451	Right to occupy or use certain public property, including leasehold interests.
RCW 84.40.080	Listing omitted property or improvements.
WAC 458-12-170	Listing of property – Public lands – Possessory rights.
WAC 458-12-175	Listing of property – Public lands – Leasehold interests and improvements.
WAC 458-12-180	Listing of property – Public lands – Public body as lessee – Improvements.

CHAPTER 4 – Property Tax Collection

4.1 Taxable Situs

RCW 84.44.010	Situs of personalty generally.
RCW 84.44.020	Gas, electric, water companies – Mains and pipes, as personalty.
RCW 84.44.030	Lumber and sawlogs.
RCW 84.44.050	Personalty of automobile transportation companies – Vessels, boats and small craft.
RCW 84.44.080	Owner moving into state or to another county after January 1st.
RCW 84.44.090	Disputes over situs to be determined by department of revenue.

4.2 Listing of Property

RCW 36.21.015	Qualifications for persons assessing real property – Examination – Examination waiver – Continuing education requirement.
RCW 84.04.030	"Assessed value of property."
RCW 84.40.020	Assessment date – Average inventory basis may be used – Public inspection of listing, documents, and records.
RCW 84.40.025	Access to property required.
RCW 84.40.030	Basis of valuation, assessment, appraisal – One hundred percent of true and fair value – Exceptions – Leasehold estates – Real property – Appraisal – Comparable sales.
RCW 84.40.0301	Determination of value by public official -- Review -- Revaluation -- Presumptions.
RCW 84.40.031	Valuation of timber and timberlands -- Criteria established.
RCW 84.40.032	Valuation of timber and timberlands -- "Timberlands" defined and declared lands devoted to reforestation.
RCW 84.40.033	Valuation of timber and timberlands -- Legislative findings.
RCW 84.40.036	Valuation of vessels -- Apportionment.
RCW 84.40.037	Valuation of computer software -- Embedded software.
RCW 84.40.038	Petition county board of equalization -- Limitation on changes to time limit -- Waiver of filing deadline -- Direct appeal to state board of tax appeals.
RCW 84.40.039	Reducing valuation after government restriction -- Petitioning assessor -- Establishing new valuation -- Notice -- Appeal -- Refund.
RCW 84.40.040	Time and manner of listing.
RCW 84.40.042	Valuation and assessment of divided or combined property.
RCW 84.40.045	Notice of change in valuation of real property to be given taxpayer – Copy to person making payments pursuant to mortgage, contract, or deed of trust – Procedure –Penalty.

RCW 84.40.060	Personal property assessment.
RCW 84.40.065	Listing of taxable ships and vessels with department -- Assessment -- Rights of review.
RCW 84.40.070	Companies, associations -- Listing.
RCW 84.40.080	Listing omitted property or improvements.
RCW 84.40.085	Limitation period for assessment of omitted property or value -- Notification to taxpayer of omission -- Procedure.
RCW 84.40.090	Taxing districts to be designated -- Separate assessments.
RCW 84.40.110	Examination under oath -- Default listing.
RCW 84.40.120	Oaths, who may administer -- Criminal penalty for willful false listing.
RCW 84.40.130	Penalty for failure or refusal to list -- False or fraudulent listing, additional penalty.
RCW 84.40.160	Manner of listing real estate -- Maps.
RCW 84.40.185	Individuals, corporations, limited liability companies, associations, partnerships, trusts, or estates required to list personalty.
RCW 84.40.190	Statement of personal property.
RCW 84.40.200	Listing of personalty on failure to obtain statement -- Statement of valuation to person assessed or listing -- Exemption.
RCW 84.40.210	Personalty of manufacturer, listing procedure, statement—"Manufacturer" defined.
RCW 84.40.220	Merchant's personalty held for sale—Consignment from out of state—Nursery stock assessable as growing crops.
RCW 84.40.230	Contract to purchase public land.
RCW 84.40.240	Annual list of lands sold or contracted to be sold to be furnished assessor.
RCW 84.40.315	Federal agencies and property taxable when federal law permits.
RCW 84.40.335	Lists, schedules or statements to contain declaration that falsification subject to perjury.
RCW 84.40.340	Verification by assessor of any list, statement, or schedule -- Confidentiality, penalty.
RCW 84.40.350	Assessment and taxation of property losing exempt status.
RCW 84.40.360	Loss of exempt status -- Property subject to pro rata portion of taxes for remainder of year.
RCW 84.40.370	Loss of exempt status -- Valuation date -- Extension on rolls.
RCW 84.40.380	Loss of exempt status -- When taxes due and payable -- Dates of delinquency -- Interest.
RCW 84.40.390	Loss of exempt status -- Taxes constitute lien on property.

Other References

AGO 1965-66, No. 4	Offices and officers -- County -- Assessor -- Tax rolls -- Listing of property -- Authority to correct possible error.
AGO 1971, No. 3	Taxation -- Real property -- Excise -- Mobile homes.
AGO 1971, No. 37	Taxation -- Property -- Counties -- Meetings -- Public -- Attendance by public at sessions of a county board of equalization.

AGO 1975, No. 11	Taxation – Real property – Liens – Acquisition of taxable real property by United States agency.
AGO 1977, No. 16	Taxation – Property – Farm and agricultural land – Valuation of perennial crops.
AGO 1980, No. 1	Offices and officers – County – Assessor – Public records – Taxation – Public access to property tax assessment rolls.
AGO 1980, No. 4	Property – Taxation – Real property – Mobile homes – Improvements – Omitted assessment of mobile homes affixed to real property.
Special Notice	Eliminating the Collection of anticipated taxes and assessments – Legislative update (Revised 1/23/2018)
Court Cases	Alaska Land Company, Inc. v. King County, (1969) 77 W2d 247, 461 P2d 339. Automat Co., Inc. v. Yakima County, (1972) 6 WA 991, 497 P2d 617. Boise Cascade v. Pierce County, (1974) 84 W2d 667, 529 P2d 9. Carkonen v. Williams, (1969) 76 W2d 617, 458 P2d 280. Carpenter v. Franklin County Assessor, (1981) 30 WA 826, 638 P2d 619. Haines v. Anaconda Aluminum Co., (1976) 87 W2d 28, 549 P2d 13. King County v. Dept. of Revenue, (1982) 32 WA 617, 649 P2d 126. Mason Overtaxed, Inc. v. Mason County, (1963) 62 W2d 677, 384 P2d 352. Niichel v. Lancaster, (1982) 97 W2d 620, 547 P2d 1021. Northern Commercial Co. v. King County, (1964) 63 W2d 639, 388 P2d 546. Northwest Natural Gas v. Clark County, (1983) 98 W2d 739, 658 P2d 669. P. B. Investment Company, Inc. v. King County, (1970) 78 W2d 81, 469 P2d 893. Tacoma Goodwill Industries v. Pierce County, (1973) 10 WA 197, 518 P2d 196. Trans West Co. v. Klickitat County, (1979) 22 WA 798, 591 P2d 469. Twin Lakes Golf & Country Club v. King County, (1976) 87 W2d 1, 648 P2d 538. Xerox Corp. v. King County, (1980) 94 W2d 284, 617 P2d 412.

4.3 Collection of Taxes

State Constitution, Art. VII	Revenue and Taxation.
State Constitution, Art. XI	County, city, and township organization.
RCW 36.29.010	General duties.

RCW 36.29.100	Ex officio collector of first class city taxes.
RCW 36.29.110	City taxes.
RCW 36.29.120	Ex officio collector of other city taxes.
RCW 36.29.130	Duty to collect taxes.
RCW 36.29.190	Acceptance of electronic payments – Transaction processing costs.
RCW 84.08.010	Powers of department of revenue – General supervision – Rules and processes – Visitation of counties.
RCW 84.08.020	Additional powers – To advise county and local officers – Books and blanks – Reports.
RCW 84.12.370	Certification to county assessor – Entry upon tax rolls.
RCW 84.16.130	Certification to county assessors – Apportionment to taxing districts – Entry upon tax rolls.
RCW 84.56.010	Establishment of tax rolls by treasurer – Public record – Tax roll account – Authority to receive, collect taxes.
RCW 84.56.020	Taxes collected by treasurer – Dates of delinquency – Tax statement notice concerning payment by check – Interest – Penalties – Extensions during state of emergency.
RCW 84.56.022	Tax statement to show voter-approved levies.
RCW 84.56.025	Waiver of interest and penalties – Circumstances – Provision of death certificate and affidavit for certain waivers.
RCW 84.56.035	Special assessments, excise taxes, or rates and charges – Collection by county treasurer authorized.
RCW 84.56.050	Treasurer's duties on receiving rolls – Notice of taxes due.
RCW 84.56.060	Tax receipts – Current tax only may be paid.
RCW 84.56.070	Personal property – Distrain and sale, notice, property incapable of manual delivery, property about to be removed or disposed of.
RCW 84.56.075	Issuance of warrant by court for property subject to distraint.
RCW 84.56.090	Distrain and sale of property about to be removed, dissipated, sold, or disposed of – Computation of taxes, entry on rolls, tax liens.
RCW 84.56.120	Removal of property from county or state after assessment without paying tax.
RCW 84.56.150	Removal of personalty – Certification of tax by treasurer.
RCW 84.56.160	Certification of statement of taxes and delinquency.
RCW 84.56.170	Collection of certified taxes – Remittance.
RCW 84.56.200	Removal of timber or improvements on which tax is delinquent – Penalty.
RCW 84.56.210	Severance of standing timber assessed as realty – Timber tax may be collected as personalty tax.
RCW 84.56.220	Lien of personalty tax follows insurance.
RCW 84.56.230	Monthly distribution of taxes collected.
RCW 84.56.240	Cancellation of uncollectible personalty taxes.

RCW 84.56.250	Penalty for willful noncollection or failure to file delinquent list.
RCW 84.56.260	Continuing responsibility to collect taxes, special assessments, fees, rates, or other charges.
RCW 84.56.270	Court cancellation of personalty taxes more than four years delinquent.
RCW 84.56.280	Settlement with state for state taxes – Penalty.
RCW 84.56.290	Adjustment with state for reduced or canceled taxes and for taxes on assessments not on the certified assessment list.
RCW 84.56.300	Annual report of collections to county auditor.
RCW 84.56.310	Interested person may pay real property taxes - Limitation.
RCW 84.56.320	Recovery by occupant or tenant paying realty taxes.
RCW 84.56.330	Payment by mortgagee or other lienholder.
RCW 84.56.340	Payment on part of parcel or tract or on undivided interest or fractional interest – Division – Certification – Appeal.
RCW 84.56.345	Alteration of property lines -- Payment of taxes and assessments. _
RCW 84.56.360	Separate ownership of improvements – Separate payment authorized.
RCW 84.56.370	Separate ownership of improvements – Procedure for segregation of improvement tax.
RCW 84.56.380	Separate ownership of improvements – Segregation or payment not to release lien.
RCW 84.56.430	Relisting and relevy of tax adjudged void.
RCW 84.56.440	Ships and vessels – Collection of fees and taxes – Delinquent fees and taxes – Extensions during state of emergency – Withholding decal for failure to pay taxes or fees.
RCW 84.68.010	Injunctions prohibited – Exceptions.
RCW 84.68.020	Payment under protest – Claim not required.

Other References

AGO 1971, No. 37	Taxation – Property – Counties – Meetings – Public – Attendance by public at sessions of a county board of equalization.
AGO 1976, No. 16	Offices and officers – County – Treasurer – Taxation – Funding costs of property tax foreclosures.
Court Case	Pier 67, Inc. v. King County, (1977) 89 W2d 379, 573 P2d 2.
Special Notices	Legislative Update – Eliminating the collection of anticipated taxes and assessments (Revised) – 2017 Legislative Update – Changes in the statute to clarify inclusion of deferral balances in certificates of delinquency and treatment of proceeds when tax title properties are rented or sold- 2013 Legislative Update – Clarifying treatment of deferral lien balances included in certificates of delinquency – 2015

[Legislative Update – Refunds of property taxes paid as a result of manifest errors in description of property](#) - 2015

[Legislative Update – Changes in the statute to clarify inclusion of deferral balances in certificates of delinquency and treatment of proceeds when tax title properties are rented or sold](#) - 2013

[Legislative Update – Clarifying treatment of deferral lien balances included in certificates of delinquency](#) - 2015

[Legislative Update – Refunds of property taxes paid as a result of manifest errors in description of property](#) – 2015

Court Case Pier 67, Inc. v. King County, (1977) 89 W2d 379, 573 P2d 2.

4.4 Lien of Taxes

RCW 84.40.390	Loss of exempt status – Taxes constitute lien on property.
RCW 84.56.220	Lien of personalty tax follows insurance.
RCW 84.56.270	Court cancellation of personalty taxes more than four years delinquent.
RCW 84.56.310	Interested person may pay real property taxes - Limitation.
RCW 84.56.330	Payment by mortgagee or other lien holder.
RCW 84.60.010	Priority of tax lien.
RCW 84.60.020	Attachment of tax liens.
RCW 84.60.040	Charging personalty tax against realty.
RCW 84.60.050	Acquisition by governmental unit of property subject to tax lien or placement under agreement or order of immediate possession or use – Effect.
RCW 84.60.070	Acquisition by governmental unit of property subject to tax lien or placement under agreement or order of immediate possession or use – Segregation of taxes if only part of parcel required.

Other References

AGO 1975, No. 11	Taxation -- Real property -- Liens -- Acquisition of taxable real property by United States agency.
AGLO 1975, No. 56	Taxation -- Real property -- Liens -- Status of personal property tax lien attaching to real property under RCW 84.60.020.

Court Case Pierce County v. Wingard, (1971) 5 WA 568, 490 P2d 129.

4.5 Omitted Property and Omitted Value

RCW 84.08.030	Additional powers – To test work of assessors – Supplemental assessment lists – Audits.
RCW 84.40.080	Listing omitted property or improvements.
RCW 84.40.085	Limitation period for assessment of omitted property or value – Notification to taxpayer of omission – Procedure.

[WAC 458-14-015](#) Jurisdiction of county boards of equalization.

4.6 Destroyed Property

[RCW 36.21.080](#) New construction building permits – When property placed on assessment rolls.

[RCW 84.70.010](#) Reduction in value – Abatement – Formulas – Appeal.

[RCW 84.70.040](#) Arson destroyed property.

4.7 Refunds

[RCW 84.69.010](#) Definitions.

[RCW 84.69.020](#) Grounds for refunds – Determination – Payment – Report.

[RCW 84.69.030](#) Refunds – Procedure – When claim for an order required.

[RCW 84.69.040](#) Refunds may include amounts paid to state, and county and taxing district taxes.

[RCW 84.69.050](#) Refund with respect to amounts paid state.

[RCW 84.69.060](#) Refunds with respect to county, state, and taxing district taxes.

[RCW 84.69.070](#) Refunds with respect to taxing districts – Administrative expenses – Disposition of funds upon expiration of refund orders.

[RCW 84.69.080](#) Refunds with respect to taxing districts – Not to be paid from county funds.

[RCW 84.69.090](#) To whom refund may be paid.

[RCW 84.69.100](#) Refunds shall include interest – Written protests not required – Rate of interest.

[RCW 84.69.110](#) Expiration date of refund orders.

[RCW 84.69.120](#) Action on rejected claim – Time for commencement.

[RCW 84.69.130](#) Claim prerequisite to action – Recovery limited to ground asserted.

[RCW 84.69.140](#) Interest shall be allowed on amount recovered.

[RCW 84.69.150](#) Refunds within sixty days.

[RCW 84.69.160](#) Chapter does not supersede existing law.

[RCW 84.69.170](#) Payment under protest not required.

[WAC 458-18-210](#) Refunds – Procedure – Interest.

[WAC 458-18-215](#) Refunds – Payment under protest requirements.

[WAC 458-18-220](#) Refunds – Rate of interest. (Updated annually.)

Other References

[AGO 1967, No. 20](#) Taxation – Notice – Persons entitled to notice of property taxes due – Refund of taxes paid without protest.

[AGO 1969, No. 21](#) Taxation – Exemption – Refund of property taxes to persons exempt under RCW 84.36.128.

[AGO 1984, No. 21](#) Taxation – Property – Administrative refund of certain property taxes.

4.8 Reassessment of Property

- [RCW 84.08.060](#) Additional powers – Power over county boards of equalization – Reconvening – Limitation on increase in property value in appeals to board of tax appeals from county board of equalization.
- [RCW 84.56.430](#) Relisting and relevy of tax adjudged void.

4.8.1 Conveyances

- [RCW 64.04](#) Conveyances

4.9 Recovery of Taxes Paid or Property Sold for Taxes

- [RCW 84.68.010](#) Injunctions prohibited – Exceptions.
- [RCW 84.68.020](#) Payment under protest – Claim not required.
- [RCW 84.68.030](#) Judgment – Payment – County tax refund fund.
- [RCW 84.68.040](#) Levy for tax refund fund.
- [RCW 84.68.050](#) Venue of action – Intercounty property.
- [RCW 84.68.060](#) Limitation of actions.
- [RCW 84.68.070](#) Remedy exclusive – Exception.
- [RCW 84.68.080](#) Action to recover property sold for taxes – Tender is condition precedent.
- [RCW 84.68.090](#) Action to recover property sold for taxes – Complaint.
- [RCW 84.68.100](#) Action to recover property sold for taxes – Restrictions construed as additional.
- [RCW 84.68.110](#) Small claims recoveries – Recovery of erroneous taxes without court action.
- [RCW 84.68.120](#) Small claims recoveries – Petition – Procedure of county officers – Transmittal of findings to department of revenue.
- [RCW 84.68.130](#) Small claims recoveries – Procedure of department of revenue.
- [RCW 84.68.140](#) Small claims recoveries – Payment of refunds – Procedure.
- [RCW 84.68.150](#) Small claims recoveries – Limitation as to time and amount of refund.
- [WAC 458-18-215](#) Refunds – Payment under protest requirements.

Other References

- [AGO 1974, No. 6](#) Offices and officers -- County -- Assessor -- Taxation -- Real property -- Exemptions.
- [AGO 1981, No. 3](#) Taxation -- Property -- Counties -- Cities and towns -- Application of 106 percent limitation to county tax refund levy.
- Court Case** Star Iron & Steel Co. v. Pierce County, (1971) 5 WA 515, 488 P2d 776.

CHAPTER 5 – Exemptions and Deferrals

5.1 Senior Citizens and Disabled Persons

5.1.1 Exemptions

RCW 84.36.379	Residences – Property tax exemption – Findings.
RCW 84.36.381	Residences – Property tax exemptions – Qualifications.
RCW 84.36.383	Residences – Definitions.
RCW 84.36.385	Residences – Claim for exemption – Forms – Change of status – Publication and notice of qualifications and manner of making claims.
RCW 84.36.387	Residences – Claimants – Penalty for falsification – Reduction by remainderman.
RCW 84.36.389	Residences – Rules and regulations – Audits – Confidentiality – Criminal penalty.
RCW 84.40.178	Exempt residential property – Maintenance of assessed valuation – Notice of change.
WAC 458-16A-100	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Definitions.
WAC 458-16A-110	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Gross income.
WAC 458-16A-115	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Adjusted gross income.
WAC 458-16A-120	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Determining combined disposable income.
WAC 458-16A-130	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Qualifications for exemption.
WAC 458-16A-135	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Application procedures.
WAC 458-16A-140	Senior citizen, disabled person, and one hundred percent disabled veteran exemption – Exemption described – Exemption granted – Exemption denied – Freezing property values.
WAC 458-16A-150	Senior citizen, disabled person, one hundred percent disabled veteran exemption – Requirements for keeping the exemption.

Other References

AGO 1967 No. 11	Taxation- Exemption- Eligibility of life tenant for tax exemption under chapter 168, laws of 1965, ex. Sess.
AGO 1967 No. 13	Taxation- Exemption- Eligibility of trustor- Beneficiary of a revocable trust for tax exemption under chapter 168, laws of 1965, ex. Sess.

AGO 1967 No. 20	Taxation- Notice- Persons entitled to notice of property taxes due- Refund of taxes paid without protest.
AGO 1972 No. 23	Taxation- Real Property- Exemption- Elderly- Sale to non-eligible grantee- Portion of tax to be paid.
AGLO 1979 No. 24	Offices and officers- County- Assessor- Taxation- Real Property- Applicability of retired persons' property tax exemption to certain leasehold interests.
AGO 1980 No. 1	Offices and officers- County- Assessor- Public records- Taxation- Public access to property tax assessment rolls.
AGO 1988 No. 12	Public disclosure- Privacy- Confidential income information.
Special Notices	2009 Legislative Updates- Issued 07/23/2009 (E2SHB 1208) Legislative Update – Income Thresholds for Property Tax Relief Programs for Senior Citizens and Disabled Persons – 2015 Legislative Update for Assessors and Treasurers – State School Levy, Enrichment Levies, and State Local Effort Assistance – 2017

5.1.2 Assistance for Widows or Widowers of Veterans

RCW 84.39.010	Exemption authorized—Qualifications.
RCW 84.39.020	Filing claim for exemption—Requirements.
RCW 84.39.030	Continued eligibility—Renewal forms.
RCW 84.39.040	Agent or guardian filing claim on behalf of claimant.
RCW 84.39.050	Failure to reside on property—Repayment.
RCW 84.39.060	Determination of assistance—Biennial budget request.

5.2 Nonprofit Organizations

RCW 84.36.005	Property subject to taxation.
RCW 84.36.010	Public, certain public-private property exempt.
RCW 84.36.020	Cemeteries, churches, parsonages, convents, and grounds.
RCW 84.36.030	Property used for character building, benevolent, protective or rehabilitative social services – Camp facilities – Veteran or relief organization owned property – Property of nonprofit organizations that issue debt for student loans or that are guarantee agencies.
RCW 84.36.031	Clarification of exemption in RCW 84.36.030 .
RCW 84.36.032	Administrative offices of nonprofit religious organizations.
RCW 84.36.035	Nonprofit organization engaged in procuring, processing, etc., blood, plasma or blood products.
RCW 84.36.037	Nonprofit organization property connected with operation of public assembly hall or meeting place.

RCW 84.36.040	Nonprofit day care centers, libraries, orphanages, homes or hospitals for the sick or infirm, out-patient dialysis facilities.
RCW 84.36.041	Nonprofit homes for the aging.
RCW 84.36.042	Nonprofit organization, corporation, or association property used to provide housing for persons with developmental disabilities
RCW 84.36.043	Nonprofit organization property used in providing emergency or transitional housing to low-income homeless persons or victims of domestic violence.
RCW 84.36.045	Nonprofit organization property available without charge for medical research or training of medical personnel.
RCW 84.36.046	Nonprofit cancer clinic or center
RCW 84.36.047	Nonprofit organization property used for transmission or reception of radio or television signals originally broadcast by governmental agencies.
RCW 84.36.049	Nonprofit Homeownership Development
RCW 84.36.050	Schools and colleges.
RCW 84.36.060	Art, scientific and historical collections and property used to maintain, etc., such collections – Property of associations engaged in production and performance of musical, dance, artistic, etc., works – Fire engines, implements, and buildings of cities, towns, or fire companies – Humane societies.
RCW 84.36.070	Intangible personal property — Appraisal.
RCW 84.36.240	Soil and water conservation districts, personal property.
RCW 84.36.250	Water distribution property owned by nonprofit corporation or cooperative association.
RCW 84.36.260	Property, interests, etc., used for conservation of ecological systems, natural resources, or open space – Conservation or scientific research organizations.
RCW 84.36.262	Cessation of use giving rise to exemption.
RCW 84.36.264	Application for exemption under RCW 84.36.260 , conservation of ecological systems.
RCW 84.36.350	Property owned or used for sheltered workshops for handicapped.
RCW 84.36.480	Nonprofit fair associations.
RCW 84.36.550	Nonprofit organizations – Property used for solicitation or collection of gifts, donations, or grants.
RCW 84.36.560	Nonprofit organizations that provide rental housing or used space to very low-income households.
RCW 84.36.570	Nonprofit organizations – Property used for agricultural research and education programs. Nonprofit Organization- Aircraft.
RCW 84.36.575	
RCW 84.36.650	Property used by certain nonprofits to solicit or collect money for artists.
RCW 84.36.670	Senior citizen organizations – Property used for operation of a multipurpose senior citizen center.

General Provisions

RCW 84.36.800	Definitions.
RCW 84.36.805	Conditions for obtaining exemptions by nonprofit organizations, associations or corporations.
RCW 84.36.810	Cessation of use under which exemption granted – Collection of taxes.
RCW 84.36.812	Additional tax payable at time of sale – Appeal of assessed values.
RCW 84.36.813	Change in use – Duty to notify county assessor – Examination – Recommendation.
RCW 84.36.815	Initial application, renewal declaration for exemption – Affidavit certifying exempt status – Exemption effective for following year.
RCW 84.36.820	Application forms to be mailed to owners of exempt property – Failure to file before due date, effect.
RCW 84.36.825	Application, declaration fee – Waiver authorized – Late filing penalty.
RCW 84.36.830	Review of applications for exemption – Procedure – Approval or denial – Notice.
RCW 84.36.833	Application for exemption or renewal may include all contiguous exempt property.
RCW 84.36.835	List of exempt properties to be prepared and furnished each county assessor.
RCW 84.36.840	Statements – Reports – Information – Filing – Requirements.
RCW 84.36.845	Revocation of exemption approved or renewed due to inaccurate information.
RCW 84.36.850	Review – Appeals.
RCW 84.36.855	Property changing from exempt to taxable status – Procedure.
RCW 84.36.860	Public notice of provisions of act.
RCW 84.36.865	Rules and regulations.
RCW 84.36.900	Severability
RCW 84.36.905	Effective date – Construction
RCW 84.40.315	Federal agencies and property taxable when federal law permits.
RCW 84.40.350	Assessment and taxation of property losing exempt status.
RCW 84.40.360	Loss of exempt status – Property subject to pro rata portion of taxes for remainder of year.
RCW 84.40.370	Loss of exempt status – Valuation date – Extension on rolls.
RCW 84.40.380	Loss of exempt status – When taxes due and payable – Dates of delinquency – Interest.
RCW 84.40.390	Loss of exempt status – Taxes constitute lien on property.
RCW 84.68.010	Injunctions prohibited – Exceptions.
WAC 458-16A-010	Nonprofit homes for the aging.
WAC 458-16A-020	Nonprofit homes for the aging – Initial application and annual renewal.

<u>WAC 458-16-100</u>	Property tax exemptions, generally, rules of construction.
<u>WAC 458-16-110</u>	Applications – Who must file, initial applications, annual declarations, appeals, filing fees, penalties, and refunds.
<u>WAC 458-16-120</u>	Appeals.
<u>WAC 458-16-130</u>	Change in taxable status of real property.
<u>WAC 458-16-150</u>	Cessation of use – Taxes collectible for prior years.
<u>WAC 458-16-165</u>	Conditions under which nonprofit organizations, associations, or corporations may obtain a property tax exemption.
<u>WAC 458-16-180</u>	Cemeteries.
<u>WAC 458-16-190</u>	Churches, parsonages and convents.
<u>WAC 458-16-200</u>	Land upon which a church or parsonage shall be built.
<u>WAC 458-16-210</u>	Nonprofit organizations or associations organized and conducted for nonsectarian purposes.
<u>WAC 458-16-215</u>	Nonprofit organizations that solicit, collect, and distribute gifts, donations, or grants.
<u>WAC 458-16-220</u>	Church camps.
<u>WAC 458-16-230</u>	Character building organizations.
<u>WAC 458-16-240</u>	Veterans organizations.
<u>WAC 458-16-245</u>	Student loan agencies.
<u>WAC 458-16-260</u>	Nonprofit day care centers, libraries, orphanages, homes for sick or infirm, hospitals, outpatient dialysis facilities.
<u>WAC 458-16-266</u>	Homeownership development.
<u>WAC 458-16-270</u>	Schools and colleges.
<u>WAC 458-16-280</u>	Art, scientific, and historical collections.
<u>WAC 458-16-282</u>	Musical, dance, artistic, dramatic and literary associations.
<u>WAC 458-16-284</u>	Fire companies.
<u>WAC 458-16-286</u>	Humane societies.
<u>WAC 458-16-290</u>	Nature conservancy lands.
<u>WAC 458-16-300</u>	Public meeting hall – Public meeting place – Community meeting hall.
<u>WAC 458-16-310</u>	Community celebration facilities.
<u>WAC 458-16-320</u>	Emergency or transitional housing.
<u>WAC 458-16-330</u>	Sheltered workshops for the handicapped.
<u>WAC 458-16-560</u>	Housing for very low-income households.

Other References

<u>AGO 1976 No. 18</u>	Taxation – Property – Removal of exemption – Taxation of previously exempt property for prior
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years.

[AGO 1977 No. 8](#) Taxation -- Property – Excise – Leases – Taxation of improvements to leaseholds of public property.

[AGO 1979 No. 19](#) Taxation – Property – Indians – Taxation of property situated on federally-recognized Indian reservations.

Court Cases Alaska Land Company, Inc. v. King County, (1969) 77 W2d 247, 461 P2d 339.
Carpenter v. Franklin County Assessor, (1981) 30 WA 826, 638 P2d 619.
Catholic Archbishop of Seattle v. Johnston, (1978) 89 W2d 505, 573 P2d 793.
Johnson v. Spokane, (1978) 19 WA 722, 577 P2d 164.
Timber Traders, Inc. v. Johnston, (1976) 87 W2d 42, 548 P2d 1080.
United Methodist Church v. Walla Walla County, (1973) 82 W2d 138, 508 P2d 1361.

5.3 Deferral of Special Assessments and/or Property Taxes

5.3.1 Senior Citizens and Disabled Persons

[RCW 84.38.010](#) Legislative finding and purpose.

[RCW 84.38.020](#) Definitions.

[RCW 84.38.030](#) Conditions and qualifications for claiming deferral.

[RCW 84.38.040](#) Declaration to defer special assessments and/or real property taxes – Filing – Contents – Appeal

[RCW 84.38.050](#) Renewal of deferral – Forms – Notice to renew – Limitation upon special assessment deferral amount.

[RCW 84.38.060](#) Declaration of deferral by agent, guardian, etc.

[RCW 84.38.070](#) Ceasing to reside permanently on property subject to deferral declaration.

[RCW 84.38.080](#) Right to deferral not reduced by contract or agreement.

[RCW 84.38.090](#) Procedure where residence under mortgage or purchase contract.

[RCW 84.38.100](#) Lien of state, mortgage or purchase contract holder – Priority – Amount – Interest.

[RCW 84.38.110](#) Duties of county assessor.

[RCW 84.38.120](#) Payments to local improvement or taxing districts.

[RCW 84.38.130](#) When deferred assessments or taxes become payable.

[RCW 84.38.140](#) Collection of deferred assessments or taxes.

[RCW 84.38.150](#) Election to continue deferral by surviving spouse or surviving domestic partner.

[RCW 84.38.160](#) Payment of part or all of deferred taxes authorized.

[RCW 84.38.170](#) Collection of personal property taxes not affected.

RCW 84.38.180	Forms – Rules and regulations.
WAC 458-18-010	Deferral of special assessments and/or property taxes – Definitions.
WAC 458-18-020	Deferral of special assessments and/or property taxes – Qualifications for deferral.
WAC 458-18-030	Deferral of special assessments and/or property taxes – Declarations to defer – Filing – Forms.
WAC 458-18-040	Deferral of special assessments and/or property taxes – Lien of state – Mortgage – Purchase contract – Deed of trust.
WAC 458-18-050	Deferral of special assessments and/or property taxes – Declarations to renew deferral – Filing – Forms.
WAC 458-18-060	Deferral of special assessments and/or property taxes – Limitations of deferral – Interest.
WAC 458-18-070	Deferral of special assessments and/or property taxes – Duties of the county assessor.
WAC 458-18-080	Deferral of special assessments and/or property taxes – Duties of the department of revenue – State treasurer.
WAC 458-18-090	Deferral of special assessments and/or property taxes – Appeals.
WAC 458-18-100	Deferral of special assessments and/or property taxes – When payable – Collection – Partial payment.

Other References

Special Notices

[Legislative Update – Changes in the statute to clarify inclusion of deferral balances in certificates of delinquency and treatment of proceeds when tax title properties are rented or sold](#) - 2013

[Legislative Update – Clarifying treatment of deferral lien balances included in certificates of delinquency](#) - 2015

[Legislative Update – Clarifying treatment of deferral lien balances included in certificates of delinquency](#) - 2015

5.3.2 Homeowners With Limited Income

RCW 84.37.010	Findings -- Intent.
RCW 84.37.020	Definitions.
RCW 84.37.030	Deferral program qualifications.
RCW 84.37.040	Deferral program administration.
RCW 84.37.050	Renewals -- Requirement to reside on property.
RCW 84.37.060	Right to defer not reduced by contract or agreement.
RCW 84.37.070	State lien on property.
RCW 84.37.080	Conditions under which deferment ends.
RCW 84.37.090	Applicable statutory provisions.

RCW 84.37.900	Severability -- 2007 sp.s. c 2. -- Decodified by the code reviser, July 2016.
RCW 84.37.901	Application -- 2007 sp.s. c 2.
RCW 84.37.902	Review by the joint legislative audit and review committee. -- Decodified by the code reviser, July 2016.
RCW 84.37.903	Effective date -- 2007 sp.s. c 2.
WAC 458-18A-010	Deferral of special assessments and/or property taxes -- Definitions.
WAC-458-18A-020	Deferral of special assessments and/or property taxes -- Qualifications for deferral.
WAC-458-18A-030	Deferral of special assessments and/or property taxes -- Declarations to defer -- Filing-- Forms.
WAC 458-18A-040	Deferral of special assessments and/or property taxes -- Lien of state -- Mortgage -- Purchase contract -- Deed of trust.
WAC 458-18A-050	Deferral of special assessments and/or property taxes -- Declarations to renew deferral -- Filing -- Forms.
WAC 458-18A-060	Deferral of special assessments and/or property taxes -- Limitations of deferral -- Interest.
WAC 458-18A-070	Deferral of special assessments and/or property taxes -- Duties of the county assessor.
WAC 458-18A-080	Deferral of special assessments and/or property taxes -- Duties of the department of revenue -- State treasurer.
WAC 458-18A-090	Deferral of special assessments and/or property taxes -- Appeals.
WAC 458-18A-100	Deferral of special assessments and/or property taxes -- When payable -- Collection -- Partial payment.

Other References

Special Notices	Legislative Update – Changes in the statute to clarify inclusion of deferral balances in certificates of delinquency and treatment of proceeds when tax title properties are rented or sold - 2013 Legislative Update – Clarifying treatment of deferral lien balances included in certificates of delinquency - 2015
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5.4 Other Exemptions

5.4.1 Other Exemptions – Improvements to Single Family Dwellings

RCW 84.36.400	Improvements to single family dwellings.
WAC 458-16-080	Improvements to single family dwellings – Definitions – Exemption – Limitation – Appeal rights.

5.4.2 Other Exemptions – Alcohol, Biodiesel, and Wood Biomass Fuels

RCW 82.29A.135	Exemptions – Property used to manufacture alcohol, biodiesel, or wood biomass fuel.
RCW 84.36.635	Property used for the manufacture of alcohol fuel or biodiesel fuel.
RCW 84.36.640	Property used for the manufacture of wood biomass fuel.

5.4.3 Other Exemptions – Multi Unit Dwellings

RCW 84.14.005	Findings.
RCW 84.14.007	Purpose.
RCW 84.14.010	Definitions.
RCW 84.14.020	Exemption – Duration – Valuation – Exceptions.
RCW 84.14.030	Application – Requirements
RCW 84.14.040	Designation of residential targeted area – Criteria – Local designation – Hearing – Standards, guidelines.
RCW 84.14.050	Application – Procedures.
RCW 84.14.060	Approval – Required findings.
RCW 84.14.070	Processing – Approval – Denial – Appeal.
RCW 84.14.080	Fees.
RCW 84.14.090	Filing requirements upon completion – Owner, city – Determination by city – Notice of intention of city not to file – Extension of deadline – Appeal.
RCW 84.14.100	Report – Filing.
RCW 84.14.110	Cancellation of exemption – Notice by owner of change in use – Additional tax – Penalty – Interest – Lien – Notice of cancellation – Appeal – Correction of tax rolls.

5.4.4 Other Exemptions – Improvements for Water Quality

RCW 84.36.255	Improvements to benefit fish and wildlife habitat, water quality, and water quantity – Cooperative assistance to landowners – Certification of best management practice – Limitation – Landowner claim and certification.
RCW 89.08.440	Best management practices for fish and wildlife habitat, water quality, and water quantity property tax exemption – List – Forms – Certification of claims.
RCW 84.36.255	Improvements to benefit fish and wildlife habitat, water quality, and water quantity – Cooperative assistance to landowners – Certification of best management practice – Limitation – Landowner claim and certification.

5.4.5 Other Exemptions – Parcels Valued at Less Than \$500

RCW 84.36.015	Property valued at less than five hundred dollars – Exceptions.
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5.4.6 Other Exemptions – Personal Property Exemptions

RCW 84.36.070	Intangible personal property – Appraisal.
RCW 84.36.110	Household goods and personal effects – Fifteen thousand dollars actual value to head of family.
RCW 84.36.120	Household goods and personal effects – Definitions.
RCW 84.36.240	Soil and water conservation districts, personal property.
RCW 84.36.300	Stocks of merchandise, goods, wares or material – Aircraft parts, etc. – When eligible for exemption.
RCW 84.36.310	Stocks of merchandise, goods, wares or material – Aircraft parts, etc. – Filing requirements.
RCW 84.36.320	Stocks of merchandise, goods, wares or material – Inspection of books and records.
RCW 84.36.477	Business inventories.
RCW 84.36.510	Mobile homes in dealer's inventory.
RCW 84.36.595	Motor vehicles, travel trailers, and campers.
RCW 84.36.600	Computer software.
RCW 84.36.630	Farming machinery and equipment.
RCW 84.36.645	Semiconductor materials. (<i>Contingent effective date; contingent expiration date.</i>)
RCW 84.40.405	Rules for agricultural products and business inventories.
WAC 458-16-115	Personal property exemptions for household goods, furnishings, and personal effects, and for the head of a family.

5.4.7 Historic Property

RCW 84.26.010	Legislative findings.
RCW 84.26.020	Definitions.
RCW 84.26.030	Special valuation criteria.
RCW 84.26.040	Application -- Fees.
RCW 84.26.050	Referral of application to local review board – Agreement – Approval or denial.
RCW 84.26.060	Notice to assessor of approval – Certification and filing – Notation of special valuation.
RCW 84.26.070	Valuation.
RCW 84.26.080	Duration of special valuation – Notice of disqualification.
RCW 84.26.090	Disqualification for valuation – Additional tax – Lien – Exceptions from additional tax.
RCW 84.26.100	Payment of additional tax – Distribution.
RCW 84.26.110	Special valuation – Request for assistance from state historic preservation officer authorized.
RCW 84.26.120	Rules.

RCW 84.26.130	Appeals from decisions on applications.
WAC 458-15-005	Purpose.
WAC 458-15-010	Authority.
WAC 458-15-015	Definitions.
WAC 458-15-020	Application.
WAC 458-15-030	Multiple applications.
WAC 458-15-040	Costs and fees.
WAC 458-15-050	Qualifications.
WAC 458-15-060	Processing of the agreement.
WAC 458-15-070	Disqualification or removal.
WAC 458-15-080	Disqualification or removal – Effective date.
WAC 458-15-090	Additional tax.
WAC 458-15-100	Appeals
WAC 458-15-110	Exemption of portion of historic property.
WAC 458-15-120	Revaluation and new construction.

5.4.8 Miscellaneous Exemptions

RCW 82.48.110	Aircraft not to be subject to ad valorem tax – Exceptions.
RCW 84.09.040	Penalty for nonperformance of duty by county officers.
RCW 84.36.079	Rights, title, interest, and materials of certain vessels under construction.
RCW 84.36.080	Certain ships and vessels.
RCW 84.36.090	Exemption for other ships and vessels.
RCW 84.36.100	Size of vessel immaterial.
RCW 84.36.105	Cargo containers used in ocean commerce.
RCW 84.36.130	Airport property in this state for smaller airports belonging to municipalities of adjoining states.
RCW 84.36.135	Real and personal property of housing finance commission.
RCW 84.36.210	Public right of way easements.
RCW 84.36.230	Interstate bridges – Reciprocity.
RCW 84.36.301	Legislative finding and declaration for RCW 84.36.300.
RCW 84.36.451	Right to occupy or use certain public property, including leasehold interests.
RCW 84.36.470	Agricultural Products – Exemption.
RCW 84.36.487	Air pollution control equipment in thermal electric generation facilities – Records – Payments on cessation of operation.

RCW 84.36.500	Conservation futures on agricultural land.
RCW 84.36.580	Property used to reduce field burning. (<i>Expires January 1, 2007.</i>)
RCW 84.36.590	Property used in connection with privatization contract at Hanford reservation.
RCW 84.36.595	Motor vehicles, travel trailers, and campers.
RCW 84.36.605	Sales/leasebacks by regional transit authorities.
RCW 84.36.655	Property related to the manufacture of superefficient airplanes. (<i>Contingent effective date; expires July 1, 2024.</i>)

CHAPTER 6 – Taxing Districts

6.1 Taxing Districts

RCW 36.35.290	Easements – Electric utility recorded interest
RCW 84.04.120	"Taxing district".
RCW 84.08.140	Appeals from levy of taxing district to department of revenue.
RCW 84.09.030	Taxing district boundaries – Establishment.
RCW 84.09.035	Withdrawal of certain areas of a library district, metropolitan park district, fire protection district, or public hospital district – Date effective.
RCW 84.09.037	School district boundary changes.
RCW 84.40.090	Taxing districts to be designated – Separate assessments.
RCW 84.40.160	Manner of listing real estate – Maps.
RCW 84.40.170	Plat of irregular subdivided tracts – Notice to owner – Surveys – Costs.
RCW 84.52.025	Budgets of taxing districts filed with county commissioners to indicate estimate of cash balance.
WAC 458-12-140	Taxing district boundaries -- Designation of tax code area.
WAC 458-50-130	Taxing district boundary changes – Estoppel.

Other References

Special Notice [Property Tax Special Notice - 2008 Legislation Updates](#)

6.2 Plats

RCW 36.18.010	Auditor's fees.
RCW 36.80.050	Highway plat book.
RCW 58.08.010	Town plat to be recorded – Requisites.
RCW 58.08.015	Effect of donation marked on plat.
RCW 58.08.020	Additions.
RCW 58.08.030	Plats to be acknowledged – Certificate that taxes and assessments are paid.
RCW 58.08.035	Platted streets, public highways – Lack of compliance, penalty.
RCW 58.08.050	Official plat – Platted streets as public highways.
RCW 58.17.070	Preliminary plat of subdivisions and dedications – Submission for approval – Procedure.
RCW 58.17.080	Filing of preliminary plat – Notice.
RCW 58.17.090	Notice of public hearing.
RCW 58.17.092	Public notice – Identification of affected property.

RCW 58.17.095	Ordinance may authorize administrative review of preliminary plat without public hearing.
RCW 58.17.100	Review of preliminary plats by planning commission or agency – Recommendation – Change by legislative body – Procedure – Approval.
RCW 58.17.110	Approval or disapproval of subdivision and dedication – Factors to be considered – Conditions for approval – Finding – Release from damages.
RCW 58.17.120	Disapproval due to flood, inundation or swamp conditions – Improvements – Approval conditions.
RCW 58.17.130	Bond in lieu of actual construction of improvements prior to approval of final plat – Bond or security to assure successful operation of improvements.
RCW 58.17.140	Time limitation for approval or disapproval of plats – Extensions.
RCW 58.17.150	Recommendations of certain agencies to accompany plats submitted for final approval.
RCW 58.17.155	Short subdivision adjacent to state highway – Notice to department of transportation.
RCW 58.17.160	Requirements for each plat or replat filed for record.
RCW 58.17.165	Certificate giving description and statement of owners must accompany final plat – Dedication, certificate requirements if plat contains – Waiver.
RCW 58.17.170	Written approval of subdivision – Original of final plat to be filed – Copies.
RCW 58.17.180	Review of decision.
RCW 58.17.190	Approval of plat required before filing – Procedure when unapproved plat filed.
RCW 58.17.195	Approval of plat or short plat – Written finding of conformity with applicable land use controls.
RCW 58.17.200	Injunctive action to restrain subdivision, sale, transfer of land where final plat not filed.
RCW 58.17.205	Agreements to transfer land conditioned on final plat approval – Authorized.
RCW 58.17.210	Building, septic tank or other development permits not to be issued for land divided in violation of chapter or regulations – Exceptions – Damages – Rescission by purchaser.
RCW 58.17.212	Vacation of subdivision – Procedure.
RCW 58.17.215	Alteration of subdivision – Procedure.
RCW 58.17.225	Easement over public open space – May be exempt from RCW 58.17.215 – Hearing – Notice.
RCW 58.18.010	Assessor's plat – Requisites, filing, index, etc. – When official plat.
RCW 65.04.030	Instruments to be recorded or filed.
RCW 65.04.050	Index of instruments, how made and kept – Recording of plat names.

6.3 Surveys

RCW 58.09.020	Definitions.
RCW 58.09.030	Compliance with chapter required.
RCW 58.09.040	Records of survey – Contents – Filing – Replacing corner, filing record.

RCW 58.09.050	Records of survey – Processing – Requirements.
RCW 58.09.060	Records of survey, contents – Record of corner, information.
RCW 58.09.080	Certificates – Required – Forms.
RCW 58.09.090	When record of survey not required.
RCW 58.17.250	Survey of subdivision and preparation of plat.
RCW 58.17.255	Survey discrepancy – Disclosure.

6.4 Segregations

RCW 58.17.020	Definitions.
RCW 84.04.090	"Real property".
RCW 84.04.120	"Taxing district".
RCW 84.04.130	"Tract", "lot", etc.
RCW 84.40.042	Valuation and assessment of divided or combined property.
RCW 84.40.230	Contract to purchase public land.
RCW 84.40.240	Annual list of lands sold or contracted to be sold to be furnished assessor.
RCW 84.40.315	Federal agencies and property taxable when federal law permits.
RCW 84.56.340	Payment on part of parcel or tract or on undivided interest or fractional interest – Division – Certification – Appeal.
RCW 84.60.050	Acquisition by governmental unit of property subject to tax lien or placement under agreement or order of immediate possession or use -- Effect.
RCW 84.60.070	Acquisition by governmental unit of property subject to tax lien or placement under agreement or order of immediate possession or use – Segregation of taxes if only part of parcel required.
WAC 458-07-035	Listing of property – Subdivisions and segregation of interests.

CHAPTER 7 – Levies

7.1 Levy of Taxes

[State Constitution, Art. VII, Sections 1 and 2](#)

RCW 28A.315.305	School district organizational changes – Corporate existence – Payment of bonded indebtedness – Levy authority – Levy requirements for dissolved or annexed financially insolvent school districts.
RCW 28A.323.010	Joint school districts – Defined – Designation.
RCW 28A.323.040	Joint school districts – Administration – County to which joint school district considered as belonging.
RCW 28A.323.060	Joint school districts – Directors – Vacancies.
RCW 28A.323.080	Joint school districts – Assessed valuation – Certification.
RCW 28A.323.090	Joint school districts – Levy of tax.
RCW 28A.323.100	Joint school districts – Levy of tax – Remittance to district treasurer.
RCW 36.21.100	Annual report to department of revenue on property tax levies and related matters.
RCW 39.67.010	Agreements contingent on property tax levy – Authorized.
RCW 39.67.020	Transfer of funds between taxing districts.
RCW 53.36.100	Levy for industrial development district purposes – Notice – Petition - Election
RCW 53.36.160	Multiyear levy periods – Requirements.
RCW 73.08.080	Tax levy authorized. [Veterans Assistance Fund.]
RCW 84.08.140	Appeals from levy of taxing district to department of revenue.
RCW 84.09.030	Taxing district boundaries – Establishment.
RCW 84.41.050	Application — Procedures.
RCW 84.48.110	Transcript of proceedings to county assessors – Delinquent tax for certain preceding years included.
RCW 84.52.010	Taxes levied or voted in specific amounts -- Effect of constitutional and statutory limitations.
RCW 84.52.018	Calculation of tax levy rates when the assessment of highly valued property is in dispute.
RCW 84.52.020	City and district budgets to be filed with county legislative authority.
RCW 84.52.025	Budgets of taxing districts filed with county commissioners to indicate estimate of cash balance.
RCW 84.52.030	Time of levy.
RCW 84.52.040	Levies to be made on assessed valuation.
RCW 84.52.043	Limitations upon regular property tax levies.

RCW 84.52.044	Limitations upon regular property tax levies — Participating fire protection jurisdictions.
RCW 84.52.050	Limitation of levies.
RCW 84.52.052	Excess levies authorized — When — Procedure.
RCW 84.52.053	Levies by school districts authorized — When -- Procedure.
RCW 84.52.0531	Levies by school districts — Maximum dollar amount for maintenance and operation support — Restrictions — Maximum levy percentage — Levy reduction funds — Rules.
RCW 84.52.054	Excess levies — Ballot contents — Eventual dollar rate on tax rolls.
RCW 84.52.056	Excess levies for capital purposes authorized.
RCW 84.52.063	Rural library district levies.
RCW 84.52.065	State levy for support of common schools.
RCW 84.52.067	State levy for support of common schools — Disposition of funds.
RCW 84.52.069	Emergency medical care and service levies
RCW 84.52.070	Certification of levies to assessor.
RCW 84.52.080	Extension of taxes on rolls — Form of certificate — Delivery to treasurer.
RCW 84.52.085	Property tax errors.
RCW 84.52.105	Affordable housing levies authorized — Declaration of emergency and plan required.
RCW 84.52.120	Metropolitan park districts — Protection of levy from prorationing — Ballot proposition.
RCW 84.52.125	Fire protection districts — Protection from levy prorationing.
RCW 84.52.130	Fire protection district excess levies.
RCW 84.52.135	County levy for criminal justice purposes.
RCW 84.52.700	County airport district levy authorized.
RCW 84.52.703	Mosquito control district levies authorized.
RCW 84.52.706	Rural county library district levy authorized.
RCW 84.52.709	Intercounty rural library district levy authorized.
RCW 84.52.712	Reduction of city levy if part of library district.
RCW 84.52.713	Island library district levy authorized.
RCW 84.52.718	Levy by receiver of disincorporated city authorized.
RCW 84.52.719	Second class city levies.
RCW 84.52.721	Unclassified city sewer fund levy authorized.
RCW 84.52.724	City accident fund levy authorized.
RCW 84.52.727	City emergency fund levy authorized.
RCW 84.52.730	City lowlands and waterway projects levy authorized.
RCW 84.52.733	Metropolitan municipal corporation levy authorized.

RCW 84.52.736	Metropolitan park district levy authorized.
RCW 84.52.739	Code city accident fund levy authorized.
RCW 84.52.742	County lands assessment fund levy authorized.
RCW 84.52.745	General county levy authorized.
RCW 84.52.749	County rail district tax levies authorized.
RCW 84.52.750	Solid waste disposal district – Excess levies authorized.
RCW 84.52.751	County hospital maintenance levy authorized.
RCW 84.52.754	Park and recreation service area levies authorized.
RCW 84.52.757	Park and recreation district levies authorized.
RCW 84.52.760	County road fund levy authorized.
RCW 84.52.761	Road and bridge service district levies authorized.
RCW 84.52.763	City firemen's pension fund levy authorized.
RCW 84.52.769	Reduction of city levy if part of fire protection district.
RCW 84.52.772	Fire protection district levies authorized.
RCW 84.52.775	Port district levies authorized.
RCW 84.52.778	Public utility district levy authorized.
RCW 84.52.784	Water-sewer district levies authorized.
RCW 84.52.786	Cultural arts, stadium and convention district tax levies authorized.
RCW 84.52.787	Cemetery district levy authorized.
RCW 84.52.790	Public hospital district levy authorized.
RCW 84.52.793	Air pollution control agency levy authorized.
RCW 84.52.796	Mental retardation and developmental disability services levy authorized.
RCW 84.52.799	Veteran's relief fund levy authorized.
RCW 84.52.802	Acquisition of open space, etc., land or rights to future development by counties, cities, metropolitan municipal corporations or nonprofit nature conservancy corporation or association – Property tax levy authorized.
RCW 84.52.808	River improvement fund levy authorized.
RCW 84.52.811	Intercounty river control agreement levy authorized.
RCW 84.52.814	Flood control zone district levy authorized.
RCW 84.52.817	Irrigation and rehabilitation district special assessment authorized.
RCW 84.52.820	Reclamation district levy authorized.
RCW 84.52.823	Levy for tax refund funds.
RCW 84.55.045	Applicability of chapter to levy by port district for industrial development district purposes.

RCW 84.56.010	Establishment of tax rolls by treasurer – Public record – Tax roll account – Authority to receive, collect taxes.
RCW 84.56.022	Tax statement to show voter-approved levies.
RCW 84.56.430	Relisting and relevy of tax adjudged void.
RCW 84.68.040	Levy for tax refund fund.
RCW 84.69.020	Grounds for refunds – Determination – Payment – Report.
WAC 458-19-005	Definitions.
WAC 458-19-010	Levy limit and levy rate calculations.
WAC 458-19-020	Levy limit – Method of calculation.
WAC 458-19-025	Restoration of regular levy.
WAC 458-19-030	Levy limit – Consolidation of districts.
WAC 458-19-035	Levy limit – Annexation.
WAC 458-19-040	Levy limit – Newly formed taxing district.
WAC 458-19-045	Levy limit – Removal of limit (lid lift).
WAC 458-19-050	Port district levies.
WAC 458-19-055	Levy limit – Proration of earmarked funds.
WAC 458-19-060	Emergency medical service levy.
WAC 458-19-065	Levy limit – Protection of future levy capacity.
WAC 458-19-070	Procedure to adjust consolidated levy rate for taxing districts when the statutory aggregate dollar rate limit is exceeded.
WAC 458-19-075	Constitutional one percent levy limit calculation.
WAC 458-19-080	City annexed by fire protection and/or library districts.
WAC 458-19-085	Refunds – Procedures – Applicable limits.
WAC 458-19-550	State levy – Apportionment between counties.

Other References

AGO 1965 No. 65	Taxation – Property – Valuation – "True and fair value."
AGLO 1975, No. 12	Districts – Schools – Elections – Ballot titles.
AGLO 1976, No. 70	Taxation – Real property – Counties – Deadline for annual property tax levies.
AGO 1977, No. 7	Taxation – Property – Pensions – Retirement – Police – Firemen – LEOFF – Property taxes for firemen's pension fund.
AGO 1977, No. 9	Taxation – Property – Cities and towns – Local improvements – Applicability of statutory tax limitation to certain municipal property taxes.
AGLO 1978, No. 29	Districts – Port – Taxation – Restrictions upon property taxation by newly formed port district.
AGO 1981, No. 11	Districts – Port – Taxation – Budget – Timing of certain port district property tax levies.

Special Notices	2008 Legislation Updates - Levy Lid Lift, Establishing Taxing District Boundaries, Beach Management Districts, Binding Site Plans (Issued August 27, 2008)
	2010 Legislation Updates (Issued June 30, 2010)
	2009 Legislation Updates - Levies & Collection Issues (Issued July 23, 2009)
	Taxing District Levy Certification (Issued July 15, 2008)
Court Cases	Alaska Land Company, Inc. v. King County, (1969) 77 W2d 247, 461 P2d 339.
	Dept. of Revenue v. Hoppe, (1973) 82 W2d 549, 512 P2d 1094.
	Hoppe v. King County, (1980) 95 W2d 332, 622 P2d 845.
	Sator v. Dept. of Revenue, (1977) 89 W2d 338, 572 P2d 1094.

7.2 Limitations

RCW 84.55.005	Definitions. (Effective if unconstitutionality of Initiative Measure No. 747 is affirmed by pending appeal.)
RCW 84.55.010	Limitations prescribed.
RCW 84.55.0101	Limit factor – Authorization for taxing district to use one hundred one percent or less – Ordinance or resolution.
RCW 84.55.012	Reduction of property tax levy – Setting amount of future levies.
RCW 84.55.0121	Reduction of property tax levy for collection in 1998.
RCW 84.55.015	Restoration of regular levy.
RCW 84.55.020	Limitation upon first levy for district created from consolidation.
RCW 84.55.030	Limitation upon first levy following annexation.
RCW 84.55.035	Inapplicability of limitation to newly-formed taxing district created other than by consolidation or annexation.
RCW 84.55.040	Increase in statutory dollar rate limitation.
RCW 84.55.045	Applicability of chapter to levy by port district for industrial development district purposes.
RCW 84.55.050	Election to authorize increase in regular property tax levy – Limited propositions – Procedure.
RCW 84.55.060	Rate rules – Educational program – Other necessary action.
RCW 84.55.070	Inapplicability of chapter to levies for certain purposes.
RCW 84.55.080	Adjustment to tax limitation.
RCW 84.55.092	Protection of future levy capacity.
RCW 84.55.100	Determination of limitations.
RCW 84.55.110	Withdrawal of certain areas of a library district, metropolitan park district, fire protection district, or public hospital district – Calculation of taxes due.
RCW 84.55.120	Public hearing – Taxing district's revenue sources – Adoption of tax increase by ordinance

or resolution.

[WAC 458-19-005](#)

Definitions.

[WAC 458-19-010](#)

Levy limit and levy rate calculations.

[WAC 458-19-020](#)

Levy limit – Method of calculation.

[WAC 458-19-025](#)

Restoration of regular levy.

[WAC 458-19-030](#)

Levy limit – Consolidation of districts.

[WAC 458-19-035](#)

Levy limit – Annexation.

[WAC 458-19-040](#)

Levy limit – Newly formed taxing district.

[WAC 458-19-045](#)

Levy limit – Removal of limit (lid lift).

[WAC 458-19-050](#)

Port district levies.

[WAC 458-19-055](#)

Levy limit – Proration of earmarked funds.

[WAC 458-19-060](#)

Emergency medical service levy.

[WAC 458-19-065](#)

Levy limit – Protection of future levy capacity.

[WAC 458-19-070](#)

Procedure to adjust consolidated levy rate for taxing districts when the statutory aggregate dollar rate limit is exceeded.

[WAC 458-19-075](#)

Constitutional one percent limit calculation.

[WAC 458-19-080](#)

City annexed by fire protection and/or library districts.

[WAC 458-19-085](#)

Refunds – Procedures – Applicable limits.

Other References

[AGLO 1975, No. 86](#)

Taxation – Property – Port districts – Computation of port district property tax under 106% statutory limitation.

[AGLO 1976, No. 6](#)

Taxation – Property – Expiration of 106% limitation upon regular property taxes.

[AGO 1977, No. 9](#)

Taxation – Property – Cities and towns – Local improvements – Applicability of statutory tax limitation to certain municipal property taxes.

[AGLO 1977, No. 9](#)

Districts – Ports – Elections – Bonds – Taxation – Real property – Passage or failure of proposition.

[AGLO 1978, No. 29](#)

Districts – Port – Taxation – Restrictions upon property taxation by newly formed port district.

[AGO 1978, No. 29](#)

Taxation – Property – Elections – Extent of voter approval required to exceed 106% limitation.

[AGO 2006, No. 9](#)

Fire Protection Districts – Cities & Towns – Annexation – Taxation – Effect on fire protection district's taxing authority of annexing part of the district into a code city

[State Constitution, Art. VII, Sec. 2](#)

Limitation on Levies

Special Notices

[2008 Legislation Updates - Levy Lid Lifts, Establishing Taxing District Boundaries, Beach Management Districts, binding Site Plans \(Issued August 27, 2008\)](#)
[Determining The Levy Limit Factor For Property Tax Increases \(Issued April 22, 2009\)](#)

7.3 Withdrawal or Reannexations of Areas

RCW 27.12.355	Rural county library district, island library district, or intercounty rural library district – Withdrawal or reannexation of areas.
RCW 27.12.470	Rural partial-county library districts.
RCW 35.61.360	Withdrawal or reannexation of areas. (Metropolitan park district.)
RCW 52.04.056	Withdrawal or reannexation of areas. (Fire protection district.)
RCW 52.04.141	Annexation of contiguous territory not in same county.
RCW 52.04.161	Newly incorporated city or town deemed annexed by district – Withdrawal.
RCW 70.44.235	Withdrawal or reannexation of areas. (Public hospital district.)
RCW 84.55.110	Withdrawal of certain areas of a library district, metropolitan park district, fire protection district, or public hospital district – Calculation of taxes due.

7.4 Public Hearings – Increasing Revenues

RCW 84.55.120	Public hearing – Taxing district's revenue sources – Adoption of tax increase by ordinance or resolution.
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Other References

Special Notice	Taxing District Levy Certification (Issued July 15, 2008)
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CHAPTER 8 – Property Tax Annual Ratio Study

RCW 84.12.350	Apportionment of value by department of revenue.
RCW 84.16.110	Apportionment of value to counties by department of revenue.
RCW 84.40.185	Individuals, corporations, limited liability companies, associations, partnerships, trusts, or estates required to list personalty.
RCW 84.48.075	County indicated ratio – Determination by department – Submission of preliminary ratio to assessor – Rules – Use classes – Review of preliminary ratio – Certification – Examination of assessment procedures – Adjustment of ratio.
RCW 84.48.080	Equalization of assessments – Taxes for state purposes – Procedure – Levy and apportionment – Hypothetical levy for establishing consolidated levy – Rules – Record.
RCW 84.52.065	State levy for support of common schools.
WAC 458-53-010	Declaration of purpose.
WAC 458-53-020	Definitions.
WAC 458-53-030	Stratification of assessment rolls – Real property.
WAC 458-53-050	Land use stratification, sales summary and abstract report.
WAC 458-53-070	Real property sales studies.
WAC 458-53-080	Real property sales sample selection.
WAC 458-53-095	Property values used in the ratio study.
WAC 458-53-100	County generated sales studies.
WAC 458-53-105	Review procedures for county studies.
WAC 458-53-130	Real property appraisal studies.
WAC 458-53-135	Indicated real property ratio – Computation.
WAC 458-53-140	Personal property ratio study.
WAC 458-53-160	Indicated personal property ratio – Computation.
WAC 458-53-200	Certification of county preliminary and indicated ratios – Review.
WAC 458-53-210	Appeals.

CHAPTER 9 – Assessment Roll/Tax Roll

RCW 36.21.080	New construction building permits – When property placed on assessment rolls.
RCW 84.34.090	Extension of additional tax and penalties on tax roll – Lien.
RCW 84.34.100	Payment of additional tax, penalties, and/or interest.
RCW 84.40.020	Assessment date – Average inventory may be used – Public inspection of listing, documents, and records.
RCW 84.40.040	Time and manner of listing.
RCW 84.40.090	Taxing districts to be designated – Separate assessments.
RCW 84.40.160	Manner of listing real estate – Maps.
RCW 84.40.320	Detail and assessment lists to board of equalization.
RCW 84.48.010	County board of equalization – Formation – Per diem – Meetings – Duties – Records – Correction of rolls – Extending taxes – Change in valuation, release or commutation of taxes by county legislative authority prohibited.
RCW 84.48.034	County board of equalization – Duration of order.
RCW 84.48.050	Abstract of rolls to state auditor – State action if assessor does not transmit, when.
RCW 84.48.080	Equalization of assessments – Taxes for state purposes – Procedure – Levy and apportionment – Hypothetical levy for establishing consolidated levy – Rules – Record.
RCW 84.48.120	Extension of state taxes.
RCW 84.48.130	Certification of assessed valuation to taxing districts.
RCW 84.52.080	Extension of taxes on rolls – Form of certificate – Delivery to treasurer.
RCW 84.56.010	Establishment of tax rolls by treasurer – Public record – Tax roll account – Authority to receive, collect taxes.
RCW 84.56.020	Taxes collected by treasurer – Dates of delinquency – Tax statement notice concerning payment by check – Interest – Penalties.
RCW 84.56.022	Tax statement to show voter-approved levies.
RCW 84.56.025	Waiver of interest and penalties – Circumstances – Provision of death certificate and affidavit for certain waivers.
RCW 84.56.050	Treasurer's duties on receiving rolls – Notice of taxes due.
RCW 84.56.120	Removal of property from county or state after assessment without paying tax.
RCW 84.56.280	Settlement with state for state taxes – Penalty.
RCW 84.56.290	Adjustment with state for reduced or canceled taxes and for taxes on assessments not on the certified assessment list.

RCW 84.56.300	Annual report of collections to county auditor.
WAC 458-07-030	True and fair value – Defined – Criteria – Highest and best use – Data from property owner.
WAC 458-12-115	Personalty – Taxable situs – In general.
WAC 458-14-025	Assessment roll corrections not requiring board action.
WAC 458-14-026	Assessment roll corrections agreed to by taxpayer
WAC 458-30-280	Notice to withdraw from classification.
WAC 458-30-320	Assessment and tax rolls.

Assessment Roll – Public Utilities

RCW 84.12.350	Apportionment of value by department of revenue.
RCW 84.12.360	Basis of apportionment.
RCW 84.12.370	Certification to county assessor – Entry upon tax rolls.
RCW 84.16.040	Annual assessment – Sources of information.
RCW 84.16.050	Basis of valuation – Apportionment of system value to state.
RCW 84.16.090	Assessment roll – Notice of valuation.
RCW 84.16.110	Apportionment of value to counties by department of revenue.
RCW 84.16.120	Basis of apportionment.
RCW 84.16.130	Certification to county assessors – Apportionment to taxing districts – Entry upon tax rolls.
WAC 458-50-100	Apportionment of operating property to the various counties and taxing districts. In general.

Other References

Special Notice	Adding New Value to the Assessment Roll (Issued November 27, 2017) Building Permits In Relationship to Adding Value of New Construction (Issued September 15, 2008)
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CHAPTER 10 – Special Benefit Assessment Districts

10.1 Diking and Drainage

Diking Districts

Chapter 85.05 RCW	Diking districts.
RCW 85.05.135	Special assessments – Budgets – Alternative methods.
RCW 85.05.367	Lands owned by district exempt from taxation.
RCW 85.05.380	Public lands subject to assessment – Rights and liabilities of public corporations.
Chapter 85.18 RCW	Levy for continuous benefits – Diking districts
RCW 85.18.010	Levy for continuous benefits authorized -- Base benefits.

Drainage Districts

Chapter 85.06 RCW	Drainage districts and miscellaneous drainage provisions.
RCW 85.06.125	Special assessments – Budgets – Alternative methods.
RCW 85.06.350	Public lands subject to assessment – Rights and liabilities of public corporations.

Diking and Drainage District in Two or More Counties

Chapter 85.24 RCW	Diking and drainage districts in two or more counties.
RCW 85.24.065	Special assessments – Budgets – Alternative methods.
RCW 85.24.250	Municipality may contribute.
RCW 85.24.275	Assessment of state lands.

10.2 Flood Control Districts

Flood Control

RCW 86.12.010	County tax for river improvement fund – Flood control maintenance account.
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Flood Control by Counties Jointly

RCW 86.13.010	Boundary line rivers – Contract to control.
RCW 86.13.030	Tax levy in each county – Intercounty river improvement fund.

Flood Control Zone Districts

RCW 86.15.160	Excess levies, assessments, regular levies and charges – Local improvement districts.
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10.3 Irrigation And Rehabilitation Districts

Irrigation Districts

- [RCW 87.03](#) Irrigation districts generally.
- [RCW 87.03.240](#) Assessments, how and when made – Assessment roll.
- [RCW 87.03.242](#) Exemption of farm and agricultural land from special benefit assessments.

Irrigation and Rehabilitation Districts

- [Chapter 87.84 RCW](#) Irrigation and rehabilitation districts.
- [RCW 87.84.070](#) Special assessments – Notice and election – Collection.

10.4 Forest Fire Protection Assessment Districts

- [RCW 76.04.610](#) Forest fire protection assessment.

10.5 Horticultural Assessment Districts

- [RCW 15.09.135](#) Assessment – Public hearing – Rate – County review – Lien.

10.6 Mosquito Control Districts

- [Chapter 17.28 RCW](#) Mosquito control districts.
- [RCW 17.28.100](#) Election on proposition to levy tax.
- [RCW 17.28.252](#) Excess levy authorized.
- [RCW 17.28.253](#) District boundaries for tax purposes.
- [RCW 17.28.255](#) Classification of property – Assessments.
- [RCW 17.28.256](#) Assessments – Roll, hearings, notices, objections, appeal, etc.
- [RCW 17.28.257](#) Assessments – Payment, lien, delinquencies, foreclosure, etc.
- [RCW 17.28.260](#) General obligation bonds – Excess property tax levies.

10.7 Pest Control Districts

- [RCW 17.12.080](#) Levies on state and county lands – Levies on state lands to be added to rental or purchase price.

10.8 Reclamation Districts

- [Chapter 89.30 RCW](#) Reclamation districts of one million acres.

10.9 River and Harbor Improvement

- [Chapter 88.32 RCW](#) River and harbor improvements.

[RCW 88.32.040](#) Establishment of assessment district – Assessments – State lands.

10.10 Road Improvement Districts

[Chapter 36.88 RCW](#) County road improvement districts.

[RCW 36.88.080](#) Property included in district – Method of assessment – Assessment limited by benefit.

[RCW 36.88.085](#) Exemption of farm and agricultural land from special benefit assessments.

10.11 Television Reception Improvement District

[Chapter 36.95 RCW](#) Television reception improvement districts.

10.12 Weed Districts

[Chapter 17.04 RCW](#) Weed districts.

[RCW 17.04.170](#) Indian reservation lands – United States lands.

[RCW 17.04.180](#) County and state lands.

[RCW 17.04.240](#) Assessments – Classification of property – Tax levy.

[RCW 17.04.245](#) Assessment – Tax roll – Collection.

[Chapter 17.06 RCW](#) Intercounty weed districts.

[RCW 17.06.060](#) Director's powers and duties – Taxation – Treasurer – Costs.

Other References

[AGO 1984, No. 1](#) Districts – Weed – Taxation – Assessments – Counties – Cities and towns – Applicability of weed district assessments to certain city-owned land.

Special Notices [2008 Legislation Updates - Levy Lid Lifts, Establishing Taxing District Boundaries, Beach Management Districts, Binding Site Plans \(Issued August 27, 2008\)](#)
[2009 Legislation Updates - Levies & Collections \(Issued July 23, 2009\)](#)

CHAPTER 11 – Appeals

11.1 Board of Equalization

RCW 84.08.020	Additional powers – To advise county and local officers – Books and blanks – Reports.
RCW 84.08.060	Additional powers – Powers over county boards of equalization – Reconvening – Limitation on increase in property value in appeals to board of tax appeals from county board of equalization.
RCW 84.08.130	Appeals from county board of equalization to board of tax appeals – Notice.
RCW 84.40.020	Assessment date — Average inventory basis may be used — Public inspection of listing, documents, and records.
RCW 84.40.038	Petition county board of equalization – Limitation on changes to time limit – Waiver of filing deadline – Direct appeal to state board of tax appeals.
RCW 84.40.150	Sick or absent persons – May report to board of equalization.
RCW 84.40.320	Detail and assessment lists to board of equalization.
RCW 84.48.010	County board of equalization – Formation – Per Diem – Meetings – Duties – Records – Correction of rolls – Extending taxes – Change in valuation, release or commutation of taxes by county legislative authority prohibited.
RCW 84.48.014	County board of equalization – Composition of board – Appointment – Qualifications.
RCW 84.48.018	County board of equalization – Chairman – Quorum.
RCW 84.48.022	County board of equalization – Meetings.
RCW 84.48.026	County board of equalization – Terms – Removal.
RCW 84.48.028	County board of equalization – Clerk – Assistants.
RCW 84.48.032	County board of equalization – Appraisers.
RCW 84.48.034	County board of equalization – Duration of order.
RCW 84.48.036	County board of equalization – Annual budget.
RCW 84.48.038	County board of equalization – Legal advisor.
RCW 84.48.042	County board of equalization – Training school.
RCW 84.48.046	County board of equalization – Operating manual.
RCW 84.48.065	Cancellation and correction of erroneous assessments and assessments on property on which land use designation is changed.
RCW 84.48.140	Property tax advisor.
RCW 84.48.150	Valuation criteria including comparative sales to be made available to taxpayer – Change.
WAC 458-14-001	Boards of equalization – Introduction.
WAC 458-14-005	Definitions.

WAC 458-14-015	Jurisdiction of county boards of equalization.
WAC 458-14-025	Assessment roll corrections not requiring board action.
WAC 458-14-026	Assessment roll corrections agreed to by taxpayer.
WAC 458-14-035	Qualifications of members – Term – Organization of board – Quorum – Adjournment – Alternate and interim members.
WAC 458-14-046	Regularly convened session – Board duties – Presumption – Equalization to revaluation year.
WAC 458-14-056	Petitions – Time limits – Waiver of filing deadline for good cause.
WAC 458-14-066	Requests for valuation information – Duty to exchange information – Time limits.
WAC 458-14-076	Hearings on petitions.
WAC 458-14-087	Evidence of value – Admissibility – Weight.
WAC 458-14-095	Record of hearings.
WAC 458-14-105	Hearings – Open sessions – Exceptions.
WAC 458-14-116	Orders of the board – Notice of value adjustment – Effective date.
WAC 458-14-127	Reconvened boards – Authority.
WAC 458-14-136	Hearing examiners.
WAC 458-14-146	Conflicts of interest.
WAC 458-14-156	Training seminars.
WAC 458-14-160	Continuances – Ex parte contact.
WAC 458-14-170	Appeals to the state board of tax appeals.
WAC 458-14-171	Direct appeals to board of tax appeals.

Other References

AGO 1971, No. 37	Taxation – Property – Counties – Meetings – Public – Attendance by public at sessions of a county board of equalization.
AGO 1971, No. 31	Taxation – Real property – Application of tax exemption provided under Chapter 288, Laws of 1971, 1st Ex. Sess., to heirs or grantees of a tax exempt property owner.
AGO 1972, No. 23	Taxation – Real property – Exemption – Elderly – Sale to noneligible grantee – Portion of tax to be paid.
AGO 1973, No. 16	Offices and officers – County – Board of equalization – Taxation – Jurisdiction of county board of equalization to increase property tax valuation without notice.
AGO 1977, No. 21	Districts – Diking – Elections – Eligibility of contract purchasers to vote in diking district elections.
AGO 1986, No. 3	Counties – Assessor – Taxes – Valuation of property – Presumption of correctness.
Court of Appeals Division No. 1	University Village v. King County - Total Market Value

Court Cases

Island County on Assessment Ratios v. Dept. of Revenue (1972) 81 W2d 193, 500 P2d 756.
Niichel v. Lancaster (1982) 97 W2d 620, 647 P2d 1021.

11.2 Board of Tax Appeals

RCW 82.03.010	Board created.
RCW 82.03.020	Members – Number – Qualifications – Appointment.
RCW 82.03.030	Terms – Vacancies.
RCW 82.03.040	Removal of members – Grounds – Procedure.
RCW 82.03.050	Operation on part time or full time basis – Salary – Compensation – Travel expenses.
RCW 82.03.060	Members not to be candidate or hold public office, engage in inconsistent occupation nor be on political committee – Restriction on leaving board.
RCW 82.03.070	Executive director, tax referees, clerk, assistants.
RCW 82.03.080	Chairman.
RCW 82.03.090	Office of board – Quorum – Hearings.
RCW 82.03.100	Findings and decisions – Signing – Filing – Public inspection.
RCW 82.03.110	Publication of findings and decisions.
RCW 82.03.120	Journal of final findings and decisions.
RCW 82.03.130	Appeals to board – Jurisdiction as to types of appeals – Filing.
RCW 82.03.140	Appeals to board – Election of formal or informal hearing.
RCW 82.03.150	Appeals to board – Informal hearings, powers of board or tax referees – Assistance.
RCW 82.03.160	Appeals to board – Formal hearings, powers of board or tax referees – Assistance.
RCW 82.03.170	Rules of practice and procedure.
RCW 82.03.180	Judicial review.
RCW 82.03.190	Appeal to board from denial of petition or notice of determination as to reduction or refund – Procedure – Notice.
RCW 82.03.200	Appeals from county board of equalization – Evidence submission in advance of hearing.
RCW 84.08.060	Additional powers — Power over county boards of equalization — Reconvening — Limitation on increase in property value in appeals to board of tax appeals from county board of equalization.
RCW 84.08.130	Appeals from county board of equalization to board of tax appeals – Notice.
WAC 456-09	Formal hearings – Practice and procedure.
WAC 456-10	Informal hearings – Practice and procedure.

11.3 Other Appeals

RCW 84.08.140	Appeals from levy of taxing district to department of revenue.
RCW 84.12.340	Hearings on assessment, time and place of.
RCW 84.14.070	Processing – Approval – Denial – Appeal
RCW 84.16.100	Hearings, time and place of.
RCW 84.26.130	Appeals from decisions on applications. (Historic property.)
RCW 84.33.130	Forest land valuation – Application by owner that land be designated and valued as forest land – Hearing – Rules – Approval, denial of application – Appeal.
RCW 84.34.035	Applications for current use classification – Approval or denial – Appeal – Duties of assessor upon approval.
RCW 84.34.108	Removal of classification – Factors – Notice of continuance – Additional tax – Lien – Delinquencies – Exemptions.
RCW 84.36.385	Residences – Claim for exemption – Forms – Change of status – Publication and notice of qualifications and manner of making claims.
RCW 84.36.812	Additional tax payable at time of sale – Appeal of assessed values.
RCW 84.36.850	Review – Appeals.
RCW 84.38.040	Declaration to defer special assessments and/or real property taxes – Filing – Contents – Appeal.
RCW 84.40.039	Reducing valuation after government restriction – Petitioning assessor – Establishing new valuation – Notice – Appeal – Refund
RCW 84.70.010	Reduction in value – Abatement – Formulas – Appeal.
WAC 458-53-210	Appeals.

CHAPTER 12 – Tax Increment Financing

12.1 Community Revitalization Financing (CRF)

RCW 39.89.010	Declaration – Purpose.
RCW 39.89.020	Definitions.
RCW 39.89.030	Authority – Conditions.
RCW 39.89.040	Coordination with other programs – Improvements by private developer must meet applicable state and local laws.
RCW 39.89.050	Procedure for creating increment areas.
RCW 39.89.060	Public notice – Notice to officials.
RCW 39.89.070	Apportionment of taxes.
RCW 39.89.080	General indebtedness – Security.
RCW 39.89.090	Conclusive presumption of validity.
RCW 39.89.100	Revenue bonds.
RCW 39.89.900	Supplemental nature of chapter.

12.2 Hospital Benefit Zones (HBZ)

RCW 39.100.010	Definitions.
RCW 39.100.020	Conditions for financing public improvements.
RCW 39.100.030	Benefit zone creation – Agreement, hearing, and notice requirements – Ordinance requirements.
RCW 39.100.040	Benefit zone ordinance, publicizing and delivery – Challenges to benefit zone formation.
RCW 39.100.050	Use of excess local excise tax – Boundary information – Definitions.
RCW 39.100.060	Issuance of revenue bonds.
RCW 39.100.900	Effective date – 2006 c 111.

12.3 Local Infrastructure Financing Tool (LIFT)

RCW 39.102.010	Finding.
RCW 39.102.020	Definitions.
RCW 39.102.030	Creation.
RCW 39.102.040	Application process – Board approval.
RCW 39.102.050	Demonstration projects.
RCW 39.102.060	Limitations on revenue development areas.
RCW 39.102.070	Local infrastructure financing – Conditions.

RCW 39.102.080	Revenue development area adoption – Process.
RCW 39.102.090	Revenue development area adoption – Ordinance – Hearing and delivery requirements.
RCW 39.102.100	Revenue development area adoption – Notice requirements.
RCW 39.102.110	Local excise tax allocation revenues.
RCW 39.102.120	Local property tax allocation revenues.
RCW 39.102.130	Use of sales and use tax funds.
RCW 39.102.140	Reporting requirements.
RCW 39.102.150	Issuance of general obligation bonds.
RCW 39.102.160	Use of tax revenue for bond repayment.
RCW 39.102.170	Limitation on bonds issued.
RCW 39.102.190	Revenue bonds to fund public improvements.
RCW 39.102.195	Limitation on use of revenues.
RCW 39.102.200	Joint legislative audit and review committee reports.
RCW 39.102.210	Program evaluation.
RCW 39.102.220	Administration by department and board
RCW 39.102.902	Construction – 2006 c 181.
RCW 39.102.903	Effective date – 2006 c 181
RCW 39.102.905	Expiration date – 2013 2 nd sp.s. c 21.

12.4 Local Revitalization Financing (LRF)

RCW 39.104.010	Finding.
RCW 39.104.020	Definitions.
RCW 39.104.030	Conditions.
RCW 39.104.040	Creation of revitalization area.
RCW 39.104.050	Limitations on revitalization areas.
RCW 39.104.060	Use of property tax allocation revenues for revitalization financing – Opting out – Partial participation.
RCW 39.104.070	Participating in revitalization financing – Interlocal agreement – Imposition of sales and use tax – Ordinance to opt out – Notice.
RCW 39.104.080	Local property tax allocation revenues – Distribution – Determination – Termination – Exception.
RCW 39.104.090	Local sales and use tax increments.
RCW 39.104.100	Application process – Department of revenue approval.
RCW 39.104.110	Issuance of general obligation bonds.

RCW 39.104.120	Use of tax revenue for bond repayment.
RCW 39.104.130	Limitation on bonds issued.
RCW 39.104.140	Construction – Port districts – Authority.
RCW 39.104.150	Administration by the department – Adoption of rules.

12.5 Local Infrastructure Project Area Financing (LIPA)

RCW 39.108.005	Finding.
RCW 39.108.010	Definitions.
RCW 39.108.030	Designation of sending areas – Inclusion of agricultural and forestland of long-term commercial significance.
RCW 39.108.040	Development rights from agricultural and forestland of long-term commercial significance.
RCW 39.108.050	Designation of sending areas—Inclusion of rural zoned lands under certain circumstances.
RCW 39.108.060	Determination of total number of transferable development rights for agricultural and forestland of long-term commercial significance and designated rural zoned lands.
RCW 39.108.070	Allocation among local governments of transferable development rights from agricultural and forestland of long-term commercial significance and designated rural zoned lands.
RCW 39.108.080	Development plan for infrastructure.
RCW 39.108.090	Program for transfer of development rights into receiving areas – Requirements.
RCW 39.108.100	Development rights available for transfer to receiving cities.
RCW 39.108.110	Quantitative and qualitative performance measures—Reporting.
RCW 39.108.120	Creating a local infrastructure project area.
RCW 39.108.130	Limitations on local infrastructure project areas.
RCW 39.108.140	Participating taxing districts.
RCW 39.108.150	Allocation of property tax revenues.

12.6 State Land Improvement Financing Area (SLIFA)

RCW 39.112.010	Finding.
RCW 39.112.020	Definitions.
RCW 39.112.030	Conditions.
RCW 39.112.040	Creation of revitalization area.
RCW 39.112.050	Limitations on revitalization areas.
RCW 39.112.060	Use of property tax allocation revenues for revitalization financing – Opting out – Partial participation.
RCW 39.112.070	Participating in revitalization financing – Interlocal agreement – Imposition of sales and use tax – Ordinance to opt out – Notice.

[RCW 39.112.080](#) Use of tax revenue for bond repayment.

[RCW 39.112.090](#) Limitation on bonds issued.

12.7 Commercial Office Space Development Area (COSDA)

[RCW 35.107.005](#) Findings – Intent.

[RCW 35.107.010](#) Commercial office space development area—Local sales and use tax remittance program—Local property tax reinvestment program.

[RCW 35.107.020](#) Definitions.

[RCW 35.107.030](#) Ordinance establishing commercial office space development area – Requirements.

[RCW 35.107.040](#) Application for a qualifying project – Requirements.

[RCW 35.107.050](#) Application approval by administrative official or committee of the city – When authorized.

[RCW 35.107.060](#) Commercial office development public improvement fund – Required deposits.

[RCW 35.107.070](#) Commercial office development public improvement fund – Expenditures.

[RCW 35.107.080](#) Ownership change in participating projects.

[RCW 35.107.090](#) Joint legislative audit and review committee report.

CHAPTER 13 – Annual Reports

Reports Requested from Counties

Due Date	Report Title	Filed By	Filed With
February 28	Levy Report - XXXX Assessments and Levies Due in YYYY (XXXX is Assessment Year and YYYY is the Tax Year)	Assessor	DOR – Research & Fiscal Analysis
February 28	Senior Report - County Senior Citizen Relief	Assessor	DOR – Research & Fiscal Analysis
February 28	Property Assessment Roll - County Property Tax Collections (Calendar Year) _____	Treasurer	DOR – Research & Fiscal Analysis
February 28	Final Values - State Property Tax Levy Values	Assessor	DOR – Research & Fiscal Analysis (submit electronically in Excel format)
February 28	Taxing District Levy Computation Worksheets (REV 64 0007)	Assessor	DOR – Research & Fiscal Analysis (DOR review)
March 1	Revaluation Plan (Due the year preceding the new re-inspection cycle)	Assessor	DOR – Property Tax
July 15	Assessor's Certificate of Assessment Rolls to County Board of Equalization (REV 64 0051)	Assessor	DOR – Property Tax
August 30	End of Fiscal Year Recap for the State Levy	Treasurer	DOR – Business & Financial Services
August 31	Taxing District Boundary Report (Code Area Changes)	Assessor	DOR – Property Tax
September 1	Personal Property Stratification Report	Assessor	DOR – Property Tax
September 15	Assessor's Certificate of New Construction Value (REV 64 0059)	Assessor	DOR – Property Tax
September 15	Real Property Sales Study (Computer printout)	Assessor	DOR – Property Tax
October 15	Revaluation Progress Report (REV 64 0089 filed annually)	Assessor	DOR – Property Tax
October 31	Abstract of Assessed Values	Assessor	DOR – Research & Fiscal Analysis (submit electronically in Excel format)
November	Refund Fund Levy Report	Treasurer	DOR – Research & Fiscal Analysis (submit electronically in Excel format)

Monthly	Statement of Taxes Collected Real Estate Excise Tax (REV 84 0005)	Treasurer	DOR – Special Programs
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CHAPTER 14 – Record Retention

[General Records Retention Schedule for Local Government Agencies](#)

APPENDIX A – Definitions and Terminology

The following definitions/terminologies are taken from specific property tax statutes, property tax rules, advisories, or Black's Law Dictionary:

- A -

Ad valorem tax	A tax based on the value of property.
Additional tax (Current Use) RCW 84.34.108	The difference between the property tax paid as open space land, farm and agricultural land, or timber land and the amount of property tax otherwise due and payable for the seven years last past had the land not been so classified; plus interest upon the amounts of such additional tax paid at the same statutory rate charged on delinquent property taxes from the dates on which such additional tax could have been paid without penalty if the land had been assessed without penalty if the land had been assessed without regard to classification.
Additional tax (Historic Property) RCW 84.26.090 WAC 458-15-015	"Additional taxes, interest and penalties: (a) The cost multiplied by the levy rate in each year the property was subject to special valuation; plus (b) interest on the amounts of the additional tax at the statutory rate charged on delinquent property taxes from the dates on which the additional tax could have been paid without penalty if the property had not been valued as historic property under chapter 84.26 RCW; plus (c) a penalty equal to twelve percent of the amount determined in (a) and (b)."
Advance tax(Quick collect) RCW 84.56.070	Tax collected on personal property, which is to be sold, moved, or liquidated. The tax is calculated and collected on current year levy, based on new value.
Advisory value RCW 84.41.110 WAC 458-53-020	The true and fair value determinations by department appraisers or auditors made at the request of the county assessor. The value made by them shall not in any manner be binding upon the assessor.
Appraisal	An estimate of value.
Assessment date RCW 84.40.020 WAC 458-12-360	All real and personal property in this state that is subject to taxation shall be listed and assessed every year, with reference to its value on the first day of January of the year in which it is assessed.
Assessment ratio RCW 84.40.030	All property shall be valued at one hundred percent of its true and fair value in money and assessed on the same basis unless specifically provided otherwise by law.
Assessed value RCW 84.40.020 RCW 84.04.030	The terms "assessed valuation of taxable property," "valuation of taxable property," "value of taxable property," "taxable value of property," "property assessed," and "value," whenever used in any statute, law, charter or ordinance with relation to the levy of taxes in any taxing district, shall be held and construed to mean "assessed value of property" as defined in RCW 84.04.030. RCW 84.04.030 – Assessed value of property shall be held and construed to mean aggregate valuation of property subject to taxation by any taxing district as placed on the last completed and balanced tax rolls of the county preceding the date of any tax levy.
Assessment year	January 1 through December 31st of any year. The year the property is listed and assessed by the county assessor.

[RCW 84.40.020](#)
[RCW 84.04.040](#)

The assessment year is the calendar year prior to the year the taxes become due and payable.

- B -

**Board of equalization –
County**
[RCW 84.48.010](#)
[WAC 458-14-001](#)

The county governmental authority has the option of either appointing the members or constituting the board. The board shall consist of not less than three nor more than seven members and this board shall convene at a time set by statutes. There is no state board of equalization...Only a state board of tax appeals and the Department of Revenue.

Bond

A written promise/document to pay a specified sum of money at a specified date or dates in the future together with periodic interest. Revenue and general obligation bond.

Boundary change
[RCW 84.09.030](#)
[WAC 458-12-140](#)

Any change in taxing district boundaries, for the purpose of property taxation and the levy of property taxes. Most taxing district's boundaries must be established by August 1 of the year in which the levy is made.

Cancellation

Reduction to the tax roll after the roll has been certified for collection for a specific year.

Change of use
[Chapter 84.34 RCW](#)
[Chapter 84.33 RCW](#)

When land which is classified under chapter [84.34](#) RCW or designated under chapter [84.33](#) RCW is applied to some other use.

Change of venue
(*Black's Law Dictionary*)

The removal of a suit begun in one county or district to another county or district for trial, though the term is also sometimes applied to the removal of a suit from one court of the same county or district.

Compensating tax
[Chapter 84.33 RCW](#)

Tax calculated on removal from designated forest land classification.

Compliance, Notice of
[RCW 84.26.080](#)
[WAC 458-15-070](#)

An affidavit on the real estate excise tax form which is signed by the new owner/owners at the time of sale or transfer of ownership of historic property when they desire the property to continue under that respective classification.

**Consolidated taxing
district**
[WAC 458-12-140](#)

A combination of all taxing districts whose combined levy for tax purposes makes up the total levy applicable to an individual property.

**Constitutional
limitation**
[RCW 84.55.010](#)

The levy for a taxing district in any year shall be set so that the regular property taxes payable in the following year shall not exceed one hundred one percent of the amount of regular property taxes lawfully levied for such district in the highest of the three most recent years in which such taxes were levied for such district plus an additional dollar amount calculated by multiplying the increase in assessed value resulting from new construction, improvements to property and any increase in the assessed value of state assessed property by the regular property tax levy rate of that district for the preceding year.

The constitutional limitation is often referred to as the "101% limit" or "levy limit."

Contiguous

Land adjoining and touching other property held by the same ownership. Land divided by a public road, railroad, public right of way, or waterway, but otherwise an

RCW 84.34.020	integral part of a farming operation.
County commissioner RCW 36.32.005	The term county commissioners when used in Title 36 or other provision of law shall include the governmental authority empowered to so act under the provisions of a charter adopted by any county of the state.
County governmental authority	The board of county commissioners or county legislative body as established under Home Rule Charter.
County legislative authority WAC 458-18-510	The county commissioners, or in a case of a home rule charter county, the governmental authority empowered to so act.
County recording authority RCW 84.04.045 WAC 458-15-015	The county auditor or the county recording authority as authorized under Home Rule Charter.
Coupon	The interest document specifying the amount of interest and date of payment, attached to a bond or coupon warrant.
Coupon warrant	A warrant payable to the bearer with interest coupons attached. When issued, constitutes a general obligation of the district.
Current assessment year	The year the property is listed and valued by the county assessor.
Current tax year	The year the taxes are due and payable.
Current use Chapter 84.34 RCW	Present use of the land.
Deferred taxes RCW 84.38.010 WAC 458-18-010	A retired person qualifying under RCW 84.36.381 through 84.36.389 may elect to defer payment of special assessments and/or real property taxes on his/her residence an amount of up to 80% of their equity.
Delinquent assessments	Assessment remaining unpaid on and after the due date for which a penalty for non-payment is attached.
Delinquent interest RCW 84.56.020	Penalty for non-payment of a tax or assessment by the due date.
Department RCW 84.04.047	Department means the Department of Revenue of the state of Washington.
Designated forest land Chapter 84.33 RCW	Land which is primarily devoted to and used for growing and harvesting timber but its value for other purposes may be greater than its value for use as forest land.
Destroyed property RCW 36.21.080 RCW 84.70.010	If, on or before December 31 in any calendar year, any real or personal property placed upon the assessment roll of that year is destroyed in whole or in part, or is in an area that has been declared a disaster area by the governor and has been reduced in value by more than twenty percent as a result of a natural disaster, the true and fair value of such property shall be reduced for that assessment year by an amount determined by taking the true and fair value of such taxable property before destruction or reduction in value and deduct there from the true and fair value of the remaining property after destruction or reduction in value.

District WAC 458-18-510	District means any county, city, town, port district, school district, road district, water district, fire district, other municipal corporation, now or hereafter existing, having the power or authorized by law to levy or have levied for it, burdens on property for the purposes of obtaining revenue for public purposes, but shall not include the state.
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- E -

Eminent domain, Power of	The right of government to take private property for public use (usually by purchase).
EMS RCW 84.52.069	Emergency Medical Service.
Ex officio	By virtue of the office.
Excess levy RCW 84.52.052	Levy of additional taxes by any taxing district over and above the regular/statutory rate. Approved by the electors at a special or general election. Voter approved levies in accordance with RCW 84.52.052; this does not include the EMS, Port, and PUD districts.
Export	An export is an article that is sent, taken or carried out (<i>Black's Law Dictionary</i>) of a state destined to a foreign country. (Rules relating to the Revenue Act of 1935, Washington state tax commission, p. 135.)

- F -

Farm and agricultural land RCW 84.34.020	Land devoted primarily to the production of livestock, agricultural commodities, etc., for commercial purposes.
Fiscal year RCW 84.04.040	The assessment year and fiscal year shall commence January 1 st and end December 31 st in each year.
Floating home RCW 82.45.032	A building on a float used in whole or in part for human habitation as a single family dwelling, which is not designed for self-propulsion by mechanical means or for propulsion by means of wind, and which is on the property tax rolls of the county in which it is located.
Foreign commerce	Means that commerce, commercial intercourse, traffic or trade which involves the purchase, sale or exchange of property and its transportation, or the transportation of persons, or the transportation of communications or electrical energy, from a state or territory of the United States to a foreign country, or from a foreign country to a state or territory of the United States. It includes fish, seafood, or other products originating on the high seas beyond the territorial limits of the state. (Rules relating to the Revenue Act of 1935, Washington state tax commission, p. 135.)
Forest land RCW 84.33.035	"Forest land" is synonymous with "designated forest land" and means any parcel of land that is twenty or more acres or multiple parcels of land that are contiguous and total twenty or more acres that is or are devoted primarily to growing and harvesting timber. Designated forest land means the land only and does not include a residential home site.

- G -**Gender, Number and**
[RCW 84.04.065](#)

Every word importing the singular number only may be extended to or embrace the plural number, and every word importing the plural number may be applied and limited to the singular number, and every word importing the masculine gender only may be extended and applied to females as well as males.

General obligation bond
[RCW 39.53.010](#)

Any bond, note, warrant, certificate of indebtedness, or other obligation of a public body which constitutes an indebtedness within the meaning of the constitutional debt limitation.

- H -**Highest and best use**
[WAC 458-07-030](#)

Basis for valuing property for assessment purposes. Highest and best use is the most profitable likely use for which a property can be put. It is the use, which will yield the highest return on the owner's investment.

Historic property
[RCW 84.26.020](#)
[WAC 458-15-015](#)

Real property together with improvements thereon, except property listed in a register primarily for objects buried below ground, which is: (a) Listed in a local register of historic places created by comprehensive ordinance, certified by the secretary of the interior as provided in P.L. 96-515; or (b) Listed in the national register of historic places.

Householder
[RCW 84.04.050](#)

Every person, married or single, who resides within the state of Washington being the owner or holder of an estate or having a house or place of abode, either as owner or lessee.

- I -**Import**

An import is an article, which comes from a foreign country (not from a state, territory, or possession of the United States) or originates on the high seas and is brought into the taxing jurisdiction of a state. (Rules relating to the Revenue Act of 1935, Washington State Tax Commission, p. 135.)

Indicated property ratio personal
[WAC 458-53-160](#)

The sum of the actual total county assessed values is divided by the sum of the indicated market values to determine the county indicated personal property ratio.

Indicated real property ratio
[WAC 458-53-135](#)

The sum total of the actual real property assessed values, forest land assessed values, senior freeze assessed values, and current use assessed values is divided by the sum of the indicated market values to determine the county indicated real property ratio.

Interstate
[WAC 458-12-115](#)

Goods in transit to this state from another state.

Interstate commerce

Includes, but is not limited to, that commerce, commercial intercourse, traffic, or trade which involves the purchase, sale or exchange of property and its transportation, or the transportation of persons, from one state or territory of the United States to another. (Rules relating to the Revenue Act of 1935, Washington

state tax commission, p. 135.)

Intrastate

[WAC 458-12-115](#)

Goods in transit from one point in this state to another point within this state.

- J -

Joint taxing district

All taxing districts other than the state, county, county roads, city, port, and public utility districts.

Judgment

An amount to be paid or collected by a governmental unit as the result of a court decision, including condemnation awards in payment for private property taken for public use.

**Board of
equalization**

[RCW 84.48.010](#)

The Board of Equalization convenes annually on the 15th day of July, or within fourteen days of the certification of the county assessment rolls, for a period not to exceed four weeks but shall remain in session not less than three days, for the purpose of receiving and equalizing the assessed values for all property listed by the assessor on the real and personal property assessment rolls as of January 1, 12:00 noon meridian time, in the current year. The board shall hear and act upon all petitions regarding current assessments properly filed by any aggrieved party.

- L -

Land

The soil with everything on it and under it.

Land use code

[WAC 458-53-020](#)

The identification of each real property parcel by numerical digits as representations of the major use of the property. The Land Use Code is derived from the Standard Land Use Coding Manual as prepared by the Federal Bureau of Public Roads and includes use classifications specified by state law.

Lease for life

[WAC 458-16A-100](#)

A lease that terminates upon the demise of the lessee.

Legislative authority

Government authority of a city, town, or county.

Levy

[RCW 84.52.040](#)

The rate percent necessary to raise the amount of taxes for any taxing district within the county computed by an assessed valuation of any property.
The total dollar amount is also referred to as a levy.

Life estate

[WAC 458-16A-100](#)

An estate whose duration is limited to the life of the party holding it or of some other person.

Local review board

[RCW 84.26.020](#)

A local body designated by the local legislative authority.

**Local improvement
district (LID)**

A single charge levied against a parcel of real property to defray the cost of a public improvement that presumably will benefit only the properties it serves. Public improvements might be assessments for sidewalks, curbs, sewer, or water lines.

Lot, tract, etc.

[RCW 84.04.130](#)

A piece or parcel of real property and piece or parcel of land is any contiguous quantity of land in the possession of, owned by, or recorded as property of the same claimant, person or company.

- M -

Manifest error RCW 84.68.110	Any error that is clearly evident from an inspection of any assessment list or tax roll itself; or any error that becomes clearly evident upon examination of any record of the county assessor or other public officer, any other error made in process of preparing any assessment list or tax roll and subsequently becoming evident. Providing that the correction of any of the above errors does not involve a revaluation of the property.
Market value estimate	Value of real property determined by the application of the market data approach, cost approach and income approach. Any one of the three approaches to value, or all of them, or a combination of approaches may finally be used in making the final estimate of market value depending on the circumstances. The market data and income approaches shall be considered where applicable in all appraisals.
Mobile home RCW 82.50.010 RCW 46.04.302	A structure, designed and constructed to be transportable in one or more sections, and is built on a permanent chassis, and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities that include plumbing, heating, and electrical systems contained therein.
Modular home RCW 46.04.303	A factory-assembled structure designed primarily for use as a dwelling when connected to the required utilities that include plumbing, heating, and electrical systems contained therein, does not contain its own running gear, and must be mounted on a permanent foundation.
Money, moneys	Money or moneys shall be held to mean gold and silver coin, gold and silver certificates, treasury notes, United States notes, and bank notes.
Municipality	A district having powers of local self-government. City, town, etc., having its own self-government.

- N -

Net cash rental RCW 84.34.065	Average rental paid on an annual basis, in cash, for the land being appraised and other farm and agricultural land of similar quality and similarly situated that is available for lease for a period of at least three years to any reliable person without unreasonable restrictions on its use for production of agricultural crops.
New construction Chapter 36.21 RCW WAC 458-12-342	The creation of something new rather than the repair or improvement of something already existing. It is the building or erection of something which did not exist before, as distinguished from the alteration or repair of something already existing.
Notice of change of value RCW 84.40.045 WAC 458-12-360	A notice mailed by the assessor to the taxpayer when there is a change in the true and fair value of real property (land and/or improvements) or a change in value of land in open space classification.
Notice of compliance RCW 84.26.080	An affidavit on the real estate excise tax form which is signed by the new owner/owners at the time of sale or transfer of ownership of historic property when they desire the property to continue under that respective classification.
Notice of continuance Chapter 82.45, 84.33 and 84.34	An affidavit on the real estate excise tax form or a separate form which is signed by the new owner/owners at the time of sale or transfer of ownership when classified or designated land (open space, timber land, forest land, or farm and agricultural

RCW Chapter [458-30](#) and [458-40](#) WAC land) is desired to continue under the respective classification or designation.

Number and gender
[RCW 84.04.065](#)

Every word importing the singular number only may be extended to or embrace the plural number, and every word importing the plural number may be applied and limited to the singular number, and every word importing the masculine gender only may be extended and applied to females as well as males.

- O -

Oath/swear
[RCW 84.04.070](#)

"Oath" may be held to mean affirmation and the word "swear" may be held to mean affirm.

Omitted personal property
[RCW 84.40.080](#)
[WAC 458-12-050](#)

Personal property omitted from the assessment roll. It shall not include personalty that was listed but improperly valued.

Omitted real property
[RCW 84.40.080](#)
[WAC 458-12-050](#)

Real property omitted from the assessment roll for any preceding year at the value for that year. (Limitation of no more than three assessment years from the year of discovery.)

Omitted value
[RCW 84.40.080](#)
[WAC 458-12-050](#)

All personalty that was assessed at less than market value due to inaccurate reporting by the taxpayer or person reporting said property.

Open space land
[RCW 84.34.020](#)

"Open space land" means (a) any land area so designated by an official comprehensive land use plan adopted by any city or county and zoned accordingly, or (b) any land area, the preservation of which in its present use would (i) conserve and enhance natural or scenic resources, or (ii) protect streams or water supply, or (iii) promote conservation of soils, wetlands, beaches or tidal marshes, or (iv) enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open space, or (v) enhance recreation opportunities, or (vi) preserve historic sites, or (vii) preserve visual quality along highway, road, and street corridors or scenic vistas, or (viii) retain in its natural state tracts of land not less than one acre situated in an urban area and open to public use on such conditions as may be reasonably required by the legislative body granting the open space classification, or (c) any land meeting the definition of farm and agricultural conservation land under RCW 84.34.108(8). As a condition of granting open space classification, the legislative body may not require public access on land classified under RCW 84.34.108(1)(b)(iii) for the purpose of promoting conservation of wetlands.

Ordinance

An ordinance of a city or town or resolution or other instrument by which the governing body of the public body exercising any power hereunder takes formal action and adopts legislative provisions and matters of some permanency.

Owner

The party or parties having the fee interest in land, except where land is subject to real estate contract "owner" means the contract vendee. Legal owner is the person holding legal title to the property against which property tax is charged. The term lienholder is used on personal property.

- P -

Person RCW 84.04.075	Person shall be construed to include firm, company, association, or corporation.
Personal property RCW 84.04.080	The term personal property is defined in RCW 84.04.080, which should be consulted in any case where it is at all doubtful whether a given piece of property is real or personal.
Plat RCW 58.17.020	A map or representation of a subdivision, showing thereon the division of a tract or parcel of land into lots, blocks, streets and alleys, or other divisions and dedications.
Power of eminent domain	The right of government to take private property for public use (usually by purchase).
Public utilities RCW 84.12.200 Chapter 458-50 WAC	Each company doing intercounty or interstate business in this state that is assessed and has values certified to the county assessor by the Department of Revenue. The term "centrally assessed properties" is sometimes used for these properties. The properties consist of power, communication, and transportation companies.
PUD Title 54 RCW	Public Utility District. The purpose of this district is to conserve the water and power resources of the state of Washington for the benefit of the people thereof, and to supply public utility services including water and electricity for all uses.

- Q -

Quick collect RCW 84.56.070	The collection of taxes which have been levied (second Monday of October) on personal property that is about to be moved from the county where it has been assessed, about to be destroyed, sold or disposed of.
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- R -

Ratio RCW 84.48.075 WAC 458-53-020	The percentage relationship of real property assessed value to the true and fair value of real property as determined by real property sales, by department appraisals, or by department approved county appraisals, or the percentage relationship of personal property assessed value to the true and fair value of personal property as determined from department audits or from department approved county audits.
Ratio study RCW 84.48.075 WAC 458-53-020	The Department's annual comparison of the relationship between the county assessed values of real and personal property with the market value of that property as determined by the Department's analysis of sales, appraisals, and/or audits or the comparison of the relationship between the county assessed values of real property classified under chapter 84.34 RCW (current use) with the current use value of that property as determined by the department.
Real estate	Land with improvements on it.
Real property	Exclusive rights of possession, dominion, and use. A mental concept of real estate arising from ownership.

**Regular property taxes/
regular property tax levies**

[RCW 84.04.140](#)

The term "regular property taxes" and the term "regular property tax levy" shall mean a property tax levy by or for a taxing district which levy is subject to the aggregate limitation set forth in RCW [84.52.043](#) and [84.52.050](#), as now or hereafter amended, or which is imposed by or for a port district or a public utility district.

Rehabilitation

[RCW 84.26.020](#)

The process of returning a property to a state of utility through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its architectural and cultural values.

Resolution

[RCW 84.41.041](#)

A special or temporary order of a legislative body (requires less legal formality than an ordinance or statute). (See definition of Ordinance.)

Revenue bond

[RCW 39.53.010](#)

Any bond, note, warrant, certificate of indebtedness, or other obligation for the payment of money issued by a public body or any predecessor of any public body and which is payable from designated revenues or a special fund but excluding any obligation constituting an indebtedness within the meaning of the constitutional debt limitation and any obligation payable solely from special assessments or special assessments and a guaranty fund.

- S -

Sales study

[RCW 84.40.030](#)

A study of comparable sales within the past five years for appraisal of real property using all factors as to time of sale, location, physical or other factors affecting value as of the assessment date.

Senior taxing district

State, county, city and road districts.

Short plat

[RCW 58.17.020](#)

The map or representation of a short subdivision.

Short subdivision

[RCW 58.17.020](#)

The division or re-division of land into four or fewer lots, tracts, parcels, sites, or divisions for the purpose of sale, lease, or transfer of ownership.

Situs, taxable personal property

[RCW 84.44.010](#)

[WAC 458-12-115](#)

Personal property shall be listed and assessed in the county where it is located.

Situs, taxable real property

[WAC 458-12-055](#)

The situs of real property is at the place where the property is located. The situs of a possessory interest in real property is at the place where the real property is situated. Where a parcel of real property is located in more than one taxing district the portion lying within a particular district is assessable only in that district.

Special assessments

[WAC 458-18-010](#)

The charge or obligation imposed by local government upon real property specially benefited by improvements.

Special valuation

[RCW 84.26.020](#)

The determination of the assessed value of the historic property subtracting, for up to ten years, such cost as is approved by the local review board.

State levy

[RCW 84.48.080](#)

The amount levied in any one year for general state purposes shall not exceed the lawful dollar rate on the dollar of the assessed value of the property of the entire state,

which assessed value shall be one hundred percent of the true and fair value of the property in money.

State review board
[RCW 84.26.020](#)

The advisory council on historic preservation established under chapter [27.34](#) RCW, or any successor agency designated by the state to act as the state historic preservation review board under federal law.

Stratification
[WAC 458-53-020](#)

The grouping of the real or personal property assessment records into specific assessed value and/or use categories for ratio sampling and calculation purposes.

Subdivision
[RCW 58.17.020](#)

The division or re-division of land into five or more lots, tracts, parcels, sites, or divisions for the purpose of sale, lease, or transfer of ownership. This does not include a short subdivision.

Supplemental

Tax added to the roll after the roll has been certified for a specific year.

Survey
[RCW 58.09.020](#)

Survey shall mean the locating and monumenting in accordance with sound principles of land surveying by or under the supervision of a licensed land surveyor, of points or lines which define the exterior boundary or boundaries common to two or more ownerships or which reestablish or restore general land office corners.

Swear, oath
[RCW 84.04.070](#)

Oath may be held to mean affirmation, and the word *swear* may be held to mean affirm.

-

- T -

Tax/taxes
[RCW 84.04.100](#)

The word "tax" and its derivatives, "taxes," "taxing," "taxed," "taxation" and so forth shall be held and construed to mean the imposing of burdens upon property in proportion to the value thereof, for the purpose of raising revenue for public purposes.

Tax code area
[WAC 458-19-005](#)

A geographical area made up of a unique mix of one or more taxing districts, which is established for the purpose of properly calculating, collecting, and distributing taxes. Only one tax code area will have the same combination of taxing districts, with limited exceptions.

Tax lien
[RCW 84.60.010](#)

All taxes and levies which have been lawfully imposed or assessed upon the real and personal property. Liens include charges and expenses concerning the taxes.

A claim that governmental units have upon properties until taxes have been paid.

**Taxable situs –
personalty**
[RCW 84.44.010](#)
[WAC 458-12-115](#)
[WAC 458-12-120](#)

Personal property shall be listed and assessed in the county where it is situated. The personal property pertaining to the business of a merchant or of a manufacturer shall be listed in the town or place where his business is carried.

**Taxable situs – real
property**
[WAC 458-12-055](#)

The situs of real property is at the place where the property is located. The situs of a possessory interest in real property is at the place where the real property is situated. Where a parcel of real property is located in more than one taxing district the portion lying within a particular district is assessable only in that district.

Taxing district
[RCW 84.04.120](#)

"Taxing district" shall be held and construed to mean and include the state and any county, city, town, port district, school district, road district, metropolitan park district,

[WAC 458-12-140](#)
[WAC 458-18-510](#)

water-sewer district or other municipal corporation, now or hereafter existing, having the power or authorized by law to impose burdens upon property within the district in proportion to the value thereof, for the purpose of obtaining revenue for public purposes, as distinguished from municipal corporations authorized to impose burdens, or for which burdens may be imposed, for such purposes, upon property in proportion to the benefits accruing thereto.

Taxpayer
[WAC 458-18-510](#)

The person holding legal title to the property against which tax is charged.
"Taxpayer" shall mean any individual, corporation, association, partnership, trust, or estate whose property has been or will be assessed for property tax purposes according to Title [84](#) RCW.

Timber
[RCW 84.33.035](#)

"Timber" means forest trees, standing or down, on privately or publicly owned land, and except as provided in RCW [84.33.170](#) includes Christmas trees and short-rotation hardwoods.

Timber land
[RCW 84.34.020](#)(3)

Any parcel of land that is five or more acres or multiple parcels of land that are contiguous and total five or more acres which is or are devoted primarily to the growth and harvest of timber for commercial purposes. Timber land means the land only.

Tract, lot
[RCW 84.04.130](#)

"Tract" or "lot," and "piece or parcel of real property," and "piece or parcel of lands" shall each be held to mean any contiguous quantity of land in the possession of, owned by, or recorded as the property of the same claimant, person, or company.

Trending

Trending consists of adjusting the sale price of a property or the appraisal value from the time of sale or appraisal to a specific point in time, which is the January 1 assessment date.

True and Fair Value
[RCW 84.40.030](#)
[RCW 84.34.065](#)
[WAC 458-07-030](#)

The basis of all assessments. Means market value and is the amount of money a buyer willing but not obligated to buy would pay for it to a seller willing but not obligated to sell. In arriving at a determination of such value, the assessing officer can consider only those factors, which can within reason be said to affect the price in negotiations between a willing purchaser and willing seller.

Tract, lot
[RCW 84.04.130](#)

"Tract" or "lot," and "piece or parcel of real property," and "piece or parcel of lands" shall each be held to mean any contiguous quantity of land in the possession of, owned by, or recorded as the property of the same claimant, person, or company.

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- U -**Uniformity**

All taxes shall be uniform upon the same class of property within the territorial limits of the authority levying the tax and shall be levied and collected for public purposes only. (Article VII, Section 1, State Constitution.)

The county commissioners are the authority that levies the tax (not individual taxing districts) in the county, and all property that comes within their jurisdiction must be uniformly valued and assessed. This rule firmly prohibits the use of varying assessment ratios within the confines of the county borders. The assessor must value all real and personal property at its fair market value and then apply the same or a uniform assessment ratio thereto. (Carroll Barlow, Snohomish County Assessor v. Washington State Tax Commission (1967).)

- V -**Value/ valuation**
(*Black's Law*
Dictionary)

Relationship between a thing desired and a potential purchaser. Volume of goods, commodities, service a thing will command in exchange. It exists in the minds of men (people create value). Value is related to and influenced by need, utility, scarcity, and purchasing power.

- W X Y Z -

APPENDIX B – Property Tax Advisories & Special Notices

Property Tax Advisories

- [PTA 1.1.2009](#) Specific Questions Related to Administration of Property Taxes Under I-695.
- [PTA 2.1.2009](#) Property Tax Bulletins Cancelled.
- [PTA 4.2.2009](#) Specific Question Pertaining to the Administration and Qualification of the Land on which a Residence is Sited for Property Classified as Farm and Agricultural Land Under Chapter [84.34](#) RCW. (REVISED)
- [PTA 5.1.2009](#) Specific Question Pertaining to Land Classified as Farm and Agricultural Land Under Chapter [84.34](#) RCW, when the Land Qualifies for Classification because of the Commercial Agricultural Activity Produced from Perennial Plantings.
- [PTA 6.1.2011](#) Property Taxability of Motor Vehicles.
- [PTA 7.1.2009](#) Sales Tax as an Element of Value.
- [PTA 8.1.2009](#) Appraisal of Bed and Breakfast Establishments.
- [PTA 9.1.2009](#) Assessment of Supplies.
- [PTA 10.1.2009](#) "True Lease" or Security Agreement.
- [PTA 11.2.2009](#) Application of the Federal Servicemembers' Civil Relief Act and the Washington Service Members' Civil Relief Act to Property Tax Administration.
- [PTA 12.1.2011](#) Classification of Land Used for Christmas Tree Production.
- [PTA 13.1.2009](#) Impact of Local Zoning Ordinances on Property Tax Exemptions Granted Under Chapter 84.36 RCW.
- [PTA 14.2.2009](#) Transfer or Removal of Land Owned by a Federally Recognized Indian Tribe Classified Under Chapters 84.33 or 84.34 RCW.
- [PTA 15.1.2009](#) Low-Income Housing Valuation.
- [PTA 16.1.2011](#) Establishing Additional Eligibility Requirements for the Current Use Program

Special Notices

- [2008 Legislation Updates – Levy Lid Lift, Establishing Taxing Districts Boundaries, Beach Management Districts, Binding Site Plans \(8/27/2008\)](#)
- [2009 Legislative Updates – Current Use Program and Designated Forestland \(7/23/2009\)](#)
- [2009 Legislative Updates – Levies and Collection Issues \(7/23/2009\)](#)
- [2010 Legislative Updates \(6/30/2010\)](#)
- [2011 Legislative Updates and Special Session – Levies, Collection & Appeal Issues \(9/21/2011\)](#)
- [Adding Value to the Assessment Rolls – Update \(11/27/2017\)](#)
- [Assessment of Low Income Housing – Update \(10/2/2009\)](#)

[Building Permits in Relation to Adding Value of New Construction \(9/15/2008\)](#)

[Determining the Limit Factor for Increases in Property Tax Levies \(4/22/2009\)](#)

[Distribution of Additional Tax and Compensating Tax \(5/17/2010\)](#)

[Eliminating the Collection of anticipated taxes and assessments – Legislative update \(Revised 1/23/2018\)](#)

[Industrial Development District Levies for Port Districts \(8/8/2013\)](#)

[Land Containing Historical Sites Classified as Open Space Land \(4/8/2011\)](#)

[Legislative Updates – Changes in the Property Tax Exemption for Museums and Performing Arts Facilities \(7/8/2009\)](#)

[Legislative Updates – Changes in the Property Tax Exemption for Nonprofit Fair Associations \(10/17/2013\)](#)

[Legislative Updates – Changes in the statute to clarify inclusion of deferral balances in certificates of delinquency and treatment of proceeds when tax title properties are rented or sold \(12/30/2013\)](#)

[Legislative Update – Current Use, Marijuana, and Designated Forest Land Legislation \(6/12/2014\)](#)

[Legislative Update – Federally Recognized Indian Tribes – ESB 1287 \(7/2/2014\)](#)

[Legislative Update – Income Thresholds for Property Tax Relief Programs for Senior Citizens and Disabled Persons \(8/12/2015\)](#)

[Legislative Update – Refunds for Manifest Error Corrections \(7/9/2015\)](#)

[Legislative Update – Standardized Criteria Established for Exempt Nonprofits \(6/17/2014\)](#)

[Legislative Update –Valuation of Publicly Owned Property and Elimination of Leasehold Excise Tax Credit \(1/10/2014\)](#)

[Legislative Update – Clarifying treatment of deferral lien balances included in certificates of delinquency \(11/13/2015\)](#)

[Legislative Update for Assessors and Treasurers – State School Levy, Enrichment Levies, and State Local Effort Assistance \(8/22/2017\)](#)

[Property Tax Exemption for Nonprofit Hospitals \(3/6/2009\)](#)

[Property Valuation Appeals \(5/20/2009\)](#)

[Revised Legislative Update – Providing home ownership opportunities for low income households \(11/21/2016\)](#)

[Taxing District Levy Certification \(7/15/2008\)](#)

[Wheat Prices Used to Determine the Assessed Value of Farm & Agricultural Land \(10/2/2009\)](#)

[Withdrawing Land from Classification in the Current Use Program – Legislative Update \(12/20/2017\)](#)

APPENDIX C – Forms and Publications

C.1 Forms

Form Number	Form Title
27 0060	Confidential Tax Information Authorization
60 0002*	Board Clerk's Record of Hearing
60 0003*	County Secrecy Affidavit
61 0036*	Appraisal Data Sheet
61 0060*	Industrial Property Questionnaire
61 0061*	Rent Information Survey
61 0062	Application for Continuing Education Credits: Advisory Appraisals
62 0021	Application for Designated Forest Land Parcels with Same Ownership
62 0033	Property Owner's Request for Removal of Designated Forest Land
62 0047	Notice of Removal of Designated Forest Land and Compensating Tax Calculation
62 0048	Notice of Intent to Remove Designated Forest Land
62 0049	Notice of Approval or Denial of Application for Designated Forest Land
62 0109	Notification to Owner of Creation of Local Improvement District and Special Benefit Assessments
62 0110	Application for Designated Forest Land Parcels with Multiple Ownerships
63 0001	Application for Property Tax Exemption
63 0017*	Deferred Tax Transmittal (Senior Deferral)
63 0023	Property Tax Assistance Claim Form for Widows / Widowers of Veterans
63 0025	Relief Under the Provisions of the Federal Service members Civil Relief Act as Applied to Property Tax
63 0026*	Deferred Property Tax or Special Assessment Partial Payment
63 0027	Application for Exemption of Farm Machinery and Equipment
63 0028	Notification to Owner of Creation of Local Improvement District and Special Benefit Assessments
63 0029	Exemption of Real and Personal Property Used in the Manufacturing of Biodiesel, Alcohol, or Wood Biomass Fuel
63 0030	Application for Tribal Land Used for Essential Government Services

Form Number	Form Title
63 0031	Special Property Tax /Exemption for Installation of an Automatic Sprinkler System in a Nightclub
63 0032	Affidavit to Request Removal of Property Tax Delinquency for Manufactured /Mobile Homes or Park Model Trailers
64 0001	Petition for Property Tax Refund
64 0002	Senior Citizen and Disabled Persons Exemption from Real Property Taxes
64 0003	Taxpayer's Claim for Reduction of Assessments Resulting from Destroyed Real or Personal Property or Loss of Value in a Declared Disaster Area
64 0004	Levy Limit Calculation for Districts Not Levying Since 1985
64 0005*	Washington State Association of County Assessors and DOR Training Registration Form
64 0007	Highest Lawful Levy Calculation and Actual Levy Calculation
64 0009	Exemption for Physical Improvements to a Single Family Dwelling
64 0010	Affidavit of Cooperative Housing or Life Estate for Senior Citizens Exemption
64 0011	Senior Citizen and Disabled Persons Declaration to Defer
64 0012	Report on Property Immune from Taxation
64 0014	Property Tax on Cessation of Use
64 0016	Senior Citizen / Disabled Persons Gross Income Adjustments for Business, Rental, or Farm Income
64 0017	Senior Citizen / Disabled Persons Property Tax Exemption and/or Deferral Programs
64 0018	Change in Status Report – Senior Citizen and Disabled Persons Exemption from Real Property Taxes
64 0019*	Senior Citizen/Disabled Persons Deferral from Real Property Taxes – Renewal
64 0020*	Senior Citizen/Disabled Persons Exemption from Real Property Taxes – Renewal
64 0021	Application for Classification or Reclassification as Open Space Land or Timber Land for Current Use Assessment
64 0022	Open Space Taxation Agreement
64 0023	Notice of Removal of Current Use Classification and Additional Tax Calculations
64 0024	Current Use Application – Farm and Agricultural Land Classification
64 0025*	Deferral for Homeowners with Limited Income – Renewal
64 0027	Notice of Request to Withdraw Current Use Assessment Classification
64 0034	Computation for School District Bond, Capital Project Fund, Transportation Vehicle Fund, and Maintenance and Operation Levies
64 0035	Application and Certification of Special Valuation on Improvements to Historic Property

Form Number	Form Title
64 0036	Certification of Approval for Special Valuation on Historic Property
64 0037	Removal of Special Valuation on Historic Property
64 0038	Application for Transfer of Designated Forest Land to Current Use Classification
64 0043	Nonprofit Homes for the Aging
64 0044	Taxpayer Petition to County BOE for Review of Real Property Valuation Determination for Leasehold Excise Tax Purposes
64 0045	Assessment Roll Correction Agreement Based on a Change of Land Use Designation
64 0046	Taxpayer's Request for Change in Valuation Upon Notice of Decision by Local Government Planning
64 0047	Notice of Continuance – Land Classified as Current Use or Designated as Forest Land
64 0048	Request for Reconvening (BOE)
64 0049*	Notice of Approval to Hear Property Tax Appeals
64 0050*	Notice of Meeting of County BOE
64 0051	Assessor's Certificate of Assessment Rolls to County BOE
64 0052	Assessor's Certificate of Real Property Assessment Roll to County BOE
64 0053	Assessor's Answer to Personal Property Petition to the County BOE
64 0054	Assessor's Certificate of Personal Property Roll to County BOE
64 0055	Assessor's Answer to Real Property Petition
64 0056*	Minutes and Proceedings of the County BOE
64 0058*	Order of the County BOE
64 0059	Assessor's Certificate of New Construction Value to County BOE
64 0060	Application for Change of Classification or Use
64 0062	Assessor's Response to Request for Review of Application Denial for Farm and Agricultural Land Classification and Forest Land Designation
64 0064*	County Board of Equalization (Sign-in Sheet)
64 0066	Assessor's Answer to Petition Appealing Current Use Assessment Valuation or Removal of Classification
64 0070	Notice of Request to Remove Current Use Assessment Classification
64 0071	Notice of Intent to Remove Current Use Assessment Classification
64 0072	Request for Information Verifying Intent to Continue Farm and Agricultural Land Classification
64 0073	Request for Information Verifying Intent to Continue Current Use Classification or Designated Forest Land

Form Number	Form Title
64 0075	Taxpayer Petition to the County BOE for Review of Real Property Valuation Determination
64 0076	Taxpayer Petition to the County BOE for Review of Personal Property Valuation Determination
64 0077	Taxpayer Petition to the County BOE for Review of Current Use Determination
64 0078	Assessment Roll Corrections Agreed to by the Taxpayer
64 0079	Request for Direct Appeal to the State Board of Tax Appeals
64 0080	Request for Administration of Appraiser Examination
64 0081	Application for Accreditation as an Ad Valorem Real Property Appraiser
64 0082	Senior Citizens and Disabled Persons Reduction from Leasehold Excise Tax
64 0083	Application for Accreditation Renewal
64 0085	Declaration of Trust for Senior Citizens Property Tax Exemptions
64 0088	Notice of Approval or Denial of Application for Classification as Farm and Agricultural Land
64 0090	Taxpayer Petition to the County BOE for Denial of Senior Citizen/Disabled Person Exemption or Deferral Determination
64 0091	Application for Exemption of Improvements Benefiting Fish and Wildlife Habitat, Water Quality, or Water Quantity
64 0092	Annual Certification for Improvements Being Maintained for the Benefit of Fish and Wildlife Habitat, Water Quality, or Water Quantity
64 0093	Notice of Withdrawal of Current Use Assessment Classification
64 0094	Continuing Education Course Approval Application
64 0095	Proof of Disability Statement
64 0096	Prorating worksheet for 1% Constitutional Limit w/ Instructions
64 0097	Prorating Worksheet for \$5.90 Aggregate Limit w/ Instructions
64 0098	Income Checklist for Senior Citizen / Disabled Persons Property Tax Relief Programs
64 0100	Levy Certification
64 0101	Taxing District Ordinance / Resolution
64 0102*	Electronic Filing of Personal Property Listing
64 0103	Notice of Approval or Denial of Application for Classification as Open Space or Timber Land
64 0104	Personal and Industrial Property Valuation Guidelines
64 0105	Deferral Application for Homeowners with Limited Income
64 0106*	County Statistics for Comparison Report

Form Number	Form Title
64 0108	Current Use Application Farm and Agricultural Land Classification Parcels with Multiple Ownerships
64 0109	Current Use Application Timber Land Classification Parcels with Multiple Ownerships
64 0110	Certification of Contiguous Parcels with Different Ownerships
64 0111	Current Use Application Timber Land Classification Parcels with Same Ownership
64 0113*	Assessor's Answer to Petition Appealing Senior Citizen/Disabled Person Exemption Determination or Deferral Determination
65 0004	Private Car Companies Annual Report
65 0009	Public Utilities Annual Report (Airline Companies – Domestic)
65 0010	Public Utilities Annual Report (Small Domestic and Fractional Airplane Companies of Any Size)
65 0011	Public Utilities Addendum for Part 91 (Charter Airlines)
65 0012	Public Utilities Annual Report (Liquid Pipeline Companies)
65 0018	Public Utility District Annual Report
65 0019	Public Utilities Annual Report (Railroad Companies)
65 0029	Public Utilities Annual Report (Telecommunications Companies)
65 0030	Public Utilities Annual Report (Rural Electric Cooperatives)
65 0032	Public Utilities Annual Report (Electric Investor Owned)
65 0033	Public Utilities Annual Report (Natural Gas Pipeline & Distribution)
65 0036	Public Utilities Annual Report (Wireless Telecommunications Companies)
65 0037	Notification of Real Property Transfers of Public Utility Companies

* Contact the Department of Revenue for a copy.

C.2 Publications

Publication Number	Publication Title
BR 0012	Paying your Property Taxes Under Protest
BR 0025	Commercial Vessel Tax (DOR Special Programs Division)
FS 0024	Resolution/Ordinance Procedures for Increasing Property Tax Revenue
FS 0012	Homeowner's Guide to Property Taxes

Publication Number	Publication Title
FS 0080	Homeowner's Guide to Mass Appraisal
FS 0014	Personal Property Tax
FS 0016	Nonprofit Organizations
FS 0017 LP	Property Tax Deferrals for Senior Citizens and Disabled Persons
PTFS 0017 EX	Property Tax Exemptions for Senior Citizens and Disabled Persons
FS 0024	Guidelines for Timber Management Plans (DOR Special Programs Division)
FS 0026	Property Tax Tip Sheet- State School Levy
FS 0031	Property Tax Calendar
FS 0034	Appealing Your Property Tax Valuations to the County Board of Equalization
FS 0046	Open Space Taxation Act
FS 0049	Designated Forest Land
PTFS 0051	Property Tax Assistance for Widows or Widowers of Disabled Veterans
PTFS 0057	Property Tax Deferrals for Homeowners with Limited Income
FS 0050	Property Tax Assessment of Mobile and Manufactured Homes
	County Assessor's Manual
	County Boards of Equalization Manual
	Levy Manual
	Personal Property Manual
	Current Use and Designated Forestland Manual
Web Based	Ballot Measure Requirements for Voted Property Tax Levies

APPENDIX D – Miscellaneous Materials

Industrial Valuation Guidelines
Personal Property Valuation Guidelines
Electronic Filing of Personal Property Listing*



PROFESSIONAL **CONSULTING SERVICES** OF IAAO, LLC

A wholly owned subsidiary of IAAO

Final Report
Sedgwick County – Operational Audit

of the
County Appraiser's Office

Commented Review
of
Business Processes and Valuation Practices

February 28, 2020

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Introduction:

The Board of County Commission (BOCC) in the State of Kansas appoints the County Appraiser as is the case for Sedgwick County. Appointments are made for a four-year term prescribed by law to begin July 1 and each fourth year thereafter, beginning in 1993. The next appointment cycle is July 1, 2021. Should a vacancy occur prior to the next designated cycle the BOCC may appoint a successor to fill the unexpired term or may appoint an interim appraiser for a period not to exceed six months. Mark Clark, AAS, Chief Deputy Appraiser, was appointed Interim County Appraiser by the BOCC and served in that capacity from September 1, 2018 to March 1, 2019. Since Kansas law does not provide for the reappointment of an interim county appraiser, the BOCC contracted with the Kansas Department of Revenue, Division of Property Valuation for the Division to provide an Acting County Appraiser to serve until the currently vacant county appraiser position is filled on or before September 1, 2019, whichever occurs first. Raelane Schnacker RMA, has been appointed Acting County Appraiser.

The primary functions of the county appraiser are to discover, list, and value all property within the county (jurisdiction) in accordance with Kansas law which includes Kansas statutes (K.S.A.) as well as Kansas appellate court decisions. The county appraiser's office performs its duties under the directions of the property valuation director (PVD) for the state of Kansas.

The Sedgwick County website video for the Appraiser's Office does a good job of explaining their responsibilities at <https://www.sedgwickcounty.org/appraiser/>. The Mission, as stated on the website: **"To annually produce a fair and equitable appraisal roll used in formulating the funding for quality public services in our community"** is also a reflection of the legal and constitutional requirements of the office. Fairness in application of appraisal methods and techniques along with adherence to legislative mandates ultimately results in an equitable treatment of property owners/taxpayers. To be clear, "funding" in this case is the apportionment of the property tax burden based on value so that each taxpayer is paying their fair share of the total property tax burden. This tax apportionment is also known as "Ad Valorem" or according to value.

Sedgwick County deploys the use of "Mass Appraisal" methods to achieve measurable applications of "fairness and equality." Mass Appraisal requires the same appraisal process as prescribed for private sector appraisers. What is different is the Scope of Work, and the specialized skills using quantitative methods, exploratory data analysis, and proprietary Computer Assisted Mass Appraisal systems (aka, CAMA). Also required are individual skills and efforts to adapt common software, MS Excel, Adobe Acrobat, and custom programs to the functionality of the state mandated CAMA package to produce credible results. Credible results can be measured via several performance methods as mandated by law, standards or best practices. The following analysis, discussion, and comments examine and compare the operations, procedures, and processes used by the appraiser's office in accordance with industry standards, best practices, appraisal theory, and adherence to Kansas law, and mandated regulations from the PVD of the State of Kansas.

Audit Plan and Scope of Work Statement

At the request of the Sedgwick County Board of Commissioners, the International Association of Assessing Officers, hereafter (IAAO) entered into a contract for professional services to conduct an audit of the county appraiser's processes and valuation practices. The IAAO has engaged Michael Ireland, RES, CAE the retired elected assessor in Bloomington, IL as the principle consultant. Assisting Mr. Ireland in matters relating to IAAO's interest as project director is Larry Clark, CAE, Director of Strategic Initiatives for the IAAO. The resumes of Mr. Ireland and Mr. Clark are available in the report's supplemental resources at the end of the report.

Scope of Work

Prior to engaging the Professional Consulting Services of IAAO, a Scope of Work document was prepared by Mr. Larry Clark and sent for review of content, and proposed services to be provided by PCSIAAO. This document was review by Ms. Patricia J. Parker, AAS, Assistant County Counselor, and Mr. Mark Clark, AAS as interim County Appraiser for comment, additions, time tables, and expected deliverables. Requirements from the county included as primary are:

- All valuation units of the Appraiser's Office and their associated property types, e.g. commercial, residential, personal property, etc.
- The audit will encompass review of current operational practices related to:
 - All resources required for various major property types within each valuation unit.
 - Sales validation process and methodology.
 - Sales ratio study methodology and use with the valuation creation through value defense processes.
 - Appraiser to property ratio (number of properties assigned to each appraiser).
 - Reliance on technology for value creation through reconciliation for the creation of the final appraisal roll.
 - Final review process.

From the above submissions a Scope of Work plan was developed as follows:

- Management Practices:
 - Quality control procedures for property types identified for data collection and business processes.

- Current sales validation process.
- Staff allocation and quantity related to workflow and property type allocation.
- Final value selection for Appraisal Roll (Full Market Value).
- Staff Qualifications for Property Types Assigned:
 - Review current job descriptions with designation requirements versus existing staff qualifications.
 - Property type assignment in staff job descriptions versus property type valuations performed by appraisal staff.
- Appraisal Roll, full market value ratio study program, and performance results for all properties identified within the SOW.
 - Sales ratio study practices and how the results are being used.
- Valuation model procedures and methodologies development for all valuation approaches used to develop full market value for all property types identified and valued by the Sedgwick County Appraiser's Office. Also included is the appraiser review of model generated (CAMA system) values for the Appraisal Roll.
- Final Review Process:
 - Final Value Review Process currently implemented by the Sedgwick County Appraiser's Office from model developed value through to appeal defense.
 - Review documented standard operating procedures and training related to the Final Review Process.

The audit focused on property class found in the table below and separated by property class. Some properties have multiple classes.

Class	Description	Class Count	Land Value	Improvement Value	Total Value
R	Residential Including Apartments	170,552	3,877,381,800	18,745,713,385	22,623,095,185
F	Residences on Farm Home sites	3,426	67,757,300	501,988,040	569,745,340
A*	Agricultural Use Land & Improvements	16,825	91,607,700	50,878,410	142,486,110
C	Commercial & Industrial	13,837	1,339,939,280	4,527,446,480	5,867,385,760
V	Vacant Lots	13,297	240,820,800	0	240,820,800
	Personal Property		NA	NA	
	Appeals				

* Counts are based on economic neighborhood groupings.

Deliverables

IAAO's Assessment Practices Self Evaluation Guide and Technical Standards are the basis for the operational audit. Kansas law, including PVD's legal and technical requirements and USPAP are also taken into consideration in the audit. The audit process includes analysis of strengths and weaknesses measured using the various IAAO technical standards on assessment practices and an internal evaluation based on a series of questions presented and answered by the jurisdiction using the Assessment Practices Self Evaluation Guide. Included was an on-site visit by the consultant (three days) to interview staff members, review processes in the working environment, and to collect additional information regarding inputs and outputs. The on-site visit also provided the consultant with live demonstrations of functional operations used within the appraiser's office. Following is a list of information and data collected from the questionnaire and on-site visit.

- ❖ Conducted in-person interviews with available staff to (1) ensure PSCIAAO consultants have the appropriate documentation both in paper and electronic data file form and (2) understand the current status, systems and methodologies being employed by the Sedgwick County Appraiser's Office.
- ❖ Reviewed Orion and other Computer Assisted Mass Appraisal System (CAMA) capabilities from the perspective of how they are currently being used considering their capabilities for use in model development and Final Review process.
- ❖ Reviewed current data collection processes for all the Property Classes identified within the scope of work requirements section, including field sheets (manual or electronic) and any mailer type collection forms for all three approaches to value utilized: cost, market and income approaches.

- ❖ Reviewed sales verification procedures and accompanying analysis programs for model development and / or valuation table rates contained within CAMA.
- ❖ Reviewed quality control procedures for data collection, data entry, valuation table rate adjustments and ratio studies for the properties identified within the requirements section.
- ❖ Reviewed staff expertise and capabilities/qualifications related to the valuation of properties assigned from a mass appraisal perspective. Current job descriptions are used as the source information for comparison of staff qualifications and experience to industry standards for work assigned to be performed.
- ❖ Reviewed the defense of value procedures and programs currently being used.
- ❖ Developed a Report with recommendations based on the above requirements and deliverables such as:
 - Resource requirements including organization and management.
 - Valuation procedures, internal controls, data acquisition, data adequacy, data storage, and data retrieval.
 - Quality control procedures and programs to measure performance of the Appraisal Roll based on IAAO industry standards and the requirements of PVD.

Audit and Results

Audit results are reported using the IAAO Self-Evaluation Guide for progression through the topics. The general topic theme is presented for each topic being reviewed. Strengths are summarized with comments, followed by a discussion of topics that need to be addressed for improvement, where current technology, statutory mandates, or PVD guidelines inhibit a process, progression, or practice. The format follows the questionnaire, stating the question, followed by the “Response” from Sedgwick County, “Response” from the consultant, and “**RECOMMENDATIONS**” from consultant. Each section ends with a “Conclusion” summarizing the full analysis of the section from the consultant.

Practices and Procedures Questionnaire

Operating Environment

This section covers the overall operating context in which the Sedgwick County appraiser's office operates and is mandated to carry out the appraisal and assessment processes, adhering to comprehensive and complex laws, rules, and procedures as prescribed by Kansas property tax law, with oversight by the Kansas Property Valuation Division. The fundamental demographics of the Sedgwick County property inventory is as follows:

1. Basic Data	Real Estate Type	Numeric Summary
Population		513,678 - 2017
Parcel Counts *	Residential	181,343 - 2018
	Commercial	22,904 - 2018
	Industrial	746 - 2018
	Agricultural	16,728 - 2018
	Total	221,721 - 2018
Typical Sales Per Year	Residential (AVG)	10,165 - 2015-2018
	Commercial (AVG)	1070 - 2015-2018
	Industrial (AVG)	17 - 2015-2018
	Agricultural (AVG)	876 - 2015-2018
	Total (AVG)	56,915 - 2015-2018
Typical Appeals Per Year	Residential (AVG)	2,274 - 2015-2018
	Commercial (AVG)	1,494 - 2015-2018
	Industrial (AVG)	88 - 2015-2018
	Agricultural (AVG)	276 - 2015-2018
	Total (AVG)	16,506 - 2015-2018
Total Land Area		1,008 SQ/Miles
Total Taxable Real Estate Value	215,067 parcels - 2018	\$4,384,591,850 (Assessed)
Personal Property Accounts		35,281 - 2018
Appraisal Date		1/1/of Tax Year

*Not all "A" class properties are valued at fair market value and have an assessment rate of 25%. Land devoted to ag use is classified as "A" and has an assessment rate of 30%.

Question #2: Where are the following functions performed? e.g. field data collections, valuation modeling, value generation, value review, building permit review, sales data collection, sales data review, and statistical analysis.

Response by the Jurisdiction: All the above functions are a requirement of the appraisal process in order to generate value estimates that are deemed credible. The appraiser's office response to completing each function is: "This process is performed by the office." Some functions are completed in the office, and others in the field. An entire section is dedicated to the specifics of data collection. A detail audit of each process will be vetted during review of the Property Data Collection and Maintenance section.

Questions #3 & #4: Do the governing statutes contain?

- **Market Value requirement**
- **Ratio Study Mandate**
- **Revaluation and reinspection mandate**
- **Disclosure of sale price**
- **Taxpayer to provide income and expense statement**
- **Special treatment of classes, e.g. fractional assessment, exemptions, use value, TIF's, valuation caps etc.**

Response by the Jurisdiction: All the above have been affirmed as being statutory requirements and with references given to Kansas statutory law. Many of the statutory mandates covering property tax assessment are found in Chapter 79 of the Kansas Statutes.

The issue of the taxpayer providing an income and expense statement goes to the status of burden of proof. By law the burden of proof rests on the county appraiser, however regarding leased commercial and industrial property the burden shifts to the taxpayer unless the county appraiser is furnished an income and expense statement for the three years preceding the year of appeal. This applies to informal appeals, as well as small claims if the statement is not provided within 30 days after the informal meeting.

- **Statutes connected with education aid payments**

Response by the Jurisdiction: The Kansas legislature exempted \$20,000 appraised value from properties used for residential purposes. Rather than deducting \$20,000 from the 100% appraised value of residential properties, the County applies a tax credit on the tax bill. This law is enacted for 2017 and 2018 only.

Assistant County Counselor Response: In practice this exemption is applied as a tax credit on the tax bill. (\$20,000 appraised value x 11.5% residential assessment ratio = \$2,300 assessed value x 20 mils=\$46.00)

- **Statutes limiting assessor discretion to use generally accepted valuation methodology, or mandates to use only current use value?**

Response by Jurisdiction: This is not a direct statutory mandate, but the Orion CAMA system has been limited in its capability to value multi-parcel economic units using the sales comparison and income approaches. The income approach and sales comparison approach for all commercial properties are generated outside of the Orion CAMA. Only the cost approach is

performed in Orion CAMA on commercial property. Afterwards, these estimates are entered into Orion.

RECOMMENDATION #1: The chief deputy county appraiser, and assistant county counselor responded that Tyler Technologies, producer of the Orion CAMA system, has recently deployed within Orion a multi-parcel valuation application software solution. Without this Orion work around, the current CAMA system will not allow the county appraiser's office to produce a sales comparison or income approach value for multi-parcel properties. While the current proprietary system is familiar to the commercial staff, it was stated during the on-site visit the external system was at times temperamental. While no major upgrades to the Economic Unit Summary (EUS) are available, the appraiser's office yearly works with Sedgwick County IT staff to populate the application with current model data and ensures the application is working.

I recommend the county appraiser begin a migration to the "multi-parcel valuation" application now available in the Orion system. This process can begin with a period of learning and testing the system in a beta fashion. Workout the difficulties, with possible suggestions to Tyler on improvements and updates. In the future working within the Orion system will save time. It was stated that current multi-parcel valuation takes a lot of time to complete.

SECOND LEVEL RECOMMENDATION #2: It is also revealed that the county clerk invokes all property boundary changes regarding splits, and combinations. This puts an elected official and an appointed official in a position of needing to work together for the greater good of the taxpayer. I recommend the county clerk and appraiser work together to reduce the number of multi-parcel economic units by combining these multi-parcels into single parcels. Sedgwick county staff states, "They have more multi-parcels than any county in the state of Kansas". Cooperation to reduce the number of multi-parcels would reduce the work loads of both departments, save time, effort, and complexity. It is a common and best practice in most jurisdictions to allow multiple parcels to be combined. Benefits include single tax bills, reduced parcel mapping maintenance, improvement of valuation, better comprehension on appeal to make sure all parcels are included in the value and the appeal, and owners could not circumvent the tax payment system of being delinquent of a single parcel of the economic unit without facing the threat of a tax sale.

Should a cooperative effort to complete this recommendation proceed, I also recommend the property owner be notified as a courtesy and provide permission to combine parcels. Communication with the property owner will also allow the county to determine if combining the parcels would create a problem and if so, how can the county help resolve the problem. A cost benefit study is another option to consider. Reducing the number of multi-parcel units would be beneficial to reducing the cost and time to implement the first recommendation.

During this audit process, the office of the PVD has provided this option: that in cases where you have one owner of multiple parcels within the same legal description, the county can on its own, combine those parcels into one parcel, without permission from the property owner. This option provides a step in the right direction to solving the multi-parcel dilemma.

- **Classified property tax system? See Table below**

Assessment Rates from Article 11 § 1 Kansas Constitution					
Class 1	Type	Level	Class 2 PP	Type	Level
1	Residential	11.5%	1	Mobile Home	11.5%
2**	Land AG use	30%	2	Oil and Gas	30%
3	Vacant Lots	12%	3	Public Utility PP	33%
4	RP, IRC 501 (c)	12%	4	Motor Vehicles	30%
5	Public Utility RP	33%	5	C & I M&E	25%
6	Commercial RP + AG Land	25%	6	All Other	30%
7	All Other	30%			

** Not valued based on the fair market value of the property as defined by K.S.A 79-503a

- **Limit on how much appraised value can be changed?**

Response by Consultant: *K.S.A 79-1460 addresses value change as follows, the valuation for all real property shall not be increased unless the record of the latest physical inspection was reviewed by the county or district appraiser, and documentation exists to support such increase in valuation in compliance with the directives and specifications of the director of property valuation, and such record and documentation is available to the affected taxpayer. For the next two taxable years following the taxable year that the valuation for commercial real property has been reduced due to a final determination made pursuant to the valuation appeals process, the county appraiser shall review the computer-assisted mass-appraisal of the property and if the valuation in either of those two years exceeds the value of the previous year by more than 5%, excluding new construction, change in use or change in classification, the county appraiser shall either: (1) Adjust the valuation of the property based on the information provided in the previous appeal; or (2) order an independent fee simple appraisal of the property to be performed by a Kansas certified real property appraiser.*

The Kansas Supreme Court in *Bd. Of Cnty. Comm'rs v. Jordan*, 303 Kan. 844 (2016) ruled that K.S.A. 2014 Supp. 79-1460 (a) (2) and (c) were unconstitutional as they violated Article 11, § 1 of the Kansas Constitution which provides that the legislature shall provide for a "uniform and equal basis

of valuation and rate of taxation of all property subject to taxation”. The opinion provided for revaluation under certain changes in market conditions.

Question #5: Does the property tax system have measures that ensure that the jurisdiction has the capacity to perform its assessment functions effectively?

- **Jurisdictional support at the county or state level**
- **Ability for counties to coop or merge assessment district**
- **Lack of reliance on property tax results in improper funding for completing assessment function**
- **Fiscal importance of assessment function results in lack of full resources to complete the assessment function as statutorily mandated.**

Response by Jurisdiction: The topic of resources as related to funding the assessment function is a concern to the county appraiser. The appraisal/assessment process is very labor intensive even with the use of technology. When any taxable property or portion thereof is omitted from the tax roll a shift in the burden of payment occurs by causing those paying taxes to also pay the portion for the omitted property. Lack of funding for appropriate staff levels is one concern that requires continued monitoring. Staffing levels are a current concern regarding discovery and listing of new property and maintaining accuracy of existing parcels. Further discussion on staffing is provided in the next chapter topic, “Management and Staffing”.

Not every legal mandate or administrative rule the county appraiser is obligated to follow has been covered in this Section. The operating environment is highlighted to set the stage for future chapters that cover details involving:

- Management & Staffing
- Technology
- Mapping -GIS
- Sales Data, Ratio Studies
- Data Collection
- Land Values
- Residential Value
- Commercial Values
- Value Defense
- Personal Property Value

Review and evaluation of these specific topics will examine additional mandates, and adherence to regulations promulgated by the PVD in completing the appraisal and assessment process.

Management and Staffing

This chapter reviews compliance regarding laws, and PVD regulations and directives as they relate to the management functions for the appraiser's office. Included is a review of resources with a primary focus on staffing. As in the previous section the primary question is presented with paraphrased sub-questions, followed by comments and recommendations as needed.

Question #1: Does the jurisdiction keep abreast of changes in laws, regulations, and court decisions?

- **access to an up-to-date compilation of property tax laws and regulations**
- **ready access to, a service that reports property tax cases**
- **regularly monitors news of legal developments**
- **regularly briefs the staff (and other interested parties) on recent legal developments**
- **actively participates in current legislation and in the development of legislative proposals**
- **meets with and participates in groups concerned with improved legislation**

Response by Jurisdiction: The county appraiser tracks and monitors legislative changes and changes in rules, and regulations using several methods. Membership in professional organizations like the IAAO, Kansas County Appraisers Association, and continuous contact with assistant county counselor all assist in this effort. Constant monitoring is required at many levels. The IAAO provides court decisions from any state that recently experienced a court challenge to a specific property tax law. The county appraiser's association has a committee assigned to keep abreast of changes to laws in Kansas and can work with the PVD to also provide participation when required to improve a proposed law, or to lobby. The assistant county counselor keeps track of updates to current laws, Board of Tax Appeal decisions, and helps with interpretation of laws for implementation.

Question #2: Does the jurisdiction regularly monitor the local economy, development patterns, and property market trends?

Response by Jurisdiction: Monitoring is done through periodicals and local economists at Wichita State University. Real estate trends are also derived using sales transactions for each property type, as well as rents and income statements submitted for apartments and commercial properties. The appraiser's office has also used the outside services of a consultant to conduct a capitalization rate study and a benchmark study. Every other year the appraiser's office, along with

other jurisdictions, obtains a hotel/motel cap rate study. Such studies provide insight into the expectations of investors.

Question #3: Does the jurisdiction engage in formal planning?

Response by Jurisdiction: Each department develops their annual work plan for data collection, sale validation, valuation of all property types, e.g. residential, commercial, agriculture, personal property, and appeals. All plans must provide for the fulfillment of statutory requirements:

- A county appraiser must annually appraise each parcel of property as of January 1. K.S.A. 79-1412a; K.S.A. 79-1455.
- A county appraiser must view and inspect all the property in his or her jurisdiction once every six years. K.S.A. 79-1476
- Comply with rules, directives, and regulations as promulgated by the PVD

Question #4. Has the jurisdiction prepared a written estimate of necessary human resources?

Question #5. Has the jurisdiction prepared an estimate of necessary physical resources?

Question #6. Does the budgeting process employed by the jurisdiction explicitly consider outputs in addition to inputs so that the prospects of obtaining adequate funding are improved?

Comment by Consultant: The three questions above are interrelated. The county responses have been combined for clarity and convenience. An overview of data collection workflow is required.

Response by the Jurisdiction: Various exhibits and continuous discussion were provided to the consultant by the appraiser's office. The 2020 budget preparation is currently in progress. Mark Clark is requesting six new staff members for fiscal year 2020 and considering another six in fiscal 2021. The table below was provided in response to the questionnaire as a breakdown of how the office is currently staffed.

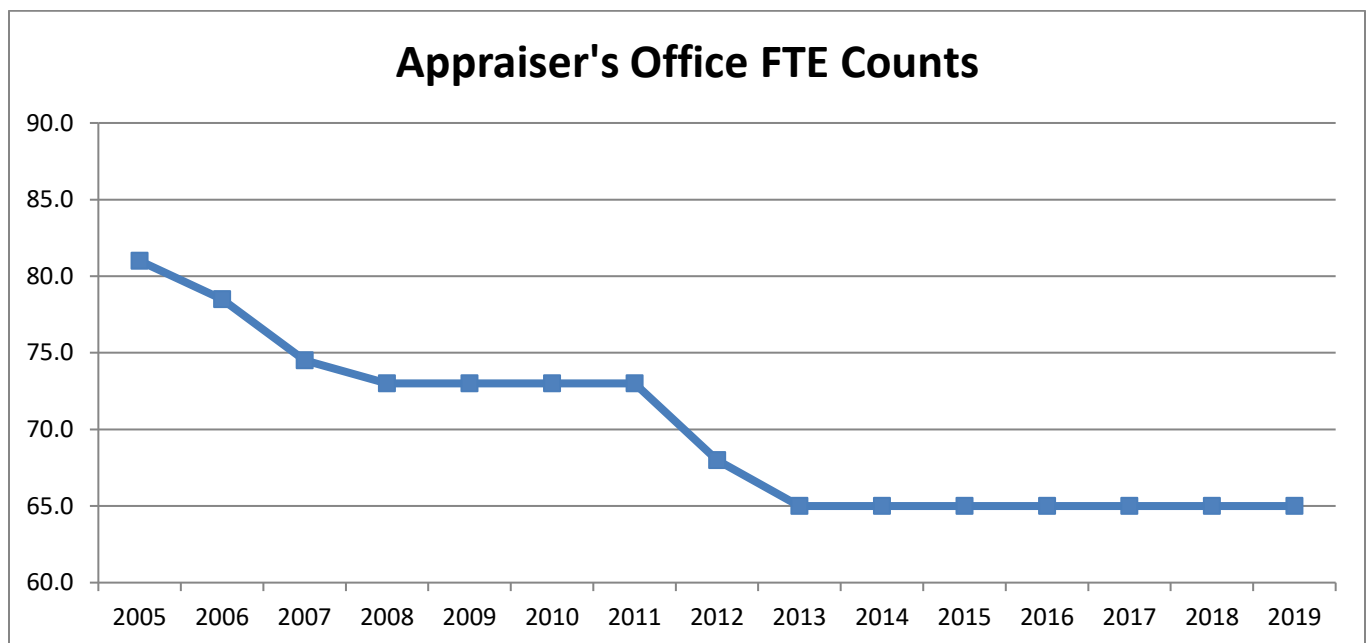
Staff Assignments Report		Future Staff Needs
Function	Current Staff	Needed (IN ADDITION TO)
Field Data Collection	Residential/Ag 9; Commercial 5	Residential/Ag 5; Commercial 5
Building Permit Review	Residential/Ag10; Commercial 2	<i>Above staff would aid in this process.</i>
Sales Verification	Residential/Ag 5; Commercial 3	Residential/Ag 2; Commercial 2
Income/expense Analysis	Residential/Ag 0; Commercial 1	Residential/Ag 0; Commercial 1
Valuation Modeling	Residential/Ag 1; Commercial 1	Residential 1; Commercial 1
Statistical Analysis	Residential/Ag 1; Commercial 1	Residential/Ag 1; Commercial 1
Personal Property Valuation	Personal Property 6	Personal Property 1
Personal Property Auditing	Personal Property 0	Personal Property 0

Appraisal Support (AS) - Data Entry	Data Entry 11	Data Entry 2
AS – Technology	Technology 2	Technology 1
AS – Mapping	Mapping 2	Mapping 1
Administration	Administration 3	Administration 1

The request for 2020 includes the following additions to staff:

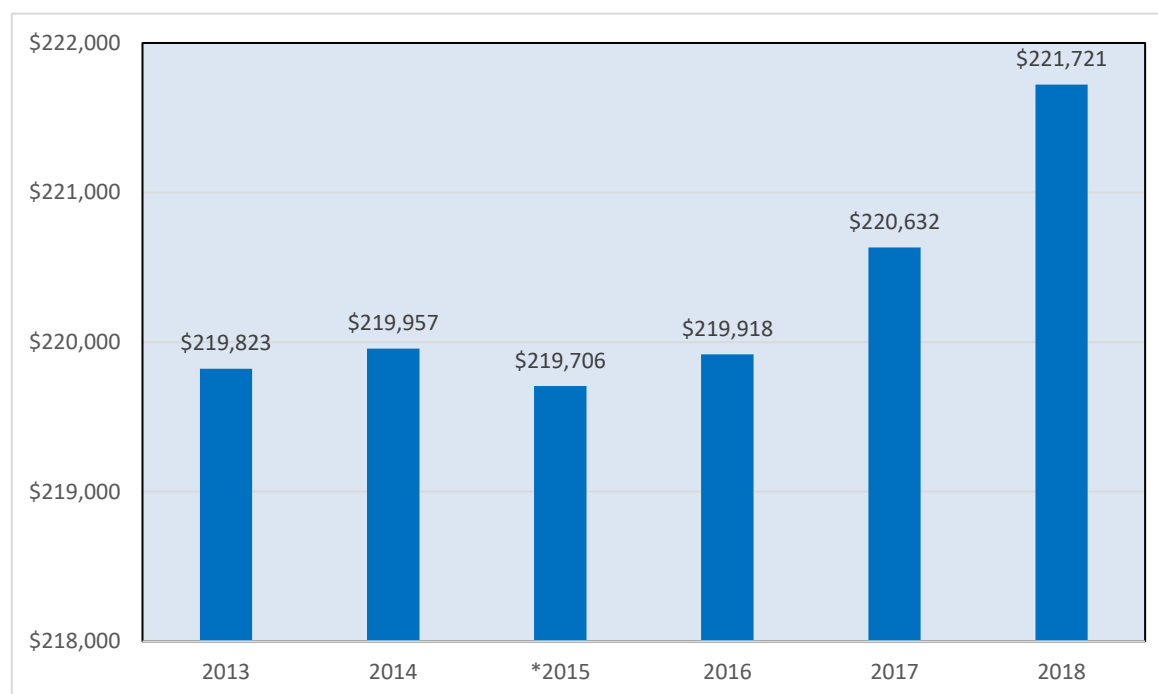
- Personal Property Appraiser (1)
- Appraisal Support (1)
- Residential Appraiser (2)
- Commercial Appraiser (2)

The chart below shows changes in staff level over the past fifteen years;



	2005	2019	Change
Administration	16.0	3.0	-13
Commercial	11.0	13.0	2
Residential & Agriculture	20.0	18.0	-2
Special Use Property	19.0	12.0	-7
Support Staff	15.0	19.0	4
Total	81.0	65.0	-16

Parcel Growth in Sedgwick County



*2015 was the year the appraiser's office cleaned up right-of-ways (ROWs) parcels.

The graph above depicts a growth in parcels of 1,898 or just shy of one-percent (0.09%). Much of this growth comes from new construction.

Returning to **Question #3** regarding planning and the statutory requirement, K.S.A. 79-1412a requires the county appraiser to "Annually, as of January 1, supervise the listing and appraisal of all real estate and personal property in the county subject to taxation except state-appraised property." Each parcel requires a staff member to touch it in some manner. K.S.A. 79-1476 provides that "Commencing in 2000, every parcel of real property shall be actually viewed and inspected by the county or district appraiser once every six years." This process is referred to as, "17% rule", ($1/6 = .1667$, or 17%). This process is initiated first using technology in the office to digitally measure two sides of each structure and compare to measurements on the sketch. Exterior property attributes are also checked using oblique aerial high-resolution photos to view all sides of the improvements on the property. Standards for the seventeen percent property review are also mandated via a directive from PVD, with Directive #11-043. When any property review falls outside the standards quoted in the directive, an actual physical inspection is required including a new measuring of the improvement in question.

The county appraiser's office also enforces a 2% error rate in all data captures. This is completed with an iterative process of random checks by a supervisor to make sure data approvals and changes are consistent from property to property and validated by a second review. These secondary reviews are tracked and recorded. Whenever the review supervisor makes a correction, the initial data collector can track reasons and type of change made by the supervisor.

Question #7: Is the jurisdiction well-organized?

Question #8: Is staff well-managed?

- **Job descriptions for every position?**
- **there a current procedures manual?**
- **current written personnel policy?**
- **regular performance reviews performed?**

Response by Jurisdiction: The jurisdiction responded "Yes" to all the above questions and has provided examples of manuals. County policy states that performance reviews are to be conducted quarterly with a final annual performance review completed after October 31st. The supervisor and employee are present during the review.

Response by Consultant: The jurisdiction provided documentation in support of the above questions. The overall complexity of and interrelationships of the operations and procedures mandated by law require maximum levels of organization and planning. The PVD guideline on Procedural Compliance provides the details mandated including a calendar of milestone dates set forth by Kansas law. The compliance guideline uses a 100-point credit system to measure and assign a value to operational compliance. The 2018 Compliance Review document awarded 95.8 points to the county appraiser's office. During operation, the jurisdiction also tracks and reports their progress status to the PVD. When any item has not met its standard, the expected standard points are deducted. The county experienced deduction for a not commenting on changes, and lack of analysis documentation to the PVD.

Question #9: Do the members of the staff have the right set of skills and experience?

Question #10: Are salaries and benefits competitive?

- **Are there salary incentives for professional certifications or designations?**

Response by Jurisdiction: The county answered “Yes” regarding skill sets for the staff. This is driven primarily from the fact that staff members attend courses sponsored by the IAAO, PVD, and other providers of appraisal education. They also provided a list of staff members who have earned one or more designations.

Appraisal Institute	International Assn. Assessing Officers	Kansas Property Valuation Division
1 – SRA, MAI	3 RES	14 RMA
	7-AAS	
	1 CAE	
Key: SRA = Residential Specialty MAI = Specialty in all property types AAS = Assessment Administration Specialist RES = Residential Evaluation Specialist CAE = Certified Assessment Evaluation RMA = Registered Mass Appraiser		

In all, twenty-five (25) staff members hold a designation. In addition to meeting educational and experience requirements of a designation, designees are also required to meet continuing education requirements as a maintenance provision to their designation. The Appraisal Institute, and IAAO require members and designees to keep up on revisions to USPAP, and standards of conduct through code of ethics, and conduct courses.

New hires work with experienced staff members through a process of shadowing, emulating, and then supervised independent application of the training. This is primarily for data collectors and support staff. New staff members are also enrolled in PVD courses and workshops including a course that covers the property tax laws in Kansas.

Typically, if budget provides, employees earning a PVD designation receive a \$1,000 salary increase and employees earning an IAAO designation receive a \$2,000 salary increase.

Regarding salaries and benefits being competitive, the jurisdiction used an IAAO Salary survey and an “Evergreen Study” as the basis to indicate compensation in the appraiser’s office is below competitive market levels.

Response by Consultant: Other states provide designation incentives, making the proposal by the appraiser’s office a reasonable request. There is a difference between skills and education. Education provides a knowledge and understanding of concepts and techniques. Skills are more of an application of knowledge and competency of the knowledge. IAAO and other professional

appraisal organizations test for knowledge and understanding with courses and examinations covering course content. They also test competency using requirements to produce demonstration appraisals, pass case study exams, and meet experience requirements. Adherence to standards is also required. After successful completion of all the previous requirements a designation is awarded.

RECOMMENDATION #3: The IAAO has produced a set of eight knowledge areas to be used for development of staff in the appraiser's office. Also, the IAAO has added the Mass Appraisal Specialist (MAS) designation. This designation puts a specific focus on methods and techniques used to attain the USPAP standard "credible Mass Appraisal results." It is recommended the Sedgwick County Appraiser provide for and encourage existing and new staff to pursue a MAS designation. There is no doubt, skills required to completing credible mass appraisals are only taught in the IAAO courses.

Question #11: Are skills in procurement and contract management sufficient?

Response by Jurisdiction: "The office manager has the responsibility of preparing and overseeing the annual budget, purchases and contract management. Contracts are approved/reviewed through OnBase with oversight by the County Counselor's Office and Division of Purchasing."

Response by Consultant: The audit scope of work is primarily targeted at the operations within the purview and control of the county appraiser's office. The appraiser's office does not directly engage in the procurement of contracts, and secures outside contractors. The county counselor's office oversees and prepares contracts for outside services. This does not mean the appraiser's office does not participate in defining needs for contractual services in cooperation with the counselor's office. The contract for this audit with the IAAO is an example of how the counselor's office and appraiser's office worked together.

The budget and planning process are also part of the contracting for services assignment. Any expected expenditure of funds for contractual services should be specifically identified during the budget approval process.

RECOMMENDATION #4: The IAAO does have a written Standard for Contracting Services, 2008. I would recommend the appraiser's office staff along with the county counselor review this standard for advisory compliance when developing proposals for contracted services. This standard is helpful with developing specific appraisal related concepts that are needed for assistance in developing values, data collection, software upgrades etc. One such discussion during the on-site interview is the need for a new capitalization rate study. Those needing the contract services should also be involved in providing needs of deliverables, justification of

needs, e.g. time saving, meeting legal and directive mandates, cost benefit analysis, etc. are examples.

Question #12: Are exemption and other property tax reduction measures well-managed, etc.?

Response by Jurisdiction: Yes.

Response by Consultant: The research and discussion with staff during the on-site visit confirmed that exemptions are controlled and managed through compliance with statutory mandates. K.S.A. 79-201 et seq., a majority of which covers the topic of exemptions in the state of Kansas. The PVD directive #92-025 also directs the specifics of how a property exemption process is implemented.

Question #13: Is the quality assurance program of the jurisdiction adequate?

- **Staff is required to adhere to ethical standards. The office provides needed guidance and deals promptly and effectively with ethical problems**
- **The office's organization reinforces quality assurance**
- **The office's computer system design reinforces quality assurance**
- **Standards of performance are formalized & procedures are documented**
- **Data maintenance programs reinforce quality assurance**
- **Valuation accuracy is monitored regularly using a flexible ratio study program**
- **Management communicates quality assurance expectations**
- **Management takes appropriate corrective action when potential or actual quality problems surface**
- **Management periodically commissions procedural audits**

Response by Jurisdiction: The jurisdiction considers the quality control checks to be in a state of general compliance, but also foresees that some specific areas of data production, data quality, and valuation results for market value property classes could be improved. The jurisdiction provided a thirty (30) page document used to control the sales validation process, and proper use and review of the "Kansas Real Estate Sales Validation Questionnaire." All property characteristics for valid sales are compared to third party sources, in addition to desktop review and field review. All changes are documented and attached as documented sources to the property record for viewing when required.

The PVD Procedural Guideline 2019, p 13, cites USPAP Standard Rule 5-7 “requires statistical testing of models.” In reconciling a mass appraisal, an appraiser must:

- (a) reconcile the quality and quantity of data available and analyzed within the approaches used and the applicability or suitability of the approaches used; and
- (b) employ recognized mass appraisal testing procedures and techniques to ensure that standards of accuracy are maintained.

K.S.A. 79-1476 is a reference to the PVD Directive #11-043. Directive #11-043 provides tools and methods for attaining and maintaining data quality. The appraiser’s office is required to track all re-inspections and new inspections and include a history record of changes. Random sampling is completed on at least 1% of parcels inspected, and a reviewer will recollect the data again. Thorough quality checks are completed on all models, e.g. land, improvements, residential, commercial, agriculture, manufactured homes, depreciation schedules etc. Multiple regression model values are compared to adjusted comparable sales and where the variance is greater than 10% additional explanatory notes are required.

K.S.A. 79-1485, K.S.A. 79-1444, and K.S.A. 79-1445 are statutory mandates for completing a sales ratio analysis. The PVD must publish the results of the ratio analysis and provide each county their results. The PVD will notify the county of “substantial compliance” on meeting the requirements of law to appraise taxable property at fair market value. The PVD relies on the IAAO standard of ratio studies (2013) as the guideline for appraised values to sales price ratios.

Response by Consultant: A review of the quality assurance and appraisal performance statistics has been conducted. Using the staff resource table presented in section 1 of this report, approximately fifty-percent (50%) of staff is dedicated to quality control of data. At the on-site interview staff members demonstrated examples of their daily on-going procedures. data collecting, model building, (residential and other), sales verification, data entry, and statistical analysis were all demonstrated. Staff members work daily to ensure any data they touch is of the highest quality. Every effort is made to ensure all review standards and statistical standards mandated by law or PVD directive are acceptable and within tolerances stated in a standard.

Topics of concern expressed and related to data and statistical quality are as follows:

- o Growth in parcel counts per person has put pressure on the ability to satisfy production and reporting deadlines going forward.
- o Experienced and knowledgeable staff members that work with data and the data products at the highest levels, e.g. model development, statistical analysis, economic unit

assignment, sales validation, are also staff members who are nearing retirement. When experienced staff retire a considerable amount of intellectual property (knowledge and experience) leave the building.

- o Senior staff members expressed concern that a succession plan was not in place. Retirement of experienced appraisal staff is an industry wide problem both in the private and public sector.

USPAP Standard 5 states: “In developing a mass appraisal, an appraiser must be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce and communicate credible mass appraisals.” The awareness and understanding of the process is learned in the classroom. Correct application of these methods and techniques comes from years of application of the methods and techniques, in addition to understanding the relationship that each data attribute has toward producing credible mass appraisal values. As recently as February 22, 2019 the PVD issued Directive #19-051, directing county appraisers as follows: “For the 2019 and 2020 valuation years, the county or district appraiser shall perform all appraisal functions in conformity with Uniform Standards of Professional Appraisal Practice (USPAP), 2018-2019 Edition.”

Competency Rule: I bring this discussion to the forefront because according to USPAP competency requires: “#2. The knowledge and experience to complete the assignment competently.” The accompanying Comment goes onto say: “competency may apply to factors such as: Familiarity with specific type of property; assets; a market; a geographic area; specific laws and regulations; analytical methods.” These are all appraisal concepts previously presented by the county as part of the overall quality assurance program. K.S.A. 79-505(a) requires PVD adopt rules and regulations or directives prescribing appropriate standards for the performance of appraisals. Directive #19-051 directs county appraisers, for 2019 and 2020 valuation years, to perform all appraisal functions in conformity with USPAP, 2018-2019 Edition. Like the law, USPAP is not severable, other than by Jurisdictional Exception where a law or regulation precludes compliance with any part of USPAP, and should that happen only that part of USPAP becomes void for that assignment.¹

RECOMMENDATION - Discussion: The previous discussion that covers the questions regarding quality control checks, resources to achieve and maintain adequate quality control have been presented with details. For the purpose of providing insight into the required use of human resources, and to be complying within quality control standards as mandated requires further discussion before a complete RECOMMENDATION is made on this section. Collecting

¹ Jurisdictional Exception Rule, eUSPAP 2018-19 Addn. Appraisal Foundation

and maintaining data requires more resources manpower and financial than any other function or process, required to be completed by the appraiser's office. Response from the jurisdiction is their recommendation when they evaluate all the mandated requirements including a very robust time-line to meet required statutory dates is, "We need more staff." As mentioned previously until all chapters have been through the audit process no recommendation for increasing staff will be provided.

As the consultant/auditor I will commend the staff members of the appraiser's office on their exemplary efforts toward attaining standards of quality. They say, "quality control could be improved/enhanced with more staff. Lack of resources for adequate quality control." Recommendations for this chapter address other areas that can lead to improvement of "quality control."

RECOMMENDATION #5: In part, the IAAO standard on Professional Development, 2013 is used as a compliance measurement relating to staff skills and development. USPAP Standard 5 and the Competency Rule are used also. Staff skills and compensation are inter-related and must be considered together. The staff skill level is very high as it must be in order to meet the compliance requirements. The question is, Is it high enough? Most of those holding designations are Registered Mass Appraisers, (RMA) and Assessment Administration Specialists (AAS). The education requirements for the RMA designation emulates the course requirements for the IAAO's RES, and includes Kansas specific courses on personal property and the property tax law course. The requirements for the RMA provide a good education nucleus of knowledge and understanding.

IAAO recently introduced a new designation Mass Appraisal Specialist, (MAS) to recognize competency in a wide range of mass appraisal theories, techniques and applications. While the Appraisal Process remains intact, the "Scope of Work" required to complete a mass appraisal differs considerably from "fee or single property "appraisal." The MAS designation is designed to recognize this difference in application of the appraisal process.

The required course list includes four of the same courses required for the RMA designation. see MAS education requirements as listed:

1. IAAO Course 101: Fundamentals of Real Property Appraisal
2. IAAO Course 102: Income Approach to Valuation
3. IAAO Course 300: Fundamentals of Mass Appraisal
4. IAAO Course 331: Mass Appraisal Practices and Procedures
5. IAAO Course 332: Modeling Concepts
6. IAAO Course 333: Residential Model Building

7. IAAO Workshop 171 Standards of Professional Practices and Ethics or IAAO online Standards of Practice.

Courses 331, 332, 333, and now 334 [Commercial Model Building] have all come on-line beginning in 2013. Course 300 remains, but courses 311, and 312 are being converted into a combined course to be offered online soon.

To address issues in chapter 2, e.g. staff skills, and begin a progression to a succession plan to replace and update knowledge backed by experience when retirement of senior staff members occurs, the following steps are recommended solutions:

1. The appraiser's office begins developing a succession plan to fill positions when senior experienced staff members retire. The plan should follow the general steps of:
 - a. Think in terms of a five-year plan, beginning with the end in mind.
 - i. What should the departments look like five years later?
 - ii. Create a vision identifying potential future directors of the various staff operations. Consider leadership skills in addition to technical skill.
 - iii. Share the succession plan concept with HR. as they may provide you with helpful information.
 - iv. Share the plan concept with the board of county commissioners. Keep them updated on the progress at least semi-annually. If additional funding is needed you want them to buy in.
 - v. Keep stake-holders involved in the process.
 1. Consider using performance evaluations to identify potential candidates for vacated positions.
 2. Provide for mentoring relationships when possible.
 3. Provide for additional education to update candidates' skills and knowledge levels.
 4. Update job descriptions to meet the future skills required to meet needed and desired improved level of compliance with the law and prescribed standards of practice.

- vi. Embrace the idea that succession planning will be an on-going process. This provides for a continued progression and motivation of subordinate staff members to enhance their skills and abilities should an opportunity to advance come available.
 - b. Why is succession planning important? A major finding in the IAAO 2016 Salary Survey reveals 48% of respondents plan to retire in the next nine years, and 23% in five years or less. Current appraiser's office staff members expressed similar concerns among their own ranks.
2. Current staff members holding the RMA designation should enroll as candidates for the IAAO designation of [MAS²](#). (click on link for all qualification requirements)
- a. Those designated as AAS, RES, and CAE may also benefit from the hands-on course work conveyed by IAAO courses 331, 332, 333, and 334.
 - i. These courses build on applying actual mass appraisal concepts useful for understanding and application. Courses 331 and 332 use MS Excel, and 333, 334 teach modeling using SPSS.
 - b. The IAAO has recently published a [Body of Knowledge³](#) (BOK), that captures the expertise required to effectively work in the assessment profession. (IAAO BOK available on www.amazon.com , search IAAO)
 - c. The BOK not only describes key knowledge areas but also provides for levels of competency of knowledge as it pertains to a specific knowledge area. (a USPAP requirement)
 - d. Using the BOK provides for better structuring of targeted education for staff.
3. Competitive salary and compensation are considered by the appraiser's office as not competitive based on an IAAO survey. The IAAO has published many salary surveys with recent ones in 2016 and 2017. I recommend the appraiser's office purchase one or both surveys and complete a salary and compensation analysis using the data and conclusions from the survey to support their claim of non-competitive compensation. When completed the analysis should be shared with HR, with their recommendations. Such might include:

² https://www.iaao.org/wcm/Education/IAAO_Designations/CAE/wcm/Designations_Content/MAS.aspx

³ <https://www.iaao.org/media/pubs/Apendium.pdf>

- a. Review of all job descriptions to verify the current and recommended new salary classification for positions where the salary is based on outdated job requirements, skills and required education.
- b. One finding of the 2016 survey is IAAO designated members median base salary of \$63,000 was \$2,400 higher than non-designated staff.
 - i. Review of the surveys would provide details on salary increments for various designations.
 - ii. Interview other jurisdictions of similar parcel mixes (on a percentage basis) in Kansas for information on salary increments for designated staff.
- c. Complete a fully documented and comprehensive salary review document. Work with HR to adjust salary classes based on job requirements and updated job descriptions, provide for competitive compensation in the next budget presented for approval.

Conclusion on Operating Staffing and Budget: Staffing, budgeting, and quality control are all interrelated, in terms of the appraiser's office ability to meet all legal and directive mandates. The staff is in place as is the budget for 2018. The appraiser's office advocates for an increased staff size in the 2020 fiscal year. This impacts the budget for the office. Using 2018 documents provided, personnel costs (staff) are 93% of the total amounts budgeted for the appraiser's office. As recognized in the discussions presented, the work produced requires considerable human resources. At the current budgeted staff level, 65 employees work on completing the annual appraisal/assessment process. Each section of this report addresses efficiencies of staff processes. Due to the current workload there are no staff members specifically assigned to researching and developing more efficient procedures either by changes in workloads, or implementation of new advanced technologies. Gains in efficiency of procedures requires time and staff to research what processes need updating most.

The assessment process itself is not only rigorous but the time-line is demanding. Completing appraisals, appeals, issuing tax bills within a ten-month time frame on nearly 222,000 real property accounts, 35,000 plus personal property accounts and maintaining compliance with the many laws, regulations, and directives is commendable. Quality control is discussed and evaluated based on regulations from the PVD that are specific regarding compliance to data error rates and the methods used to assure quality data. The data quality is backed-up statistically during the valuation cycle and completion of the appraisal process using measures

of appraised value to sale price, as a ratio of the two (appraised value / sale price = ratio). The IAAO standard on Sales Ratio Study, provides the quality Standards see table below:

Type of property	Measure of central tendency	COD	PRD*
Single-family residential			
Newer, more homogenous	0.90-1.10	10.0 or less	0.98-1.03
Older, heterogeneous areas	0.90-1.10	15.0 or less	0.98-1.03
Rural residential and seasonal	0.90-1.10	20.0 or less	0.98-1.03
Income-producing properties	0.90-1.10		
Larger, urban jurisdictions	0.90-1.10	15.0 or less	0.98-1.03
Smaller, rural jurisdictions	0.90-1.10	20.0 or less	0.98-1.03
Vacant land	0.90-1.10	20.0 or less	0.98-1.03
Other real and personal property	0.90-1.10	Varies with local conditions	0.98-1.03

The 2018 Compliance report confirms the ratio standard on residential property meets compliance. For commercial real property the standard does not provide a definable line as to “Larger, Smaller” urban jurisdictions. The Sedgwick County jurisdiction is larger than the average size jurisdiction in the United States. In Kansas only Johnson County is larger than Sedgwick County. Commercial overall ratio is 90.5% with a COD of 22.2%, the COD falling outside of both large and small measure based on the standard. Recommendation for improving commercial ratio standards will be provided in Commercial Values Section. The overall Residential measures are within the Ratio Standard requirements.

2018 Compliance Review	RATIO	CONFIDENCE
MEASURE	STUDY	RANGE
a. RESIDENTIAL		
LEVEL: MEDIAN RATIO	90.1	IN (87.9, 91.8)
UNIFORMITY: COD	10.6	IN (9.7, 11.7)
b. COMMERCIAL/INDUSTRIAL		
LEVEL: MEDIAN RATIO	90.9	IN (86.2, 94.9)
UNIFORMITY: COD	22.2	IN (19.9, 25.1)
TOTAL		

Additional discussion of Sales Ratio specifics will follow in the audit “Sales Ratio Studies” Chapter 7. The point of this discussion is compliance with various “Quality Standards” requires staff first and foremost to have the skills, knowledge, experience and depth of application to

understand the methods and techniques needed for attaining compliance with the mandates. In this section I find the appraiser's office preformed their duties at a high level. The evaluation of compliance as mandated meets most standards of quality and performance.

Recommendations have been provided that intend to protect the accomplishments of meeting compliance mandates. Retirement of senior level, highly skilled and knowledgeable staff is a future concern, but must be addressed now with a proactive succession plan.

Technology and its use have created a paradigm shift in the process and application of mass appraisal methods and techniques (scope of work). Future leaders and directors of staff in the appraiser's office will require updates to their skill sets. It is recommended new and enhanced skills be obtained by attending the most current education available and then install these new methods and techniques into the appraisal process. Budgets and policies supported by the county board of commissioners, and the PVD will also need adjusting to support these changes from a funding and administrative perspective.

Information Technology

Question#1: Does a modern database management system with its expected services and interfaces underlie the assessment system?

- Are there sufficient automated edits in place in the jurisdiction?
- Are there backup and recovery provisions in place?

Question #2: Does the database improve quality and minimize potentially inconsistent redundancies?

Question #3: Does the database enable added functionality?

Question #4: Do the database tools provide for modern support for temporal and spatial variables?

- Can the database handle data entry and updating for past, current, and upcoming tax years and the need of the users to separately activate separate tables to do so
- Does the data base meet IAAO standards for usability?

Response by Jurisdiction: Two database management systems operate within the appraiser's office. The Orion system from Tyler Technologies is the primary source for storing real property and manufacture home data. The personal property data resides in the Aumentum system from Thomson Reuters.

The Orion system is provided to counties throughout Kansas as the primary Computer Assisted Mass Appraisal (CAMA) software for real property. A personal property application is also available in the Orion system but is not used by the jurisdiction. The PVD provides detailed guidance in the Procedures Compliance Guide on the internal tables and use thereof contained in the Orion system.

The Orion system provides the jurisdiction adequate levels of editing and backups. The Aumentum system lacks the quality control features of the Orion System requiring other external application to assist with data integrity for personal property data and analysis.

Questions #2 - #4 address the overall user satisfaction with system operations, ease of use, learning curve to get to proficiency in use, and ability to handle multiple tax years. For all categories the Orion system being a Windows based user interface, basic ease of use, and overall functionality is good. Users can move around in the Orion system without much difficulty. This is not the case for the Aumentum system. Functionality and flexibility of the Aumentum causes delays in workflow, requires an extra level of user education to learn scripted queries for retrieval of data items and reports. This system has been in place since 2010 with no updates, with only system patches being provided on a monthly basis. The vendor opines they don't expect to roll out any new versions of the software before 2021. They have developed a new version in California, and it is being tested. It is live in Riverside, CA and Sedgwick County is aware that version has experienced problems. The jurisdiction's estimate is it could be 2025 before an updated version is available for use in the appraiser's office.

The appraiser's office states they are confident the Orion system meets IAAO standards because the PVD does state that the Orion system produces results in compliance with USPAP.

Question #5: Does the database provide support for parcel aggregates and sub-parcel records?

Question #6: Does the valuation software allow for flexibility and adaptation?

- **Can revisions be made in valuation tables without jeopardizing the official roll in progress?**

Response by Jurisdiction: The current configuration of Orion in the appraiser's office does not include support for parcel aggregates (multi-parcels) and sub-parcels. However, Orion does now provide such configurations as part of the Orion system. Flexibility has been previously addressed in the response to questions #2-#4. Orion does allow table revisions, but Aumentum does not.

Response by the Consultant: **Questions #1 - #6** are aimed at addressing the operations, security and functional use of software applications. There is not a current IAAO Standard on database usability. The Standard on Mass Appraisal, 2017 does address the use of data, as does the

Standard on Automated Valuation Models, 2018. The private sector has created data standards for residential and commercial appraisals⁴. The “usability” is more of a user reaction to the retrieval and storing of data items.

The details of data base design and use is a process completed by technology companies and information technology departments. The Orion and Aumentum systems are in place and Orion is a mandated CAMA system by the PVD for use by all county property appraisers in the state of Kansas.

Each system was demonstrated during the on-site visit. Neither system provides full functionality or flexibility. If Orion and Aumentum engaged in complete functionality and flexibility there would be little need for staff to create external work arounds using MS Excel, or OnBase, a document management system. Commercial property activities other than data characteristics are processed entirely outside of the Orion system. This is a customized application referred to as “EUS” or Economic Unit Summary. The EUS was developed using C-Sharp a.k.a. C#, a programming language, designed by [Microsoft](#). The EUS application was designed to transact the needed functionality for valuing multi-parcels by working with the GIS and combining multi-parcels into “Economic Units” to be valued, and then to allocate the values back to the individual parcels for assessment. The IT support for the EUS is not in-house, meaning it is not provided by the county IT staff. The process used to create the economic units requires heavy processing loads and is usually completed in off business hours to avoid conflicts with other County batch processing routines.

RECOMMENDATION #6: The Orion CAMA system is locked in place and ultimate control of updates are provided by Tyler Technologies and to the PVD, the holder and distributor of Orion to users using a centralized browser-based system. Other than attending user meetings and requesting updates, improvements to functionality is through the PVD pipeline, there is no choice but to keep using the Orion system as is. The addition of the Multi-Parcel Valuation system in Orion may provide greater flexibility than the current EUS system once it is learned and implemented. See RECOMMENDATION #1 in the chapter on [Operation Environment](#). (click on hyperlink).

The Aumentum is problematic on several levels. Most notably it also functions as a tax billing system used by other departments. According to the staff in the appraiser’s office, some county departments are satisfied with how Aumentum performs and have not shown an interest in exploring other software options that would provide all users a more efficient system. (Note from Consultant: *A more precise recommendation will be presented in the personal property chapter*)

⁴ IAAO Fair & Equitable 2008, Linne

According to the Tyler Technologies web site, there is an Orion solution for tax billing and collection. As stated below this option deserves further consider if it creates needed efficiencies.

“Orion is a proven software solution for CAMA and tax billing and collection.

From simplifying processes and improving workflow to ensuring efficient and consistent operations, Orion connects you to all the essential business tools you need.”⁵

At the county level effort between county offices is required to improve work flow. Like with the multi-parcel issue, when a single department is functional and others require extra time and staff to create work-arounds outside of a central system, this is not efficient government. Exploring and finding software that is more flexible and functional for valuing personal property must be considered. With the projections for updates to Aumentum out as far as 2025, this is the equivalent of a user working in DOS applications from a technology perspective.

Question #7: Does the valuation modeling software produce results capable of being timely applied?

Question #8: Can the valuation modeling software produce data on the confidence of its estimates?

Response by Jurisdiction: **Questions #7 and #8** address the output and deliverables that the valuation systems are capable of. While not all valuation functions are completed within the Orion software, the cost model results and comparable sale results are completed and applied using Orion. Currently some analysis such as location adjustments, updating depreciation tables to the local market, sales validation results, notes, and developing market models using multiple regression analysis (MRA) are completed outside of Orion. The Orion MRA module provides standard regression measure of “goodness of fit” e.g. R^2 , standard error of the estimate and coefficient of variation. Individual measures of variable importance included are, correlation, T or F values and standardized regression errors. All the above pertain to residential model development.

As previously discussed, the current version of Orion in use does not support the valuing of multi-parcels that represent a single economic unit. In-house tools have been developed and implemented for valuing commercial properties. Primarily used on commercial is a segregated summary statistical model developed using baseline values.

Response by the Consultant: As previously discussed the appraiser’s office must create work-arounds in their processes for all functions not provided by the CAMA software. This requires

⁵ <https://www.tylertech.com/products/orion/appraisal>

additional efforts and testing before implementation. It also requires the appraiser's office to ensure their results will be accepted into the Orion CAMA and Aumentum systems for the purpose of noticing changes in value and creation of the tax bill.

RECOMMENDATION #7: The County Clerk, Treasurer/collector, information services, and appraiser's office must come together to improve functionality of all software products used in the property tax cycle. While this may come at a cost initially, if the benefit is improved efficiency for any one department, the one-time cost is preferred to annual cost increases required for additional staff. A full study of finding new or improved measures of efficiencies where current software is inadequate is needed sooner than later.

Question #9: Does the valuation modeling software support its estimate of a parcel's value with a small set of comparable properties, sold or unsold, that have had their estimates adjusted to reflect how they would compare to the subject property after adjusting for the differences between them?

Response by the Jurisdiction: Residential – Yes. Multi-parcel issues on commercial records prevent Orion from being able to produce income & comparable sales estimates (performed outside of Orion). Tyler Technologies made it possible in Orion, Aumentum did not. A demonstration of adjusted comparables was presented during the on-site visit.

Response by the Consultant: As mentioned in other responses by the jurisdiction the Orion system is focused mostly on valuing residential properties. Comparable sales and income analysis are completed outside of the Orion system, specifically for multi-parcel economic units. On the Tyler Technologies⁶ web site promoting Orion as a full CAMA solution, specifically saying: "Develop, calibrate and test your model(s) using cost, market, or income appraisal methods". Understanding this as a marketing claim, the options to complete values for residential, income producing properties is at least potentially available for use. Now that a solution is also present to complete values on multi-parcel records is also present, the RECOMMENDATION made in the Operating Environment chapter is supported.

Question #10: Can the valuation software permit the implementation of analyses not contemplated by the original design, either by customizing reserved variables and processes in the core DBMS, by facilitating third party interfaces, or both?

Response by Jurisdiction: Tyler Technologies made it possible in Orion, Aumentum did not. The Orion System has been interfaced with the OnBase and Apex sketching software. When using the

⁶ <https://www.tylertech.com/products/orion/appraisal>

Orion System notes and other documents created using OnBase are displayed seamlessly, as are the sketches created in the Apex application.

Response by the Consultant: As stated in their response, the jurisdiction provided demonstration and examples of third-party implementation and analysis. The functionality of third-party applications appeared seamless in operation.

Question #11: Does the system take advantage of the benefits of integrated CAMA/geographic information technology?

Response by Jurisdiction: GIS is managed by the Sedgwick County GIS Division. ESRI products services parcels and land data. Information is integrated in Orion automatically when GIS publishes their data. Maps in Orion ping to GIS servers. Demonstrations and examples were provided during the on-site visit.

Question #12: Does the system provide advanced workflow processing and management, including those relevant for appeals documents at the various required levels?

Question #13: Does the system provide advanced document management?

Response by Jurisdiction: Yes, when using Orion. No when using Aumentum. Orion does support documents being attached to records, but Sedgwick County uses a separate scanning software (OnBase) that is integrated with Orion. It does not support documents being attached. Aumentum PP has extremely limited integration with OnBase software.

Response by Consultant: The review of the Orion and Aumentum applications in terms of workflow and management are connected to the response in the two previous chapters on Operating Environment and Management and Staffing. The Orion technology provides the required tools needed to complete the appraisal/assessment function resulting in compliance with quality mandates and value mandates. The appraiser's office staff is highly skilled in all facets of operating Orion. While not all modules in Orion have been fully deployed, they are available for use. It has been suggested earlier that using the multi-parcel application must be considered and evaluated for use by visiting other jurisdictions where it is used and tested.

The Aumentum system is a source of frustration by users in the appraiser's office. A visit to the Thomson Reuters⁷. Web site reveals all the property tax components available as an integrated tax administration and CAMA system. The appraiser's office and the PVD have worked out the CAMA side with the Orion mandate. Aumentum remains in the Register of Deeds, County Clerk, and Treasurer's/collector's office as an active application. Based on the Aumentum system

⁷ <https://tax.thomsonreuters.com/en/aumentum>

demonstrated compared to the one described on the Thomson Reuters web site, the system in place in Sedgwick county is an older version without recent updates.

Question #14: Does the agency keep abreast of potentially relevant technological developments?

Response by Jurisdiction: Yes. The staff members involved with modeling, reconciling final values, and the in-house GIS technician are involved keeping abreast of updates and enhancements to the current technology. They spend time reviewing new functions and evaluating how a new technology tool would benefit the overall appraisal and GIS process.

Question #15: Does the computer system maintain a frozen record of the property at the time of sale?

Response by Jurisdiction: "Sales history is used in creating Models in the valuation process determining value estimates. This process does not function for Commercial multi-parcels. A Commercial Sales Database is used for tracking of multi-parcels; however, it is not used in determining "value estimates."

Conclusion on Information and Technology: Availability and use of the many technology components used by the appraiser's office, are directly connected to the two previous chapters. Technology is responsible for completion of most procedures. When the technology is working correctly as the user expects, the Operating Environment is considered productive with appreciated efficiencies. These same efficiencies influence staffing levels and required abilities. The county appraiser's ability to influence improvements in current technology is tempered by dynamics from outside sources. The Register of Deeds and County Clerk participate in the property tax system at the beginning where sale transactions filed with the Register of Deeds evoke changes in property lines and the County Clerk has authority of what parcels are split, or combined. The Treasurer's/collector's work is at the end of the property tax cycle, via notice requirements, billing, and collections. There is general frustration among most elected officials with Aumentum software.

The PVD controls the Orion CAMA system, and provides assistance to counties when requested. This does not mean that if the county appraiser requires or requests added functionality it can be provided immediately, or ever. All indications from the county support the idea that Orion meets the majority of their needs and where it does not, they have developed a work around. The only exception is the management and control over multi-parcel economic units. There is an Orion solution for management, but issues involving control over who initiates splits and combinations of parcels are not part of the software domain.

Review of the technology and its operation have revealed its ability to comply with appraisal standards required by USPAP, and additional mandates of the PVD (known as special conditions

in USPAP). The provided RECOMMENDATIONS are directed toward strategies that would improve processes and reduce processing time. Technology has allowed the appraiser's office to do more with less, more parcels per staff member and fewer staff members. The appraiser's office has done an excellent job of using technology.

As the audit progresses there will be additional commenting on technology and its use.

Cadastral Mapping.

Questions:

- 1. Do the cadastral maps enable the jurisdiction to have reasonable assurance that all taxable parcels have been identified and no parcels have escaped inclusion in the system?**
- 2. Do the cadastral maps provide the basic information specified in the IAAO standard?**
- 3. Does the jurisdiction maintain a complete set of cadastral maps showing the identity, size, shape, and location of each parcel in the jurisdiction as of each assessment date that remains subject to ongoing litigation?**

Response by Jurisdiction: In response to the above questions, all are in the affirmative. Yes. "Copies of GIS Parcel layers are saved at the end of each year."

Response by Consultant: Demonstrations of the GIS were presented during the on-site visit. The internal review of the GIS is based on functionality and use by the staff in the appraiser's office. The Orion system and GIS are integrated and work seamlessly together. Map layers can be displayed from Orion for a specific parcel, and from a GIS parcel, users can display Orion data.

Questions:

- 4. Are maps and related records maintained on a timely basis?**
- 5. Are all parcels assigned a unique identifier that is associated with its current configuration and size?**
- 6. Do cadastral maps include representations of improvements as well as the legal boundaries of the parcels?**
- 7. Are maps spatially referenced and capable of meeting national map accuracy standards or IAAO standards, including those cited by reference such as the**

American Society for Photogrammetry and Remote Sensing (ASPRS) standards? Do they meet the standards when plotted at the scales cited in the IAAO standard?

Response by Jurisdiction: **Questions #4-#7** are all “Yes.”

Response by Consultant: **Questions #4-#7** all pertain to compliance with the IAAO Standard on Digital Cadastral Maps and Parcel Identifiers, 2015. This standard is used to evaluate compliance with the specific questions.

It is important to note that the Geographic Information System (GIS) for Sedgwick County resides in its own department, a/k/a. Sedgwick County Geographic Information Services (SCGIS). The web site, <https://www.sedgwickcounty.org/gis/about/> provides details on all services provided for the Wichita/Sedgwick County region. Key services include data development and conversion, mapping, data queries, geo-spatial analysis, application development and website support.

It is the responsibility of the register of deeds and appraiser’s office to provide data required for updates to the parcel and ownership layers to the SCGIS updated regarding parcel layers.

The IAAO GIS standard provides this statement in section 2, Introduction:

- Cadastral maps for the entire jurisdiction.... are essential to the performance of assessment functions.
- Digital cadastral maps enable the assessor to more efficiently;
 - access parcel location and information,
 - reveal geographic relationships that affect property value,
 - provide a platform for the visualization of data layers and analytical results.

Section 2.1 The Role of the Assessor, from the GIS standard:

- The assessor, or an authorized agent, should be the data steward for parcel and assessment data.
- Possess the ultimate authority to inventory, create and define all parcels and other cadastral layers.
- The assessor should maintain parcel identifiers for assessment purposes.
- The assessor should work closely with GIS or IT agencies that creates and maintain GIS data.

The GIS standard continues with this statement: “The assessor should track current ownership of all parcels via the recording of deeds and other documents conveying title”and... “In larger jurisdictions this function may be performed by a separate department. Nevertheless, deed processing and cadastral mapping are functionally related through the review of ownership and the interpretation of property descriptions and should be organizationally linked in the assessor’s office” And.... “The assessor should address policy-level matters, such as how the overall mapping program is integrated in a multipurpose data-sharing environment.”

RECOMMENDATION #8: I have previously discussed the issue of multipurpose data sharing, in [Recommendation #2](#) . The IAAO GIS standard recognizes this issue as a division of responsible, departments that do share require being “organizationally linked.”

Response by Consultant Continued: Questions #4-#7. Section 3 of the IAAO GIS Standard - **Core Components of a Digital Cadastral Mapping System:**

- A geodetic control network based in a mathematical coordinate projection.
- A cadastral parcel layer delineating the boundaries of real property in the jurisdiction.
- A unique parcel identifier assigned to each parcel.
- Other cadastral layers related directly to the parcel layer, such as subdivision, lot and block, tract, and grant boundaries.
- Digital aerial orthophotographs.
- A computer system that links spatial data and parcel attribute data.

The SCGIS as it pertains to and operates within the appraiser’s office follows the Core Components of the IAAO GIS standard.

Section 3.3 - **Core Cadastral Map Layers** at a minimum consist of:

- A PLSS layer, if geographically applicable.
- Subdivision, plat and condominium boundaries as recorded or filed.
- Block and lot boundaries as recorded or filed.
- Parcel boundaries; platted and unplatted, both taxable and nontaxable.

These layers are specifically identified on the SCGIS website.

Property Data:

- [Lots](#)
- [Property Parcels](#)
- [Subdivisions](#)

A continued review of the IAAO GIS standard Sections 3.4 – 3.10 reveals the SCGIS complies in all areas based on review of data layers and processes described on the SCGIS website. Section 4 of the GIS standard covers the specifics of creating a digital geographic system. As this SCGIS is in place and fully functioning a comparison of processes is not required.

Section 5 covers System Maintenance of the GIS. The county appraiser has only partial responsibility for maintenance regarding parcels and ownership. They are responsible for “Archiving” tax layer data for each specific assessment cycle, thus year. Section 5.2 covers archiving and the appraiser’s office is complying.

Section 6 in the GIS standard covers “Quality Control” during creation and maintenance of the GIS layers. As the appraiser’s office does not create or maintain any line work, an audit comparison for controls falls outside of the scope of work specific to the appraiser’s office.

During the on-site interviews and demonstrations appraiser’s staff did not identify any issues experienced with mapping errors detrimental to their specific work and use of the GIS. Positional accuracy from a user perspective is acceptable.

Questions Continued:

- 8. Are maps (or a geographic information system) capable of significantly enhancing the mass appraisal system?**
- 9. Does the GIS or mapping system display and support valuation areas and identifiers?**
- 10. Can market areas and neighborhoods be updated with GIS?**
- 11. Does the jurisdiction perform advanced spatial analyses possible only with a GIS?**

Response by Jurisdiction: **Questions #8 - #10** are all “Yes.” **Question #11** is “No.” **Questions, 8,9,10** all address how the appraiser’s office uses the GIS technology. The creation of the economic unit system and tracking of multi-parcel values would be even more time consuming and difficult without the enhancements the GIS provides. Economic units can be displayed as single parcel unit (that is the users can see all parcels visually). This provides for instant visual feedback of building inventory and allocated values. The residential market areas are a map layer and used to control for market area adjustments in modeling process, identify outlier value estimates, and select comparable sales from competing neighborhoods within a market area. The GIS is also a product used for workflow controls, data collection, building permits, in-house data verification, land value maps, tracking and processing appeals. Some of these workflow processes are integrated with Orion, while others are completed using Orion data with external GIS processes and applications.

Conclusion by Consultant on Cadastral Mapping:

The IAAO standard on Digital Cadastral Maps and Parcel Identifiers is used as the guiding source document for compliance. The appraiser's office staff members are skilled users of the GIS layers made available to them. The specific layers of lots, parcels, and subdivisions are part of the daily and annual work products used and delivered by the appraiser's office. The integration of parcels from Orion with parcels in the GIS allows for many enhanced operations and geo-spatial analysis to be performed by staff in the appraiser's office.

The standard on GIS does provide guidance on the necessity for the assessor and others within the county governmental structure to work together to solve for the best outcomes when GIS production responsibilities cross departmental lines of authority or authorization.

[Recommendations #1](#) and #2 are presented in recognition of this guidance. Recognition of efficiency, cost savings, and best practices are also desired results.

Question #11 was answered "No." The question does leave room for interpretation as the appraiser's office perceives "spatial analyses" as some type of 3D analysis, which can be true. What is completed using the EUS to combine single ownership, multi-parcels into a single economic unit to value, and then allocate the portions back out is an example of an advanced method of spatial analyses. While cumbersome and time consuming when viewed on a GIS layer, considering the processes used, not many jurisdictions have solved the multi-parcel processing question.

I do see an opportunity to use the GIS as an enhancement for analysis and valuation of commercial and industrial properties using a response surface variable in a commercial model to account for geographic differences. I will discuss this more and provide a recommendation during the chapter on Commercial Valuation -10.

After review and analysis of how the appraiser's office is supporting and using the SCGIS including comparative compliance with the IAAO GIS standard, there are no concerns of non-compliance. Recommendations #1 and #2, address departmental responsibility for a better environment of workflow, functional questions on operations of parcel creation, and ownership boundaries.

Property Use Codes, Market Areas, and Neighborhoods

This section covers the statutory requirements of K.S.A. 79-1476 providing for a Real and Personal Property Classification system. The section will address only Real Property

Classification system as Personal Property has its own chapter devoted to valuing and assessing personal property. The questions below were answered by the jurisdiction.

Questions:

1. Does the jurisdiction employ a logical property type classification scheme?

Response by the Jurisdiction: The classification system is mandated by the state Constitution Article 11.—FINANCE AND TAXATION- § 1. System of taxation; classification; exemption, and K.A.S.79-1439 - Property Valuation, Equalizing Assessments, Appraisers and Assessment of Property. The constitution goes on to setup classifications for real property as follows:

	Sub-Class	Class	Percentage
Class Number 1	1	Residential - Apartments	11.5%
	2	Land Devoted to AG Use	30%
	3	Vacant Lots	12%
	4	Real Property Non-Profit – sub class	12%
	5	Public utility, Except RR	33%
	6	Commercial & Industrial, on Buildings on AG Land	25%
	7	All other not sub-classified	30%

All property except for agricultural land is appraised at full value based on its highest and best use, the classes are assigned based on such highest and best use. Once the appraised value is completed the class percentage is applied to convert the appraised value to assessed value.

2. Does the CAMA system provide for mixed use properties?

Response by the Jurisdiction: “Yes, but it doesn’t work.”

3. Has the jurisdiction developed separate geographic areas and location identifiers for each major property type?

Response by the Jurisdiction: “Yes.” This is discussed in the previous chapter under [question #10](#). There are ten geographic stratifications for market areas and each market area contains sub-strata neighborhoods.

4. Do appraisers determine geographic areas used for valuation purposes?

5. Are geographic areas sufficiently large to afford adequate market data for analysis?

Response by the Jurisdiction: Questions #4 and #5 are “Yes” but there is some misunderstanding of the question.

6. Does the jurisdiction validate the assignment of property use codes and geographic identifiers?

Response by the Jurisdiction: “Yes, this is completed through a query. Edits are set up to catch errors.”

Response by the Consultant: The USE CODE’s are mandated and in compliance with the mandates as provided by Kansas law, as well as the Kansas constitution. The PVD cited no violation of compliance in the 2018 report on compliance. The PVD provides specifications, manuals, guides, schedules, memoranda, regulations and directives on the various procedures for valuing property, as per Directive #17-048. This includes guides for specific methodologies directed at these property types.

- 1) Personal Property Guide
- 2) Oil and Gas Appraisal Guide
- 3) Grain Elevator Appraisal Guide
- 4) Commercial Feedlot Appraisal Guide

Further review and discussion of how property is valued is provided in the sections covering Land Values, Residential Valuation, Commercial Valuation, Personal Property Valuation, and Appeals.

Property Data Collection and Maintenance

This chapter covers the specifics of what data is collected, how often, the sources of data, use of building permits, and zoning. I also looked at how technology is used to collect and maintain data and if any data quality standards are in place. The questions are grouped for responses from jurisdiction and consultant. In all, 15 questions on data are addressed in this chapter.

Compliance measurements for data collection are cited in the 2018-2019 Procedural Compliance Guidelines, PVD. Specifically stated are USPAP, PVD Manuals, PVD guidelines, and PVD Directives. PVD provides data collection guidelines for proper coding of attributes into the Orion system.

Questions:

1. **Do computer records contain information on current property use, highest and best use, and indicators of legal uses, such as zoning? Also covered are various methods of collecting and maintaining data.**
2. **Does the jurisdiction have a documented rationale for the data it collects, including its decisions on interior vs. exterior inspections and the frequency of each type of inspection?**
3. **Does the jurisdiction maintain computerized data on land attributes important in the local market?**
4. **Does the jurisdiction physically inspect properties at least every four to six years?**

Response by the Jurisdiction: Yes, to all the above. Zoning is carried on the data file, but maintenance of zoning is lacking and does not meet accuracy standards. Maintaining zoning as a property attribute is not a priority. The reason is, there are 30 -40 different zoning classifications in the county, with no standards regarding meaning. Highest and best use is not a coded property attribute. We follow PVD guidelines and business rules in-house as directed. PVD compliance guidelines require documentation on all data changes, and updates. i.e. what data items were changed, who made the changes, creation of a record history of changes?

K.S.A 79-1476 mandates every parcel of real property shall be viewed and inspected by the county once every six years. The Revaluation Maintenance Specifications requires the county appraiser to select a sample of parcels for inspection to ensure that 100% are inspected at least once every six years. In the Sedgwick county appraiser's office this is known as "17%", e.g. 1/6 or 17% are reviewed each year.

Response by the Consultant: Having reviewed the requirements set-forth by:

- Kansas statute, PVD Directive #11-043, administrative regulation;
- USPAP SR 5-2(e);
- 2018 Procedural Compliance Review Checklist, 2018 Compliance Status Report, and Sedgwick County 2018 Compliance Review;
- On-site demonstration of process, and discussion.

The appraiser's office meets the compliance requirements as they pertain to Questions #1 - #4. The issue of "Highest and Best Use", while not carried on the actual record, the "Use Code" assigned gives the data collector/appraiser the opportunity to make the assigned use code represent each parcels highest and best use. At the time of assigning the Use Code if the parcel or economic unit is to be appraised based on highest and best use, as such the Use Code can reflect a

use other than the current actual use when it does not represent the highest and best use. Such an action would then reflect the finding of the case cited. (See *Board of Douglas County Comm'rs v. Cashatt*, 23 Kan.App.2d 532, 933 P.2d 167 (1997).)

Questions:

5. **Does the jurisdiction regularly obtain copies of building permits, occupancy permits, or both, and does it conduct physical inspections of affected properties?**
6. **Is the residential property record card designed to facilitate collection and review, and is it supported by a data-coding manual and training program?**

Response by the Jurisdiction: We complete a manual review of Metropolitan Area Building and Construction Department database for City of Wichita and unincorporated areas of Sedgwick County. Building permits for small towns that don't go through MABCD are faxed or emailed to our office. Building permits include % completed. We are reviewing building permits to determine if it's something we need to go out on. We would not go out on a roofing permit or elevator inspection.

Question:

7. **Does the office use mobile electronic devices for field data collection?**

Response by the Jurisdiction: SG Co KS uses an older system from Tyler-“Mobile Office”, appraisal staff finds inefficient & outdated for updating data in the field. A newer system is available- “Field Office” that allows for uploading and downloading of CAMA data which would eventually cut down on entry staff & errors. The estimated cost of upgrading to “Field Office” is \$70,000 with annual maintenance costs; the cost is based on the population of the county.

Response by the Consultant: Questions, #5 - #7 fit together for analysis of compliance and processes. The appraiser's office has access to the permitting system for the City of Wichita and can review permits on an as needed basis. The process is basically manual to get the permit from the city electronic system into the Orion system for field checks and review.

The data collection record is setup to match the data input for the Orion system. The appraiser's data collection staff did not indicate any issues regarding the order of data collected, or difficulty completing the form in the field. Since populating the record is completed manually for data entry, it is important the collection form follow the screen used to capture the field data electronically. Reducing data entry time, and errors provides better efficiency and order of inspection as field appraisers can easily adapt their inspection order to the form to gain efficiency. Data entry requires efficient organization to reduce errors and time.

RECOMMENDATION #9: Data collection is the most time consuming, labor intensive, and expensive task completed in the mass appraisal process. The appraiser's office is legally responsible for creating and maintaining a complete and accurate inventory of every piece of real estate in the county. A primary duty is to "discover" the specific data required to complete the appraisal. The ability to obtain building permits is a real time saver. Processing building permits manually is not.

As previously recommended, the appraiser's office must have solid line of cooperation with agencies outside of the office. Building, zoning and code enforcement offices are another example where this cooperation needs to exist.

Regarding Question #5, it is recommended that the appraiser's office develop a plan with the cooperation of the City of Wichita's permitting department to receive building permits via an electronic transfer of a file that can be used to directly attach the permit information to the assessment record. For this to happen one of two changes would be required.

- Work with the GIS departments so that the official address on the permit can be matched to the address on the assessment record.
- Or The appraiser's office provides a cross referenced database to the building department with the parcel identification number. Once the permitting officer enters the address the parcel ID is also included on the permit and can electronically attach the permit to the assessment record.

The second concept has been implemented in many assessment jurisdictions across the United States and is a workable option to be considered for implementation. (see [example document](#) at the end of the audit)

RECOMMENDATION #10: Question #7 addresses the use of mobile technology in the field. The jurisdiction has tried implementing "Mobile Office" a technology that provides for uploads and downloads of records for processing, and then upload of records processed. An updated process is available in Orion called, "Field Office." The appraiser's office is cautious in their approach to purchasing Field Office due to a cost estimate of \$70,000, plus an annual maintenance fee of \$5,680. The fee is based on parcel count.

The number one recognition when dispensing with an old system, (in this case manual data collection) and going to a new technology system, is there will be a change in required skill sets. These changes include, physical ability to manage another field apparatus, appropriate training using technology in the field, (classroom and field), and open lines of communication with the vendor.

Recently the Appraisal Manager from the Douglas County Appraiser's Office posted on the IAAO "Open Forum" the approach used to implement the "Mobile Office" technology. It is

recommended the Sedgwick County Appraiser's Office work towards a technology driven data collection solution to be implemented. The recommended steps include:

- Develop an Implementation Plan
 - Include expectations of results and cost saving
- Get in touch with Douglas County Appraiser's Office
 - Visit the office on a field trip to learn from their experience implementing Mobile Office
- Meet with the Vendor of Mobile Office to discuss an implementation plan.
 - Contract with Tyler Technologies to allow a pilot study to be conducted
 - Use the pilot study to find solutions to problematic issues.
- Consider alternate technology data collection applications. Assessment Analyst by ESRI would be an example as it also integrates with GIS.

The recommendations above are provided as a method for reducing workloads. As discussed in chapter 2 an increase in staffing up to six is being recommended in the 2020 fiscal year. Even with the above recommendations implemented, it does not guarantee increased staffing levels may not be needed. Attrition through retirement, and resignations are also part of the staffing equation.

S.W.O.T. analysis requires measuring the Strength, Weakness, Opportunities, and Threats when changes in processes are being considered. Failure of a previous attempt in using technology for data collection should not be the reason for ending the search for a solution. The fact that Douglas County has all the same mandates as Sedgwick County and has found a mobile solution that works is encouraging and needs further research on the part of Sedgwick County.

The \$70,000 price tag for Mobile Office sounds expensive, but in consideration that it may stave-off the need to hire even more data collectors in the future is an opportunity that deserves serious consideration. Technology does not require benefits, it's at work every day, and often provides opportunity for creative changes in other processes within the work environment.

Mobile data collection is relatively new in the property assessment industry in the past ten years. Many attempts have found failure. Recently more successes have emerged, specifically where planning, training, and testing were at the forefront of implementing the changes.

Recommendations #9, and #10 must be included with staff level discussions being requested. If \$70,000 were expended on a successful mobile data collection system, how would efficiencies be measured and what would the return be?

Questions:

- 8. Does the assessment office have computerized edits that include both range and consistency checks?**
- 9. Are property data collected or at least reviewed by experienced appraisers?**
- 10. Does the jurisdiction have explicit data accuracy standards?**
- 11. Does the jurisdiction have a data quality control program?**
- 12. Does the jurisdiction avail itself of valuable third-party data sources?**
- 13. Does the jurisdiction obtain and make appropriate use of electronic photographs?**
- 14. Does the jurisdiction capture property data available from marketing materials or blueprints?**
- 15. Does the jurisdiction capture information submitted during appeals?**

Response by the Jurisdiction: Yes to questions #8-#15. Edits are in place and work effectively and efficiently. **Questions #9, #10, #11** – Appraisal Support performs the checks for data accuracy as follows:

<1Yr Employment 100% QC
1 – 2 yrs. of Employment 25% QC
2 - 5 yrs. of Employment 10% QC
5 + yrs. of Employment 5% QC
Splits/Plats 100% QC

QC is increased if the error rate goes above 2% until error rate is improved. Caveat is that after QC is completed, the managerial staff is also doing the work being QC'd. All commercial data is 100% QC'd.

Sources for third-party data include: Zillow, Realty Rates, CoStar, LoopNet, CoreLogic, Burbauch, Keller Craig & Assoc., IREM. Marketing materials when available, blueprints, and data secured via the appeal process are other sources of data capture. Street level photos, aerials and oblique imaging are also used in the data verification procedure. All data provided in confidentiality is stored in a private hard copy file by order.

Response by the Consultant: The statements above from the jurisdiction provides the methodology deployed to ensure quality data. Inexperienced data collectors have 100% of their work checked for quality control. As a data collector gains experience, they require fewer checks. During the on-site visit the staff shared that an overall error rate of two percent (2%) or less is the requirement of PVD regarding data accuracy. Data edit within the Orion system keeps data entry errors to a minimum using on-line edits to capture data ranges that are not acceptable, and logical edits that provide warnings before the data entry is accepted.

Third party data sources provide additional insight for parcels with transactions currently on the market. It's not clear if data reviewed from third party sources is compared with the current record for corrections or updates. In the questionnaire response the jurisdiction does ensure third party contribution are scanned and attached to the specific record for viewing.

Conclusion by Consultant on Data Collection and Maintenance:

Quality data is a primary concern and expectation that drives all functions to be completed by the appraiser's office. Collecting data for appraising real property is a rigorous process that requires specific planning. The IAAO has recently published their Apendium of eight books, (AKA "The Body of Knowledge.", <http://www.amazon.com> search Apendium). Book 2 covers the entire breadth of knowledge and skills required for a successful and comprehensive data collection plan. Equally rigorous is data maintenance. The mandates set-forth by the PVD's Revaluation Maintenance Specifications (RMS), and directives require wide-ranging attention to details of collecting and maintaining the data. Kansas law requires reinspection of every parcel once every six years. Sold parcels require a measurement verification.

All processes used for data collection must be approved and verified by the PVD. Measurement errors greater than 10%, or +/- one foot or more are considered substantial errors. Stringent **quality control** checks are performed on the data by the appraiser's office and PVD. The PVD grades out the data collection and maintenance process using its compliance report system, at a maximum amount of four points (4) on a one hundred (100) point scale. These four points if weighted by importance are the most important points awarded. Without quality data,

compliance in other categories will suffer greatly in attempting to achieve their own required compliance points. Quality data results in credible value estimates and thus equitable assessments.

The data collection methods used by the appraiser's office are following mandates of the PVD, having graded out at the maximum compliance points of four (4). Two recommendations are provided as a means of efficiency and cost reduction over time. Two areas of data collection that are prone to errors (reduction in quality and time), are data reentry from hard copy to computer, and the fact the data must be keyed twice. Mobile data collection technology is designed so that if data is digitized in the field no further entry is required. All the field data is still subject to the same edits as if completed at a desktop station. The recommendations are not expected to significantly improve the data quality, but over the course of a few years it will provide greater efficiency in the overall process, and possibly reduce the need for additional future data collection staff.

All commercial data is collected and manually digitized but not commercial data resides in the Orion system. This is another area of operations that needs a plan, (five-year plan) to improve efficiencies. Data collection, transaction, market analysis, application, and appeals are all areas for commercial real property where better and expanded use of technology can improve many processes currently in place on the commercial side.

To repeat, the importance of data quality cannot be over emphasized. It is the nucleus of all valuation and assessment process, from discovery to appeal, and billing and collection. Because the data is used in the private sector via the Sedgwick County website, it is fully transparent to all who have a need. Attorneys, insurance companies, newspapers, realtors, title companies, real estate investment, represent just some of the commerce entities that use the data daily off the website, or through the taxpayer assistance staff. Incorrect, inconsistent, unreliable data can make for errors in decisions in the public and private sectors.

When all the different measures of data quality are considered the data collected and used by the appraiser's office is reliable, current, and meets prescribed data quality standards.

Sales Data and Ratio Studies

Sales data and its use in a Ratio Study are evaluated using the IAAO Standard on Ratio Studies, 2013. The standard is divided into two Sections; Guidance of Local Jurisdictions and Monitoring by Oversight Agencies. According to the PVD (the oversight agency); **Permanent Administrative Regulations – Article 4. – Real Estate Ratio Study, 93.4.6 Performance standards**, “Table 2-3 of the “standard on ratio studies,” adopted by the executive board of the international association of assessing officers in April 2013, is hereby adopted by reference and shall constitute the performance standards used to evaluate the appraisal of residential and commercial and industrial real estate.”... However, the coefficient of dispersion shall have a range of **5.0 to 20.0** with a **level of confidence of 95 percent**. (Authorized by K.S.A. 79-1491; implementing K.S.A. 79-1485, 79-1486, 79-1487, and 79-1488, K.S.A. 2013 Supp. 79-1489, K.S.A. 79-1490, 79-1492, and 79-1493; effective June 26, 1998; amended April 20, 2001; amended Oct. 3, 2014.)

STANDARD ON RATIO STUDIES—2013

Table 2-3. Ratio study uniformity standards indicating acceptable general quality*

General Property Class	Jurisdiction Size/Profile/Market Activity	COD Range
Residential improved (single family dwellings, condominiums, manuf. housing, 2-4 family units)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 10.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 15.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 20.0
Income-producing properties (commercial, industrial, apartments,)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 20.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 25.0
Residential vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/slower development/less active markets	5.0 to 20.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 25.0
Other (non-agricultural) vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 20.0
	Large to mid-sized jurisdictions/slower development/less active markets	5.0 to 25.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 30.0

These types of property are provided for general guidance only and may not represent jurisdictional requirements.

*The COD performance recommendations are based upon representative and adequate sample sizes, with outliers trimmed and a 95% level of confidence.

*Appraisal level recommendation for each type of property shown should be between 0.90 and 1.10.

*PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity. However, PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted.

*Alternatively, assessing officials can rely on the PRB, which is less sensitive to atypical prices and ratios. PRB coefficients should generally fall between $-.05$ and $.05$. PRBs that are statistically significant and less than -0.10 or greater than 0.10 indicate unacceptable vertical inequities.

*CODs lower than 5.0 may indicate sales chasing or non-representative samples.

The appraiser's office can utilize ratio study data in more detail than does the PVD. As the questions are reviewed and analyzed the ratio study standard will be compared for compliance and application of use. The two major aspects of appraisal performance accuracy are the appraisal level, the overall ratio of appraised values to market values. The level provides information on the degree to which legal requirements are met and based on the statistical **median**. The second measure, uniformity measures the degree to which properties are appraised at equal percentages of market value, the coefficient of dispersion (COD) provides insight into uniformity within market strata, and between strata.

The state of Kansas requires that each real estate transaction completed include a "Sales Validation Questionnaire," (SVQ) form PV-RE22-OP (Rev. 08/12), with exceptions per Directive #03-041. The questionnaire is submitted to the Register of Deeds.

Questions:

- 1. Are all transfers of property (sales) uniquely identified and captured?**
- 2. Are real estate sales properly screened and appropriate adjustments made?**

Response by the Jurisdiction: An operations documentation report on sales validation or SVQ was submitted in support of all questions in this chapter. Appraisal Support completes initial screening of the SVQ. A single person is assigned the responsibility of sales research to validate each sale, assign it to the proper class, and verify the legal description and update the sales information in the Orion system. The SVQ document being processed is an image residing with the register of deed, (ROD). Staff in the appraiser's office is notified by the ROD when SVQ's are available for processing. With the volume of SVQ's recorded each week and a PVD deadline on the 10th of each month to report, additional staff members are re-assigned from their primary duties to assist with SVQ validation process. In 2018 twelve-thousand plus (12,000 +) SVQ's were recorded in Sedgwick county.

The departmentalization of the appraiser's office also requires routing sales data to residential, ag, and commercial staff. Sales verification of the routed SVQ is completed by that department. The following steps are used to complete the verification process.

- Check the register of deed database for any accompanying documents
- Check the Aumentum tax system for entry
- Check the District Court database
- Contact buyer/seller, via phone
- Contact when required, attorney, realtor, involved parties to transaction

- Examine the sale on third party sources, Realtor.com, Zillow etc.
- Additional research if ratio is out of predetermine range .80 – 1.10
 - This may include field verification by the appraisal staff

After all processes are completed on verification and entry, all documents and notes are sent to imaging. All sales data is then imported into OnBase. At the request of the appraiser's office a batch processing routine must be run by county IT.

Response by the Consultant: As in the chapter on data collection, sales data validation is another required data collection item. In this case sales price and all related attributes to the sale so that the price can be evaluated and confirmed as a representation of an arms-length transaction. Sales flagged as arms-length are used to estimate market value, conduct ratio studies, and as comparables during appeal to support the estimated value.

Sales validation is a time consuming and labor driven process. See the IAAO standard on Verification and Adjustment of Sales, 2010. This standard provides the specifics steps and processes recommended for validating a sale price as an arms-length proxy for market value. The Appraisal Foundation's, Appraisal Practice Board published two documents in 2015, Identifying Comparable Properties Revised, and Identifying Comparable Properties in Automated Valuation Models for Mass Appraisal⁸ as guidelines to be used in both the verification process, and the use of arms-length transactions for market analysis.

This review confirms the appraiser's office verification methods comply with the stated standards and guidelines.

Questions:

- 3. Are sales used in valuation analyses and ratio studies adjusted to the valuation date (time-trended)?**
- 4. Are ratio studies conducted at timely intervals during the valuation process?**
- 5. Does the jurisdiction conduct ratio studies by property groups and subgroups?**
- 6. Does the jurisdiction use ratio studies as a tool for planning both reappraisals and staff needs?**

⁸ https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2

7. Can the jurisdiction perform ratio studies by combinations of property characteristics specified by staff on an ad-hoc basis?

Response by the Jurisdiction: “Yes” sales are time-adjusted to the valuation date. Question #4, Residential runs them periodically through the year, commercial relies on information provided by PVD. Ratio studies are completed at the start and end of the valuation process for Residential properties. The report is viewed by County Appraiser, Residential Project Leader, Department Application Manager and Residential Modeler. PVD Ratio Report is seen by County Appraiser and is distributed to staff. The most recent ratio report includes a graph showing a decline in ratios over a twelve-month period, declining ratios are an indication of rising prices.

Question #5: Residential does periodically and at years end conducts a market analysis. Commercial staff members may run ratio studies periodically and performs a market analysis at the end of the year for final review.

Question #6: “No.”

Question #7: “YES.” FOLLOW UP QUESTION: *Can an appraiser conduct a ratio report for their own use by a neighborhood for example?* Security settings in Orion are in place to limit these reports to employees who need to see them. The Residential Department uses them. The Commercial Department cannot run the report in Orion, but the reports are done with outside applications and statistical software. Residential can conduct a ratio report for their own use by a neighborhood using the Orion sales file. The commercial sales file is not inside the CAMA system. Thus, commercial cannot run a ratio report in Orion due to the multi-parcels present.

Response by the Consultant: Questions #1 - #7 are originating from the portion of the Ratio Study standard in the context of compliance for jurisdictional use. As an on-going and continuous study of quality measures, ratio studies are aimed to keep all valuation staff informed and up-to-date on how current appraisals comply with ratio standards. Periodic ratio studies also provide for identifying compliance of vertical and horizontal equity patterns, examples would be: between market areas, and neighborhoods each being in an acceptable range. The appraiser can also analyze by property attributes, land size, building size, age, grade, wall type etc., looking to see whether these attributes show any appraisal bias being 10% +/- from the overall median? Uniformity can also be reviewed in the same manner.

All analysts and appraisal staff must have the ability to complete a quality assurance ratio study at any time, beginning of a cycle, in the middle, or to confirm compliance with the PVD ratio report.

Questions:

- 8. Does the statistical program used to produce the ratio study compute the IAAO standard measures of level (median, mean, weighted mean ratio), horizontal uniformity [coefficient of dispersion (COD)], and vertical uniformity [price-related differential (PRD) and coefficient of price-related bias (PRB)]? (Note: Jurisdictions will enjoy a grace period for introducing the use of the PRB.)**
- 9. Does the jurisdiction compute confidence intervals for the statistics it computes as described in question 8 above?**
- 10. Does the jurisdiction compute additional study-validating measures for the statistics it computes as described in question 8 above?**

Response by the Jurisdiction: Q #8. Yes, PRB is not being used at this time. Q#9. Yes. Q #10. "SPSS & R Studio software is used for this" SPSS is used to do time trend sales ratio and detailed market analysis. Information is easier to manipulate in SPSS over Orion and Excel.

Questions:

- 11. Does the jurisdiction test that sold and unsold properties have been appraised similarly (to ensure sample representativeness)?**
- 12. Do the ratio studies include appropriate graphics?**
- 13. Do the jurisdiction's ratio studies compare favorably with any the oversight agency may conduct, possibly an appraisal- rather than sales- ratio study?**

Response by the Jurisdiction: Q #11.- #13. Yes. SPSS & R Studio software is used for this. Limited graphs are available in Orion for PRD and median ratio(very basic)

Response by the Consultant: Using the standard on Ratio Studies as it pertains to the appraiser's office specifically, some deficiencies in use and construction of ratio reports exist. The deficiencies are not considered a violation or total non-compliance with the ratio standard, but they earn a discussion. The appraiser's office relies mostly on the ratio reports generated by the PVD. This is understandable due to the fact fifty-percent (50%) of their compliance score is based on the ratio statistics. The statistical measure in the PVD report confirms an overall compliance. The PVD report is not designed to measure appraisal performance within strata. Levels and uniformity using intra-county performance measures compared with the overall PVD measures will provide insight into uses and other data strata not in compliance. Responses by the jurisdiction imply internal ratio studies on stratified data are limited primarily due to limitation within the Orion system and time. Ratio studies on selected strata can be completed

in SPSS or R but it requires additional time and effort to export the data and to then complete the analysis. SPSS does support a pre-programmed sales ratio module, the R system does not. The COD and PRB statistics require users to create the algorithm within those software platforms as these measures are specifically created for use by the property assessment industry, this setup requires an additional time commitment to setup for COD and PRB results.

PVD Sales Ratio Summary – 2018:

The sales ratio results from the Sedgwick County 2018 Compliance Review are displayed in the table below:

MEASURE	RATIO STUDY	CONFIDENCE RANGE (IN/OUT)	POINTS ALLOCATED	SUBCLASS WEIGHT	POINTS POSSIBLE	POINTS RECEIVED
1. STATISTICAL MEASURES						
a. RESIDENTIAL						
LEVEL: MEDIAN RATIO	90.1	IN (87.9, 91.8)	25	0.798	20.0	20.0
UNIFORMITY: COD	10.6	IN (9.7, 11.7)	25	0.798	20.0	20.0
b. COMMERCIAL/INDUSTRIAL						
LEVEL: MEDIAN RATIO	90.9	IN (86.2, 94.9)	25	0.202	5.0	5.0
UNIFORMITY: COD	22.2	IN (19.9, 25.1)	25	0.202	0.0	0.0
TOTAL					45.0	45.0

Considerable weight is placed on ratio results toward the total points awarded by the PVD, with 100-points being a perfect overall score. Fifty-percent (50%) or 50 points is possible to receive in sales ratio section. In 2018, the appraiser's office earned 45 of the 50-points available. As seen in the table the COD on Commercial/Industrial is slightly above the twenty-percent (20%) stated by the PVD and IAAO standard. It is noted the 22.2% does fall within the 95% confidence interval range. This however only validates that the 22.2% COD can be asserted as the true COD with a 95% level of confidence.

A second sales ratio report, generated by the SGCAMAPROD system on 2/13/2019, produced the following:

REPORT TOTALS									
	COUNT	PRICE	TOTAL VALUE	AGGR RATIO	MEAN RATIO	MEDIAN RATIO	STD DEV	COD	PRD
Summary	6301	\$1,157,240,807	\$1,108,701,070	95.81%	95.81%	95.85%	6.75	5.58	100.001

The above ratios are for residential class properties only and have been trimmed using the method of any ratio greater than 1.5 +/- times the median ratio. Thus, ratios greater than 143%, or less than 48% are not used in the study and are flagged as outliers. Comparing the two reports apples to apples is not reliable. The appraiser's office provides for all residential arms-

length sales as ratio candidates, then trims the outliers using the method stated above. This method does not conform to the IAAO Standard of Sales Ratio, Appendix B, page 53 and 54. The same outlier trimming method is also described in the Kansas Real Estate Ratio Study. The actual PVD report statistics are on the website <https://www.ksrevenue.org/pdf/17FinalRatioStudy.pdf>. Reviewing the 2016 PVD report as a gauge it appears the ratio reports are based on a data sample with fewer observations reported, and the PVD does a sub-class report on strata. No reason was provided for the difference in medians on the residential class.⁹

RECOMMENDATION #11: This recommendation is based on the full analysis in this section covering sales processing procedure, in-house ratio studies for intra-jurisdictional knowledge of different strata, and compliance with the PVD mandates of statistical compliance.

As stated previously, using PVD ratio standards the appraiser's office meets the statistical measures for compliance. No further action is required in reaching the overall compliance goal. The recommendations are directed toward improving workflow on documenting sales validation and improving processes for monitoring appraisal performance periodically during the appraisal cycle.

Sales validation and documentation is labor concentrated, and time-consuming. Methods and techniques that will reduce the time required and reduce the labor required should be explored. The suggestions here follow a pattern suggested in the data collection section. How technology is used currently is more important than what technology is used. With the technology pieces locked in, e.g. Orion, OnBase, EUS, and Aumentum, any improvement will need to be made using a study of workflow and processing habits. Following is a list of considerations for change:

- As filing and recording the SVQ falls on the Register of Deeds for initial processing before available for processing by the appraiser's office.

Opportunity #1

- Develop a system for and with the ROD, as an SVQ is recorded and the parcel identification number assigned, the property class is also assigned for that parcel.

⁹ The 2017 Kansas Real Estate Ratio Report was not available on at the time this report analysis was completed.

- This eliminates the need for a second person to enter the PIN, decide if residential, Ag, or commercial/industrial. (This can be accomplished electronically)

Benefit: As sales are ready for review by the Appraisal Support, a second sorting, query is not required to identify non-residential sales. This type system also allows for agriculture, and commercial sale to be available for processing sooner.

- Understanding that once the ROD's notifies specific staff members that an SVQ file is ready for processing, each SVQ is then pulled for review and saved for attachment to the appraiser's record. From this step a "Sales Cover Sheet" is created.

Opportunity #2

- It is apparent some information on the "Sale Cover Sheet" is populated from an electronic file. (If this is not the case it must be.) The Orion system must host a Change of Ownership screen, with the ability to add all pertinent data, and information about the sale. It will also include a history of Ownership report.
- Orion, or Aumentum will also provide space for appraiser notes, date, and initials. Example below:



- With deeds, and SVQ's being retained as an image by the ROD, it would save effort and time if a link is created using the parcel ID as reference to allow users in the appraiser's office to click on a link and all the pertinent documents would be available for viewing. No attachment would be needed. Click [Recorder of Deeds Parcel Documents](#)

Benefit: Keeping all data on sale and ownership changes as part of the CAMA database and not as an outside work around that must be attached will be a time saver, reducing redundancies and providing consistency of process.

When integrated with the CAMA database all the sale information is readily available for viewing on a single screen.

Any mandated reports by the PVD can then be generated from the CAMA database, in summary or full form. Click on to see [examples](#).

- Completing in-house sales ratio reports will bring hidden problems from models, or equity into focus. Using in-house ratio analysis to discover inequities, geographically, by property uses, age related, quality grade assignment, and many others is in the IAAO standard on Ratio Studies, under the topic of “Horizontal Equity.”

Opportunity #3

- The concept of equity for property appraisal and assessments embeds what is described as vertical equity, as related to Sale Price. The price related differential, (PRD) and price related bias (PRB) statistics are used as measures for gaging whether appraisals are accurate at different price levels; whether higher priced properties are appraised at different percentages of value than lower priced properties?
- Horizontal equity compares ratio results for specific property attributes such as, age, location, size, use, etc. See example using validation codes:

FLAG	Count	Median	Mean	Mean	IQR	SD	COD	COV	PRD	PRB
1 Arm's Length	2313	0.9963	1.0242	1.0053	0.1235	0.1506	9.271	14.7090	1.0188	-0.0601
2 Relocation	273	1.0241	1.0301	1.0293	0.1025	0.0877	6.529	8.5107	1.0007	0.0211
7h Bank REO	45	1.5228	1.5197	1.3997	0.3330	0.2692	13.907	17.7129	1.0857	-0.1862
Combined	2631	1.0000	1.0333	1.0124	0.1257	0.1482	9.751	14.3410	1.0206	-0.0642

In this example jurisdiction it is mandated the Bank REO's initially remain in the ratio report, relocation sales are also mandated to remain. It is clear the REO sales do not represent the typical market and their use skews the overall result and analysis. While the “Relocation Sale” have good statistics, they tend to be appraised slightly high based on the overall ratio results. Relocations are appraised with the same model as arms-length transactions and Bank REO's. What is different with these two groups is the motivations of the seller are different than the typical market observes.

Example #2, commercial ratio results are outside of the COD standard of 20%, but without analysis to identify the problem finding a solution is difficult. Using the variable “Use” to breakdown the ratio report gives a better view of results as provided.

Ratio Summary Statistics Section

				Wtd.						
USE_CODE	Count	Median	Mean	Mean	IQR	SD	COD	COV	PRD	PRB
C 0050 Apt>6	10	1.0160	0.9343	0.9479	0.3170	0.2477	17.277	26.5129	0.9857	0.2653
C 0060 CBusn	62	1.0068	1.0276	0.8449	0.3498	0.3987	26.191	38.7968	1.2162	0.0009
C 0070 Office	19	0.9620	1.1198	1.0941	0.5038	0.5251	34.959	46.8970	1.0235	0.0940
R 0043 Apt<6	15	1.0000	0.9912	0.8357	0.2351	0.2954	19.775	29.8032	1.1861	-0.1662
Combined	106	1.0000	1.0211	0.8700	0.3449	0.3937	26.584	38.5606	1.1737	0.0065

The example jurisdiction, like Sedgwick County, has a median level that meets the ratio standard, but the COD is above the 20%. However, the apartments are within the standard COD. Office properties have an extremely high COD. This jurisdiction needs a full review of “Office” procedures, operations, and value outputs. Only by stratifying the commercial sales by “Use Code” is this revealed. The next example provides additional ratio statistics for consideration, all are discussed in the ratio study standard.

Additional Ratio Summary Statistics Section										
										5%
					15%	Wtd.	Wtd.			Trim.
USE_CODE	Count	Min	Max	Range	COC	COD	COV	MADM	MAPDM	Mean
C 0050 Apt>6	10	0.3988	1.1923	0.7935	60.000	20.535	964.1041	0.0985	9.697	0.9497
C 0060 CBusn	62	0.2072	2.2464	2.0391	50.000	40.299	2745.038	0.1469	14.589	1.0067
C 0070 Office	19	0.5320	2.8556	2.3236	26.316	39.855	2288.314	0.2446	25.430	1.0560
R 0043 Apt<6	15	0.3183	1.6654	1.3471	66.667	11.479	548.2145	0.1207	12.068	0.9911
Combined	107	0.0592	2.8556	2.7963	49.533	34.295	2269.650	0.1639	16.393	0.9967

Appraisal and Sale Price Summary Statistics Section

		Appraisal	Sale Price	Appraisal	Sale Price
USE_CODE	Count	Mean	Mean	Median	Median
C 0050 Apt>6	10	337461	356020	326881	332500
C 0060 CBusn	62	549448	650307	332752	342500
C 0070 Office	19	537756	491508	246447	390000
C20062 ComrDevRate	1	92040	1553473	92040	1553473
R 0043 Apt<6	15	163068	195136	168237	185000
Combined	107	469120	539237	246447	300000

The above examples were generated using NCSS 11¹⁰

Benefit: Additional depth of in-house ratio analysis provides the precise measures to identify areas of non-compliance with the ratio standard before, rather than after, the appraisal/assessment cycle is completed. In recognizing the additional time, and thus staff for this level of analysis, consider out-sourcing the analysis. Working with student interns from WSU should be considered. The jurisdiction's SPSS software is capable of all the above calculations, as is R, and Excel. It is just a matter of a one-time setup to make it all work. Further discussions will follow on stratification of sales data in the chapters on valuation and model development.

Another important benefit of having on-demand, in-house ratio analysis available is for use in an appeal. Statistically providing the actual level of appraisal on all parcels in a class, or by use, or with in specific market area is strong evidence on how credible the appraised values are. And when the ratio statistics are not supportive, it can be telling the review appraiser that a needed value change is basic and able to avoid an appeal all together.

Conclusion by Consultant on Sales Data and Ratio Studies: Sales data and its prescribed use goes to the core for all operations and processes in the appraiser's office. All property subject to market value estimates are evaluated comparing appraised value to sale price. Standard 5 of USPAP SR 5-7 (comment) states in part.....*"requires appraisers to evaluate performance of models, using techniques..... and model performance statistic such as appraisal- to sale ratio studies"*. As the PVD mandates compliance with both USPAP and the IAAO Standard on Ratio Studies and both standards site market value and thus sale price as the target of the value estimate, the entire effort toward estimating value by the appraiser's office is reliant on the use of sale price as both a guide and target.

This audit on process and operation finds the appraiser's office to be in compliance with how sales are processed and then used in estimating value based on the standards of compliance required. The audit review does reveal areas of operation that can be improved to gain efficiencies aiding in reducing staff time. Conducting stratified ratio studies can be used to help reduce the COD on commercial property as a class. These suggested steps are found in the "RECOMMENDATIONS." The "Opportunity" suggested to reduce the time to process the SVQ does require cooperation of the Register of Deeds and possibly county IT or Tyler Technologies/Orion staff. This is presented as an "Opportunity." For future change. As a county all opportunities to increase efficiencies must be explored. Completing in-house ratio studies

¹⁰ NCSS 11 Statistical Software (2016). NCSS, LLC. Kaysville, Utah, USA, ncss.com/software/ncss.

using various strata to discover areas where values and equity can be improved requires more staff time. This was stated as a reason for not completing ratio studies at this depth. The results of in-house ratio studies are needed. While ratio studies on-demand are desirable, even having quarterly studies with predefined requirements completed by an outside source, e.g. consultant, intern etc. is preferable to having no report.

Land Valuation

Land valuation in Kansas is divided into three classes, residential, agriculture, and commercial. The PVD's 2018-19 Procedural Compliance Guidelines will be used for documentation of compliance for each class. The response by the appraiser's office to the questions in this chapter is weighed against the mandates of K.S.A. 79-1476, and K.S.A 79-420, USPAP Standard 5, SR 5-5a(iii), 5-6b, 5-7b, the RMS Section 8, and the IAAO Standard on Mass Appraisal of Real Property, 2017.

Questions:

- 1. Is the land valuation process clearly documented?**
- 2. Is all land assigned an appropriate unit of comparison?**
- 3. Aside from areas with few sales, is land valuation based primarily on the sales comparison approach, using either a standard unit or base lot method?**
- 4. Are size adjustments regularly developed based on market analysis?**
- 5. Are adjustment factors regularly developed for relevant features based on market analysis?**
- 6. Does land valuation employ spreadsheet or statistical software?**

Response by the Jurisdiction: Residential land is valued using base rate models. In all there are 206 land models used to estimate land values in the neighborhoods. The valuation is completed manually outside of Orion in Excel and manually updated in Orion. Each parcel is assigned to a neighborhood in the Excel spreadsheet then the model is applied to estimate the value. Section 8 of the RMS provides a framework for each of the three land classifications. Industrial is classified as commercial land. The front foot, whole site, square foot, or per acre base rate method is the foundation of the model structures used on all land models. These models are known as Computer Assisted Land Pricing (CALP) models.

Questions:

#7: Does land valuation employ computerized mapping or GIS software?

#8. When current year sales are insufficient for reliable analysis, does the office supplement them with prior sales and/or employ supplemental land valuation methods?

#9. Are land valuation tables or models regularly updated?

#10. Are sales ratio studies regularly conducted for vacant land?

Response by the Jurisdiction: A neighborhood or market area map is generated in the appraiser's office utilizing GIS software which provides the defined areas to which each parcel is assigned for land valuation.

Q#8, Q.#9, and Q.#10 are "YES."

Questions:

#11. Is agricultural and timber land appraised in compliance with legal requirements using appropriate methods and techniques?

#12. Are mineral properties appraised in compliance with statutory requirements using appropriate methods and techniques?

Response by the Jurisdiction: **Q.#11.** PVD provides annual agricultural use values for all counties. **Q#12.** Sedgwick County, Kansas has no severed mineral records to apply values to. Oil and Gas are valued as personal property.

Response by the Consultant: Agricultural land carries a split value. "Fair market value in money" in accordance with K.S.A. 79-503a, applies a market value to the home-site land and improvements. Land devoted to agricultural use shall be valued based on the capitalization of agricultural income. As set forth in K.S.A. 79-1476, agricultural use models based on soil productivity shall be developed and provided to the county by the PVD. The county appraiser is required to use the Orion "use value tables" as developed and provided by the PVD. The PVD sees the use value as a "Jurisdictional Exception" to USPAP as it is mandated value method prescribed by Kansas law.

Conclusion by Consultant on Land Valuation:

Land value models are stored in the Orion CAMA system using the prescribed tables, defining the models as, AgMkt, Acres, Site, Sqft, Lot, Depthfactor, and NBHD. During the on-site visit land

models were reviewed with discussion on the process. Land value is based on a simple base rate with a different model for each defined geographic area. An example model is: (Base Size * Base Val) +/- adjustments. The adjustments are for size if the subject is smaller than the base there is negative adjustment. If the subject is larger, a positive adjustment will be made to the base value. Land values are tested for reasonableness to the market where vacant land sales are available. When such sales are unavailable, land to building ratios based on typical market allocations are used.

Land value compliance methods are found in the PVD, Procedural Compliance Guide. The PVD will verify each neighborhood profile for conformity of economic status, land use mix, and market trends. They also verify that each active land model has an analysis or narrative. The PVD also verifies that each active land model has an analysis or narrative. Such analysis and conclusion are required and must be available for review. Sales comparison is the preferred approach to land valuation. When sales data is insufficient, alternate recognized methods are required for valuing land.

For Agriculture land, the LandAgMkt table is reviewed to verify values are updated as provided by the PVD.

Overrides to market land values must be documented for reasons and supported. The overrides are coded into the Orion system.

RECOMMENDATION: #12

Opportunity/Threat: This recommendation is provided for clarity of operational opportunity that is not currently in use. Creating and maintaining 206 land models even with the aid of the CAMA system is an intricate and time-consuming process. The Orion system as presented and discussed in the Information Technology chapter lacks [full flexibility](#), in this case to the use of “Hybrid Models”¹¹ that can be used to adjust for the variations of multiple base rate models. Use of this model structure can reduce the number of models required for 206, to in theory one, but a realistic estimate would be ten (10) or fewer.

It is possible with the current models to reduce the numbers of models by identifying models with similar base rates and adjustments, then using binary NBHD's as a method to adjust for different locations, as the location provides the basis for the starting base rate. Obtaining the expertise of an outside modeling expert could prove helpful in condensing the number of models

¹¹ IAAO AVM Standard 2018, p23

and yet still being capable of applying the models using the Orion Land Valuation module and meeting compliance requirements as set forth by the PVD.

Residential Valuation

The following documents are used for evaluation of residential real property. As set forth by the Kansas Constitution, Article 11 § 1 covers the classification system. Class 1: Real Property, sub-class (1) is Residential property (including multi-family residential and mobile homes). Guidelines used for compliance include, Procedural Compliance Guide PVD, 2018-19, Revaluation Maintenance Specifications PVD, 2019, USPAP 2018-19, IAAO Standard on Mass Appraisal Real Property, 2017, and Automated Valuation Models, (AVMs) 2003 revised 2018.

Questions:

- 1. Is primary reliance placed on the sales comparison approach in the appraisal of single-family homes, condominiums, and townhomes?**
- 2. Are sales used in residential valuation adjusted to the valuation date?**
- 3. Are residential valuation models, equations, and tables recalibrated each revaluation year?**
 - Does the jurisdiction recalibrate residential valuation models, equations, or tables each revaluation year?**
- 4. Are single-family residential neighborhoods adequate in size?**
- 5. Do residential sales comparison models include those property characteristics that contribute significantly to value?**

Response by the Jurisdiction: Yes to all the above. Condominium's detached single family, townhomes, and multi-family are all part of the residential class. There are six (6) urban models, four (4) rural models and one (1) condo model. All models are fully recalibrated each year as required by law. Model specification and calibration is completed in the Orion CAMA system using the multiple regression analysis (MRA) module.

Response by the Consultant: **Q #1 - #5.** The standard on Mass Appraisal of Real Property begins with addressing the requirement of complete and accurate data. The audit covered the topic data collection in chapter 6. The Mass Appraisal Standard section 3, covers valuation accuracy, selection of characteristic data, and property classes. Section 4 give specifics on "Valuation" and

includes the three approaches to value. In section 4.1 of the standard, use of geographic stratification is provided saying: *“stratification is appropriate when the value of property attributes varies significantly among areas and each area is large enough to provide adequate sales.”* The Mass Appraisal standard provides this ranking system as a guideline for what value approach is “typically useful” for different use classes.

Type of Property	Cost Approach	Sales Comparison Approach	Income Approach
Single-family residential	2	1	3
Multifamily residential	3	1, 2	1, 2
Commercial	3	2	1
Industrial	1, 2	3	1, 2
Nonagricultural land	–	1	2
Agricultural	–	2	1
Special-purpose	1	2, 3	2, 3

Mass Appraisal Standard sections 4.6.1 – 4.6.3 specifically address different classes of residential real property and using MRA as a method to calibrate a sales comparison and multifamily residential models. Section 5 of the Mass Appraisal standard addresses, quality assurance and value defense. For this audit quality assurance is reviewed in chapter 7 and value defense is in the final chapter 12.

The IAAO standard on AVM's is also applied in this valuation section. The AVM standard covers the specifics of the modeling process with emphasis on appraisal and statistical principles. The following bullet points highlight areas where the AVM standard applies to completing a Mass Appraisal;

- 3.3 Purpose of an AVM – “efficiently provide an accurate, uniform, equitable estimate of fair market value.”
- 3.4 Development and Application of AVMs – “AVMs are developed using appraisal principles and techniques” ...” Two major components of valuation modeling are specification and calibration.”
 - The model specification process identifies property characteristics (variables) that reflect consumer demands and are used to construct the model structure.
 - Model calibration is the process of deriving coefficients for the variables previously specified in addition variables are created through transformations to avoid collinearity problems.

- 3.4.1 Scope of Work – “The scope of work defines the type of property and geographic area in which the AVM will be applied, and the steps required to develop and implement the AVM”

In Kansas the Scope of Work is promulgated by the PVD in the Procedural Compliance Guide, with specifics defined in the RMS, and USPAP Standard 5, SR 5-2(j), Standard 6, SR 6-1 and 6-2. All jurisdictions in Kansas are required to submit a SOWD electronically to the PVD. Compliance to this requirement is graded out in the “Procedures” section of the 2018 Compliance Review. A total of 36 points are possible in this section. Sedgwick County received 32 points. The deficiencies resulting from issues in reporting is discussed in the chapter on Land Valuation.

USPAP Standard 6, SR 6-1 states in the comment, Comment: “Documentation for mass appraisal for ad valorem taxation may be in the form of (1) property records, (2) sales ratio and statistical studies, (3) appraisal manuals, and documentation, (4) market studies, (5) model building documentation, (6) regulations, (7) statutes, and (8) other acceptable forms.” As noted in previous chapters and in this chapter, the appraiser’s office meets this requirement that is specific to the ad valorem methods of “Mass Appraisal”. SR 6-2 addresses the appraisal date. K.S.A. 79-503a states that the appraisal date is January 1, thus compliance is achieved with this rule. Due to the fact the PVD requires compliance with USPAP in all phases of the appraisal process and has promulgated directives and compliance documents, and statutory references, all county appraisers are required to follow, compels compliance with USPAP as the Appraisal Process is completed. On the 2018 Compliance Review, under “Procedures,” d1. LAND VALUATION MODEL CALIBRATION, and d2. MARKET AG LAND VALUATION, no points are received.

While it is stated the Orion CAMA, system is USPAP compliant, the total clarity of such a statement is asynchronous. The appraiser’s office as routine requires some analysis outside of Orion be completed in order to comply with PVD processes.

Questions:

6. How are atypical homes valued?

Response by the Jurisdiction: Cost Approach

7. How are homes subject to flooding, tornados, hurricanes, contamination, or other external obsolescence issues valued?

Response by the Jurisdiction: Valued using cost, market or multiple regression analysis with additional lump sum or percentage adjustments.”

8. How are condominiums and townhomes valued?

314 W 10th St, Kansas City, Missouri 64105-1616 USA
816/701-8100, Fax 816/701-8149, 800/616-4226, www.iaao.org

Response by the Jurisdiction: Valued using cost, market or multiple regression analysis

9. Are condominium and townhome neighborhoods adequate in size?

10. Are appropriate procedures in place for the valuation of mobile/manufactured homes?

Response by the Jurisdiction: Mobile homes placed on a permanent foundation are valued as real property. The title must be in the name of the same person(s) as the underlying real property. All other mobile homes are valued as Personal Property. The Marshal Swift cost for manufactured homes is available in the Orion CAMA system. For mobile homes classified as real property they are valued in Orion. For mobile homes on real property, but not on a permanent foundation are noted on the Orion record for reference.

Questions:

11. Are appropriate procedures in place for the valuation of cottage and recreation properties?

12. Do construction costs manuals reflect the local market?

13. Are depreciation schedules market-derived?

14. Are cost values reconciled to the market?

15. Are values checked for accuracy, uniformity, and compliance with IAAO ratio study standards?

Response by the Jurisdiction: Questions #9, #11 - #15 all "Yes."

Question: #16. When multiple approaches are used, how are values reconciled?

Response by the Jurisdiction: During final review of parcels where multiple approaches were developed (sales comparison, cost, MRA, etc.), the approach that is chosen will be the one which provides the best indication of market value and offers the most support. This process and its procedures are documented.

Response by the Consultant: The jurisdiction provided a sample of model development sheets for residential properties. Review of these work products, and using the requirements found in the scope of work documented in the PVD's Procedural Compliance Guidelines, the IAAO standards on Mass Appraisal, and AVM, evaluation of the models was conducted. The residential valuation processes used in the appraiser's office follow these evaluation documents. Mandates for completing a construction cost multiplier analysis, and depreciation analysis were each given maximum points on the 2018 Compliance Review by the PVD.

RECOMMENDATION #13: This recommendation is advisory for the purpose of clarity regarding the modeling process. Valuation model development and all the processes are complex in technique and development. Yet in the end it is the simple progression of the “Appraisal Process.” Development of a model summary report would be helpful and useful for explaining the complexities of the entire process. The report should include examples how the market areas are selected. The report should be structured to answer the following questions:

- Exactly what does the model structure for cost, market, and MRA models look like?
- If each model is market based, then how are they different in using the market data?
 - How is the same market data applied differently to Cost and Sales Comparison?
- Specifically, what accuracy measures are used to reconcile the different value estimates?
- Provide a ratio report for each market area, and within each market area a further breakdown by Cost, Market, or MRA models should be made.

A summary report provides an immediate review of results that are clearly stated and revealed for review by technical and non-technical users. The results can also be used as support in the appeal process. The Neighborhood Profile reports are a start on implementing this recommendation, but additional results on values would improve the total understanding. Standard 6 in USPAP provides guidance on completing a Mass Appraisal Report.

Conclusion by Consultant on Residential Valuation: The appraiser’s office staff devotes considerable time preparing data for use in the valuation process. These processes have previously been examined and validated in other chapters of this audit. Without quality data it is impossible to “produce and communicate credible mass appraisals” as USPAP Standard 5 requires. The Orion CAMA system allows for use of market derived construction cost multipliers, and market derived depreciation tables. The appraiser’s office provided MRA output results for the direct market models in each of the market areas. Also reviewed was a ratio report on residential values with the following results:

REPORT TOTALS									
	COUNT	PRICE	TOTAL VALUE	AGGR RATIO	MEAN RATIO	MEDIAN RATIO	STD DEV	COD	PRD
Summary	6301	1,157,240,807	\$1,108,701,070	95.81%	95.81%	95.85%	6.75	5.58	100.001

These overall results meet the standards of accuracy based on the IAAO standard on Ratio Studies.

Opportunities:

- The advisory recommendation provides for better communication of results.

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- Additionally, an area of concern surrounds the methods used in the model development and analysis phases for excluding outlier sales or value estimates. This was expressed in the Sales Ratio chapter, but it changes some in the valuation section. It was expressed that during model calibration when percent error exceeded thirty percent (30%) +/- that case (sale) was no longer used to calibrate the model. This policy needs to be reviewed with the guidance provided in the IAAO standard on Ratio Studies, Appendix B.
- Holdout Samples are another chance to get better feedback on model performance. Section 5.3 Mass Appraisal Standard, "Since they were not used in the valuation, holdout samples can provide more objective measures of valuation performance." Also see AVM standard 7.4.

The "Opportunities" are provided as processes to ensure the ratio statistics are unbiased measures not affected by elimination of all poor value estimates. If only the lowest error rate is allowed the "error rate measure" coefficient of dispersion (COD) is distorted. Using a consistent and objective outlier procedure is recommended. The COD in the report in the 2018 Compliance Report from the PVD, provides that the residential class accounts for half the COD points allowed and awarded in the report.

Overall analysis and development of residential values follow mandated laws, and directives.

Evaluation with IAAO standards as guidelines reveals some areas where opportunities exist to improve the valuation processes.

Commercial Valuation

Compliance regarding commercial valuation is evaluated based on Kansas law, K.S.A. 79-503a, K.S.A. 79-1476, USPAP, and adherence to the rules in the PVD Procedural Compliance Guide and the RMS. IAAO standards on Mass Appraisal, AVM and Sales Ratio Studies will be used for comparison of mandates by PVD and the Orion CAMA system, to suggested methods found in the IAAO Standards. Like with other property classes, commercial property is subject to the "17%" rule for data collection. Commercial property is appraised at 100% of fair market value and assessed at twenty-five percent (25%) of the appraised value. The following 13 questions were answered by the jurisdiction regarding the processes and operations used for completing the appraisal of commercial real property in Sedgwick County.

Questions:

- 1. Does the jurisdiction have a commercial cost manual that is up to date and rooted in the local market?**

Response by the Jurisdiction: Cost values are generated in the Orion CAMA system using annually updated Marshall and Swift valuation tables with the local multiplier applied.

- 2. Does the jurisdiction have a program for the routine capture of income and expense data?**

Response by the Jurisdiction: I&E data is gathered through an annual survey questionnaire mailing and from information willingly supplied during valuation appeal meetings. It is also obtained through the appeal process.

Response by the Consultant: The appraiser's office provided a 61 page "Commercial Data Collection" document and the "Benchmark Study January1, 2018" providing insight into the processes used to apply the Cost and Income approaches. These documents contain much of the specific processes required to generate accurate cost estimates using the Orion CAMA system. The Benchmark Study includes the specific model specifications and calibrations used for application of the income approach.

- 3. Do commercial appraisers screen and validate commercial market data?**

Response by the Jurisdiction: We research market listings for sale and for lease properties through Co-star, Realty Rates, Burbach, IREM, Loopnet, and other local realty listing sources. Sale transaction data is verified through interviews.

- 4. Does the jurisdiction obtain and utilize information on typical income and capitalization rates available from third party sources?**

Response by the Jurisdiction: Cap rate studies are contracted annually from Keller and Associates. Property types addressed in the studies are rotated on a bi-annual basis.

- 5. Are spreadsheet and/or statistical packages used in analyses?**

Response by the Jurisdiction: SPSS, Excel, RStudio

- 6. Are multi-family properties appraised by the sales comparison or income approach?**

- 7. Do multi-family valuation models recognize features important to renters and investors in such properties?**

Response by the Jurisdiction: **Q#6 and Q#7** – The income approach is typical” “Many features are accounted for in the economic grade assignment. We list apartment counts by bedroom/bathroom combinations

8. Are office buildings appraised based on capitalized net income?

9. Are retail appraisals rooted in market data, and do they recognize variations in relevant location and building features?

10. Do appraisals for warehouses and light industrial properties recognize the features that drive market value for such properties?

Response by the Jurisdiction: **Q#8** YES. Response by the Jurisdiction: **Q#8** Yes. **Q#9** – Variances are recognized through economic grades and building section rank” **Q#10** – Many features are accounted for in the economic grade assignment.

11. How are values reconciled?

Response by the Jurisdiction: All Commercial property values are annually analyzed in comparison to model estimates. Properties with value outside the norm or that have special circumstances identified are individually reviewed by Appraisers.

12. Does the jurisdiction have policies for the appraisal of mixed-use properties?

Response by the Jurisdiction: PVD provides guidance. There is cooperation among divisions within the office regarding mixed use properties.

Response by the Consultant: **Q #3- Q#12** all involve the use of the data and analysis found in the Benchmark Study. The Benchmark Study is a stratified analysis of the varied uses, classes, sizes and tenancies found in the commercial properties within Sedgwick County. Examples of strata's:

- Apartments
- General Office Low Rise – Single Tenant
- General Office Low Rise – Multi Tenant
- Multi-Tenant Retail under 20,000 sq. ft.
- Multi-Tenant Retail over 20,000 sq. ft.
- Single Tenant Retail less than 5,000 sq. ft.
- Industrial Warehouse – up to 5,000 sq. ft.
- Industrial Warehouse – 5,000 to 15,000 sq. ft.

Improvements have been assigned an investment grade “class”: A, B, C, D that uses a different criterion than the assignment of a Marshall Swift building class that also uses A, B, C, D. An “Investment Class Definitions” table is provided for assistance. The Benchmark Table is well designed for easy application of the data. Sedgwick County Appraiser and staff are the intended users of the Benchmark Study, however there is not any specific mention of what specific data is used to develop the benchmarks. Knowing the full coverage areas of the data sources provides full credibility that all benchmarks reflect local market trends and economic conditions.

During the on-site interview commercial staff provided a demonstration of the valuation processes used on commercial property types. This included the cost approach generated from Orion and the application of results from the benchmark study. Problematic issues discussed included:

- Lack of full disclosure on data sources used to develop Benchmark Study.
- Use of the Economic Unit System (EUS) into the future without the ability to update or fix bugs.
- Anticipated updates to Marshall and Swift system will pressure production do to needed training and adjustments in processes.
- Frustrations with lack of income analysis capabilities within the Orion system.

When the cost estimate and the benchmark estimate have a spread greater than thirty percent (30%) +/- the value is specifically reviewed using comparable sales and equity analysis to reconcile the final value estimate. The practice of reviewing individual value estimates, or a sample set of parcels is not a part of the current valuation processes for commercial real property.

The appraiser’s office staff involved with valuing the commercial sector of real property in Sedgwick County exhibits a high level of skill and understanding and proficient application of the methods and practices required to produce credible mass appraisals.

13. How are special purpose properties appraised?

Response by Jurisdiction: “Cost Approach is typical.”

Conclusions by the Consultant: Using the Sedgwick County, 2018 Compliance Review and the PVD Procedural Compliance Guide 2019 for a basis of mandated compliance on commercial processes, maximum points were awarded for the “Scope of Work” section. On the “Statistical Measures” section under “COMMERCIAL/INDUSTRIAL – UNIFORMITY: COD”, zero points were received as the COD is 22.2% thus greater than the 20% maximum allowed by the PVD for compliance.

RECOMMENDATION #14: The IAAO standard on ratio studies section 4.2, suggest completion of at least four (4) ratio studies when there is a revaluation. In Sedgwick County revaluation is completed annually thus a constant evaluation of results is required. A baseline study on commercial property provides preliminary information on appraisal level and uniformity. At the very least this baseline ratio report should provide results on the different commercial strata. Completing a stratified ratio study, any stratum with statistical measures outside of allowed compliance results can be identified. After all commercial property is revalued a second report should be generated for compliance results, and to identify any property classes or uses in need of further review.

A second level of non-compliance is associated with the fact no formal review of appraised values is conducted during the revaluation cycle. IAAO standard on mass appraisal, section 5.5 specifically states: “*confidence begins with application of reliable appraisal techniques, generation of appropriate valuation reports, and **review of preliminary values**”.* Such reviews are helpful in identifying specific causes of uniformity issues. For example, is the cost approach estimating value too high (or low) for a certain class, or market area? Determine if an adjustment can be made on the model side to correct this problem.

RECOMMENDATION #15: The valuation process is like all the processes in the appraiser’s office, it demands labor intensive assignments to complete the valuation cycle start to finish. The current Benchmark Study is completed by an outside consulting firm using a variety of data studies, and data sources. For 2019 the county appraiser’s office added local data, including sales and income information to the Benchmark Study using Microsoft’s Excel spreadsheet.

Opportunity: Going forward the format and templates for development of in-house benchmarks are established, it is recommended the process continue in-house in future valuation cycles. The advantage is appraisers can have input into the data used and analysis. Knowing what the data sources are and how reliable the data is, provides a higher level of confidence in the estimated values. The in-house benchmarks also allow for testing on sample data sets as part of the development process, this in turn allows for adjustments toward improved value estimates at the inception of the valuation cycle.

Threats: Implementation of the stated opportunity above can create complications of meeting mandated timelines for completion for the commercial appraisers. Much of the labor needed to complete the commercial values results from a lack of flexibility between the Orion, EUS, and Aumentum systems. In order to implement RECOMMENDATIONS #14, and #15, either additional staff is required, or a complete review and inventory of methods used is required. Such a review will develop a plan to reduce time thus labor and leverage the use of technology.

Conclusion by Consultant on Commercial Valuation: The knowledge, skills, and proficiencies required to complete credible mass appraisals on commercial real property takes years of

education and experience. There are many market variables that must be considered by the appraiser. Where residential property in general participates in the local market, there are many market components involved with commercial real property. Commercial property transacts in a local markets, regional markets, and global markets. Commercial property is purchased for single tenant use, multi-tenant use, no growth investment with tax advantage, to highly leveraged growth investment, and tax advantage. The list goes on as does the complexity of understanding market forces. Having reviewed the processes and steps mandated and used by the Sedgwick County appraiser's office, commercial staff, and appraisers, they meet the majority of compliance standards.

As discussed in this chapter there is room for improvement at the uniformity level. No data was provided, and no in-depth ratio studies conducted to measure how much improvement can be made. Recommendations are provided to address methods that can be implemented to improve the statistical COD and bring it into compliance. But more important these recommendations provide for improved processes to enhance the overall knowledge of the relationship the appraisals have to the sales price between different commercial classes.

Each chapter of the audit discusses the amount of labor required to meet compliance mandates of Kansas law, and the PVD. Commercial valuation is no different. Leadership at the county level and within the appraiser's office must continue to explore and investigate new methods to increase efficiencies and effectiveness. The commercial valuation section in the appraiser's office needs to begin with discovery and implementation of improved efficiencies immediately.

Valuing Personal Property

This description provided by the appraiser's office incorporates the documents used for compliance accountability when valuing Personal Property. See below:

By law, the county appraiser must appraise all taxable personal property using publications and valuation guidelines prescribed by the State Division of Property Valuation. The county may deviate from a prescribed value, if it is "market-driven", in order to achieve market value. All deviations must be documented [K.S.A. 79-1456]. The Kansas Constitution places personal property into Class 2, which is further divided into six subclasses. A brief description of each personal property subclass and the manner in which it is valued and assessed for property taxation is outlined below. Guidelines for valuing personal property can be found on the Property Valuation Directors website. The Personal Property Valuation Guide provides the guidelines for valuing mobile/manufactured homes, motor vehicles, commercial/industrial machinery and equipment, and other tangible personal property. The Kansas Oil & Gas Appraisal Guide provides the guidelines for valuing oil and

gas property. Information pertaining to the valuation of state appraised railroads and public utilities can be found on the PVD website under “Public Utilities.”

Questions:

1. What personal property is assessable in the jurisdiction?

Response by the Jurisdiction: See below:

- **Mobile Home**
- **Mineral Leasehold** interests, *except* oil leasehold interests the average daily production from which is five barrels or less, and natural gas leasehold interests the average daily production from which is 100 mcg or less.
- **Public Utility**
- **Motor Vehicles (24M trucks, 16/20M trucks, Buses)**
- **Commercial & Industrial Machinery and Equipment**
- All other tangible personal property not otherwise specifically classified (**Trailers, ATV's, Non-Highway vehicles, Motorbikes, Recreational Vehicles**-not taxes when tagged, **Snowmobiles, Dune Buggies, Golf Carts**)
- **Watercraft**
- **Aircraft**

2. Is a thorough personal property discovery program in place?

Response by the Jurisdiction: The owners of taxable personal property are required by law to list their property each year with the county appraiser. When the owner does not list taxable property, the appraiser must discover the property and place it on the appraisal roll. Methods the county can use to discover taxable property within their jurisdiction include:

- Accessing information from public records,
- Viewing the property,
Obtaining information from lessees and others that are required to list property they do not own, but have in their possession
- Utilize State title lists, state watercraft and the Manufactured Home Community list that is received by owners/operators

Refer to the “Discovery of Personal Property” section in this guide for more information. [K.S.A. 79-1411b].

Additional Sources the county appraiser can use to discover taxable property or identify its owner are:

- Previous assessment records, physical inspection of the property

- Real property field appraiser records, Previous Audits
- State and local sales tax permits, City and county business licenses
- Property transfer documents, Bill of Sale Business listings from the news media
- Classified Advertisements, Telephone directories
- City directories, Accounting records
- Public records (trade name records)
- Title and registration applications, Corporation charters, partnership
- FAA Aircraft Registrations articles
- Mobile/Manufactured Home Court Lists Permits
- Ks. Dept. of Wildlife, Parks, & Tourism Boat Registrations

3. How is personal property appraised?

Response by the Jurisdiction: Personal Property is appraised per guidelines, provided to the Appraiser's office every year, and established by the Kansas Dept. of Revenue (KDOR) and the Property Valuation Division (PVD).

All personal property, **except certain motor vehicles and commercial/industrial machinery** and equipment, is appraised at its "market value" as of the first day of January each year. Market value is the amount of money a well-informed buyer would pay and a well-informed seller would accept for property in an open and competitive market without any outside influence. Certain motor vehicles and commercial/industrial machinery and equipment are appraised using a **value-based method**; however, it is not "market value."

Response by the Consultant: Exceptions to the "market value" requirement is bolded and underlined above for clarity in the response. These exceptions are not valued at "market value".

4. Is personal property valuation automated?

Response by the Jurisdiction: No, however, Personal Property trailers and Commercial & Industrial Machinery & Equipment (CIME) and 16/20M trucks are auto valued based on depreciation.

5. Are the real and personal property systems linked to each other?

Response by the Jurisdiction: No, except for Manufactured Homes, which are valued in the Real Property system and then interfaced over into the Personal Property system.

6. Does the jurisdiction provide taxpayers with required reporting forms each year?

Response by the Jurisdiction: Yes, we have preprinted renditions and instruction letter that is mailed to the property owner every year. We also have blank renditions available to property owners at their request.

Response by the Jurisdiction: *Q#6 & Q#7 are the same questions;* No, we only utilize the forms that we mail to the property owners.

8. Does the jurisdiction take remedial action when a taxpayer fails to respond?

Response by the Jurisdiction: The county appraiser is required by law to apply a penalty to the assessed value of personal property that is not listed in a timely manner or that is not listed at all. County appraisers may grant an extension to file if a taxpayer submits a written request, or before the March 15th deadline, which states just and adequate reasons for the extension. When an extension is granted and the taxpayer fails to file by the extended deadline, penalties are calculated from the March 15th deadline (April 1st for oil and gas renditions), not the date of the extended deadline.

Response by the Consultant: What documents are available to discover a new business that has not previously filed on personal property? Answer below, also included a blank form:

Failure to File Penalties: [50%] [K.S.A. 79-1422] *If within one year following the March 15th filing deadline, the county discovers a taxpayer failed to file a list or failed to file a complete list of taxable personal property, the county appraiser must determine the assessed value of the property and apply a 50% penalty for failure to file. When the taxpayer fails to file a complete list of the property, the penalty is applied only to the omitted or underreported property. If the county discovers taxable personal property that was omitted from the appraisal roll after June 15th of the current tax year (the date the appraiser certifies the appraisal roll to the county clerk), but prior to March 15th of the following tax year, the county clerk must place the property on the assessment roll as an added tax and apply a 50% penalty to the assessed value. [K.S.A. 79-1427a]*

If a failure-to-file penalty is applied to the value of taxable personal property and the taxpayer later files a list of the personal property within one year of March 15th, the failure- to-file penalty is no longer applicable and the appropriate late filing penalty is applied to the assessed value of the personal property which is now filed late.

9. Are personal property returns retained in a central repository?

Response by the Jurisdiction: Yes, all returns, and documentation received are scanned and kept in our imaging system.

10. Does the personal property system flag abnormal year-to-year changes?

Response by the Jurisdiction: No, this is done manually with sequel queries that we run yearly.

11. Does the office conduct routine audits?

Response by the Jurisdiction: No, we have not completed audits on accounts since the early 2000's. However, we do have a strict Quality Control (QC) policy on the valuation of accounts worked by staff.

Response by the Consultant: Collecting and listing the constitutionally classified personal property such as renditions, manufactured mobile homes, motor vehicles (all classes and sub-classes), commercial/industrial machinery and equipment, and mineral leasehold interests (oil and gas) is a discipline itself. The IAAO Standard on the Valuation of Personal Property provides this list of methods suggested for discovery:

Self-Declaration form, also called personal property statement, return, affidavit, report, listing, schedule rendition, and other titles in various jurisdictions.

- Conducting an annual canvass.
- Previous assessment records and previous personal property statements or returns
- Cross reference business with leasing company returns.
- Physical inspection (on-site review)
- Real property field appraiser reports and the property characteristic file
- Audits (desk, office, field, telephone, or correspondence)
- Income Tax Returns
- State, provincial, and local sales tax permits
- Federal, state, provincial, municipal, and county business licenses and registrations
- Building permits
- Chambers of commerce membership lists
- New business listings from news media
- Public records (such as trade name records, Uniform Commercial Code [UCC] forms, corporation charters, partnership articles, and assumed name notices)
- Property transfer documents, including recorded bill(s) of sale
- Classified advertisements
- Telephone directories
- City directories
- Accounting records, including financial statements
- Various state and federal tax returns (usually restricted to audit records)
- Internet research on business operations and contacts
- Web sites, specifically leasing and sales
- Advertisement fliers or mailers
- Other resources that can be helpful include access to governmental databases—Department of Motor Vehicles (DMV) or Department of Revenue records providing lists of manufactured home owners or lists of corporate taxpayers by jurisdiction.

The Sedgwick County appraiser's office uses many of the methods suggested in the IAAO standard. Some methods are not applicable.

Section 6.1 of the IAAO personal property standard addresses the statutory authority and regulatory compliance and enforcement. Comparing the standard with the Kansas statutory requirements property enforcement measures, and penalties are in place to require accurate and timely filing by the property owner. The appraiser's office has created queries that provide proxy audits of returns and a quality control using independent sources.

Valuation methods are based on statutorily defined methods. The default value is "market value" except where by statute an alternate value is defined. The PVD provides guidelines to counties for valuation of all personal property. The 2018 Compliance Status Report, page 8 indicates these personal property measures are complying:

Five (5) Residential Personal Property renditions - meet guide compliance guide requirements: Yes			6/13/2018	6/28/18 msr	YES
Five (5) Commercial Personal Property renditions - meet guide compliance guide requirements: Yes			6/13/2018	6/28/18 msr	YES
Five (5) Oil renditions - meet guide compliance guide requirements: Yes			6/13/2018	6/25/18 msr	YES
Five (5) Gas renditions - meet guide compliance guide requirements: N/A			6/13/2018	6/28/18 msr	N/A
Personal property mail date: 04/30/2018	Extension granted to: N/A	Proof of Mailing: Yes	6/4/2018	6/22/18 msr	YES
Oil &/or Gas mail date: 04/30/2018	Extension granted to: N/A	Proof of Mailing: Yes	6/4/2018	6/22/18 msr	YES
Real Property Certification: 05/30/2018 Personal property certification: 05/30/2018 Oil & Gas certification: 05/30/2018			6/4/2018	6/22/18 msr	YES

Reviewing the documents that provide statutory control on the valuation of personal property and the fact the PVD did approve that all classes met the compliance guide requirements, the methods, techniques, and processes used to complete the valuation of personal property meet the compliance expectations.

Meeting compliance directives and standards procedurally is not a statement confirming the processes and procedures are efficient or represent best practices. As stated in other chapters of the audit, when a process cannot be completed in a single source computer application, and requires manual data entry, specialized queries that can only be run on legacy software platforms, lacks internal processing controls. Completing the personal property roll requires the use of the Aumentum for all personal property except Oil and Gas. Oil and Gas valuation is completed in Microsoft Excel. The PVD requires county appraisers to use Orion cost and depreciation on mobile homes, then the results must be entered in the Aumentum system. Neither Orion, or Aumentum provide any quality control functions for personal property. Efficiency and effectiveness are not achievable when three systems are used (only Orion is required) that were never designed to work interactively with each other and likely never will. Change and reorganization for valuing personal property is needed.

RECOMMENDATION #16: During the on-site interview the exchange of methods between Orion, and Aumentum were demonstrated. The concern addressing that the two systems to work in

concert with each other has been addressed already as it pertains to land valuation, and multi-parcel economic units. The jurisdiction has also conveyed information that the Orion system has a Personal Property and Oil & Gas modules available. It is recommended these modules be purchased and implemented into the Orion CAMA system. Implementation of this recommendation does recognize that the Aumentum system may still be a preference for other departments. The Treasurer/collector uses it for billing of personal property. If required it is more efficient to export and import final numbers from one system to another than to manually enter the data as is now being done. As suggested with other recommendations for change, this conversion can be completed on a multi-year implementation plan, but the sooner the better.

Conclusion by Consultant on Personal Property Valuation: The laws, directives, and operating processes required to complete the valuation of personal property are complex. The staff in the appraiser's office responsible for carrying out the assignment of valuing personal property demonstrates in-depth knowledge and skills in meeting the compliance requirements. The discovery and listing process are labor intensive and time consuming. Lacking a cohesive personal property computer system is a bottleneck to an efficient system. While safety of a process is inherent in the concept of, "this is how we always do it". Technology is available that can streamline the processes involved with valuing and taxing personal property. The word "synergy" is often used to describe where two or more agents can produce a combined effect greater than the sum of their separate efforts. Having Orion, Aumentem, Excel, and control queries, as separate functioning parts is the opposite. The needed separate interactions to use each of the software platforms is a detriment to efficiency and effectiveness in completing the valuation of personal property. Add to this the amount of labor required to track and control the inputs and outputs of each system and the need for operational change is fully apparent.

The recommendation is not a new concept but one that has been revealed in several of the chapters. The term CAMA, "Computer Assisted," implies the computer is helpful and reduces the time and labor required to complete a task. When the human must assist the computer (enter data manually, write and apply specialized queries, etc.) to create a functioning solution, inefficiency is the result.

Value Defense and Appeals

The statutory mandates directing the appeal process in the state of Kansas are K.S.A 29-1404, K.S.A 79-1448, and K.S.A. 79-1460 with additional references therein. Appeals must be filed within 30 days of the valuation notice. For real property the notice date is on or before March 1, and for personal property May 1. This begins the "informal hearing process". Guidance on the appeal process is also found in the PVD's Procedural Compliance Guide, 2019 page 76. The IAAO

standards on Tax Policy, Assessment Appeal, 2016 also provide guidance for evaluation in this chapter. There are two aspects of an assessment appeal: matters of valuation or fact, such as the amount of an appraised value, or assessment; and matters of law, such as interpretation of statutes. Administrative matters of taxation, e.g. payment under protest, or exemption from taxation are not specifically joined to valuation appeals. These matters will only be addressed in the audit as they pertain to an appeal on property valuation.

Questions:

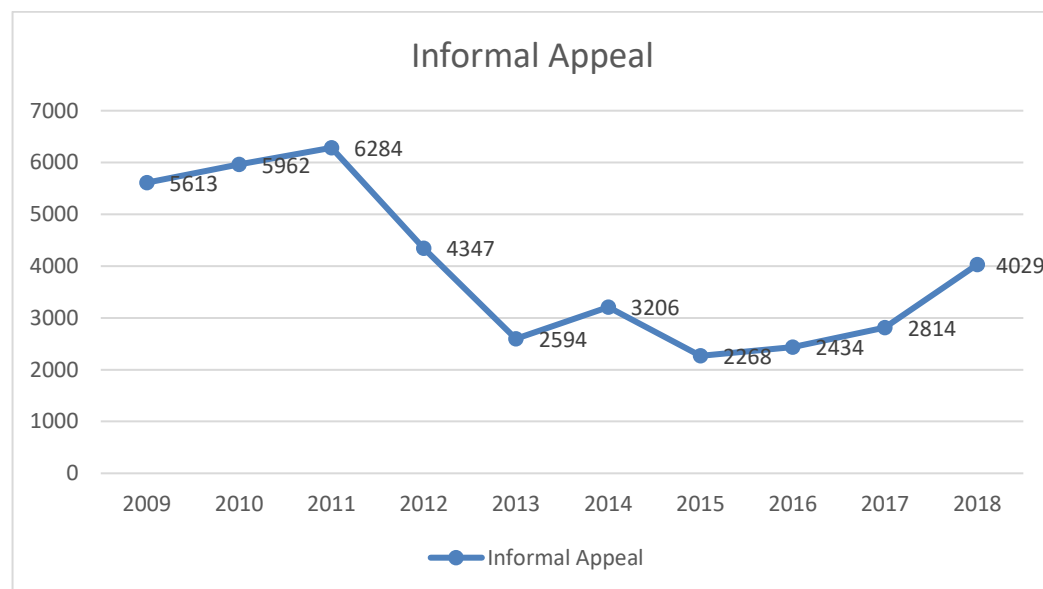
1. **Has the jurisdiction evaluated the review of final values and appeal system under which it operates and its role in the system?**
 - **Do the assessment and tax calendars impose constraints on the time available for tasks crucial to developing defensible values or defending assessments, such as whether the time between the valuation date, deadlines for submitting income and expense information, the deadline for completing rolls and issuing notices, appeal deadlines, etc.? Is the calendar readily available to the public?**
 - **Are taxpayers required to state the grounds for their appeals and to back up their complaints with evidence?**
 - **Do the reasons for appeals suggest problems with assessments that have a systemic cause (that is, outdated values or valuation methods that do not meet professional standards)?**
 - **Do assessments have a presumption of correctness that must be overcome with evidence?**
 - **Are members of formal appeal bodies required to have relevant experience?**
 - **Are formal appeal bodies briefed on the current year's assessment program?**
 - **Are appeal bodies required to give a reason for their decisions?**
 - **Is there a common belief that the formal appeal process is biased or corrupt?**

Response by the Jurisdiction: The assessment and tax calendars are combined so the public and the various offices in the property tax system know statutory deadlines and when deliverables are due. Calendars are on the county website, PVD's website and in the offices of the Appraiser, County Clerk, Register of Deeds and Treasurer. However, the calendar dates mandated by the Kansas law do not allow enough time to appropriately complete our tasks, given our current staffing levels.

Taxpayers are not "required" to state grounds for appeal or provide evidence. The appeal form does provide space for the taxpayer to include their reason for the appeal. However, the Kansas Board of Tax Appeals will not dismiss a case or otherwise disregard an appeal if the taxpayer does not provide a reason or evidence with the appeal form. Appeals are not based on any

systemic causes. The burden of proof is on the county appraiser. Some property owners believe the system is biased but this line of thinking is not prevalent.

Response by the Consultant: The initial appeal process or “informal appeal” begins with the mailing of the “change in value notice.” This starts a 30-day clock to file the informal appeal. All appeal decisions are due by May 15. The graphic below provides a view of the number of cases for informal appeals;



Since a low of 2,268 informal appeals in 2015, appeals have been trending upward to 4,029 in 2018, a 77.65% increase for 2018 over 2015. While the increase in the number of appeals is gradual in the two years prior to 2018, the change is abrupt for 2018 with an additional 1,215 informal appeals over 2017. The additional 1,215 appeals in 2018 are required to be processed within the same time period as in 2017. The 2018 trend brings out a discussion of additional time, additional staff, or both to meet the mandate of ending hearings on or before May 15, and final decisions on or before May 20. There are 80 days between March 1 and May 20. Actual workdays number 57.

Efficiency and effectiveness are paramount to completing the process where the appraiser's office generates an evidence packet to substantiate the value and provide this packet to the property owner on request. In addition, the appraiser may need to review and prepare rebuttal to any evidence submitted by the taxpayer. Sedgwick county informal hearings are scheduled for every 20 minutes on real property, and 30 minutes for agriculture. One variable not mentioned in a directive or standard is, application for an appeal and informal meeting for the property owner is often delayed until late into the thirty days. It is common for many appeals to arrive in the ten-day period prior to the deadline for filing. This of course shortens the processing time for the appraiser's office.

RECOMMENDATION #17: In consideration of required processing time, and available processing time for an informal appeal, it is recommended that an automated evidence system be developed. Once a parcel number is entered into the system and flagged for an informal hearing an evidence packet is generated automatically. It would include all items required to support a recommended value on appeal; (it may support a different value than currently on the parcel). The hearing appraiser would review the packet for approval and distribution to the appellant. If the cost, and sales comparison approaches support a reduction, that can be sent as a stipulation of value. If accepted no hearing is required.

Recommendation #17 is conceptual in design. The county appraiser would need to work-out details with the Tyler Technologies to create a module in the Orion system that would generate a digital report of: Property Record, Cost approach, Adjusted Comps Sales, and Adjusted Equity Properties, and the MRA estimate.¹² Ideally it would also include maps, and the sketch. An acceptance parameter of +/- ten percent could then be used to decide the direction of the appeal recommendation. Those recommendations would include, stipulate to a lower value, no value change the appeal moves to the BOTa, no change the appellant accepts the county evidence and withdraws.

- 2. Are taxpayers encouraged to discuss concerns with the jurisdiction informally before lodging a formal appeal?**
- 3. Does the jurisdiction have documented procedures for handling taxpayer inquiries and formal appeals?**
- 4. Does the jurisdiction track the status of each formal appeal to ensure that proper preparations are made for the hearing, that it is appropriately disposed of, and that records are properly updated?**

Response by the Jurisdiction: **Q #2 – Q#4:** The appraiser's office encourages property owners and/or their agents to visit us in-person, call or connect with our website to get appraisal information, check property characteristics and get information about the appeal process. We provide information on the types of documentation they may want to bring to an appeal meeting to help clarify or justify their request for a change in value or classification.

The Information & Assistance (I & A) Manual contains procedures for serving the public who have inquiries. The Appeal Coordinator also has written procedures for assisting property owners who are appealing. They also answer questions on date, time and location of the appeal and assist with rescheduling, etc.

¹² Nassau County NY has a sample example: <https://www.nassaucountyny.gov/4656/Understanding-Your-Prognose-Report>

Our office logs each appeal at every level into Orion (CAMA) system and the appeal is scheduled, tracked, and generates a real property result letter. There is no place in Aumentum Personal Property to formally log, schedule, track and generate result letters. Thus, an in-house database was created to log, schedule, track and generate result letters. Data is queried from the Aumentum tables to populate various information in the in-house Personal Property Appeal database.

Real property appeals are conducted in-person or via telephone. Personal Property appeals are conducted on the telephone.

Each property owner / agent gets a confirmation letter indicating the date, time and location of each appeal meeting. Quality control checks are performed on each appeal to ensure the value determined for each appeal is correctly entered into the system and matches the values on the Appraiser Appeal Information Sheet and the final value in the system and that the classification is correct. If a reduction in value is made that causes a refund to be generated, then the change order is QC'd and processed in Aumentum Tax to affect the tax roll. All the paperwork pertaining to an appeal (filing, confirmation letter, property owner and Appraiser Office documentation and the change order) are scanned into the OnBase scanning system. The OnBase scanning system has levels of security.

Response by the Consultant: Compliance for **Q#2, #3, and #4** is largely found in the responses from the jurisdiction. The appraiser's office takes the responsibility of working with property owners to resolve issues surrounding an appeal seriously. The communication with the appellant before and after appeal is designed to inform and educate how the appeal process works. The taxpayer assistance department is front line in answering questions and helping taxpayers complete their application for an informal appeal. The appraiser's office also provides written documentation on their website and have a detailed brochure explaining all the different levels and timelines involved in the appeal process.

Compliance with PVD falls into three categories';

- PVD will verify informal real property appeal records were held and notifications mailed prior to the statutory deadline.
- PVD will verify that the notification of results from the informal appeals include BOTA appeal information.
- PVD will verify all real property appeals are entered into the Orion system.

Internally, hearings are tracked in an external Microsoft database. All documentation associated with the appeal is scanned into the OnBase system for attachment to the specific record. Changes

on appeal that result in a refund must be also processed in Aumentum system, as this is where billing resides.

RECOMMENDATION #18: The administrative processing of an appeal sacrifices efficiency in the process which only satisfies the PVD requirement on reporting noticing deadlines, and that parcels under appeal are enter into the Orion system.

This recommendation is linked to #17. If an Orion record is flagged for appeal all associated documentation should be immediately available to view and transferred to required PVD reports. Development of a hearing schedule and tracking is in relative terms a simple database function. External documents/evidence, e.g. appraisals, income/expense reports, copy of the appellants appeal and comments would be the only items needing scanning and attachment with OnBase. Reduction of redundant tasks is the path to efficient and effective changes in operations.

5. Does the jurisdiction take steps to present its case effectively?
6. When a formal appeal involves difficult appraisal issues and considerable value is at stake, can the jurisdiction obtain outside expert assistance?
7. Does the jurisdiction allow—or have a strategy for allowing—online appeal filings?

Response by the Jurisdiction: **Q #5 – Q#7:** Yes Property owners and their agents can file an appeal by emailing the office. Appeals are not conducted on-line.

Response by the Consultant: **Questions #5 thru #7:** At the on-site interview and during phone conferences questions #5 and #6 received multifaceted discussion. These two questions tend to steer away from the informal hearing process and into the formal “Board of Tax Appeals” (BOTA) hearing on appeal. At BOTA the rules of evidence are more specific. Two publications are useful for understanding how the appeal process works after the informal decision is made: A Guide to Property Valuations Appeal Process – Equalization Appeals¹³ and A Guide to Property Valuations - Payment Under Protest.¹⁴ Reference to Recommendation #17 and its implementation would go a long way toward an “on-demand” process for presenting the idea that evidence e.g. market data was used to estimate value. At the on-site interview responses also included appraiser complaints that informal appeals wasted time as no evidence is provided in support of the appeal from the taxpayer.

The burden of proof is on the appraiser’s office to produce evidence that meets the “preponderance of the evidence” standard. The Kansas Supreme Court in *Nauheim v. City of Topeka*, 309 Kan. 145, 432 P.3rd 647 (2019) opined regarding this burden of proof. The Court

¹³ <https://www.ksrevenue.org/pdf/pvdappealeqnohop.pdf>

¹⁴ <https://www.ksrevenue.org/pdf/PUPNotification.pdf>

stated that **preponderance of the evidence has been defined as “evidence which is of greater weight or more convincing than the evidence which is offered in opposition to it.”** Black’s Law Dictionary 1182 (6th ed. 1990) The Court went on to state that **“a preponderance of the evidence” means that evidence which shows a fact is more probably true than not true.**’ [Citations omitted.] citing *In re B.D. -Y.*, 286 Kan. 686, 691, 187 P.3rd 594 (2008).

Success by the appraiser’s office at the BOTA is then by definition a challenge. Preponderance of the evidence is somewhat subjective as is the “Appraisal Process.” On appeal, two opinions of value are opined. Each estimate is based on facts that are not always absolute, thus regarding the opined value, it is also important to express the weight given in “reconciliation of value” to those appraisal facts given most weight by the by the appraiser to arrive at the final value estimate opined. Preponderance of the evidence means evidence that is convincing, and can be measured as factually true and accurate, this is where the focus of the appraiser’s opinion should be centered. “More true than not true, and more convincing than the opposition’s evidence.”

Question #6 asked about using outside expertise. If the idea that the evidence must be “more truthful and accurate” is the guide, then it makes sense that an expert having specific experience and expertise on specific property types provide assistance or complete an appraisal on appeal. When completing an evidence-based appraisal there are enormous amounts of data analyzed, weighed, mathematically processed, and reconciled. By USPAP standards the estimated value must be “credible.” Organized presentation of the appraisal process during an appeal hearing is critical to attaining a preponderance decision (best evidence) and upholding the burden of proof.

RECOMMENDATION #19: Preparation of an appraisal report and communicating the results in a manner that is meaningful and not misleading follows the logic of “begin with the end in mind.” Ultimately the appraised value is an “opinion.” What can get lost is that the opinion being expressed is based on a trained analyst using facts derived from market participants. The market facts are weighed against the prescribed definition of value, “Fair market value” to be exact. *“The riches of the world pales in comparison to the value of an honest opinion.” Harvey MacKay – Author.* USPAP’s Ethics Rule, **Conduct** requires: integrity, impartiality, objectivity, independent judgment and ethical conduct.

- Must not accept an assignment that includes the reporting of predetermined opinions and conclusions

All appraisals completed by the appraiser’s office are required to comply with USPAP. USPAP itself was created to: *“promote and maintain a high level of public trust in appraisal practice”* (see the Preamble). The public does not fully comprehend this concept or really care. This creates

obstacles to credibility, impartiality, and objectiveness for appraisers working in the ad-valorem appraisal discipline.

The following are ideas detrimental to the concepts of an honest opinion whether from the report or from the appraiser's testimony:

- An appraiser is paid to support the highest value, or lowest value specific to their client.
- The most current appraisal (submitted as evidence) estimate was created to match and support the value being appealed. (if so then integrity, impartiality, objectivity, independent judgment is not in play.) When defending the county's value before the Small Claims Division or the regular Board, the appraiser must begin *de novo* (starting from the beginning; anew). The appraisal itself should be *de novo* prior to the appeal hearing.
 - *de novo* (starting from the beginning; anew)
 - most formal appeal hearings use this concept
 - the appraisal should also be *de novo* prior to an appeal hearing

When the appraiser embraces and understands their ethical responsibilities to produce a credible appraisal new insight is gained, and there is the possibility a **newly developed opinion of value** is formed. From this the appraiser guides the future of the appeal. The new opinion may validate the old one, but the evidence is better, or the new opinion supports a stipulation offer to a lower value. Each outcome must meet the burden of proof standard placed on the appraiser. The next example provides insight into development of a "*do novo*" appraisal in concept:

Example: On appeal to the BOTA the appraiser should be supporting the most recent value estimate they opined. Let's say at the informal hearing the appealed value is \$150,000 set by the mass appraiser. The property owner wants \$110,000. The evidence packet supports \$140,000 using sales most comparable to the subject. The taxpayer at the informal hearing declines the new appraised value also and moves onto the BOTA with the appeal. At the BOTA hearing the appraiser is supporting \$140,000, as the most recent value opinion, not the \$150,000 currently on the roll as stated at the informal hearing.

All appraisals produce a range in value, after a deeper dive into analysis of the sales, the value opinion "anew" could be, say \$130,000. The point being not to try a support a value the market does not support like \$150,000. Since the taxpayer rejected the offer at \$140,000 during the informal, the value on appeal is still at \$150,000 but that is not the new value that the evidence supports. Trying to support a value of \$150,000 that is not supported by facts in the market

place violates both “**preponderance of the evidence**” and “**USPAP**” by reporting of predetermined opinions and conclusions.

ACTION: If and when an appeal moves forward to hearing the roll of the appraiser does not change, only their scope of work. As a witness the appraiser is only an advocate for their analysis, methods, techniques, and estimate of value. To be effective in the role as an expert witness they must spend time with the presenter of facts (usually an attorney) to prepare testimony and recognize weakness in their appraisal, (they all have some) and how to address them when exposed during cross-examination.

- Prepare an appraisal report in compliance with USPAP Standard 2, or Standard 6 based on the assignment. In preparation of the reports, focus on using market facts to form opinions within the appraisal process (highest and best use is a good example of an opinion required before the value opinion.)
- **Keep in mind the Scope of Work for a single property appraisal report will likely be different than a mass appraisal and report.**
- In preparation of an appraisal be sure to check the USPAP competency rule.
- Have appraisals been reviewed using USPAP Standard 3 by a qualified review appraiser.
- Meet with the presenter of facts (attorney if provided) to prepare testimony on the appraised value.

An appeal boils down to a conflict of opinions. The above discussion and recommendation are intended to illuminate some of the areas resulting in a conflict of opinion.

Mass Appraisal VS. Single Property Appraisal: Confusion does exist when appraised values for assessment are developed using mass appraisal methods under USPAP Standards, 5 and 6. On appeal to the BOTA, the appraisal evidence is prepared under Standards 1 and 2. It is important to keep in mind that mass appraisal results are applied to a single property. The appeal is a single property value estimate being challenged not the entire results of the mass appraisal.

Mass appraisal and single property appraisal follow the same prescribed “Appraisal Process,” they are only different in application stated by the scope of work. Recognized mass appraisal methods inherently include an “error term” for the contribution of each “variable” (Property Characteristic). The mass appraisal also includes an estimation error of the overall value results using Coefficient of Variation (COV) and Coefficient of Dispersion (COD). While the IAAO standard on ratio studies prescribes a COD of 10%-15% as acceptable for overall results of the mass appraisal (residential), property owners don’t adhere to the same standards of accuracy.

Preparation of an appraisal for appeal before the BOTA using single property methods provides for a further refined market analysis of transactional data for a single specific subject property. This refined analysis does not discard the use of the market data used in the mass appraisal it provides for narrowing comparisons parameters to transactions that are, most similar to a specific subject property. A full discussion on converting the mass appraisal results to a single property appraisal using the best comparables and calibration results from the mass appraisal can be found in the Appraisal Practice Boards "[Identifying Comparable Sales for Mass Appraisal](#)."¹⁵ Completing a precision analysis will reveal if the error term from the mass appraisal applies directly to the selected subject. The end result will be a revised and new opinion of value, or a second level of detailed analysis that supports the appraiser's opinion using the mass appraisal model.

A second benefit when using a single property method and report at the BOTA is, results can be compared directly to any evidence the taxpayer/appellant submitted in support of their claim.

8. Does a supervisory agency or review body have the power to review values and valuation methods on its initiative, or is the jurisdiction required to submit valuations to a regulatory body for approval before taxes can be levied?

Response by the Jurisdiction: PVD has the authority to review any work performed by any County Appraiser's Office in Kansas. PVD usually does not review all values but through compliance procedures and queries understands what a county has done over the year to set and defend values.

Conclusion by Consultant on Value Defense and Appeal:

Methods for delivering solutions designed to improve efficiencies in the informal and formal appeal processes are presented in recommendation #17 and #18. The evaluation of current methods recognizes the appraiser's office follows the IAAO standard on Assessment Appeal, 2016. Compliance with PVD reporting requirements are also being met.

The number of appeals increased significantly in 2018, and when this happens additional pressures to complete all informal appeals on a timely basis is problematic. The analysis of appeal processes raised some questions:

- How effective is the preparation of data with a limited time-frame?
- Is the taxpayer/property owner getting their concerns addressed?

¹⁵

https://appraisalfoundation.org/imis/docs/Valuation_Advisory_5_Identifying_Comparable_Properties_AVM_and_Mass_Appraisal_Final_081413.pdf

- Are appeals with small differences given the same attention as large differences?
- How many appeals are “kicked down the road” just to allow more time?

Creating more efficient evidence gathering for appealed properties will provide a better level of customer service, enhanced response to appraisers involved with the appeal process, and a reduced workload at the next appeal level if resolved at the informal level.

Not fully vetted in the analysis on appeal is the notion the appeal itself is based more on ability to pay, or lack of wanting to pay taxes than the actual value. This is often the hidden agenda of an appeal. In these cases the appraised value is not really at the front of the issues. Still an appeal has been filed. Payment under protest is a better suited venue when the tax amount is the dispute, not the appraised value.

The formal appeal is a product of displeasure with a decision coming from an informal appeal. A formal appeal cannot be filed unless the property has been subjected first at the informal appeal level. At the formal appeal level “preponderance of the evidence” is still the on-going burden of proof which the county must meet. Mass appraisal relies on statistical measures for appraisal compliance, but the burden of proof is on the county appraiser. Appeals moving to the BOTA are often supported using a single property report as evidence. The preponderance of the evidence is the measure accuracy, single property appraisal continues with the same specific data about the subject property as used in mass appraisal. What changes is the use of comparative data. With a single property appraisal, specific market transactions are confined to the transactions; cost, market, income that best represent the market environment of a specific subject property, or economic unit. When the scope of work changes from mass appraisal to a single property appraisal using limited number of specific market transactions, the estimated value opinion may change as a reflection of a small sample of market data specific to a single property. A subject property with a limited demand from local market forces requires the appraiser to explore transaction data on a national or even global market.

The single property appraisal and report must be detailed enough in documentation and recognition of scope of work changes that a new estimated value does represent a factual reflection of specific market conditions that were present but not singularly measured using mass appraisal techniques.

It is important to produce a documented and supported conclusion of appraised value for each appeal case, informal or formal. For the appraised value to be upheld by the BOTA the preponderance of the evidence must be obvious in the appraisal report, analysis, and conclusions. Credibility of the appraiser at hearing is a result of presentation skills as a witness, and the appraiser’s ability to convey competence of the appraisal process and subject properties participation in its market environment.

Communications and Taxpayer Assistance

Questions in this chapter center around how the county appraiser's office provides for open communications with taxpayers and other stakeholders. There is a statutory notice requirement for changes in value that serves to protect the taxpayer's interest in how their property is valued. The appraiser's office is also the keeper and custodian of the property inventory for Sedgwick County. When consideration is given to time, and resources required to create the property inventory, it is recognized as a valuable resource. With website access available on a 24/7/365 basis to the property inventory, the data is available for viewing by those involved with commerce, attorney's, developers, taxing bodies, realtors, etc. Evaluation in this chapter covers these various levels of assistance and communications.

Questions:

1. Does the jurisdiction have an active public information and assistance program?

Jurisdictions Response: The Sedgwick County Appraiser's Office has an Information & Assistance Division that disseminates and provides written and oral information. We also have a Speaker's Bureau that will speak at events.

2. Does the jurisdiction employ appropriate communications channels in addressing its constituents' concerns and needs?

Jurisdictions Response: The office uses email, the county website (Appraiser's webpage), online application for looking up values, sales and detailed property characteristics, Sedgwick County Mobile Application, newspaper, Appraiser's Office Speaker's Bureau and information communicated in written and oral format

3. Can property records be accessed online by parcel identifier, situs address, owner, and geographically?

Jurisdictions Response: Not by owner for security purposes. Not geographically.

4. Does the jurisdiction have informational materials available for the public?

Jurisdictions Response: Our office provides brochures regarding manufactured homes, watercraft, business personal property, printouts of sales and values in their neighborhood, real property cover letter, information on filing for appeals and exemptions, etc.

5. Does the jurisdiction have contingency plans for responding to crises and emerging issues?

Response by the Jurisdictions: At Sedgwick County, the Appraiser's Office is the Damage Assessment Officer. Our office has a station in the 911 emergency operations building in case of a disaster. We are also included in the county government's Continuity of Operation Plan (COOP). Our office works closely with PVD to keep abreast of issues at the state and federal levels which could affect us. We are members of the Kansas County Appraiser's Association as well.

Response by the Consultant: Responses by the appraiser's office were all answered in the affirmative. Guidance and evaluation of Communication and Taxpayer Assistance is drawn from the IAAO standard on Public Relations, 2011. Taxpayer assistance is a primary tool used to bring attention and focused level of communications regarding the duties and responsibilities of the county appraiser's office. **Question #1 and #2** describe the specific methods used to inform and educate the taxpaying public.

The answer to question #3 is a little confusing. There is open online access to property record data, geographic information system, sales reports are example tested on the website and GIS site. There are links to parcels from GIS, and to GIS from a parcel. This PIN: [30002845](#) generated a ten-page property record card.

Question #4 addresses written material available. Brochures, reports, links to PVD and other official documents attached to property taxes are all available on the website. Personal property registration, agricultural land use value, appeals, mobile land records, valuation notices, and a tax calendar are also available.

Question #5 covers how the appraiser's office is associated with crises and emergency issues. The IAAO includes this as a recommendation in section 3.3.1 "Crisis Plan."

RECOMMENDATION #20: At the on-site interview a discussion that addresses the questions in this chapter ensued. At the basic level the appraiser's office has all the boxes checked toward providing taxpayer assistance on an as needed basis. It can even be said they are proactive toward educating the taxpayer as any government office. The functions and work products completed as daily operations in the appraiser's office are hidden (not intentionally) from core constituencies. Implementing a proactive approach would be a step toward providing information not just when it's requested but as an exposure of the skills and knowledge housed in the appraiser's office. Below are some examples:

- The office promotes a speaker's panel, but what do they speak about?
 - Include a list of topics available
- Budget requests are made, or staff increases recommended. Why are these requests being made and for, what purpose?
- Monthly reports to the county board of commissioner are important.
 - A proactive outreach program keeps others informed on an on-going basis.

- Meeting and presentations with professional groups, realtors, attorneys, financial institutions, real estate appraisers, developers, civic organizations.
 - Related to the speaker's panel, but meeting with community leaders and educating them on the complexities of the property tax system, opens doors, and lines of communications.
 - Results are often seen in enhanced cooperation, with the identified groups.
 - The appeal process can result in stipulations of value (negotiated settlement) and yield the county actual construction costs, access to MLS, digital submission of plans, etc.

It is not well known the amount of data, research, education, cost per parcel, local vs. state rolls etc. that must happen to produce a tax bill. The fact the appraiser's office does not prepare or send the tax bill would likely be a surprise to many.

Proactive programs provide upfront knowledge and information so others can make informed decisions. Providing market studies to realtors may soften their position of access to the local MLS. Providing graphs of growth in permits, sales, new construction, helps support requests for budget increases, new technology, or additions to staff for specific departments. An outreach program provides the gateway to request new or additional resources long before the need arises.

Conclusion by Consultant of Communications and Taxpayer Assistance:

The appraiser's office meets all the basic levels of assistance required by law and most that are suggested in the IAAO Standard on Public Relations. There are many other opportunities beyond the current level of communicating primarily through the "Taxpayer Assistance" department. A more robust outreach program if planned, will provide an enhanced relationship with constituents.

The board of county commissioners controls the purse strings on budget requests including funding for staff in the county appraiser's office. Providing monthly reports (even if only in writing) verbally on activities and processes are useful when it's time for budget approval. Such reporting creates the opportunity to educate others on PVD mandates and the cost for fulfilling mandates.

Developers, property managers and realtors are the creator of market data and transactions used to estimate value, find and list property. When these groups better understand what the appraiser does with sales, plans, rents, etc. the more likely they are to provide access to data they control. Attorneys also represent developers and property managers on appeal. When the appraiser's office appears before these groups, opportunities to network are created that allow for a more cooperative rather than a confrontation environment during appeal.

The list and reasons go on. The idea of the recommendation is finding ways for creative transparency regarding the property tax system. Or as one author put it: “Taxation without Explanation.”¹⁶

CONCLUDING STATEMENT BY CONSULTANT:

The preceding review of “Operations and Procedure” found no evidence substantiating any **non-compliance** based on the mandates reviewed in the Kansas statutes, or mandated directives by the Kansas Property Valuation Director. Adherence to the Uniform Standards of Professional Appraisal Practices (USPAP) is implied by Kansas law, and PVD directives. Also used in the evaluation were the IAAO standards on:

- Assessment Appeal
- Automated Valuation Models
- Contracting for Services
- Digital Cadastral Maps
- Mass Appraisal
- Oversight Agencies
- Personal Property
- Professional Development
- Property Tax Policy
- Public Relations
- Ratio Studies

The IAAO standards provided additional guidance on suggested best practices used to formulate many of the “RECOMMENDATIONS”.

Used as references mandated by the State of Kansas are the, State of Kansas Personal Property Guide, 2019 Procedural Compliance Guide, 2019 Revaluation Maintenance Specifications (RMS), and the 2018 Kansas Property Tax Law. These guides provided specifics regarding the application of laws and directives. The jurisdiction provided pages from the 2018 Sedgwick County Compliance Review, and 2018 Compliance Status Report, both of which are used to measure the statutory and directive compliance. Using these two documents the only deficiencies noted are for a COD of 22.5% on the commercial class, where 20% is the maximum allowed. Also omitted is, reporting analysis on a land acre model #R1024, Sq. Ft. model #R0130,

¹⁶ Taxpayers’ Federation of Illinois, 1993 - R.D. Picur, R.A. Miranda

neighborhood models #8, #9, #16, and analysis for all commercial models were not submitted for confirmation in the Orion system according to the PVD.

In all, twenty (21) recommendations are included in the report (#21 to follow). The first twenty (20) recommendations concentrate on improving methods to gain efficiency and effectiveness of results. Kansas law mandates require tremendous amounts of labor to achieve quality results on a timely basis. The Orion CAMA system is paramount to assisting in achieving these mandated results. There is a theme however developed during the review of each of the processes. This theme encompassed using many analytical processes which must be completed outside of Orion. The Aumentum system used by the ROD's and Treasurer/collector guides parcel maintenance, personal property and tax billing. Orion has modules to complete all these processes, parcel maintenance, specifically multi-parcels, personal property, and the billing collection. With Orion being a mandated CAMA system for use in all of Kansas, Sedgwick County must reach-out to counties that have moved all processes into Orion as a model for doing the same in Sedgwick County. For commercial valuation, only the cost approach is currently being completed in Orion.

RECOMMENDATION #21: The county appraiser is requesting six additional staff for the 2020 fiscal year. Considering the numerous processes that require manual data entry, or re-entry of data, coupled with rigorous statutory timelines to complete specific processes; several experienced staff members are considering retirement within the next five years; it is recommended that six additional staff members be hired for the 2020 fiscal year.

This review of operations and procedures reveals a high level of commitment, knowledge and expertise linked directly to the staff in the appraiser's office. The required knowledge and expertise are not available in an instant. The skills required to produce a mass appraisal are uniquely different from those possessed by many private sector appraisers. Creation of economic units is itself a skill few possess, or fully understand. There are learning curves to Orion, including knowing how to make it work with external systems to create what appears to be a seamless result. **Recommendation #5** included a plan for succession to replace skills of experienced staff members that will be retiring in the next five years. If implemented many of the recommendations include learning new skills not currently in place. For these reasons and the many others provided in the previous 20 recommendations, the hiring of additional staff is supported.

Addendum

Register of Deeds, screen from PIN all documents

Building Permits, Electronic									
Project Type	Permit Type	Permit No	Date Issued	Valuation	PIN	Scope of Work	Address	Permit Issued to	Owner Name
SINGLE FAMILY ALTERATION	BLDG PERMIT - GENERAL	152629	01/10/2019	\$9,000	1425376005	INTERIOR KITCHEN REMODEL, REMOVE NON-LOAD BEARING WALL, NEW CABS, C-TOPS, FLOORING	1910 OAKWOOD AVE	B J ARMSTRONG INC	FOGLE, BRIAN & CINDY
SINGLE FAMILY ALTERATION	BLDG PERMIT - GENERAL	152950	01/22/2019	\$65,000	1433477012	NEW KITCHEN CABS/APPLIANCES, SIDING, & NEW DETACHED 2 CAR GARAGE	1206 N CLINTON BLVD	KATTELMAN CONSTRUCTION & DESIGN INC	OCONNOR, STANLEY & MARY
SINGLE FAMILY ALTERATION	BLDG PERMIT - GENERAL	152852	01/16/2019	\$5,000	1434302009	REMODEL KITCHEN & MASTER BATHROOM	12 NORBLOOM AVE	BANKS REMODELING INC	CALVERT & METZLER MEMORIAL HOMES
SINGLE FAMILY ALTERATION	BLDG PERMIT - GENERAL	152891	01/17/2019	\$10,000	1529151002	FRAME, HANG, FINISH EXT WALLS;ADD BATH;ADD BEDROOM & CLOSET	3901 RAVE RD	DW SCOTT INTERIOR CONSTRUCTION	NEWMAN, CASSANDRA
SINGLE FAMILY	BLDG PERMIT - RESIDENTIAL	152474	01/02/2019	\$230,000	1530106002	NEW CONSTRUCTION - SINGLE FAMILY HOME	8 MACKENZIE CT	KEN VERKLER CONSTRUCTION	KEN VERKLER CONSTRUCTION
SINGLE FAMILY	BLDG PERMIT - RESIDENTIAL	152941	01/18/2019	\$350,000	1530109030	NEW CONSTRUCTION	4 BENT CT	TRUNK BAY CONSTRUCTION INC	ALAN BARDWELL
SINGLE FAMILY	BLDG PERMIT - RESIDENTIAL	152947	01/18/2019	\$350,000	1530109031	NEW CONSTRUCTION	2 BENT CT	TRUNK BAY CONSTRUCTION INC	ALAN BARDWELL
OFFICE BLDG ALTERATION	BLDG PERMIT - COMMERCIAL	152464	01/02/2019	\$10,720	1531351003	REMOVE/INSTALL CEILING, LIGHTS, REPLACE DOOR FRAME INSTALL HVAC DAMPERS	3024 E EMPIRE ST	CATALYST CONSTRUCTION INC	ADVOCATE BROMENN MEDICAL
HOSPITALS/INST ALTERATION	BLDG PERMIT - COMMERCIAL	152530	01/08/2019	\$198,530	2102176006	FINISH UPGRADES TO EXISTING TRANSITIONAL CARE UNIT	2200 E WASHINGTON ST	RIVER CITY CONSTRUCTION	OSF DESIGN GROUP

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1	☐	OFF	08/19/2004 Instrument Date 08/06/2004	8/6/2004	MORTGAGE	RAUT, SHISHIR RAUT, SHWETA	NATIONAL CITY MORTGAGE CO	Pin Number: 15-31-226-016 SAPPHIRE LAKE Lot:67	2004-00028562		\$202,200.00	19 pages
2	☐	OFF	06/07/2005 Instrument Date 05/23/2005	5/23/2005	RELEASE	NATIONAL CITY BANK OH	RAUT, SHISHIR RAUT, SHWETA	Pin Number: 15-31-226-016 SAPPHIRE LAKE Lot:67 1ST ADDITION	2005-00015923	2004-00028563		2 pages
3	☐	OFF	12/13/2012 Instrument Date 11/20/2012	11/20/2012	MORTGAGE	RAUT, SHISHIR RAUT, SHWETA	PNC MORTGAGE	Pin Number: 14-31-226-016 SAPPHIRE LAKE Lot:67 Pin Number: 15-31-226-016	2012-00031283		\$172,500.00	21 pages
4	☐	OFF	01/14/2013 Instrument Date 12/12/2012	12/12/2012	RELEASE	PNC BANK NATIONAL ASSOCIATION	RAUT, SHISHIR RAUT, SHWETA	Pin Number: 15-31-226-016 SAPPHIRE LAKE Lot:67	2013-00001526	2004-00028562		2 pages
5	☐	OFF	10/20/2015 Instrument Date 10/16/2015	10/16/2015	RELEASE	PNC MORTGAGE	RAUT, SHISHIR RAUT, SHWETA	Pin Number: 15-31-226-016 SAPPHIRE LAKE Lot:67	2015-00019982	2012-00031283		2 pages
6	☐	OFF	02/08/2019 Instrument Date 01/18/2019	1/18/2019	DEED	RAUT, SHISHIR RAUT, SHWETA	HYLAND, DAVID HYLAND, ROSELLA	Pin Number: 15-31-226-016 SAPPHIRE LAKE Lot:67 Address: 1311 NORMA DR BLOOMINGTON, ILLINOIS 61704	2019-00001893		\$240,000.00	2 pages
7	☐	OFF	02/08/2019 Instrument Date 01/25/2019	1/25/2019	MORTGAGE	HYLAND, DAVID HYLAND, ROSELLA	ILLINOIS NATIONAL BANK	Pin Number: 15-31-226-016 SAPPHIRE LAKE Lot:67	2019-00001894		\$160,000.00	13 pages
Select	Index	Date Filed	Instrument Date	Kind	GRANTORS	GRANTEES	Description (Not Warranted)	File Number	Book/Page	Ref	Amount	Images
Select All Clear All Print Current Page Expand All Rows Collapse All Rows View Selected Images View Selected Details Clear Flags												

Appendix A – Personnel Resumes

Michael W. Ireland, RES, CAE

816 S. Mercer St.

Bloomington, IL. 61701

Email- mwireland@comcast.net

PROFESSIONAL EXPERIENCE

Assessor, City of Bloomington Township (Retired 12-31-2013):

I was appointed Assessor in August of 1980. I served eight full terms as an elected assessor. Prior to being the assessor, I supervised the appraisal process in the Bloomington office. The following details my ad valorem experience, and accomplishments:

- 01.01.2014 to present: Work part-time for the Bloomington Assessor as an analyst/model builder, and mentor to young staff professionals.
- Developed procedures and guidelines for completing the appraisal process including, data collection, and data analysis required to arrive at supported value estimates.
- Conducted sales ratio studies for performance analysis, and testing of the appraisal process.
- Provided supporting appraisals and detailed expert witness testimony before the local appeal board, the state Property Tax Appeal Board on behalf of McLean County.
- Illinois statutes required re-appraisal of the jurisdiction every four years. I have completed this requirement every four years starting in 1975. Beginning in 1999, semi-annual updates are completed after the quadrennial year.
- Provided the training and education of staff to assist in the process of, field review, model development, finalizing the tax roll, informal appeal processing, and formal appeal hearings, working with the public and explaining the individual impact of the re-appraisal. Under my supervision three staff members earned the CAE designation, and three also evolved into IAAO senior instructors.
- Designed and installed a complete computer assisted assessment system (CAAS) using existing staff and resources. The first system was deployed in Dbase III in 1985. In 1995, we migrated the data to MS Access and redesigned the interface for a Windows platform. Since 2014 I have worked with the

staff and a developer to update the system design and efficiency, this also includes a new web site interface.

- 2004, converted data collection from paper to digital using tablet PC's. In 2012 upgraded paperless process to Apple iPad technology using remote access to server. All task and processes are completed in a paperless environment from building permits, through the appeal process.
- Perform data analysis and develop property valuation models using Number Cruncher Statistical System (NCSS). Transfer valuation model algorithms to the MS Access system for deployment and simplified user application.
- 1988, designed and implemented searchable property information database. This was made available to real estate professionals via a dial-up bulletin board service. In 1998, moved this concept to the internet opening it to the public. The site address is; www.wevaluebloomington.org.
- Maintained standards for accuracy of assessment, and uniformity according to IAAO Standards and State Standards of assessment level within 5% of the legal level and a coefficient of dispersion (C.O.D.) less than 15% overall.
- Prepared an annual budget to be approved by the Town Board of Trustees. Part of the budget management process requires I procure employees, negotiate leases, purchasing equipment, and plan office layout.
- Assisted the township in planning, and designing a new office building for the assessor, and township supervisor. Construction was completed in 2003.
- Meet monthly with the Town Trustees to review office expenditures, inform them of progress on assessment cycle, and educate them regarding issues surrounding the property tax.
- Served as a management and technical member of the McLean County GIS Management Committee, for implementing a countywide Geographic Information System from 1998.
- 2014 – Present, mentor to staff, providing education, training, and skills enhancement. Also complete the model development, performance analysis, and advise on software design upgrades to the in-house CAMA system and web site.

Illinois Property Assessment Institute:

The Illinois Property Assessment Institute (IPAI) is a not-for-profit educational organization that provides basic education for assessment officials in the State of Illinois. I served as the Director of Education for the Illinois Property Assessment Institute from, 1983-1993, and Executive Director from,

1992-1993. State statutes recognize the IPAI as the designating and certifying authority for assessors. My experience and accomplishments while with the IPAI are as follows:

- Developed a yearly course curriculum to meet the demands of new and experienced property tax professionals. Annual course enrollment was 1,200 to 1,500 students.
- Hired qualified instructors to teach forty to forty-five different course offerings each year.
- Developed courses and exams covering various topics e.g. [Advanced Assessment Ratio Study, Mass Appraisal of Garden Apartments, and Introduction to Basic Model Building.
- Computerized the student record system to keep track of each student transcript and status of recertification.
- Implemented a financial system for bookkeeping and reporting of income and expenses.
- Planned and developed a multi-level advanced designation program for Illinois property tax professionals. (CIAO-I)

CONSULTING ACTIVITIES

- Provided education and training for appraisal/assessment staffs using IAAO, and other education provider materials throughout the US and Canada over the past 35 years.
- Member of IAAO, technical review team for Anchorage, AK, in 1997. Provided 28 specific CAMA system recommendations for improvement of the system and process.
- Served as a member of a peer review committee in Illinois to study the implementation of assessment procedures as a pilot study for improving assessment performance. 1998.
- Provided a variety of consulting services on data collection, proper valuation methods, CAMA systems, valuation models, database design, digital sketching, and photography.
- Developed custom education programs for appraisal staffs including the CAMA modeling team for Cape Town SA, and assessment ratio analysis for the state of Utah. 2000-2004.
- Completed the property valuation modeling for Tygerberg South Africa in 2001.
- Provided education and training on data analysis, and modeling for the Republic of Mauritius. – 2010.
- Completed a review of procedures for the Decatur Township Assessor, and Town board with recommendations for improvement, staffing, and updating all systems to best practices. 2013

RELATED PROFESSIONAL ACTIVITIES

- Member IAAO Education Committee 2018
- Professional Development Lifetime Achievement Award, IAAO 2015
- Member of IAAO Ad Hoc Infrastructure Review Committee 2013 – 2014
- Education Chair, Appraisal Institute, Heart of Illinois Chapter 2004 – 2005
- Senior Instructor for the International Association of Assessing Officers. 1986- present
- Served as vice-chair on the assessment / appeal committee, and member of multi-state review committee to recodify the Illinois Revenue Act of 1939. Bill passed spring of 1993.
- Chaired IAAO ad-hoc committee for developing Uniform Mass Appraisal Report.
- Chaired IAAO CAAS Council 1994 and 2000
- Member of special task force to revise Standard 6 of the Uniform Standards of Professional Appraisal Practice, Published by The Appraisal Foundation [1991 and 1995].
- Elected to serve on the IAAO Executive Board. [1988 - 90]
- Past Chapter President Society of Real Estate Appraisers, [1983 - 84]
(currently Appraisal Institute)
- Performed independent appraisal assignments for lending institution, relocation companies, and various corporations, which included all types of properties.
- Developed adult education session for explaining the use of and how the property tax system works.
- Guest lectured at Illinois State University in the departments of political science, and finance and law.
- Member of IAAO Editorial Board since 1986. (IAAO dissolved) Member IAAO Subject Matter Expert (IAAO recently dissolved).
- Chaired the Education Committee for the International Association of Assessing Officers.
[1989 - 91, 98]

PROFESSIONAL DESIGNATIONS, LICENSE

314 W 10th St, Kansas City, Missouri 64105-1616 USA
816/701-8100, Fax 816/701-8149, 800/616-4226, www.iaao.org

- Certified Assessment Evaluator [C.A.E.] International Association of Assessing Officers. 1990
- Residential Evaluation Specialist [R.E.S.] International Association of Assessing Officers. 1977
- Senior Residential Appraiser [SRA, 1978-2004] Appraisal Institute, Resigned Membership
- Senior Real Property Appraiser [S.R.P.A., 1990-2004] Appraisal Institute, Resigned Membership
- Illinois Real Estate Sales license, No. 076-0233746. [Expired]
- Certified Illinois Assessing Officer, [CIAO] Illinois Property Assessment Institute. 1969
- Member of Illinois Assessors Association Board of Directors, Vice-President. 1985 - 1989
- State Certified General Appraiser, No. 553-001126 [Expired 09/30/15]

TEACHING AND PRESENTATION EXPERIENCE

Instructor Certification:

- Began presenting appraisal related materials in 1975 at the spring conference of the Illinois Property Assessment Institute.
- attended first IAAO Instructor Training Workshop. 1978
- completed my student instructor training assignment. 1983
- approved as a Senior Instructor for the IAAO. 1986 - Present

Teaching Experience:

- Illinois Property Assessment Institute, IPAI
- International Association of Assessing Officers, IAAO
- Bloomington – Normal, adult education, Property Tax Forum
- Local civic organizations, Kiwanis, Exchange Club, loan companies, real estate companies, etc.
- Chicago Real Estate Company, appraisal licensing courses
- National Association of Independent Fee Appraisers, (NAIFA).
- Guest lectured at Illinois State University in the political science department, and Law and Real Estate.
- Taught courses in a majority of the contiguous states and Alaska.
My teaching experience includes some of the largest jurisdictions in the US, Chicago, Houston, and New York, Phoenix, and small rural areas in Louisiana, Mississippi, Wyoming, and Utah.
- International experience includes Toronto ON, Victoria BC, Edmonton AB, Cape Town SA, and Republic of Mauritius.
- Developed custom materials and presentations as requested for jurisdictions conforming to specific regulations, laws, data requirements, etc.

The current IAAO course curriculum where I have specific expertise and approval to the teach follows:

Courses:

1. Course 101 — [Fundamentals of Real Property Appraisal](#)
2. Course 112 — [Income Approach to Valuation II](#)
3. Course 201 — [Appraisal of Land](#)
4. Course 300 — [Fundamentals of Mass Appraisal](#)
5. Course 310 — [Applications of Mass Appraisal Fundamentals](#)
6. Course 311 — [Residential Modeling Concepts](#)
7. Course 312 — [Commercial/Industrial Modeling Concepts](#)

8. Course 320 — [Multiple Regression Analysis](#)
9. Course 322 — [Application of Residential Modeling Concepts](#)
10. Course 331 — [Mass Appraisal Practices and Procedures](#)
11. Course 332 — [Modeling Concepts](#)
12. Course 400 — [Assessment Administration](#)

Workshops:

1. Workshop 155 – [Depreciation Analysis](#)
2. Workshop 157 – [Appraisal Uses of Excel Software](#)
3. Workshop 159 – [Market Analysis for Income Valuation](#)
4. Workshop 162 – [Marshall & Swift Cost Approach \(Residential\)](#)
5. Workshop 163 – [Marshall & Swift Cost Approach \(Commercial\)](#)
6. Workshop 171 – [IAAO Standards of Professional Practice & Ethics](#)
7. Workshop 352 – [Computer-Assisted Mass Appraisal Feedback](#)
8. Workshop 354 – [Multiple Regression Analysis for Real Property Valuation](#)
9. Workshop 450 – [Principles of Property Assessment](#)
10. Workshop 451 – [Planning an In-House Revaluation Program](#)
11. Workshop 452 – [Fundamentals of Assessment Ratio Studies](#)
12. Instructor ITW – [Instructor Training Workshop, IAAO](#)

EXPERIENCE DETAILED ON, AUTHORSHIP, COURSE MATERIALS, AND TECHNICAL PAPERS

The following is a list of authorship contributions including textbooks, appraisal/assessment courses, and papers published or presented at conferences during my career.

Textbook Contributions:

- Co-author Visual Valuation, Chapter 11, Appraisal Institute, Chicago IL, M. Linne' 2010
- Authored, Chapter 11, Introduction to GIS/CAMA Integration, IAAO text on Assessment Administration, 2003.
- Contributing technical editor for Mass Appraisal of Real Property, R.J. Gloudemans, IAAO 1999
- Contributing author and global technical editor for, Property Appraisal and Assessment Administration, J.K. Eckert, PhD, IAAO, 1990.

Development of Course Materials:

- IAAO Course 334 – Application of Mass Appraisal to Non-Residential Properties 2017 contract *Review of course materials for application of best practices, adherence to appraisal standards, and consistency with IAAO standards of practice, and check accuracy of labs and solutions. Also develop a set of NCSS labs that replicate SPSS output.*

- IAAO course 333, Residential Model Building, NCSS interactive lab development. 2016
A new course to be offered in the spring of 2017, includes a hands-on experience using a statistical software package to develop valuation models. SPSS, or NCSS are the software selected by the education committee
- IAAO course 332 Residential Modeling Concepts, course review instructor 2016
Provided IAAO instructors and staff with course corrections, suggested improvements in Excel labs, and timing of presentation for each section of materials.
- Introduction To Regression And Spatial Analysis Used In Mass Appraisal, IPTI/IAAO 2014
This two day seminar focusing on an introduction to regression and spatial analysis. The focus will be on market analysis basics, review of linear regression, market models using non-linear regression and spatial analysis.
- Introduction to AVM and Spatial Analysis, IAAO/URISA 2001-2013
This course was developed for use at the pre-conference seminar of Integration GIS and CAMA. Course is designed for assessment and GIS professionals who need to have a primer on CAMA and how it relates to GIS in the real world. A highlight of this course is the live hands-on data analysis and GIS data exploration using PC's. The material was co-developed with Pat O'Connor, ASA
- Using NCSS for Market Analysis, and Modeling, MAAO 2008
An in-depth four-day workshop using live data to teach students market analysis methods, and lead them through a series of labs developing cost and direct market model, and using Automated Comparable sales for appeals.
- IAAO, Mass Appraisal 300 series curriculum development team 2008
The team completed a new curriculum outline for all 300 level courses to be rewritten in the next 3-5 year.
- Technical Review for IAAO Course 112, Yield Capitalization Methods 2007
- Technical Review for IAAO Course 101, Fundaments of Real Property Appraisal 2006
- NCSS Basics for Sales Ratio Analysis, State of Utah 2006
Introduction to using the NCSS software covering its basic functionality. Converting the state of Utah's ratio study from MS Excel to NCSS that is easily updated each year without reformatting.
- Preparing Data for Modeling, IAAO 2000.
Preparing data for Modeling is a comprehensive look at property data stored in a computerized environment and how a data structure can impact model accuracy.
7 continuing education credit hours
- Introduction to Using Number Cruncher Statistical System (NCSS) 2000.
This course deals with the basic functionality of the software and how to get started using it for analysis in the assessment office.
7 continuing education credit hours
- Co-authored the Applications of Residential Modeling, Course 321/322 IAAO 1999.
This course deals with hands-on computer modeling and analysis using the NCSS and AEP software. Developed the Student Reference Manual, course labs, and exam for this weeklong course. 30 hours of continuing education.
- Development of Capitalization Rates IAAO 1999.
This course deals with various methods of capitalization, and techniques. Emphasis is on using the property cap rate method with the defined technique.
7 continuing education credit hours
- Introduction to Mass Appraisal Methods IAAO 1987.
This course is a prep course for what is now IAAO Course 300. The workshop covered the basics of a CAMA system, how data is stored, and what model building is about. Students us a case study where a cost manual is analyzed and converted into a model formula that replicates the cost tables.
15 Continuing Education Credit Hours
- Assessment Administration and Office Management IPAI 1986.
This course deals with administration of various functions in the assessment office, data collection, sales analysis, dealing with personnel issues, implementing practices that conform to Illinois law. Materials cover communication and public relations using an interactive case study from a college management course.
15 Continuing Education Credit Hours

- IAAO 300 Series Curriculum Team IAAO 1986 & 2008.
Member of the IAAO 300 curriculum, team of specialist worked on converging all IAAO courses in the 300 series, (300,310,311,312,320,322) into a curriculum where each course built on and added to the previous course. This curriculum level covers the entire range of mass appraisal and modeling skills required to work in the modern assessment office today.
- Mass Appraisal of Garden Apartments IPAI 1985.
This course deals with the use of statistical methods for analyzing data and developing basic market and income models to be applied to a case study property.
15 Continuing Education Credit Hours
- Advanced Sales Ratio Analysis Illinois Property Assessment Institute 1982.
This deals with various ways to use ratio analysis to improve property assessments in areas with under or over assessments, and high dispersion. Covered weighting ratios by property class for equalization purposes as described in the IAAO Ratio Standard. Basic introduction to simple regression.
15 Continuing Education Credit Hours

Technical Papers and Standards:

- IAAO, Body of Knowledge development team, Subject Matter Expert, Knowledge Area #4, Valuation. 2015-2017
 - Appraisal Practice Board, Appraisal Foundation. Subject Matter Expert 2012.
Assigned to specifically study and recommend on the issue of "Identifying Comparable Properties", my specific focus is on Mass Appraisal / AVM.
 - Subject Matter Expert for the IAAO, on all Mass Appraisal Course, 300 Series 2008 – 2013
Respond to issues found in course content that is questioned by instructors, or IAAO education staff regarding mass appraisal methods, techniques, exam questions etc. for clarity on the issue with confirmation or corrections when deemed appropriate.
 - Automated Valuation Model Standard development committee. IAAO 2003, 2017
Specific authorship of Sections 4, Calibration Techniques and, Residential AVMs, Standard on Automated Valuation Models, AVMs, 2003. Consulted with the IAAO standards committee, and reviewed 2017 rewrite of AVM standard
 - USPAP Task Force Appraisal Foundation 1990 & 1996
Member of task forced selected by the Appraisal Standards Board to rewrite Standard 6 of USPAP. I specifically authored, SR 6-8 on developing a written mass appraisal report.
 - Authored and presented papers at the annual IAAO conference and the IAAO/URISA Conference on Integrating GIS and CAMA. A partial summary of papers are as follows;
1. Overview on developing a Body of Knowledge for the appraisal/assessment industry, 2016 IAAO Conference
 2. Run the Numbers/Modeling How-to with GIS Enhancements, 2012 GIS/CAMA
 3. Response surface analysis without a GIS, IPTI Conference, Chicago IL 2011
 4. Tabular VS. GeoStatistical Analysis, 2011 GIS/CAMA
 5. Practical Integrations of Valuation Modeling and Geographic Information Systems, GIS/CAMA 2010
 6. Market Variance, Why do similar properties have dissimilar prices, 2008 GIS/CAMA

7. Implementing CAMA/GIS, No IT, No CAMA/GIS No Problem, 2007, GIS/CAMA
8. What are AVM's Doing with GIS?, 2005 GIS/CAMA Conference.
9. A Peek Inside an AVM 2004, 2005, IAAO, and GIS/CAMA Conference.
10. Benefits for an AVM Standard 2003, IAAO Conference.
11. Location Analysis for Commercial Property, 2002 GIS/CAMA Conference, November-December 2002 v9 no. 6 Assessment Journal.
12. Simple Methods for Using Data for Information, 2000 International Property Tax Institute.
13. Developing an Assessment Professional, 2000 IAAO Conference.
14. The intent and meaning of Standard 6, of the Uniform Standards of Professional Appraisal Practice, March-April 1992 v. 14 no. 2 Assessment Digest
15. Transportability of a general-purpose residential market calibrated-cost model, June 1991 v10 no. 2 Property Tax Journal.

EDUCATION:

I graduated from Bloomington High School in 1966. In 1968, I was offered a job in the Assessor's Office. I decided to use this opportunity as my educational nucleus using the experience and specialized training as a practical educational tool from which I would learn and grow intellectually and professionally.

- 1969, earned my Certified Illinois Assessing Officers designation
- 1969 to 1978, continued to take appraisal and assessment courses.
- 1978, completed the requirements for the Senior Residential Appraiser designation (SRA) from the Society of Real Estate Appraisers (now the Appraisal Institute).
- 1979, completed requirements for the Residential Evaluation Specialist designation (RES) from the International Association of Assessing Officers.
- 1986, completed the requirements for the Certified Assessment Evaluator designation (CAE) from the IAAO in 1986.
- 1989, completed the requirements for the Senior Real Property Appraiser designation (SRPA) from the SREA (now the Appraisal Institute).
- 2017, inducted into the Bloomington High School, Hall of Fame

Since 1978, I have accumulated in excess of 7,500 contact hours of course work pertaining to appraisal, assessment, professional practice, legal liabilities, administration and other related topics. Sponsoring Organization of class work are:

- American Institute of Real Estate Appraisers
- Appraisal Institute
- Society of Real Estate Appraisers (now Appraisal Institute)
- National Association of Independent Fee Appraisers, (NAIFA)
- McKissock School of Appraisal Education, www.McKissock.com
- Bloomington - Normal Board of Realtors
- Bloomington - Normal Adult Education
- Environmental System Research Institute, ESRI®
- Illinois Department of Revenue
- Illinois Property Assessment Institute

- International Association of Assessing Officers
- International Property Tax Institute
- Lincoln Institute of Land Policy
- MapInfo Corporation

This large volume of intensive study course work along with the practical incorporation of the methods and techniques taught have given me a broad-based background from which to draw upon and use in implementing and administering many various appraisal/assessment duties and responsibilities. A complete course transcript available upon request.

TECHNICAL SKILLS

- Proficient in the use of MSWord, MS Excel, MS PowerPoint, MS Access, NCSS12, Apex Sketching, ESRI ArcMap, AEP, and Gotomypc.com.
- I have developed valuation and income models using multiple regression, non-linear regression, feedback, summarized statistics, and automated comparable sales using Euclidean metric selection.
- I had responsibility for developing and maintaining the cadastral layer of the GIS for my jurisdiction.
- Administrated network servers, add, modify users and their network permissions, create file shares and maintaining data backup schedules, in-house and online.
- Setup Client PCs.
- Transfer user files and configuration to and from workstations
- Install hardware components, e.g. memory, hard drives, modems
- Software installation on host and client PCs
- Setup and install wireless network, e.g. routers, switches, filters
- Configure and purchase technology, e.g. PCs, servers, tablet PC, digital cameras, software upgrades.

COMMUNITY ACTIVITIES

- Chair of Bloomington Zoning Board of Appeals. I have been a board member since 1978. Term ended in August 2016.
- Served on Citizens Advisory Council to school board and as vice-president [1984 - 86]
- YMCA volunteer, swim team parent board 1986 - 89, search committee for youth activity director, program committee
- I coached American Legion Baseball 1969 - 74. I coached girls and boys in the Prairie City Soccer league 1983 - 1999. I assisted with coaching in youth wrestling club from 1990-2004.
- Youth Football coach, 2014 – present

Larry J. Clark, CAE

PERSONAL INFORMATION

Address: 492 Garfield, Bonner Springs, Kansas 66012

Telephone: Home (913)422-7231 -- Office (816)701-8130 – Cell(913)403-6143

EDUCATION

College: Kansas State College of Pittsburg - Pittsburg, Kansas

Major: Social Science (Pre-Law)

Minor: Business Administration

Graduation Date: May, 1972 B.A.

Graduate Work:

Law School - Kansas University-Lawrence, Kansas-44 hours

M.B.A. Program - P.S.U.-Pittsburg, Kansas 27 hours

Appraisal Schools:

Property Valuation Division of Kansas Department of Revenue

23 Courses and Workshops 1979-1996

International Association of Assessing Officers

21 Courses and Workshops 1979-2003

American Institute of Farm Managers & Rural Appraisers

2 Courses

Appraisal Institute

5 Courses

Courses/Workshops Taught

Changing Environment of the County Appraiser in Kansas

Ratio Studies – NCRAAO

IAAO Course 300

IAAO Course 301

IAAO Course 302

IAAO Course 311

IAAO Course 312

IAAO Course 350

Commercial Property Association of Kansas Appraisal Seminar

IAAO Workshop 354(604)

IAAO Course 402

RMA Commercial Exam Workshop(Wrote and presented)

SPSS For the Appraiser Workshop(Wrote and presented)

IAAO Workshop 150 – Mathematics for Assessors

IAAO Workshop 152 – Narrative Report Writing

IAAO Workshop 157 – The Appraisal Uses of Excel Software

IAAO Workshop 161 – Marshall & Swift Residential One Day

IAAO Workshop 162 – Marshall & Swift Residential Manual

IAAO Workshop 163 – Marshall & Swift Commercial Manual

IAAO Forum 906 – Valuation of Billboards

IAAO Forum 914 – Using the HP 12C

IAAO Forum 960 – Marshall & Swift Residential Square Foot Costs

IAAO Forum 962 – Marshall & Swift Commercial Square Foot Costs

Final Value Review Workshop for the United Kingdom

Consulting Projects

Wyandotte County, Kansas – Ongoing help preparing annual statistical reports

Crawford County, Kansas – Periodic sales ratio reporting

Craig County, Colorado – SPSS training 2000 and 2002

Volusia County, Florida – SPSS training 2001

Eagle County, Colorado – SPSS training 2002

Clay County, Missouri – Cama conversion

TerraScan – Cheyenne, Wyoming Cama conversion training

IAAO – Bexar Central Appraisal District – peer review

IAAO – United Kingdom – development and presentation of a mass appraisal course 350

IAAO – United Kingdom – development and presentation of a Final Value Review Workshop

Arkansas Chapter of IAAO – Developed and taught a workshop on the use of SPSS in producing ratio studies

Reynolds Appraisal Company – Developed and taught a workshop on the use of SPSS in appraising

Assessment Coordination Division, State of Arkansas – Taught one day workshop on interpretation of SPSS output

Russian Society of Appraisers – Presented a one-day workshop on the U.S. property tax system in Moscow

Lincoln Institute of Land Policy, State Administration of Taxation of China – Presented a two-day workshop on IAAO standards at the Renmin University in Beijing, China

PROFESSIONAL DESIGNATIONS

Certified Kansas Appraiser (CKA)

June 8, 1982

awarded by the Institute of Certified Kansas Appraisers

Residential Evaluation Specialist (RES)

October 6, 1982

awarded by the International Association of Assessing Officers

Certified Assessment Evaluator (CAE)

March 15, 1984

awarded by the International Association of Assessing Officers

MEMBERSHIP

Regular Member International Association of Assessing Officer

Professional Designation Advisor for Kansas - 1991 - 2005

Senior Instructor - Courses/Workshops 151, 152, 162, 163, 300, 310, 311, 312, 350,
400, 402, 451, 452, 906, 914, 960, 962

State Representative - 1994 - 1999

Grader - 1994 - 2005

Professional Admissions Subcommittee - 1995 – 1997

Education Subcommittee – 2000-2003 (Chairman, 2000 & 2001, 2003)

Professional Development Committee – 2004, 2005

Professional Designations Subcommittee - 2007

Most Valuable Member - 1994

Bernard L. Barnard Award Winner – 1997, 2004

AVM Standards Committee Member – 2003

Presidential Award Winner – 2003

Instructor of the Year – 2005

Verne W. Pottorff Designee of the Year Award - 2008

Regular Member Kansas City Chapter of IAAO

Education Committee - 1990

Treasurer - 1991

Secretary – 1992, 2007

Vice President - 1993

President - 1994

Regular Member Kansas County Appraisers Association

Minerals Committee - 1981

Personal Property Committee - 1982, 1983

Constitutional Committee (Chairman) - 1982

Publications Committee - 1982

CKA Committee - 1982 (Chairman) 1983 (Chairman) 1984

Education Committee - 1983, 1984 (Chairman)

Appraisers Handbook Committee - 1982, 1983

Executive Board - 1984, 1989, 1990

Editor, Kansas County Appraisers Newsletter 1985 - 1991

Vice-President - 1990

President-Elect - 1991

Legislative Committee - 1991 - 1996

President - 1992

President's Award Recipient - 1985, 1991



CRITERIA FOR IAAO INSTRUCTOR SELECTION, QUALIFICATIONS, EVALUATIONS AND CONDUCT

Updated: March 2014

Becoming an IAAO Instructor

Application Procedures

Instructor Criteria as Approved by Executive Board

The Criteria for Instructor Selection, Qualifications, Evaluations and Conduct Guidelines states the qualifications for instructors of IAAO courses and workshops.

All IAAO instructors are members of the Association. An IAAO Instructor can be an In-state, Regular, Specialty, Senior or Senior Specialty Instructor.

I. Qualifications:

All applicants for instructor status are required to submit a detailed application to the Professional Development Department at the IAAO Headquarters. Prior to attending an IAAO ITW, each applicant must present proof of satisfying at least one of the following requirements: All applications must be accompanied by a full resume/bio.

- A. A bachelor's degree in any field and five (5) years of experience directly related to the subject matter to be taught.
- B. A master's degree in any field and five (5) year of experience directly related to the subject matter to be taught.
- C. A master's or higher degree in a field that is directly related to the subject matter to be taught; five (5) year of experience directly related to the subject matter to be taught.
- D. Five (5) years of real estate appraisal teaching experience directly related to the subject matter to be taught. In order to qualify as teaching experience the courses/seminars/workshops, ODF taught must meet at least one of the following minimum requirements.*
 1. Course/seminar is approved by the AQB Course Approval Program.
 2. Course/seminar is approved by a US state or territory for state appraisal licensing/certification credit.
 3. Course is taught through an accredited college or university.
 4. Course/seminar is approved for credit through an established professional appraisal organization, state assessor or appraiser agency.

*Distance education courses are not applicable for use as teaching experience.

- E. Five (5) years of specialty teaching (cadastral mapping or assessment administration) experience directly related to the subject matter to be taught.
- F. Seven (7) years of real estate appraisal experience directly related to the subject matter to be taught.
- G. Seven (7) years of specialty experience (cadastral mapping or assessment administration) experience directly related to the subject matter to be taught.

One year of appraisal experience is defined as:

1. A calendar year where the individual spent a majority (more than 50%) of their professional time appraising real property, personal property, or businesses and
2. Derived a significant portion of their income from performing (real property, personal property, or business valuation) appraisal services.

One year of specialty experience is defined as:

1. A calendar year where the individual spent a majority (more than 50%) of their professional time in cadastral mapping or assessment administration and
2. Derived a significant portion of their income from performing (cadastral mapping or assessment administration) appraisal services.

All applicants for instructor status are required to submit a detailed application to the Professional Development Department at the IAAO Headquarters. Existing instructors must have such application on file. All applicants must be IAAO members.

Prior to attendance at and participation in an IAAO Instructor Training Workshop (ITW), each applicant's application will be reviewed by the Professional Development Department. Any applicant whose application reveals they have insufficient appraisal/assessment/specialty education and/or experience may be rejected.

Each applicant coming before the IAAO Instructor Relations sub-committee of the Professional Development Committee will have attended an IAAO ITW. At the ITW, each applicant will have successfully completed a short oral presentation demonstrating his/her knowledge of appraisal/assessment and his/her ability to effectively teach such material.

II. Qualifications

The following will constitute the progression of IAAO instructors:

Trainee - a trainee instructor will have successfully completed an IAAO ITW. All trainee assignments must be arranged by IAAO staff. Upon acceptance of the applicant by the Instructor Relations sub-committee, the trainee instructor must teach his/her first course on a course from the tract taken at the ITW with an approved IAAO senior instructor or senior specialty, as appropriate, if they want to instruct nationally. The trainee will be expected to teach approximately 10 hours of a course; however, no trainee will be allowed to teach on the afternoon of the day preceding the exam. The senior instructor will rate the trainee on his/her performance during the training assignment and furnish an evaluation report to the Instructor Relations Sub-Committee. Upon review of the evaluation by the Instructor Relations Sub-Committee, the trainee may be granted regular instructor status. No trainee will be granted regular instructor status that has not met the following requirements.

- a) Successful completion of an ITW, and
- b) Passed a training assignment under a senior or senior specialty instructor, in a state/province other than the state/province of residence of the trainee, and
- c) A candidate for an IAAO designation
- d) Be an IAAO member in good standing

❖ If the trainee does not complete item c above within two (2) years, they will be suspended, and may only instruct as an In-State instructor until they obtain their designation.

In-State Instructors - are limited to teaching within their state/province, and will have met the following requirements:

- a) Successful completion of an ITW
- b) Successfully completed (attended at least 50 minutes of each 60 minutes of instruction and passed the final examination) or served as either author or reviewer of the IAAO Course or Workshop they wish to instruct. Equivalent education and examination challenges do not substitute for this requirement.
- c) Be an IAAO member in good standing

❖ In-State instructors will be required to prove requirements a) and b) listed above with every application to instruct a course/workshop. In-State instructors may only instruct IAAO programs that are conducted on a "certified" basis.

Regular Instructor - a regular instructor will have completed the requirements for a trainee instructor and additionally met the following requirements:

- a) Obtain an AAS, CAE, CMS, PPS, or RES designation within two years of becoming a regular instructor. The two years shall run from December 31st of the calendar year of the year the regular instructor status was obtained
 - b) Any instructor not obtaining an IAAO designation within the defined time frame, will be suspended, and may only instruct as an In-State instructor.
 - c) Successfully completed (attended at least 50 minutes of each 60 minutes of instruction and passed the final examination) or served as either author or reviewer of the IAAO Course or Workshop they wish to instruct. Equivalent education and examination challenges do not substitute for this requirement.
- ❖ Exception to the above guidelines is as follows: Instructors who are close to completing their designation by their candidacy completion date (but have not actually finished) may apply to the Instructor Relations sub-committee for a short extension of time. The application for an extension must be mailed to the Director of Professional Development and must be received prior to the expiration of the two-year period.

Specialty Instructor – a specialty instructor will have met the requirements for a regular instructor and additionally meet the following requirements:

- a) Hold an AAS, CMS, PPS or RES designation
- b) Be an IAAO member in good standing

There will be four classes of specialty instructors:

1. AAS Designee will be called a Senior Assessment Administration Instructor: Eligible to teach Course 400 and 402 and any Assessment Administration workshops, such as 403 and 452.
2. CMS Designee will be called a Senior Mapping Instructor: Eligible to teach any Mapping courses and workshops. Courses 600 & 601 and Workshops 650 & 651.
3. PPS Designee will be called a Senior Personal Property Instructor: Eligible to teach all Personal Property courses and workshops. Course 500 and Workshops 551, 552 and 553.
4. RES Designee will be called a Senior Residential Instructor: Eligible to teach Courses 101, 102, 201 and Workshops 155 and 252.

Senior Specialty Instructor - a senior specialty instructor will have met the requirements for a regular instructor and additionally meet the following requirements:

- a) Hold an AAS, CMS, PPS or RES designation
- b) Have completed three teaching assignments as a regular instructor
- c) Be an IAAO member in good standing

There will be four classes of senior specialty instructors:

1. AAS Designee will be called a Senior Assessment Administration Instructor: Eligible to teach Course 400 and 402 and any Assessment Administration workshops, such as 403 and 452.
2. CMS Designee will be called a Senior Mapping Instructor: Eligible to teach any Mapping courses and workshops. Courses 600 & 601 and Workshops 650 & 651.
3. PPS Designee will be called a Senior Personal Property Instructor: Eligible to teach all Personal Property courses and workshops. Course 500 and Workshops 551, 552 and 553.
4. RES Designee will be called a Senior Residential Instructor: Eligible to teach Courses 101, 102, 201 and Workshops 155 and 252.

If a senior specialty instructor successfully completes an ITW outside of their designation, they will be added to the In-State Instructor list for the courses/workshops completed in the ITW and for their specialty courses/workshops.

Senior Instructor—a senior instructor will have met the requirements for a regular instructor and additionally meet the following requirements:

- a) Hold a CAE designation
- b) Have completed three teaching assignments as a regular instructor

III. Conduct

- A. During teaching assignments, instructors must conduct themselves with integrity. They should maintain an appropriate professional relationship with students attending IAAO courses, both in and outside the classroom.
- B. It is the policy of IAAO to promote a positive learning environment for all students. Harassment and/or discriminatory behavior directed toward a person because of his or her race, ethnicity, sex, or physical disability are expressly prohibited. Instructors are obligated to refrain from such behavior and are required to discourage such behavior from occurring in the classroom by others.
- C. While in the classroom, only IAAO approved material should be discussed.
- D. Instructors wishing to set up special sessions for review should do so only in a public classroom or public meeting room.

IV. Maintaining Instructor Status

- A. All instructors, including in-state, regular, senior, & senior specialty instructors, must maintain their IAAO membership in good standing.
- B. All national instructors, regular, senior, & senior specialty instructors, must maintain their IAAO designation.
- C. All instructors, including in-state, regular, senior, & senior specialty instructors, must instruct an IAAO course/workshop/One Day Forum at least once in a period of three consecutive years. If an instructor does not meet this “three consecutive years” requirement, they will be removed from active instructor status until which time they attend and pass another ITW, in its entirety. For One Day Forum (ODF) instruction, the instructor must distribute IAAO’s evaluation form and provide the completed evaluations to IAAO Headquarters, Professional Development.
- D. All instructors, including in-state, regular, senior, & senior specialty instructors, are required to attend an Instructor Meeting at the annual conference or participate in an Instructor Meeting Webinar at least once every three years. If an instructor does not meet this requirement, they must either attend an Instructor Meeting at the annual conference or participate in an Instructor Meeting Webinar to regain his/her status of active instructor.
- E. There is no tenure for IAAO instructors. Reappointment depends on continued good teaching in the classroom and good standing with IAAO

The Director of Professional Development is allowed to approve a Senior Instructor to teach courses for which he/she has not attended an ITW. This would be allowed when there has been revisions or updates to the course/workshop, but not when the course/workshop has been a rewrite.

Revision	When material has been corrected to account for errors such as mathematical, grammar and formatting.
Update	When material has been changed or modernized to reflect more current procedures or value estimates.
Rewrite	When material has been substantially changed. A course/workshop will be considered as a rewrite when a contract has been issued by IAAO or IAAO has requested the material be rewritten. The contract can be on a fee or volunteer basis and would include any new courses/workshops. When an existing course or seminar is a "re-write" of the material, the developer or developers may present the instructor rollout.

When there is a rewrite of a course/workshop, **ALL** Instructors (In-state, Regular, Senior and Senior Specialty) have the following options to become certified on the new material:

- I. Attend an ITW on the course/workshop.
- II. Audit the course/workshop at no charge.
- III. Attend a course overview at the next IAAO Annual Conference following the rewrite.
- IV. Attend a Local Review: The IRC approved regional half-day sessions, much like that those held at the annual conference. These can be offered by local chapters or state coordinators and are instructed by previously certified instructors.
- V. Participate in a Webinar review of the updated course materials.

New IAAO Curriculum - When IAAO develops a course or workshop that is not already in its curriculum, the developer or developers of the course or workshop will conduct the rollout of the material. In the instances when the Education Sub-Committee has approved a new course or workshop, the Education Sub-Committee will designate the rollout presenter and notify the Instructor Relations Sub-Committee (IRSC) and the IRSC liaison of who the party is. New contracts by IAAO for new course development & workshops should address these requirements.

Instructor's qualifications for "new IAAO curriculum" as defined under the heading *New IAAO Curriculum*: An existing IAAO instructor can qualify to teach new IAAO curriculum by meeting any one of the below four requirements. The exam may be taken after the training or proctored according to IAAO rules and procedures. IAAO will provide the proctored exam at cost (expenses only) for each instructor attending the course overview, local review or webinar. Instructors have 12 months from the date of public notice on the IAAO website that a new course or workshop has been developed to meet one of the below requirements. If the instructor does not do so within this time frame, the instructor must attend and pass the exam for the course or workshop.

- I. Attend an ITW on the course/workshop and passing the final exam for the course or workshop.
- II. Attend a course overview at the next IAAO Annual Conference following the course development and passing the final exam for the course or workshop.
- III. Attend a Local Review by an already qualified instructor in the material and passing the final exam for the course or workshop.
- IV. Participate in a Webinar review of the updated course materials and passing the final exam for the course or workshop.

The Director and/or the Instructor Relations Sub-Committee also have the right to rescind such decisions if deemed appropriate.

V. Evaluations

The Director of Professional Development shall review all instructors annually.

- A. The IAAO Procedural Rules require that the Instructor Relations Sub-Committee train, coordinate, and monitor the quality of the instructor cadre. This “monitoring” takes place in the form of an annual overall performance rating.
- B. The Instructor Relations Sub-Committee has determined that all instructors will be evaluated based upon their student evaluations and pass rates in relation to the National Course Average. The normal acceptable range is determined by using +/- 1.5 standard deviation from the National Course Average. Any significant comments brought to the attention of the Professional Development Department staff from students, Education Coordinators and/or instructors will be included in the evaluation. By highlighting these comments we encourage the instructor to take appropriate action to remedy any problems.
- C. The Instructor Relations Sub-Committee may conduct evaluations, other than annually, in response to complaint(s) on an instructor. Before an evaluation is conducted, the Instructor Relations Sub-Committee will review the complaint(s) and determine if the complaint(s) merits any further review.
- D. If the Instructor Relations Sub-Committee does an evaluation resulting from a complaint(s), the following guidelines will be used:
 - 1. Instructor Relations Sub-Committee will conduct a conference call with the complainant(s) or conduct a follow-up by written correspondence to confirm the details of the complaint(s).
 - 2. The Instructor Relations Sub-Committee will conduct telephone interviews from randomly selected participants in the course/workshop relating to the complaint(s).
 - 3. The Instructor will be sent a written copy of the complaint(s) but names of the complainant(s) will be omitted. The instructor will have ten (10) days to respond back to the Instructor Relations Sub-Committee or request a conference call with the committee.
 - 4. The committee will review all the information and can take one of the following actions with the complainant(s) and instructor being notified in writing.
 - a) No action needed.
 - b) Written reprimand to the instructor. This would be a result of an improper action, not following IAAO policies and procedures, etc. The reprimand would be placed in the instructors file.
 - c) Written reprimand and require the instructor to recertify by attending an ITW before instructing again.
 - d) Instructors with significant problems may be asked to meet with a review committee comprised of the Chair of the Instructor Relations Sub-Committee, two Senior Instructors and the Director of Professional Development. Failure of the instructor to follow any actions by the Instructor Relations Sub-Committee or the review committee could result in the removal of instructor status.
- E. The IAAO Director of Professional Development will annually report to the Instructor Relations Sub-Committee on the status of all active IAAO instructors, including an evaluation of all approved active instructors.
- F. This evaluation will consider the student evaluations, school coordinator evaluations of the instructors, as well as the personal evaluation by the IAAO Professional Development Director. Also, pass rates are reviewed in relation to the National Course Average. The normal acceptable range is determined by using +/- 1.5 standard deviation from the National Course Average. Poor instructor performance may result in either temporary or permanent suspension of instructor status. The evaluation scheme is to be developed by the Director of Professional Development.

- G. Any instructors serving on the Instructor Relations Sub-Committee will be evaluated by the Chair of Professional Development or any representative from the Professional Development Committee the Chair appoints.
- H. The IAAO Instructor Relations Sub-Committee shall review existing guidelines biennially. The guidelines should include provisions for an annual review of the instructor evaluation process.
- I. The Instructor Relations Sub-Committee shall appoint an education counseling subcommittee composed of three senior instructors, one of whom shall be the Instructor Relations Sub-Committee chair and two others who will serve for three-year terms. They act for the Director of Professional Development in counseling and disciplinary actions as required.
- J. This model for ongoing instructor evaluation and review is not to be construed to limit the "on the spot" immediate action of the Director of Professional Development or Instructor Relations Sub-Committee to prevent damage to the integrity or reputation of the IAAO education system.

VI. Honorariums

IAAO instructors shall be paid an honorarium at the approved rate schedule effective January 1, 2014 (see below). Sponsors (Coordinators) are free to pay any negotiated compensation with an instructor for certified courses and workshops.

Flat fee for Senior Instructors:

- \$1,400 – One-Day Forum/Workshop
- \$2,200 – Two-Day Workshop
- \$2,600 – Two ½-Days Workshop
- \$2,900 – Three-Day Workshop
- \$3,600 – Four-Day Workshop
- \$4,000 – Five-Day Course

Flat fee for Regular Instructors:

- \$1,100 – One-Day Forum/Workshop
- \$1,800 – Two-Day Workshop
- \$1,900 – Two ½-Days Workshop
- \$2,200 – Three-Day Workshop
- \$2,500 – Four-Day Workshop
- \$3,000 – Five-Day Course

Expense Reimbursement

IAAO does not reimburse expenses for instructors. All personal expenses (travel, hotel, meals, etc.) must be paid for by the instructor.

Glossary



for Property Appraisal and Assessment

Second Edition

INTERNATIONAL ASSOCIATION *of* ASSESSING OFFICERS

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About International Association of Assessing Officers

The International Association of Assessing Officers (IAAO) is a nonprofit, educational, and research association. It is a professional membership organization of government assessment officials and others interested in the administration of the property tax. IAAO was founded in 1934, and now has a membership of more than 7,000 members worldwide from governmental, business, and academic communities.

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Published in the United States of America

Foreword

This most recent edition of the *Glossary for Property Appraisal and Assessment* reflects the changing technologies and needs that affect the assessment profession.

The original glossary, *Assessment Terminology*, was published in 1937, shortly after the founding of the National Association of Assessing Officers. In 1956, *Assessment Terminology* was revised and reissued. Originally published in 1997, the *Glossary for Property Appraisal and Assessment* was based on *Assessment Terminology* but had been expanded and updated. The publication was converted to an online resource from 2004 to 2013 that did not follow the traditional book format. This edition, has been converted back to the more traditional book format, but will remain a digital-only resource. Efforts have been made to expand the functionality of the book to allow printing of pages, adding annotations to personal copies and sharing definitions with colleagues.

Future plans for the glossary include making additional updates in 2014 and providing more frequent updates as terms are added or redefined.

Suggestions for glossary entries are encouraged and can be sent to:

Attn: Technical Standards Committee—Glossary

IAAO

314 W 10th St

Kansas City, Missouri 64104-1616

or to bennett@iaao.org

Chris Bennett
Director of Publications

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Responsibility for the current glossary resides with the Technical Standards Committee. The committee has been reviewing glossary terms since 2006 and plans a major revision in 2014. The 2013 committee members are Bill Marchand, Chair, Alan Dornfest, AAS, Michael Prestridge, Mary Reavey, Douglas Warr, AAS, Dennis Deegear, Christopher Bennett, Staff Liaison. Thank you also to Barbara Simmons for her editorial expertise.

Preface

This glossary is a compilation of terms gathered from numerous resources, primarily newer IAAO technical standards and textbooks. Changes in technology and assessment practices have prompted the addition of many new terms in recent years. This digital edition is intended to be a living document that can be updated frequently as new definitions are introduced.

A primary intent of using the e-format is to allow the glossary to be downloadable to user devices where it can be accessed without a continuous Internet connection.

The downloaded version will allow notations and comments to be added directly in the user's copy. Other features such as the ability to share pages and print portions of the document are also enabled. IAAO and the Technical Standards Committee hope you find this new format useful.

Bill Marchand

Bill Marchand, 2013–2014 Chair
Technical Standards Committee

Numeric

4-3-2-1 Rule—An empirical rule that ascribes 40 percent of the value of a standard lot (see **lot, standard**) to the quarter of the lot fronting on the street, 30 percent to the next quarter, 20 percent to the third quarter, and 10 percent to the rear quarter. *Compare Harper rule; Hoffman rule; one-third, two-thirds rule.* Note: Lots with a depth greater than the standard lot cannot be valued in accordance with this rule as stated above. The rule is sometimes altered by omitting the word “standard.” It thereby becomes applicable to extra deep lots but produces inconsistent results as applied to lots of varying depths.

65/35 Rule—Rule states that the value of a triangular lot with its base on the facing street will be approximately 65 percent of that of a rectangular lot of the same frontage and depth. The value of the triangular lot with its apex on the facing street will be 35 percent of that of a rectangular lot of the same base and depth.

A

AAS—See **Assessment Administration Specialist**.

Abandonment—The relinquishing of all rights and interests in real property, including any fixtures, with no intention to reuse or reclaim.

Abatement—(1) An official reduction or elimination of one’s assessed valuation after completion of the original assessment. (2) An official reduction or elimination of one’s tax liability after completion of the tax roll.

Absolute Ownership—Ownership of all real property rights and interests in a real estate parcel. See **fee simple**.

Absolute Value—The value of a number or expression regardless of its sign. For example, 3 and 3 (minus 3) both have an absolute value of 3. The mathematical symbol for absolute value is one vertical bar on each side of the number in question, for example, |3|

Abstract—To reduce a legal description of a property to another form; also, to identify a property from its legal description.

Abstract of Title—An abstract is a complete summary of all recorded documents affecting the title to a property. These documents include all conveyances, such as deeds or wills, and all legal proceedings relating to ownership of the property. Abstracts are arranged to show the history of ownership, describe the land and improvements, and give the name(s) of past and present owner(s).

Abstraction Method—Method of land valuation in the absence of vacant land sales, whereby improvement values obtained from the cost model are subtracted from sale prices of improved parcels to yield residual land value estimates. *Also called **residual land technique**.*

Acceleration Clause—A condition in a mortgage note or loan contract that allows the lender to demand immediate repayment of the entire balance if the contract is breached or other repayment conditions occur.

Access Right—The right of egress from and ingress to a property from an existing highway or street. See **bundle of rights**.

Account—A record of a particular type of transaction expressed in money and kept in the books of original entry.

Accountancy—The theory and practice of accounting, its professional responsibilities, and generally associated activities.

Accounting Records—The formal journals and ledgers, vouchers, invoices, correspondence, contracts, and other sources or support for such records; books of account.

Accounting Valuation—The historical money amount attaching to any asset or expense, generally representing cost.

Accrued—The gain or loss due to all causes. See **depreciation, accrued**.

Accuracy—The closeness of a measurement, computation, or estimate to the true, exact, or accepted value. Accuracy also can be expressed as a range about the true value. See **precision** and **statistical accuracy**.

Acknowledgment—A formal declaration attesting to the validity of the declarer's signature, usually made before an authorized public official or a notary public. The signing is a free and voluntary act.

Acquisition Cost—The cost used in accounting to represent the purchase price of an asset. If installation and other associated costs are included, the term “total acquisition cost” should be used. See **assessment—acquisition based**.

Acre—A land measure equal to 43,560 square feet, or 160 square rods.

Acreage—Unsubdivided land that is customarily measured in terms of acres rather than front feet or square feet. See **property use category**.

Active System—A system having its own source of electromagnetic radiation (EMR) such as a radar or an ultraviolet blacklight.

Actual Age—The actual number of years that have elapsed since the completed construction of an improvement; also referred to as historical age or chronological age.

Ad Valorem—According to value.

Ad Valorem Tax—A tax levied in proportion to the value of the thing(s) being taxed. Exclusive of exemptions, use-value assessment provisions, and the like, the property tax is an ad valorem tax.

ADA—Americans with Disabilities Act (1990).

Adaptive Estimation Procedure (AEP)—A computerized, iterative, self-referential procedure using properties for which sale prices are known to produce a model that can be used to value properties for which sale prices are not known. *Also called **feedback**.*

Addendum—A list or additional material added to a letter, document, contractual agreement, or the like.

Addition—(1) A term sometimes used to denote a subdivision. (2) An increase in the value of fixed assets due to the acquisition of a new property or the enlargement of an old one. *Compare **betterment**.*

Additive Model—A model in which the dependent variable is estimated by multiplying each independent variable by its coefficient and adding each product to a constant.

Address—(1) A location, expressed in terms of a conventional spatial reference scheme, at which a property or person may be found. (2) In a computer file, a specific juncture of circuits in computer machinery at which information is stored in the form of magnetic polarities. (3) The name a programmer uses to refer to such a juncture. Note: For a file of human-readable information, one must establish rules about whether and how to record various relevant addresses, including the situs address, owner's address, and mortgagee's address.

Adjustments—Modifications in the reported value of a variable, such as sale price. For example, adjustments can be used to estimate market value in the sales comparison approach by modifications for differences between comparable and subject properties. Note: Adjustments are applied to the characteristics of the comparable properties in a particular sequence that depends on the method of adjustment selected.

Adverse Land Use—A land use that decreases the value of nearby properties, usually because the adverse use is incompatible with the uses of the neighboring properties. A garbage dump near a residential neighborhood is an example of adverse land use.

Adverse Possession—The exclusive occupation and continuous possession of (another's) real property under an evident claim of title or right.

AEP—See **adaptive estimation procedure**.

Aerial—Relating to the air or atmosphere, being applicable in a descriptive sense to anything in space above the ground and within the atmosphere.

Aerial Film—A specially designed roll film supplied in many lengths and widths to fit aerial cameras. Emulsion types include panchromatic, infrared, color, and color infrared.

Aerial Photograph—A photograph of a part of the earth's surface taken by an aircraft-supported camera.

Aerial Photograph, Vertical—An aerial photograph made with the optical axis of the camera approximately perpendicular to the earth's surface and with the film as nearly horizontal as is practicable.

Affidavit—A written form of an affirmed or sworn statement.

After-Tax Cash Flow—Before-tax cash flow less income tax liabilities.

Age—See **chronological age**; **economic life**; **effective age**; and **historical age**.

Age/Life Method—A method of estimating accrued depreciation founded on the premise that, in the aggregate, a neat mathematical function can be used to infer accrued depreciation from the age of a property and its economic life. Another term is “straight-line depreciation” (see **depreciation, accrued**; and **depreciation method, straight-line**).

Agents of Production—See **factors of production**.

Aggregate Mean—See **weighted mean**.

Agreement—A general term describing a common view of two or more people regarding the obligations and rights of each with regard to a specific subject.

Agricultural Property—Improved or unimproved land that is devoted to or available for the production of crops and/or other agricultural products, livestock, and agricultural support buildings.

Air Rights—The right to use space above real estate.

Airborne Scanner—A scanner designed for use on aircraft or spacecraft in which the forward motion of the vehicle provides coverage normal to the scan direction.

Algorithm—A computer-oriented, precisely defined set of steps that, if followed exactly, will produce a prespecified result, for example, the solution to a problem.

Alienation—The transfer of title from one person to another.

Alienation Clause—A type of acceleration clause that calls for a debt under a deed or mortgage to be due in its entirety upon transfer of ownership from the secured party.

Alley Influence—(1) The effect of accessibility or proximity to a side or rear alley on the value of a lot or parcel. (2) The increment of value resulting from accessibility or proximity to a side or rear alley.

Allocation—See **land ratio method**.

Allocation by Abstraction—A method of separating a whole property value into land and improvement components. The appraiser estimates replacement cost new, subtracts an appropriate amount for depreciation, and subtracts the remainder from the whole property value to estimate the land value.

Allocation by Ratio—A method of separating a whole property value into land and improvement components, in which the appraiser develops proportions of land and improvement values for comparable properties and applies those proportions to the subject's whole property value.

Allocation Method—A method used to value land, in the absence of vacant land sales, by using a typical ratio of land to improvement value. *Also called **land ratio method**.*

Altitude—(1) The distance of a location above a reference surface. The most usual surface is sea level. (2) Height of sensor platform above a specified datum, usually above mean sea level.

Amendment—A change correcting an error or altering part of an agreement without changing the principal idea.

Amenity—A feature of an improvement that enhances its suitability for its basic use. A fireplace in a single-family residence is an amenity, as is covered parking at an apartment complex. By definition, amenities always increase value.

Amnesty, Tax—An act of pardon of tax liability by a legislative body.

Amortize—The process of repaying a loan or recovering a capital investment by means of a series of scheduled payments; typically includes interest charges and principal repayment in each of the scheduled payments.

Analog—(1) The form of data display in which values are shown in graphic form, such as curves. (2) A form of computing in which values are represented by directly measurable quantities, such as voltages or resistances. Note: Analog computing methods contrast with digital methods, in which values are treated numerically.

Ancillary Data—Subsidiary data used to define the area of interest, for example, topographic, administrative, or geologic data. Ancillary data may be digitized and merged with the primary image data to facilitate analysis.

Annex—To join a smaller, subordinate property to a larger or more dominant property.

Annuity—(1) The right to receive money or its equivalent in (usually) fixed equal amounts and at regular intervals for a definite or indefinite term. (2) A level, increasing, or decreasing stream of scheduled and predictable income or payment amounts.

Anticipated Use Method—A method used to appraise underdeveloped land. Expected improvements to the land are specified, and total development costs are estimated and subtracted from the projected selling price to give an estimate of the value of the undeveloped land.

Anticipation—See **principle of anticipation**.

Appeal—A process in which a property owner contests an assessment either informally or formally.

Apportionment—Distribution of portions of a state-assessed unit value to taxing jurisdictions.

Appraisal—(1) The act of estimating the money value of property. (2) The money value of property as estimated by an appraiser. (3) Of or pertaining to appraising and related functions, for example, appraisal practice, appraisal services. *Compare* **assessment**.

Appraisal, Acquisition—An appraisal to determine the market value of a property that is to be taken by eminent domain, so that the owner might be justly compensated.

Appraisal, Complete—The act or process of estimating value or an estimate of value performed without invoking the departure provision (USPAP).

Appraisal, Composite—An appraisal of an integrated property as a single entity rather than as a number of fractional parts. Note: A composite appraisal is usually made by capitalization of income, by the stock and debt technique, or by analysis of sales data. Logically, the term “unit appraisal” should be used to convey this meaning, but it is sometimes used, with resulting confusion, to mean an appraisal based on unit cost or unit value. *Compare* **appraisal, summation**.

Appraisal, Fractional—(1) An independent appraisal of a fractional part of a property; for example, the appraisal of a building separately from the land by use of the depreciated reconstruction cost method. (2) An appraisal of part of an integrated property without reference to the value of the whole. (3) An appraisal of a partial interest; an appraisal of the divided or undivided rights in property that represent less than the whole.

Appraisal, Limited—The act or process of estimating value or an estimate of value performed under and resulting from invoking the departure provision (USPAP).

Appraisal, Summation—An appraisal of a whole property by adding together two or more fractional appraisals, for example, the appraisal of a parcel of improved land by adding the estimated depreciated reproduction cost of the building to the estimated value of the land as determined by comparison with other land values in the community. Note: The result of a summation appraisal will generally differ somewhat from that of a composite appraisal.

Appraisal, Unit—A composite appraisal.

Appraisal Card, Building—A card used by an assessor or appraiser on which is carried a sketch or photograph of a building, a description of its location, a list of the principal factors affecting its reproduction cost and depreciation, and the calculations by which such cost and depreciation are estimated. Note: The building appraisal card is frequently combined with the land appraisal card into a single document. In such event, the combination card may be used for a composite appraisal as well as for a summation appraisal. *Also called a **property record card**.*

Appraisal Card, Land—A card used by an assessor or appraiser on which is carried a sketch or an adequate description of a parcel of land, a description of its location, a list of the principal factors affecting its market value, and the calculations by which the market value is estimated.

Appraisal Date—The date as of which a property's value is estimated.

Appraisal Emulation Model—The appraisal emulation model that follows the steps that an appraiser might follow in forming a value estimate (although not with the same insight or flexibility that a qualified appraiser brings to the assignment). The model selects

“comparable sales” using some standard criteria. It then rates those comparable sales by suitability, based on the physical and sales characteristics of each comparable sale, by adjusting the varying elements (much as is done on an appraisal form); the model then calculates an estimate of value.

Appraisal Foundation, The—The organization authorized by the United States Congress as the source of appraisal standards and appraiser qualifications.

Appraisal Methods—The three methods of appraisal, that is, the cost approach, income approach, and sales comparison approach.

Appraisal Practice—The work or services performed by appraisers, comprising three activities: appraisal, review, and consulting (USPAP).

Appraisal Principles—The economic concepts underlying appraisal. *See under principle of: anticipation, balance, change, conformity, contribution, and substitution. See competition; demand; highest and best use; and variable proportions, law of.*

Appraisal Ratio—(1) The ratio of the appraised value to an indicator of market value. (2) By extension, an estimated fractional relationship between the appraisals and market values of a group of properties. *See level of appraisal.*

Appraisal Ratio Study—A ratio study using independent expert appraisals as indicators of market value.

Appraisal Report—The oral or written communication of a completed appraisal.

Appraisal-Sale Price Ratio—The ratio of the appraised value to the sale price (or adjusted sale price) of a property; a simple indication of appraisal accuracy.

Appraisal Standards Board—The division of The Appraisal Foundation that develops, publishes, interprets, and amends the Uniform Standards of Professional Appraisal Practice on behalf of appraisers and users of appraisal services.

Appraise—To make an estimate of value, particularly of the value of property.

Appraised Value—The estimate of the value of a property before application of any fractional assessment ratio, partial exemption, or other adjustments.

Appraiser—One who estimates the value of property; more commonly, one of a group of professionally skilled persons holding themselves out as experts in valuation.

Appraiser Licensing and Certification—A procedure whereby appraisers gain permission from the state to practice without supervision by demonstrating appropriate prelicensing skills and by agreeing to maintain and improve their skills and to conduct themselves in accordance with professional standards at all times.

Appraiser Qualifications Board—The division of The Appraisal Foundation that establishes education, experience, and other criteria for licensing, certification, and reclassification of qualified appraisers.

Appreciation—Increase in value of a property, in terms of money, from causes other than additions and betterments. For example, a farm may appreciate if a shopping center is built nearby, and property of any sort may appreciate as a result of inflation. *Contrast depreciation.*

Appurtenance—In appraisal, an appurtenance is any addition to a property that becomes a part of that property. Generally, an appurtenance differs from a fixture in that the fixture was once personal property.

Area, Blighted—An area under the pressure of deleterious forces resulting in increasing neglect and decay of physical improvements and decreasing social and economic values.

Area, Floor—See **floor area of building**.

Area, Ground—See **ground area of building**.

Area Coverage—Complete aerial photographic coverage of an area by conventional photography with parallel flight lines and stereographic overlap between exposures in the line of flight.

Arithmetic Mean—See **mean**.

Arm's-Length Transaction—(1) A sale between a willing buyer and a willing seller that are unrelated and are not acting under duress, abnormal pressure or undue influences. (2) A sale between two unrelated parties, both seeking to maximize their positions from the transaction.

Array—An ordered arrangement of data, such as a listing of sales ratios, in order of magnitude.

Assemblage—The assembling of adjacent parcels of land into a single unit. *Compare* **plottage**.

Assembly Value—The excess of the value of a large parcel of land formed from a number of smaller parcels over the sum of the values of the unassembled parcels.

Assess—To value property officially for the purpose of taxation.

Assessed Value—(1) A value set on real estate and personal property by a government as a basis for levying taxes. (2) The monetary amount for a property as officially entered on the assessment roll for purposes of computing the tax levy. Assessed values differ from the assessor's estimate of actual (market) value for three major reasons: fractional assessment ratios, partial exemptions, and decisions by assessing officials to override market value. The process of gathering and interpreting economic data to provide information that can be used by policymakers to formulate tax policy.

Assessment—(1) In general, the official act of determining the amount of the tax base. (2) As applied to property taxes, the official act of discovering, listing, and appraising property, whether performed by an assessor, a board of review, or a court. (3) The value placed on property in the course of such act.

Assessment, Acquisition-Based—One of a small number of non-market assessment valuation standards. A property is placed on the tax roll at its acquisition cost; that value is not changed until the next qualifying sale, as, for example, under California's Proposition 13, adopted as an amendment to the state constitution.

Assessment, Arbitrary—(1) Assessment without consideration of such information as is reasonably available to the assessor. (2) Assessment according to the "best knowledge and belief" of the assessor when a person fails to list property in accordance with law

(a usage not recommended). Note: Although this term is commonly used by assessors in the second of these senses to refer to a legal assessment, the courts commonly use it in the first sense to mean an illegal assessment. *Compare* **assessment, doomage**.

Assessment, Area-Based—One of a small number of nonmarket assessment valuation standards. A property is placed on the tax roll at a value reflecting the land area or the surface area (floor area) of an improvement.

Assessment, Central—An original assessment made by an officer or body whose jurisdiction with respect to the property so assessed extends over two or more local assessment districts.

Assessment, Doomage—An assessment made without adequate information when a taxpayer fails to comply with laws requiring him or her to list his or her property for taxation. *Compare* **assessment, arbitrary; assessment, penalty**.

Assessment, Fractional—Assessment at a fraction of full value, or of such other standard as may be fixed by law. Note: Fractional assessment may constitute underassessment, or it may be sanctioned by law as, for example, in Alabama, where all property is legally assessable at 60 percent of full value, and in Minnesota, where various classes of property are assessable at various percentages of full value.

Assessment, Jeopardy—An assessment made out of the regular routine when there is reason to believe that adherence to such routine will jeopardize the collection of taxes on the property so assessed.

Assessment, Original—(1) The official act of the assessor in discovering, listing, and appraising property for tax purposes up to the point at which the assessment roll is first filed for public inspection. (2) The act of assessment which first places a property on the assessment roll for the particular assessment date; the agency that performs this act is the original assessing agency (or jurisdiction). (3) The valuation at which property is listed in the assessment roll at the time it is first filed for public inspection.

Assessment, Penalty—An additional assessment, usually a given percentage of the assessment otherwise applicable, intended as a penalty for failure to comply with specified legal requirements.

Assessment, Retrospective—An assessment made after the close of a tax year on property that was legally assessable, but was not listed for taxation during such year.

Assessment, Self—A term applied to the assessment process, or to certain phases of the process, when the taxpayer files a return purporting to show the proper tax base on which to compute his or her tax liability, which return is accepted as a matter of law or of practice at its face value.

Assessment, Special—A compulsory charge imposed by a government on the owners of a selected group of properties to defray, in whole or in part, the cost of a specific improvement or service that is presumed to be of general benefit to the public and of special benefit to the owners of such properties. Synonymous with betterment tax. Note: Some authorities conceive of a special assessment as a nonrecurring charge, but such a concept is inapplicable to the charges made for nuisance abatement, which are now commonly called special assessments.

Assessment, Standardized—A system of property tax assessments based largely on the uniform application of established rules and principles. Note: Standardized assessment is usually manifested by the use of land value maps, depth and corner influence tables, building classification and cost schedules, reproduction cost and depreciation schedules, and the like.

Assessment, Statutory—Valuation of a property in a specified use at an amount specified by law (for example, a golf course will be assessed at ten dollars per acre); most often used for mineral properties and open space.

Assessment, Unit—An assessment involving a composite appraisal of a property, as distinguished from an assessment involving a summation appraisal or a fractional appraisal. *Compare* **assessment, central**. Note: Unit assessment is generally limited to specified properties extending beyond the confines of a local assessment district, but it is also applicable to properties wholly within a local assessment district.

Assessment Administration—Management and oversight of assessment programs (see **assessment**).

Assessment Administration Specialist (AAS)—A professional designation conferred by the International Association of Assessing Officers.

Assessment-Appraisal Ratio—The ratio of the assessed value of a property to an independent appraisal.

Assessment Base—The total assessed value of all property within a designated area; the property tax base.

Assessment Date—The status date for tax purposes. Appraised values reflect the status of the property and any partially completed construction as of this date.

Assessment District—The administrative area in which the officer or public body responsible for making the original assessment has jurisdiction. Note: The local assessment district is usually coterminous with a county, township, or city, but the state itself may be the assessment district for some types of property.

Assessment Equity—The degree to which assessments bear a consistent relationship to market value.

Assessment Jurisdiction—A geographical area within which an assessing officer has the responsibility to determine the assessed value of property for ad valorem taxation.

Assessment Level—The common or overall ratio of assessed values to market values.

Assessment Maps—See **cadastral map**.

Assessment Period—(1) The period beginning with the assessment date and ending with the date on which the assessor is required to complete the original assessment. (2) Sometimes used synonymously with assessment year.

Assessment Progressivity (Regressivity)—An appraisal bias such that high-value properties are appraised higher (or lower) than low-value properties in relation to market values. See **price-related differential**.

Assessment Ratio—(1) The fractional relationship an assessed value bears to the market value of the property in question. (2) By extension, the fractional relationship the total of the assessment roll bears to the total market value of all taxable property in a jurisdiction. See **level of assessment** and **fractional assessments**.

Assessment Ratio Study—An investigation intended to determine the assessment ratio and assessment equity.

Assessment Review—The reexamination of assessments by a governmental agency that has the authority to alter individual assessments on its own motion. *Compare* **appeal**.

Assessment Roll—The basis on which the property tax levy is allocated among the property owners in a jurisdiction with taxing powers. The assessment roll usually lists an identifier for each taxable parcel in the jurisdiction, the name of the owner of record, the address of the parcel or the owner, the assessed value of the land, the assessed value of the improvements, applicable exemption codes, and the total assessed value. Synonyms include “cadastre,” “list,” “grand list,” “abstract of ratables,” and “rendition.”

Assessment Year—(1) A year beginning on the day after the assessment date and ending on the assessment date in the calendar year next following. (2) The 365 days beginning with the appraisal date.

Assessment-Sale Price Ratio—The ratio of the assessed value to the sale price (or adjusted sale price) of a property.

Assessor—(1) The head of an assessment agency; sometimes used collectively to refer to all administrators of the assessment function. (2) The public officer or member of a public body whose duty it is to make the original assessment.

Asset—Any owned physical object (tangible) or right (intangible) having value; a source of wealth, expressed in terms of its cost, depreciated cost or, less frequently, some other value.

Asset, Current—An asset that the owner expects to sell, exchange, consume, or otherwise dispose of at relatively short intervals.

Asset, Fixed—Any asset other than a current asset; for example, buildings, machinery, patents, and stock of subsidiary corporations.

Assign—To transfer property or a specified interest in property.

Assignment—The transfer of any personal or real property or any rights in a property, by, for example, a deed, lease, or mortgage.

Assumption Fee—A lender’s fee for processing records when a new buyer assumes an existing loan.

Assumption of Mortgage—An agreement in which the buyer accepts liability for repayment of an existing debt. Unless the seller is released, he or she remains liable for the payment of such debt.

Attachment—Property seizure by a court order.

Attestation Clause—The witness clause in a document that affirms the document is properly executed.

Attribute—Characteristic of a property.

Audit—A systematic investigation or appraisal of procedures or operations for the purpose of determining conformity with specifically prescribed criteria.

Audit, Performance—An analysis of an organization to determine whether or not the quantity and quality of work performed meets standards. Ratio studies are an important part of performance audits of an assessing organization.

Audit, Procedural—An examination of an organization to determine whether established or recommended procedures are being followed.

Audit Program—The procedures undertaken or particular work done by an accountant in conducting an examination.

Audit Trail—A set of records of the changes made to another set of records.

Automated Valuation Model (AVM)—A mathematically based computer software program that produces an estimate of market value based on market analysis of location, market conditions, and real estate characteristics from information that was previously and separately collected. The distinguishing feature of an AVM is that it is a market appraisal produced through mathematical modeling. Credibility of an AVM is dependent on the data used and the skills of the modeler producing the AVM.

Average—The arithmetic mean.

Average Absolute Deviation—See **average deviation**.

Average Deviation—The arithmetic mean of the absolute deviations of a set of numbers from a measure of central tendency, such as the median. Taking absolute values is generally understood without being stated. The average deviation of the numbers 4, 6, and 10 about their median (6) is $(2 + 0 + 4) \div 3 = 2$. The average deviation is used in computing the coefficient of dispersion (COD).

B

Bailment—A transaction in which personal property is delivered by its owner (the bailor) to a second party (the bailee) into whose possession it is put for safekeeping or for some other temporary purpose or use with no intention that title shall pass to the second party.

Balance—See **principle of balance**.

Balance Sheet—An accounting statement of financial position of any economic unit, disclosing as of a given moment its assets, liabilities, and equity.

Balloon Mortgage—A mortgage not fully amortized at maturity and requiring a lump sum (or balloon) payment.

Baltimore Rule—Synonymous with “Bernard rule.”

Band—A wavelength interval in the electromagnetic spectrum. For example, in Landsat, the bands designate specific wavelength intervals at which images are acquired.

Band-of-Investment Analysis—A perspective on (and a technique for estimating) the discount rate. The discount rate is viewed as having two components, each weighted in proportion to typical financing terms for properties of the type in question. For example, if 75 percent loans are available at 9 percent interest and investors are known to seek a 14 percent return on equity, then the discount rate is 10.25 percent, that is, $(0.75 + 0.09 = 0.0675) + (0.25 + .14 = 0.0350) = 0.1025 = 10.25$ percent.

Base Line—A survey line running due east and west through the initial point of a principal meridian, from which township lines are established by the government survey.

Base-Home Approach—A method of appraising single-family residential properties whereby each residence to be appraised is compared with one having common or typical characteristics and of known value, called the base home, and differences between the two in terms of condition, size, number of garages, and the like are weighted by the appraiser in the determination of the value of the property to be appraised.

Base-Lot Method—A method of appraising land parcels whereby each parcel to be appraised is compared with a parcel having common or typical characteristics and of known value, called the base lot, and differences between the two in terms of location, size, shape, topography, and the like are analyzed by the appraiser in estimating the value of the lot to be appraised.

Bearing—The angle between a given line and the direction in which a magnetic needle points. Note: The bearing of a line is expressed in terms of quadrants and degrees; for example, N 50 degrees E; S 10 degrees W.

Bearing Wall—A wall that supports a portion of a structure.

Before-Tax Cash Flow—Amount of income remaining after deducting for operating expenses and debt service, but before income tax on operations is deducted.

Benchmark—(1) A term used in land surveying to mean a known point of reference. (2) In property appraisal, a property of known value and of known effective age and replacement cost. (3) By extension, a model property to be used in determining by comparison the grade or quality class of other properties.

Beneficial Estate—An estate of which the right to possession has not yet passed.

Beneficial Interests—The property interests resulting from equitable ownership in a property rather than legal ownership; for example, the interests of the beneficiary of a trust.

Beneficiary—(1) The person for whose benefit property is held in trust. (2) The person to whom the proceeds of an insurance policy are payable upon the happening of the event insured against or the nonhappening of the assured event. See **owner, equitable**.

Berm—A mound of earth that diverts or controls surface drainage flow, marks property boundaries, or alters topography.

Bernard Rule—A term generally applied to an empirical rule of appraising a corner lot by adding together the value ascribable to it as an inside lot on the main street and the value ascribable to it as an inside lot on the side street. Sometimes known as the Lindsay-Bernard or Baltimore rule. *Compare* **Zangerle curve**.

Beta—A measure of the volatility of a particular stock compared to the stock market as a whole.

Betterment—An expenditure on a fixed asset that increases its value, which, under accepted accounting procedures, is reflected in an equivalent increase in the asset's book value, and that does not result in the acquisition of a new property or the enlargement of an old one. *Compare* **addition; maintenance; improvements**.

Betterment Tax—*See* **assessment, special**.

Bias—A statistic is said to be biased if the expected value of that statistic is not equal to the population parameter being estimated. A process is said to be biased if it produces results that vary systematically with some factor that should be irrelevant. In assessment administration, assessment progressivity (regressivity) is one kind of possible bias.

Bill and Hold Goods—A type of inventory that has been invoiced but not shipped from the seller to the buyer.

Binary Variable—(1) Binary variables are qualitative data items that have only two possibilities—yes or no (for example, corner location). (2) A variable for which only two values are possible, such as results from a yes-or-no question, for example, Does this building have any fireplaces? Used in some models to separate the influence of categorical variables. Also called a **dichotomous variable** or a **dummy variable**. *See* **continuous variable; discrete variable**.

Binding Requirement—All or part of a standards rule of USPAP from which departure is not permitted.

Blanket Mortgage—A mortgage covering more than one property; used in, for example, subdivision development and cooperative apartment ownership.

Blended Model—A model where more than one modeling technique is used in deriving the estimate of value. Typically, the technique involves running a hedonic model and a repeat sales index. The results are then compared and evaluated. Based on each result, the blended model reports a final estimate of value. In addition to the hedonic model and repeat sales index, many blended models also include the results of a tax-assessed value model.

Block—An urban area, usually consisting of several lots, enclosed on all sides by public streets or by public streets and a river, a railroad right-of-way, or other more or less permanent boundary. Sometimes called a “Square.”

Block Face—The long edges of two city blocks that adjoin a street for the length of one block.

Blueprint—A detailed plan used as a guide by workers on a construction project.

Board of Appeals—A public body (other than a court) charged with the duty of hearing and deciding appeals taken by taxpayers or tax districts on assessments established by public officers or bodies other than the courts. Synonymous with “Board of Tax Appeals.” Note: The decisions of such a board are subject to further review by the courts on matters of law, but its findings are often made conclusive as to matters of fact. *Compare* **board of equalization; board of review**.

Board of Equalization—A public body (other than a court) having jurisdiction over two or more assessment districts which together make up a single tax district, charged with the duty of examining the assessment rolls of several assessment districts, and empowered, on appeal or on its own initiative, to revise assessments by district totals and/or by totals for particular classes of property. *Compare* **board of appeals; board of review**. Note: A board of equalization may also be a board of review.

Board of Review—(1) A public body (other than a court) having jurisdiction over one or more assessment districts, charged with the duty of examining the assessment roll or rolls, and empowered, on appeal or on its own initiative, to revise individual assessments (preferred). (2) Broadly, any such board or any board of appeals or board of equalization.

Board of Revision—See **board of review**.

Bond, Loan—A written instrument, under seal, evidencing a participating interest in an obligation of a borrower and containing a formal promise to pay a sum certain (the par or face value) at a fixed future date (the date of maturity), with interest payable periodically at a fixed rate. Note: This is the type of bond ordinarily referred to in the phrase “stocks and bonds.” There are a few exceptional bonds outstanding that have no date of maturity or that bear interest at a rate varying with the issuer’s income or with the general price level.

Book Depreciation—See **depreciation, book**.

Book Value—See **value, book**.

Boot—Any asset or liability made part of a real property exchange to equalize the value of the realty exchanged. Examples are debt incurred before the exchange, and purchase-money mortgages originating within the exchange.

Bootstrap—A computer-intensive method of statistical inference that is based on a repeated resampling of data to provide more information about the population characteristics. The bootstrap is a data-driven procedure that is particularly useful for confidence interval approximation when no traditional formulas are available or the sample has been drawn from a population that does not conform to the normal distribution.

Boundaries—The physical and/or man-made lines that define a parcel, subdivision, neighborhood, or district.

Breach of Contract—The failure to perform a contract, in whole or in part.

Breakdown Method—See **observed condition breakdown method**.

British Thermal Unit (BTU)—A unit of heat required to raise one pound of water one degree Fahrenheit.

Brownfield—An industrial or commercial site that is abandoned or underused because it suffers from real or perceived continuing contamination.

BTU—See **British Thermal Unit**.

Building, Standard—A building that conforms precisely to the specifications of some one of the categories in the building classification schedule or the cost schedule.

Building Capitalization Rate—A building capitalization rate is the sum of the recapture and return rates on an income-producing property. The rate applies only to the improved portion of a property.

Building Classification Schedule—A table giving standard specifications of a number of different typical buildings, classified according to use (such as one-family dwelling or office building), type of construction (such as wood frame or steel frame), exterior wall materials (such as brick or stone), and other factors affecting reproduction cost.

Building Cost Schedule—A table giving approximate reproduction costs per cubic foot, per square foot of floor area, or per square foot of ground area for each of the standard buildings in the building classification schedule. Note: The building cost schedule must be supplemented by cost schedules for parts of a building, such as an oil heating system or air-conditioning system, to take care of situations in which a building has specifications differing in some detail from those of the standard building.

Building Residual Technique—A capitalization technique used when land value is known and residual income to the building or improvement is capitalized to obtain the building or improvement value.

Build-up Method—The build-up method yields an overall capitalization rate from two components. The building capitalization rate and the land capitalization rate are weighted by the percentage of property value each represents and then added together to yield an overall rate.

Bullet Loan—Gap financing offered when a construction loan has expired but permanent financing has not yet been found.

Bundle of Rights—The six basic rights associated with the private ownership of property: right to use; sell; rent or lease; enter or leave; give away; and refuse to do any of these.

Business Assets—Tangible and intangible resources that are employed by a business enterprise in its operation.

Business Enterprise—A commercial, industrial, or service organization pursuing an economic activity.

Business Enterprise Value—A term applied to the concept of an intangible, nonrealty component of a property's value probably ascribable to supramarginal management competence. Different from goodwill and going-concern value.

Business Equity—The interests, benefits, and rights inherent in the ownership of a business enterprise or a part thereof in any form (including but not necessarily limited to capital stock, partnership interests, cooperatives, sole proprietorships, options, and warrants).

Business Premises—One type of situs that represents the more or less permanent location of personal property that is highly mobile in nature.

C

Cadastral Map—A scale map displaying property ownership boundaries and showing the dimensions of each parcel with related information such as parcel identifier, survey lines, and easements. Annotations on recent sale prices and land value are sometimes added.

Cadastral Mapping Specialist (CMS)—A professional designation conferred by the International Association of Assessing Officers.

Cadastre (or Cadaster)—A term commonly used in Europe to denote an official register or inventory of all lands and/or buildings, giving the area, location, owner, and either the value or estimated gross or net yield of each. Note: This list remains substantially unchanged for a number of years, except for names of owners, and serves more or less the same purpose as an assessment roll in the United States.

CAE—See **Certified Assessment Evaluator**.

Calibration—The process of estimating the coefficients in a mass appraisal model.

CAMA—See **computer-assisted mass appraisal**.

Capital—(1) A stock of wealth. (2) A stock of wealth other than land. (3) A stock of wealth set aside for the production of additional wealth. (4) The assets of a business, both tangible and intangible. (5) The total equity of the owners in the assets of a business. (6) That portion of the equity of the owners in the assets of a business concern that represents the money or money's worth invested by the owners with the express intention that it should remain permanently in the business (preferably "capital stock" if a corporation). Note: This term should not be used without qualification unless it be defined or its meaning made clear by the context.

Capital, Fixed—See **asset, fixed**.

Capital, Invested—(1) The full equity of the owners of a business in the assets of a business concern, as represented by capital, surplus, undivided profits, and any reserves that may reasonably be expected to accrue to the owners (preferred). (2) Occasionally used in a broader sense to include the amount invested in the concern not only by its owners, but also by some or all of its creditors.

Capital, Moneyed—An indefinite term generally used in connection with bank taxation and interpreted to include substantially all money and credits and all shares of stock in financial corporations. (Term not recommended for use.)

Capital Asset Pricing Model—A method for measuring the long-term cost of capital for a particular stock.

Capital Assets—(1) Long-term assets, intended to be permanent, used to produce income, for example, machinery, equipment, land, and buildings. (2) In accounting, the readily convertible or liquid assets, as of a certain date, of a corporation (for example, cash, merchandise inventories, and accounts receivable) not intended for sale, consumption, or conversion to cash during normal business operations.

Capital Expenditure—Cash investments to acquire or improve an asset that will have a life of more than one year; as distinguished from cash outflows for expense items normally considered as part of the current operations.

Capital Gain—The profit realized through the sale of a property if the sale price of that property exceeds the cost of acquisition and of any improvements the seller has added.

Capital Market—The interaction of buyers and sellers as they buy and sell long-term financial instruments, such as mortgages, bonds, and stock.

Capital Structure—(1) The manner in which a firm is financed, that is, the amount and kind of equity and debt that satisfies the need for funds. (2) The financing mix of debt and equity. Note: Capital structure may be based on book values or market values.

Capitalization—The phenomenon whereby one or more events of economic consequence expected to happen in the future exert an economic effect on values, processes, and decisions in the present. Specifically, the conversion of expected income and rate of return into an estimated present value in the income approach to value. Property taxes, anticipated changes, and land-related government services may also be capitalized. See **yield capitalization**.

Capitalization of Ground Rent—Method of estimating land value in the absence of comparable sales; applicable where there is an income stream; for example, to farmland and commercial land leased on a net basis.

Capitalization of Income—The act of determining the present worth of anticipated income, especially when anticipated income is assumed to be equal to past income from the same source. See **discounting**.

Capitalization of Income Method—Method of estimating accrued depreciation similar to the sales comparison approach except that estimated values (appraisals) based on the income approach are used instead of comparable sales. Reliability depends on accurate data and appropriate methods.

Capitalization of Taxes—The act of determining the present worth of anticipated taxes on a property and adjusting the value of the property in accordance with such determination. Note: The value of the property may be adjusted either downward or upward, depending on whether the present worth of the anticipated taxes is greater or less than their present worth as reflected in previous valuations of the property. For example, if taxes are decreased and other factors remain equal, the value of the property is increased by the present worth of the estimated excess of the old taxes over the new, and the decrease in taxation is said to be capitalized.

Strictly speaking, taxes are capitalized as soon as they are taken into account in placing a capital value on property; some authorities, however, speak of taxes being capitalized only when a property is sold at a price that allows for them.

Capitalization Rate—Any rate used to convert an estimate of future income to an estimate of market value; the ratio of net operating income to market value.

Capitalized Leased Property—Property included on the company books under capital leases. Capital leases are leases that are effectively considered to be sales under Generally Accepted Accounting Principles (GAAP).

Capitalized Value—The value of a property estimated by the income approach to value.

Cash Discount—A discount of a billed amount if paid within a specified period.

Cash-Equivalent Sale Price—An indicator of market value that is a refinement over the raw sale price, in that the effects of unusual financing arrangements and extraneous transfers of personal property have been removed. See **adjusted sale price**.

Cash Flow—Amount of money left after subtracting operating expenses and debt service from rents collected. Before-tax cash flow (also called “cash throw-off”) signifies that income tax effect has not been considered; after-tax cash flow includes income tax savings generated by ownership.

Cash Flow Analysis—A study of the anticipated movement of cash into or out of an investment.

Cash Lease—A cash lease is a written document transferring from one owner to another party the right to live in or to use property for a specified period of time for a specified amount of money.

Cash Throw-Off—See **cash flow**.

Categorical Variable—A variable summarizing more complex qualitative judgments by assigning each to a category or giving each a rating. For example, quality of construction might be categorized as poor, fair, average, or good, or assigned a rating from 1 to 4. The categories might then be scaled by assigning a value of 100 percent to the average category and values of 60 percent and 120 percent to the extremes of poor and good.

Caveat Emptor—"Let the buyer beware." A common maxim stating that the buyer purchases at his or her own risk.

Central Meridian—The central line of longitude used as the basis for the construction of many map projections. An example would be the meridian at the center of each universal transverse Mercator zone, which is numbered 500,000 meters and used as the reference for east-west measurements within the zone.

Central Processing Unit (CPU)—The basic part of a computer. Contains circuitry necessary to interpret and execute program instructions.

Central Tendency—(1) The tendency of most kinds of data to cluster around some typical or central value, such as the mean, median, or mode. (2) By extension, any or all such statistics. Some kinds of data, however, such as the weights of cars and trucks, may cluster about two or more values, and in such circumstances, the meaning of central tendency becomes unclear. This may happen in ratio studies when two or more classes of property are combined.

Central Tendency, Measure of—A single point in a range of observations around which the observations tend to cluster. The three most commonly used measures of central tendency are the mean, median, and mode.

CERCLA—The Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended by the Superfund Amendment and Reauthorization Act (SARA) of 1986; authorizes the "superfund" administered by the Environmental Protection Agency (EPA).

Certificate of Deposit (CD)—A time deposit in a bank or savings institution that carries a fixed

rate of interest and a penalty for withdrawal before maturity.

Certificate of Redemption—The evidence of buying back or redeeming a property by the owner after loss through a judicial sale.

Certificate of Sale—A certificate, issued to the buyer at a judicial sale, that entitles the buyer to a deed upon confirmation of the sale by the court or if the property is not redeemed within a specified time.

Certificate of Title—A document that states that the title to the property is believed to be clear based on the examination of the abstract of title for the property.

Certified Assessment Evaluator (CAE)—A professional designation conferred by the International Association of Assessing Officers.

Certified Public Accountant (CPA)—Accountants who, having met the statutory requirements of a state and having been registered or licensed to practice public accounting, are permitted by the state to call themselves “certified public accountants” and use the initials “CPA” after their names.

Certiorari, Writ of—An order issued by a superior judicial or quasi-judicial body requiring an inferior judicial or quasi-judicial body to certify to the superior body the records of a case for judicial review.

Cestui Que Trust—A beneficiary of property held in trust.

Chain—A land measure of sixty-six feet or four rods or 100 links.

Change—The tendency of the social and economic forces affecting supply and demand to alter over time, thus influencing market value.

Change Principle—See **principle of change**.

Chart of Accounts—A list of accounts systematically arranged, applicable to a specific concern, giving account names and numbers.

Chattel—Tangible personal property. See **property** and **mortgage, chattel**.

Chattel Mortgage—See **mortgage, chattel**.

Check Digit—An extra digit used for the purpose of performing a check. For example, using X and 0 to indicate even divisibility or nondivisibility by 2 would result in the sequence of numbers 1, 2, 3, 4 being represented as 10, 2X, 30, 4X. Computer systems generally have a number of such checks built in to ensure that the machine made no errors in writing or reading data, the data entry clerk did not transpose digits or leave out records, and so on.

Chi-Square—A particular statistic, and a particular frequency distribution associated with it, of interest in inferential statistics. (Chi, a Greek letter, is symbolized by χ).

Chronological Age—The number of years elapsed since an original structure was built. Synonyms are actual age and historical age. *Contrast with effective age.*

Circuit Breaker—For qualifying property owners, a credit or rebate of specified amounts of property taxes incurred whenever such taxes exceed specified percentages or amounts of household income. In instances where renters are included, rent or rent equivalents substitute for property taxes.

Class—A set of items defined by common characteristics. (1) In property taxation, property classes such as residential, agricultural, and industrial may be defined. (2) In assessment, building classification systems based on type of building design, quality of construction, or structural type are common. (3) In statistics, a pre-defined category into which data may be put for further analysis. For example, ratios may be grouped into the following classes: less than 0.500, 0.500 to 0.599, 0.600 to 0.699, and so forth.

Classical Income Approach—The classical income approach uses the IRV formula (Income = Rate + Value) in order to convert present and future benefits of property ownership into an indication of the property's present value. In its simplest form, it requires an appraiser to (1) determine net annual income, (2) determine the capitalization rate, and (3) capitalize income into an estimate of value. See **income approach**.

Classification—(1) The act of segregating property into two or more classes for the application of different effective tax rates by means of one or more special property taxes (see **tax, special property**) or a classified property tax system. For a representative scheme, see

property use category. (2) In a geographic information system, the process of assigning individual pixels of a multispectral image to categories, generally on the basis of spectral reflectance characteristics.

Classified Property Tax System—(1) A system intended by law to tax various kinds of property at different effective tax rates. Thus, two different kinds of property worth the same amount of money have different tax bills. Although this could be done by applying different tax rates to different kinds of property that share a common assessment ratio, the usual approach is to apply a uniform tax rate to all properties and establish by law what the assessment ratio should be for each class of property. (2) Loosely, by extension, a set of assessment practices that has this result contrary to laws requiring uniformity.

Client—Any party for whom a fee appraiser performs a service.

Closing—The act of finalizing a real estate transaction that executes and delivers mortgage or property title documents.

Closing Costs—Settlement fees and expenses incurred in transferring property ownership that are paid at the real estate closing.

Closing Statement—A listing of incurred closing costs of the buyer and seller in closing a real estate transaction.

Cloud on Title—Any valid claim, encumbrance, or lien that may impair the title to real property.

CMS—See **Cadastral Mapping Specialist**.

COD —See **coefficient of dispersion**.

Coding—(1) The act of reducing a description of a unique object, such as a parcel of real estate, to a set of one or more measures or counts of certain of its characteristics, such as square footage, number of bathrooms, and the like. (2) Encoding, a related term, is usually used to refer to the act of translating coded descriptions useful to human beings into a form that can be processed by computers. (3) Coding is sometimes also used to refer to the writing of instructions that direct the processing done by computers.

Coefficient—(1) In a mathematical expression, a number or letter preceding and multiplying another quantity. For example, in the expression, $5X$, 5 is the coefficient of X , and in the expression aY , a is the coefficient of Y . (2) A dimensionless statistic, useful as a measure of change or relationship; for example, correlation coefficient. See **coefficient of dispersion** and **coefficient of variation**.

Coefficient of Concentration—The percentage of observations falling within a specified percentage (say, 15 percent) of a measure of central tendency.

Coefficient of Determination (R^2)—A statistic that characterizes two or more sets of numbers. The coefficient of determination, when multiplied by 100, gives the percentage strength of the (linear) relationship between or among the sets of numbers. (See **correlation**.) For two variables, the coefficient of determination and the square of the correlation coefficient are identical; for three or more variables, the coefficient of determination measures the strength of the relationship between the dependent variable and all the independent variables combined.

Coefficient of Dispersion (COD)—The average deviation of a group of numbers from the median expressed as a percentage of the median. In ratio studies, the average percentage deviation from the median ratio.

Coefficient of Price Related Bias (PRB)—The PRB indicates the percentage by which assessment ratios change whenever values are doubled or halved. For example, a PRB of $-.03$ would mean that assessment levels fall by 3% when value doubles. The PRB should range between -0.05 and $+0.05$. PRBs outside the range of -0.10 to $+0.10$ are considered unacceptable.

Coefficient of Variation (COV)—A standard statistical measure of the relative dispersion of the sample data about the mean of the data; the standard deviation expressed as a percentage of the mean.

Coincidence, Line of—Synonymous with the preferred term merge line.

Color—That property of an object that is dependent on the wavelength of the light it reflects or, in the case of a luminescent body, the wavelength of light that it emits. If this light is of a single wavelength, the color seen is pure spectral color; if light of two or more wavelengths is emitted, the color will be mixed.

Color Infrared Film—Photographic film sensitive to energy in the visible and near-infrared wavelengths, generally from 0.4 to 0.9 micrometers; usually used with a minus-blue (yellow) filter, which results in an effective film sensitivity of 0.5 to 0.9 micrometers. Color infrared film is not sensitive in the thermal infrared region and therefore cannot be used as a heat-sensitive detector.

Color of Title—Color of title refers to an appearance of legal ownership that arises from irregular conveyances. If, for example, an owner's claim to property depended on a deed that had never been recorded, that owner would have color of title but would not have full legal title. Color of title cannot arise from fraudulent documents, such as forgeries.

Commercial Paper—Short-term promise to pay issued by a corporation.

Commercial Property—See **property use category**.

Common Area—The total area within a property that is not designed for rental or sale, which is available for common use by all tenants and owners. See **undivided interest**.

Common Equity—On the books of a corporation, the amount of common stock plus premium on common stock plus retained earnings less reacquired common stock less common stock expense plus any additional paid-in capital associated with common stock. The equity interest in a property.

Community Property—Property which is acquired by either spouse during their marriage that becomes owned by them equally.

Comparable Match—This concept involves the development of value based on analysis of similar (but not identical) properties using some measure of utility (such as size or capacity) as the basis of comparison. For example, when appraising an engine lathe manufactured by Company A, the appraiser has comparables of other

similar engine lathes of the same size manufactured by Companies B and C. Obviously, compared to a direct match, this technique becomes more subjective, which requires additional analysis of the elements of comparison.

Comparable Sales; Comparables—(1) Recently sold properties that are similar in important respects to a property being appraised. The sale price and the physical, functional, and locational characteristics of each of the properties are compared to those of the property being appraised in order to arrive at an estimate of value. (2) By extension, the term “comparables” is sometimes used to refer to properties with rent or income patterns comparable to those of a property being appraised.

Comparative Unit Method—(1) A method of appraising land parcels in which an average or typical value is estimated for each stratum of land. (2) A method of estimating replacement cost in which all the direct and indirect costs of a structure (except perhaps architect’s fees) are aggregated and specified with reference to a unit of comparison such as square feet of ground area or floor area, or cubic content. Separate factors are commonly specified for different intervals of the unit of comparison and for different story heights, and separate schedules are commonly used for different building types and quality classes.

Comparison Factor—A comparison factor is a difference between two properties that influences market value and can be measured. The number of bedrooms in a single-family residence is a comparison factor.

Comparison Unit—Comparison units express an overall value attributable to a property in terms of the value per unit of measure. The sale price of a vacant lot, for example, can be expressed as a cost per square foot or cost per front foot. The income produced by a property can also be expressed in comparison units, such as rent per square foot.

Competition—(1) The attempt by two or more buyers or sellers to buy or sell similar commodities in the same market. (2) Principle of value that states that when the amount of a property of a certain type offered for sale is large in relation to demand, prices will fall; prices will rise when the opposite situation prevails.

Complementary Commodities—Goods related in such a way that an increase in the consumption of one increases the consumption of the other.

Composite Appraisal—See **appraisal, composite**; and **assessment, unit**.

Composite Rate—An overall rate of blended or weighted averages of several rates of return applicable to single investments as represented by R in the Ellwood formula. See **mortgage-equity analysis**.

Compound Interest Table—A graphic presentation that specifies an interest rate and a compounding period and gives six functions of a dollar at various yearly or monthly intervals—the future worth of \$1 after one interval, the future worth of the \$1 deposited at the beginning of each interval, the sinking-fund factor, the present worth factor, the present worth of \$1 per interval, and the amount to amortize.

Computer-Assisted Assessment System—A system for assessing real and personal property with the assistance of a computer. A computer may be used, for example, in the appraisal process, in keeping track of ownership and exemption status, in printing the assessment roll, in coordinating the work load of real property appraisers and personal property appraisers with respect to the assessment of commercial and industrial properties, and in a number of other areas.

Computer-Assisted Mass Appraisal (CAMA)—A system of appraising property, usually only certain types of real property, that incorporates computer-supported statistical analyses such as multiple regression analysis and adaptive estimation procedure to assist the appraiser in estimating value.

Concession—Benefits granted by a lessor or seller as an inducement to lease or purchase.

Condemnation—(1) The exercise of the right of eminent domain to secure legal title to private property required for a public use. (2) A declaration by a constituted authority to the effect that a structure is unfit for occupancy or dangerous to persons or other property, often accompanied by exercise of the police power to limit or prohibit occupancy or to require demolition of the structure. Note: The term “expropriation” is also used to convey the first of these meanings.

Condemnation, Excess—Condemnation of more private property than is actually required for a specific public improvement, with the intention of selling, leasing, or otherwise using the excess.

Condition—A judgment of the depreciation of an improvement. Note: This is a difficult area of comparison because although the condition of the subject is known, it is difficult to know the condition of the comparable. Differences in condition may justify variances in selling prices of similar assets. An investigation of the condition of the comparables should be done, if possible.

Condition, percent—See **percent condition**.

Conditional Sale—See **sale, conditional**.

Condominium/Condominium Unit—A condominium is a separately owned unit of real property in the same structure with other such units; the unit owners hold an undivided interest in common elements of the property, such as a lobby, swimming pool, and grounds. See **cooperative**.

Confidence Interval—A range of values, calculated from the sample observations, that are believed, with a particular probability, to contain the true population parameter (mean, median, COD). The confidence interval is not a measure of precision for the sample statistic or point estimate, but a measure of the precision of the sampling process. See **reliability**.

Confidence Level—The required degree of confidence in a statistical test or confidence interval; commonly 90, 95, or 99 percent. A 95 percent confidence interval would mean, for example, that one can be 95 percent confident that the population measure (such as the median or mean appraisal ratio) falls in the indicated range.

Conformity—See **principle of conformity**.

Consideration—The amount of money and other valuable goods or services on which a buyer and a seller agree, to consummate a sale.

Consigned Goods—Inventory in the possession of a selling agent, but owned by another party. The agent has no equity, no control of price or sale, and receives none of the profit (as such) from sale of the property (but may receive a sales commission).

Consignment—(1) A shipment of goods from one person (the consigner) to another (the consignee). (2) (Preferred.) A bailment contract whereby one party (the consigner) places his or her goods in the possession of a second party (the consignee or factor) for the purpose of sale by the second party.

Consistent Use—The concept that land should not be valued on the basis of one use while the improvements are valued on the basis of another.

Construction in Progress—Property that is in a process of change from one state to another, such as the conversion of personal property from inventory to fixed asset by installation or the conversion of personalty to realty by becoming a fixture.

Consulting—The act or process of providing information, analysis of real estate data, and recommendations or conclusions on diversified problems in real estate, other than an estimate of value.

Consumption Value—Consumption value expresses the worth of a property in terms of its capacity to produce personal satisfaction for the owner.

Contact Print—A photographic image produced by the exposure of a sensitized emulsion-coated paper in direct contact with a negative or positive film.

Contiguous—Sharing a property boundary; adjacent.

Contingency Table—A table that shows how a dependent variable varies with respect to two independent variables.

Contingent Fee—A fee determined by the results of the services to be performed or by other future events.

Contingent Valuation Method (CV)—In economics, a method of valuing public goods. The CV method uses survey questions to elicit people's preferences for public goods by finding out what they would be willing to pay for specified improvements in them. The method is thus aimed at eliciting people's willingness to pay, expressed in dollar amounts.

Continuous Data—Data that can take any value in a given range. They are often based on measurements (for example, lot size). Quantitative and continuous data can be thought of as synonymous.

Continuous-Strip Photography—Photography of a strip of terrain in which the image remains unbroken throughout its length along the line of flight.

Continuous Tone—An image that has not been screened and contains unbroken, gradient tones from black to white, and may be in either negative or positive form.

Continuous Variable—A variable for which it is conceivable that, given any two observed values, a value lying between them may occur. For example, temperature and finished living area are continuous variables; quality class and number of fireplaces are not. See **binary variable** and **discrete variable**.

Contour—An imaginary line on the ground, all points of which are at the same elevation above or below a specified reference surface.

Contract, Land—See **land contract**.

Contract for Deed—A contract for sale in which the seller retains title until the buyer completes the contracted payments for the property. The sale is not recorded until title passes to the buyer. See **land contract**.

Contract Rent—The actual amount of rent, per unit of time, that is specified in the contract (lease). For very old contracts, the contract rent may be substantially less than the rent the property would bring today. Compare **market rent**.

Contribution—See **principle of contribution**.

Contributory Value—The amount a component of a property contributes to the total market value. For improvements, contributory value must be distinguished from cost.

Control—(1) A control station. (2) The coordinates of a control station. (3) A collection of control stations. (4) The geometric data associated with a collection of control stations, such as coordinates, distances, angles, or directions between control stations. It is practically equivalent, in this sense, to basic control.

Control Point—A point to which coordinates have been assigned; these coordinates are then used in other (dependent) surveys.

Control Sample—Part of a set of data set aside for testing the results of analysis.

Conversion—Changing a property’s particular use or ownership, such as converting a large residence into offices.

Conveyances—Legal documents that transfer ownership of property. Deeds and wills are examples of conveyances. *Compare* **real estate transfer documents**.

Cooperative—A business entity, usually a corporation, that holds title to realty and that grants rights of occupancy to its shareholders by means of proprietary leases or similar devices. A cooperatively owned apartment building is legally different from a building consisting of condominium units. See **condominium** and **blanket mortgage**.

Coordinate—One of a set of N numbers designating the location of a point in N-dimensional space. Coordinates are almost always associated with coordinate systems. A coordinate system provides an easy way for finding the point designated by the set of coordinates, or for assigning a set of coordinates to a point. The coordinates are said to be “in” the associated coordinate system. It is also common to speak of the associated point as being “in” that coordinate system.

Coordinate, Geodetic—One of the set of coordinates designating the location of a point with respect to the reference ellipsoid and with respect to the planes of the geodetic equator and a selected geodetic meridian.

Coordinate, Geographic—(1) An inclusive term, used to designate either a geodetic or an astronomic coordinate. (2) The term may also designate one of a pair of coordinates that specifies the angular distances of a point from a meridian and from the equator.

Coordinate System—(1) A system for locating any geographic point by determining its north–south and east–west distance from some known base point. (2) By extension, a system for identifying each assessable parcel of real estate by means of coordinates, usually by recording the coordinates of the center of each parcel.

Coordinate System, Absolute—Refers to a worldwide coordinate system versus a relative coordinate system (local).

Coordinate System, Cartesian—(1) A two-dimensional coordinate system in which the location (coordinates) of a point is expressed as its distances from two intersecting (usually perpendicular) straight lines, the distance from each line being measured along a straight line parallel to the other line. (2) A three-dimensional coordinate system with the same features, except that planes rather than lines are the references.

Coordinate System, Geodetic—A coordinate system consisting of an ellipsoid, the equatorial plane of the ellipsoid, and a meridional plane through the polar axis.

Coordinate System, Grid—A coordinate system on a plane usually based on a map projection. The most common form is a rectangular Cartesian coordinate system. An example is the State Plane Coordinate System. Polar coordinate systems are also used, for example, in aviation and artillery firing. The advantage of a grid coordinate system is that plane coordinates may be substituted for geographic coordinates and the computations relating to them may be made by the simple methods of plane surveying.

Coordinate System, Local—A coordinate system that has its origin within the region being investigated and that is used principally for points within that region.

Coordinate System, State Plane—(1) One of the plane rectangular coordinate systems for each state in the United States, established by the United States Coast and Geodetic Survey in 1933 for use in defining locations of geodetic stations in terms of plane-rectangular Cartesian coordinates. State plane coordinate systems have been established for all fifty states, and within each state there are one or more separate projections of areas known as zones. The boundaries of state plane coordinate zones are coterminous with county and state boundaries, an administrative advantage in that counties are never required to use more than one state plane coordinate zone. (2) A mathematical projection of the curved surface of the earth on a flat surface over which a coordinate grid expressed in feet is laid.

Copyright—The exclusive right granted by a government for a limited period to an author, composer, designer, or such, or his or her heirs, legatees, or assigns, to reproduce, publish, and sell copies of an original literary or artistic work.

Corner—In land surveying, a point on a land boundary at which two or more boundary lines meet.

Corner Influence—(1) The effect of location at, or proximity to, the intersection of two streets upon the value of a lot or parcel. (2) The increment of value resulting from such location or proximity; found most often in commercial properties because of greater ease of entry and exit, accessibility to higher volume of traffic, and increased show-window and advertising space.

Corporation—A legal entity (business organization form) operating under a grant of authority from a state in the form of a charter and articles of incorporation.

Corporation, Domestic—A corporation organized under the laws of the state of reference.

Corporation, Foreign—A corporation organized under the laws of some state other than the state of reference. Note: The term “state” as used here includes any foreign country.

Correlation—A statistical phenomenon (and a technique for estimating its strength) whereby knowledge of one fact about a thing implies some knowledge of a second fact about that thing. For example, because the volume and weight of water are correlated, knowing that a quantity of water is one gallon also means knowing that its weight is eight and one-third pounds. Linear correlation, the kind most often encountered, means that an increase in one factor in some proportion (say, a doubling) changes the other in the same proportion. With curvilinear correlation, as between the radius and the area of a circle, this is not true, despite the fact that the correlation may be very strong in the sense that knowledge of one fact tells you precisely the other fact. These are examples of variables perfectly correlated or nearly so; more often, correlation is only partial—for example, the correlation between the age and height of a child. The correlation coefficient gives the strength of the linear relationship between the two variables.

Correlation Coefficient (r)—A statistic that characterizes two or more sets of numbers and, when squared and multiplied by 100, gives the percentage strength of the (linear) relationship between the two sets of numbers. For example, if the coefficient of cor-

relation between measures of the height and weight of a group of people were 0.9, then one would deduce that knowing the height of someone (loosely speaking) would explain (or account for) 81 percent of the weight.

Correlation Matrix—The table of numbers used to display the correlation coefficients for each pair of variables when three or more variables are thought to be correlated.

Cost—The money expended in obtaining an object or attaining an objective; generally used in appraisal to mean the expense, direct and indirect, of constructing an improvement.

Cost, Construction—The sum of direct costs of materials and labor plus contractor's indirect costs to build an improvement.

Cost, Depreciated Reproduction—The reproduction cost of a given property, less the estimated amount of accumulated depreciation on such property. See **reproduction cost new**.

Cost, Direct—A cost which can be traced directly to a particular unit of output, for example, cost of raw materials or certain labor costs. Note: A direct cost usually varies more or less directly with the number of units output. Synonymous with "prime cost." Contrast **cost, overhead**.

Cost, Fixed—A cost that is more or less inevitable and continuous; that does not vary with production levels; and that cannot be changed in the short run. Synonymous with "fixed charge." Compare **cost, overhead**.

Cost, Historic—The cost of an asset not adjusted for inflation since the date of purchase, as opposed to the current replacement or reproduction cost. Usually the basis for depreciation in accounting, which has a requirement that all information on financial statements be presented in terms of the item's original cost to the entity. Also called original cost.

Cost, Original—The cost of acquisition of a property by its present owner, plus the cost of any additions and betterments made by such owner, whether or not such costs represent prudent investments. Also called "actual cost" and "historical cost."

Cost, Overhead—A cost that is not directly traceable to any given unit of output, for example, salaries of managers, interest on funded debt, and property taxes. Sometimes referred to as “indirect cost.” Note: An overhead cost does not ordinarily vary with any close relationship to units of output. It is impossible to draw a sharp line of demarcation between overhead and direct costs; the difference is purely one of degree, and any classification of costs into these two groups is necessarily somewhat arbitrary. *Contrast cost, direct.*

Cost, Trended—The original cost adjusted to current price levels by means of composite or individual price indexes of items entering into such cost. Note: The trended cost should closely approximate the reproduction cost if the price indexes are appropriately selected and properly constructed.

Cost, Unit—See **unit cost**.

Cost Approach—(1) One of the three approaches to value, the cost approach is based on the principle of substitution—that a rational, informed purchaser would pay no more for a property than the cost of building an acceptable substitute with like utility. The cost approach seeks to determine the replacement cost new of an improvement less depreciation plus land value. (2) The method of estimating the value of property by: (a) estimating the cost of construction based on replacement or reproduction cost new or trended historic cost (often adjusted by a local multiplier); (b) subtracting depreciation; and, (c) adding the estimated land value. The land value is most frequently determined by the sales comparison approach.

Cost Index—An index showing the variations in construction costs over time; sometimes, by extension, a set of similar numbers showing the relative costs of construction in different geographic areas.

Cost Manual—A guide, containing pictures, specifications of structures, and cost schedules, used to help classify construction quality and estimate the cost of replacing a structure.

Cost of Capital—The opportunity cost of capital.

Cost-of-Development Method—A method of appraising undeveloped land, whereby an estimate is made of the probable proceeds to be obtained from selling the land as subdivided, developed parcels. The cost of so developing the raw land is subtracted from this estimate to obtain an estimate of the value of the raw land.

Cost of Equity—See **equity yield rate**.

Cost of Goods Sold (Cost of Sales)—(1) Retail: The total cost of goods sold during a given accounting period is determined by ascertaining the invoice costs of the materials purchased; adding the value of the inventory on hand at the start of the fiscal period, and subtracting the value of the inventory remaining on hand at the end of the fiscal period. (2) Manufacturing: The cost of production of the items sold, such as raw materials, direct labor, and overhead.

Cost of Repairs—All expenditures necessary to cure deterioration.

Cost Schedules—Charts, tables, factors, curves, equations, and the like intended to help estimate the cost of replacing a structure from a knowledge of some other factors, such as its quality class and number of square feet.

Cost Study—The determination of replacement cost new.

Cost to Cure—Estimated cost to correct or replace a component or defect within a property.

Cost Trend Factor—A factor derived from a cost index used to estimate the contemporary cost of something based on its historic cost.

Coupon Rate—The coupon rate is the rate of return specified on the face of a debt instrument (such as a bond) as opposed to the actual return (or effective yield).

COV—See **coefficient of variation**.

Covenant—A covenant is a promise written into a legal agreement (such as a deed) that binds the parties to abide by or refrain from certain acts. A deed restriction is a special kind of covenant.

Credit—A claim for money or money's worth that is enforceable at law, whether due or accruing and whether secured or not, for example, accounts receivable, notes, bonds, accrued interest and rent, and bank deposits, but not corporate stock.

Credit, Property Tax—An offset against the property tax payment or another tax payment for taxpayers who meet certain criteria (for example, renters), or whose properties have certain characteristics or are used for specified purposes (for example, pollution abatement); a direct reduction in a tax payment rather than in a tax base.

Critical Value—The value, found in a table, with which a computed statistic is compared to determine whether the null hypothesis is accepted or rejected at the specified confidence level.

Cubic Content of Building—The actual cubic space enclosed within the outer surfaces of the outside or enclosing walls and contained between the outer surfaces of the roof and six inches below the finished surfaces of the lowest floors. Synonymous with “cube of building”; “cubage of building”; “cubicle content of building.” Note: This is the definition approved by the American Institute of Architects. The Institute offers the following interpretation: “The above definition requires the cube of dormers, penthouses, vaults, pits, enclosed porches, and other enclosed appendages to be included as a part of the cube of the building. It does not include the cube of courts or light shafts, open at the top, or the cube of outside steps, cornices, parapets, or open porches or loggias.” It is recommended, however, that closed porches and other enclosed appendages of large volume be included only if they are of a type of construction similar to that main part of the building. In the case of party walls, floors, and ceilings, measurements should be made to the center of the wall, floor, or ceiling.

Current Asset—Unrestricted cash or other asset held for conversion within a relatively short period into cash or other similar asset or useful goods or services. Usually the period is one year or less but for some items, such as accounts receivable in installments, the period may be longer (by contract).

Current Liability—A short-term debt regardless of its sources, including any liability accrued and defined, and unearned revenue that is paid out of current assets or is transferred to income within a relatively short period, usually one year or less.

Current-Market-Value Appraisals—Appraisals that reflect contemporary market values rather than market values at some point in the past. Currency is commonly taken to be implicit in the term market value.

Curve, Depth—See **depth curve**.

Curve, Zangerle—See **Zangerle curve**.

D

Data—Information expressed in any of a number of ways. “Data” is the general term for masses of numbers, codes, and symbols generally, and “information” is the term for meaningful data. “Data” is the plural of datum, one element of data.

Data Collection Platform (DCP)—The system on board Landsat that acquires information from ground-based instruments such as seismometers, flood gauges, and other measuring devices. These data are transmitted to the satellite and in turn are relayed to an earth receiving station.

Data Edit—The process of examining recorded data to ensure that each element of data is reasonable and is consistent with others recorded for the same object, such as a parcel of real estate. Data editing, which may be done by human beings or by computer, is essentially a mechanical process, distinct from verifying the correctness of the recorded information by calling or writing property owners.

Data Management—The human (and sometimes computer) procedures employed to ensure that no information is lost through negligent handling of records from a file, that all information is properly supplemented and up-to-date, and that all information is easily accessible.

Date, Assessment—See **assessment date**.

Date of Acquisition—The effective purchase date of an asset. From the date of acquisition, the asset must appear in the accounts and in financial statements, and depreciation, if any, must be recorded.

Date of Sale (date of transfer)—The date on which the sale is agreed. This is considered to be the date the deed, or other instrument of transfer, is signed. The date of recording can be used as a proxy if it is not unduly delayed as in a land contract.

Datum (Geodetic)—(1) A reference surface consisting of five quantities: the latitude and longitude of an initial point, the azimuth of a line from this point, and two constants necessary to define the reference spheroid; the basis for the computation of horizontal control surveys in which the curvature of the earth is considered (leveling). (2) A level surface to which elevations are referred; usually, but not always, mean sea level.

Debit—An accounting entry or posting recording the creation of or addition of an asset or an expense, or the reduction or elimination of a liability, credit valuation account, or item of net worth of revenue.

Debt—In general usage, debt is money owed.

Debt Capitalization Rate—Debt component of an overall direct capitalization rate. Computed by dividing annual interest payments by the market value of debt.

Debt Coverage Ratio (DCR)—The ratio of net operating income to debt service, which is used to estimate the overall capitalization rate in direct capitalization. The formula for the overall capitalization rate (OAR) is $OAR = DCR \times \text{Annual debt cost} \times \text{Debt percentage of capital structure}$.

Debt Rate—The interest rate on borrowed money.

Debt Service—The total payments of principal and interest on a mortgage.

Declaration—A term occasionally used to designate a property list filed by a taxpayer.

Declaration of Restrictions—A set of recorded restrictions that applies to a specific area or subdivision.

Declaration of Trust—A written acknowledgment by the legal title holder to property specifying the property is held in trust for the benefit of another party.

Declining Terminal Series—A type of income stream that declines progressively and systematically and eventually ceases.

Deed—A document (or written legal instrument) which, when executed and delivered, conveys an interest in or legal title to a property.

Deed, Bargain and Sale—A bargain and sale deed implicitly or explicitly asserts the grantor's ownership of the property conveyed, but it makes no guarantees to defend the title. It provides the grantee more protection than a quitclaim deed but less than a special warranty deed. The words of conveyance "bargain and sale" distinguish a bargain and sale deed.

Deed, Quitclaim—A deed in which the grantor conveys or relinquishes all interests that he or she may have in a property, without warrant as to the extent or validity of such interests.

Deed, Tax—A deed by which title to real property, sold to discharge delinquent taxes, is transferred by a tax collector or other authorized officer of the law to the purchaser at a tax sale.

Deed, Trust—(1) Broadly, a deed by which title to property is transferred to a trustee to be held in trust. (2) Specifically, a deed by which title to property is transferred, conditionally or unconditionally, to a trustee to be held for the benefit of creditors or obligors of the grantor. (3) Loosely, the agreement made between an issuer of bonds and the holders of such bonds that is deposited with the trustee, whether or not such agreement involves the transfer of property to the trustee. Also called "deed of trust."

Deed, Warranty—A deed containing a covenant of warranty whereby the grantor of an estate of freehold guarantees that the title that he or she undertakes to transfer is free from defects and that the property is unencumbered except as stated, and whereby the grantor, for him- or herself and his or her heirs, undertakes to defend and protect the grantee against any loss that may be suffered by reason of the existence of any other title or interest in the property existing at the time the deed was executed and not excepted therein. *Contrast deed, quitclaim.*

Deed Recordation—The process of registering a sale of real property with the appropriate public body, usually the county recorder's office.

Deed Restriction—A limitation to property rights that transfers with the property regardless of the owner.

Deferred Maintenance—Repairs and similar improvements that normally would have been made to a property but were not made to the property in question, thus increasing the amount of its depreciation.

Degrees of Freedom (d.f.)—The number of values, in a set of observations, that could be assigned arbitrarily within the specification of a system. For example, in stratifying a sample of n objects into k strata, there are $k - 1$ degrees of freedom, because, if $k - 1$ frequencies are specified, the remaining frequency is determined by the total size n . The term is used in statistics in several slightly different senses but is important primarily only in connection with a certain aspect of inferential statistics, where it becomes a means of relating the value of a statistic that has been calculated from a sample to a table of critical values for such statistics that have been calculated for a wide range of potential sample sizes and amounts of information defined by the particular statistic of interest.

Demand—The amount of a good or service that would be purchased at various prices during a given period.

Demographics—Characteristics of human populations, for example, size, density, and distribution.

Denominator—In a fraction, the number by which another number (the numerator) is divided. For example, the denominator of $3/4$ is 4.

Densification Survey—A control or cadastral survey that establishes accuracy or additional detail in an existing survey.

Density—The total number of specific items present within a designated unit of area.

Dependent Variable—A variable, such as sale price, the value of which is predicted by the values of other variables, such as location and finished living area. Such a variable may be said to depend on the other (independent) variables.

Depletion—A decrease in land value due to the removal of trees, minerals, or other such resources. *Contrast depreciation; obsolescence.*

Depletion Rate—The periodic percentage rate at which a quantity is exhausted.

Deposition—A discovery device, conducted under oath outside a courtroom, by which one party asks questions of the other party or of a witness for the other party.

Depreciable Cost—The amount of cost to be recovered or allocated in accounting depreciation. It may represent either the total cost or cost less estimated salvage value.

Depreciation—Loss in value of an object, relative to its replacement cost new, reproduction cost new, or original cost, whatever the cause of the loss in value. Depreciation is sometimes subdivided into three types: physical deterioration (wear and tear), functional obsolescence (suboptimal design in light of current technologies or tastes), and economic obsolescence (poor location or radically diminished demand for the product).

Depreciation, Accelerated—An accounting term implying a method of accruing greater depreciation expense in the early years of a property's life and less in the later years according to an established formula.

Depreciation, Accrued—(1) The amount of depreciation, from any and all sources, that affects the value of the property in question on the effective date of the appraisal. (2) In accounting, the amount reserved each year or accumulated to date in the accounting system for replacement of a building or other asset. When depreciation is recorded as a dollar amount, it may be deductible from total plant value or investment to arrive at the rate base for public utilities.

Depreciation, Book—An accounting term referring to the total accruals recorded on the books of the owner of property summarizing the systematic and periodic expenses charged toward amortizing the investment of limited-life property over its expected life.

Depreciation, Curable—That part of depreciation that can be reversed by correcting deferred maintenance and by remodeling to relieve functional obsolescence. See **cost to cure**.

Depreciation, Economic—(1) Depreciation due either (a) to an increase in supply of the property under consideration or (b) to a reduction in monetary demand for properties of the type under consideration unaccompanied by shifts in demand from such properties to other properties and/or personal services (preferred). (2) Depreciation of any sort other than physical depreciation. Note: A depression is accompanied by economic depreciation of the type

indicated in 1(b) because of a general decline in purchasing power. Depressions are also accompanied by obsolescence because of changes in the relative distribution of purchasing power. *Contrast depreciation, physical; obsolescence.*

Depreciation, Functional—Synonymous with the preferred term obsolescence.

Depreciation, Observed—The amount of depreciation, expressed as a percentage of original or reproduction cost new, estimated on the basis of an actual inspection of the property.

Depreciation, Physical—Depreciation arising solely from a lowered physical condition of the property or a shortened life span as the result of ordinary use, abuse, and action of the elements.

Depreciation, Structural—Synonymous with the preferred term physical depreciation.

Depreciation in Accounting—(1) In accounting, a method providing for systematic allocation or recovery of cost over an asset life. (2) In appraisal, a loss of market value of an asset relative to its cost. Depreciation may stem from any cause that results in actual loss.

Depreciation Method, Annuity—A method of writing off the cost of a property over the period of its expected economic life involving: (a) Equal annual debits to depreciation expense, each being equal in amount to an annuity that could be purchased for the price of the property (less the present worth of any anticipated scrap value) and that would have a life equal to the expected economic life of the property; (b) decreasing annual credits to interest earned, each of which is equal to an assumed rate of return on the then depreciated book value of the property; and (c) increasing annual credits to depreciation reserve, each of which is equal to the difference between the amount debited to depreciation and the amount credited to interest earned. Note: For example, take a property that costs \$1,000 and has an expected economic life of ten years. From annuity tables, it is ascertained that a ten-year annuity of \$135.87 can be purchased for \$1,000, assuming an interest rate of 6 percent. For the first year, the charge to depreciation expense is \$135.87, the credit to interest earned is \$60.00, and the credit to depreciation reserve is \$75.87. For the second year, the charge to depreciation expense is \$135.87, the credit to interest earned is \$55.45, and the credit to depreciation reserve is \$80.42.

Depreciation Method, Sinking-Fund—A method of writing off the cost of a property over the period of its expected economic life involving: (a) equal annual payments into a sinking fund, the sum of which, if each be increased by compound interest from the date made until the end of such period, will equal the original cost of the property value less any anticipated scrap value at the end of its expected economic life; and (b) increasing annual depreciation charges, each of which is equal to the sum of the annual sinking fund payment and the amount of interest earned on the sinking fund during the year. Note: The procedure outlined above requires that the earnings on the sinking fund be credited directly to profit and loss. If, instead, they are offset against depreciation expense, the net depreciation charge will be constant and equal to the annual payment into the sinking fund.

Depreciation Method, Straight-Line—A method of writing off the cost of a property over the period of its expected economic life by means of equal annual charges, the sum of which is equal to the original cost of the property less any anticipated scrap value at the end of its expected economic life.

Depreciation Method, Unit of Production—A method of writing off the cost of a machine over the period of its expected economic life—such economic life being measured in terms of units of production rather than in years—by means of periodical charges measured by the number of units produced during the period, the sum of which charges is expected approximately to equal the original cost of the machine less any anticipated scrap value at the end of its expected economic life.

Depreciation Reserve—Accumulated depreciation.

Depreciation Schedules—Tables used in mass appraisal that show the typical loss in value at various ages or effective ages for different types of properties.

Depth, Standard—The depth of a standard lot (one selected as a standard either arbitrarily or because it is representative of the majority of lots within a given area).

Depth Curve—A graph of depth factors showing the estimated percentage relationships between the front-foot values of a given lot and the front-foot value of a lot of standard depth as the depth of the given lot varies. Note: Usually the depth of the given lot is plotted on the x-axis, and the percentage relationship between the front-foot value of the given lot and that of a lot of standard depth on the y-axis.

Depth Factor—The ratio of the estimated front-foot value of a lot of more or less than standard depth to the estimated front-foot value of a lot of standard depth.

Depth Influence—(1) The effect of increasing depth on the value of a lot or parcel having a given frontage. (2) The increment or decrement of value arising from a depth greater or less than that of the standard lot. See **lot, standard**.

Depth Table—A table of depth factors containing the estimated percentage relationship between the front-foot value of a lot of any given depth and the front-foot value of a lot of standard depth.

Description—See **legal description**.

Descriptive Statistics—(1) The branch of the science of statistics that is concerned only with characterizing or describing a set of data (numbers). (2) By extension, the measures used to characterize a particular set of data. Compare **inferential statistics**.

Deterioration—The impairment of condition.

Determinants of Supply and Demand—Factors that cause supply and demand to change.

Devise—A gift or transfer of real property by the owner's last will and testament.

Dichotomous Variable—See **binary variable**.

Differential Assessments—Assessments in a system of laws that require different classes of property to be assessed with different assessment ratios. The term "differential assessments" is usually reserved for systems in which the classes are broad and easily visible, such as classified property tax systems and use-value farmland assessment systems, although much the same effect is achieved by partial homestead exemptions, temporary exemptions to encourage rehabilitation or industrial location, and the like.

Digital Data—Data displayed, recorded, or stored in binary notation.

Digital Image—An image having numeric values representing tones. Each numeric value represents a different tone.

Digital Image Processing—Computer manipulation of the digital values for picture elements of an image.

Digitization—(1) The process of converting spatial information, originally compiled on orthographic materials or base maps, into digital form for incorporation into a geographic information system. (2) Referencing of ground control points or lines to a remotely sensed image.

Digitizer—A device used for scanning an image and converting it into numerical picture elements.

Diminished Utility—The difference in utility between a new improvement representing the highest and best use of the site and the existing improvement in its current condition.

Direct Equalization—The process of converting ratio study results into adjustment factors (trends) and changing locally determined appraised or assessed values to more nearly reflect market value or the legally required level of assessment. See **equalization** and **indirect equalization**.

Direct Market Method/Analysis—One of two formats of the sales comparison approach to value (the other being the comparable sales method). In the direct market method, the market analyst specifies and calibrates a single model used to estimate market value directly using multiple regression analysis or another statistical algorithm.

Direct Match—Establishes value on the basis of a direct match to an identical asset, for example, estimating the value (either retail or wholesale) of automobiles using a blue book. If the manufacturer, the model number, the age, and the accessories are known, it is simple to find the value of the subject in the various automobile blue books. Adjustments are limited to mileage and, more importantly, condition.

Discount Rate—(1) The rate of return on investment; the rate an investor requires to discount future income to its present worth. The discount rate is made up of an interest rate and an equity yield rate. Theoretical factors considered in setting a discount rate are the safe rate earned from a completely riskless investment (this rate may reflect anticipated loss of purchasing power due to inflation) and compensation for risk, lack of liquidity, and investment management expenses. The discount rate is most often estimated by band-of-investment analysis or sales comparison analysis that estimates typical internal rates of return. (2) In monetary policy, the rate that the Federal Reserve Bank charges member banks to borrow. *Compare* **recapture rate**.

Discounted Cash Flow Analysis—(1) A yield capitalization method used to calculate the present value of anticipated future cash flows. (2) Analysis of the present value of an income-producing property by isolating differences in the timing of cash flows. Net cash flows from all time intervals involved in the analysis are discounted to present value by an appropriate discount rate.

Discounting—The process of estimating the present worth of an anticipated item of income or expense by determining the amount of money which, if presently invested and allowed to accumulate at compound interest, will exactly equal the expected item of income or expense at the time when it becomes due. Note: For example, the value of \$100 due three years hence, assuming a 6 percent discount rate, is $\$100/1.063 = \83.96 ; the value of a perpetual annuity of \$100 is $\$100/1.06 + \$100/1.062 + \$100/1.063 + \dots = \$100/.06 = \$1,666.67$.

Discovery—(1) The process whereby the assessor identifies all taxable property in the jurisdiction and ensures that it is included on the assessment roll. (2) That part of a lawyer's trial preparation in which witnesses from the opposing side answer questions.

Discrete Data—Discrete data are qualitative items that have three or more predefined values (for example, topography: level, rolling, or steep).

Discrete Variable—A variable for which it is not conceivable that, given any two observed values, a value lying between them may occur. For example, the number of rooms in a house is a discrete variable, but the living area of the house is not. See **binary variable** and **continuous variable**.

Dispersion—The degree to which data are distributed either tightly or loosely around a measure of central tendency. Measures of dispersion include the average deviation, coefficient of dispersion, coefficient of variation, range, and standard deviation.

Displacement, Relief—The difference in the position of a point above or below the datum, with respect to the datum position of that point, due to the perspective of an aerial photograph. Relief displacement is radial from the photo center. In truly vertical photography, relief displacement is radial from the principal point of the photograph.

Display—A graphic representation of output data from a device or system, for example, on a computer screen. The cathode ray tube (CRT) is a widely used display device for output of “electronic” sensor data.

Dissimilarity Function—An algorithm used to assign an index of dissimilarity (or similarity) to properties as compared to a subject.

Distortion—Any shift in the position of an image on a photograph that alters the perspective characteristics of the photograph. Causes of image distortion include lens aberration, differential shrinkage of film or paper, and motion of the film or camera.

Distribution-Free Statistics—A set of robust nonparametric methods whose interpretation or reliability does not depend on stringent assumptions about the distribution of the underlying population from which the sample has been drawn. See **parametric statistics**.

Divided Rights—Rights to property that have been divided among several owners in partnerships, joint tenancy, tenancy in common, and time-share units.

Dividend Yield—The ratio of cash dividends to cash invested.

Dividends—Equity investment income earnings.

Domain, Eminent—See **eminent domain**.

Domicile (or Domicil)—That particular locality wherein a person is legally deemed to have his or her true home or place of abode. Note: A person always has one, and only one, domicile. Domicile at one place is not lost until a new domicile is established else-

where. In case one has more than one place of abode, domicile is determined with reference to one's attitude rather than in accordance with one's physical presence in one or other of such places. *Compare* **residence**.

Dominant Estate (Affirmative Easement)—The right to perform a specific action on a property owned by another.

Doomage—*See* **assessment, doomage**.

Doppler Shift—The difference between the frequency of radiation received at a point and the frequency of the radiation at its source, when observer and source are moving with respect to each other.

Dummy Variable—*See* **binary variable**.

Duty, Ministerial—*See* **ministerial duty**.

E

Earnings—A general term embracing revenue, profit, or net income.

Earnings-Price Ratio (E/P)—The ratio of earnings per share available to common stockholders of a specific company for an accounting period to the market price per share of the common stock of that company. The reciprocal of the E/P ratio is the price-earnings ratio (P/E). The E/P ratio is a direct capitalization rate for equity and not a yield rate.

Earnings Statement—An accounting statement of income and expense (or profit and loss).

Easement—(1) Broadly, any nonpossessory interest held by one person in land possessed by another whereby the first person is accorded partial use of such land or the second person is restricted in the use of his or her land. (2) A right held by one person to use the land of another for a specific purpose, such as access to other property. (3) In a restricted sense, a nonpossessory interest held by one person, by reason of his or her possession of a given piece of land (the dominant estate), in a second piece of land possessed by another (the servient estate), whereby the first person is accorded partial use of the second piece of land without the privilege of taking a portion of its substance. Note: The nonpossessory interests in land that are included in the first of the above definitions but not

in the second are: (1) servitudes, in which there is not necessarily a dominant estate in land; (2) profits a prendre, which are rights to take the substance of, or income from, the servient estate; and (3) restrictions, which limit the possessor of the servient estate in the use of his or her land without according its partial use to the owner of the nonpossessory interest.

Easement, Appurtenant—Gives one person the right to use another's land so long as the first person owns a specified piece of property. The easement attaches to the specified property, not to the person who owns it; when the title transfers, the easement also transfers.

Easement by Necessity—Arises when an owner divides his or her property, sells part of it, and the purchaser cannot get to the part he or she bought without crossing the seller's property. The purchaser acquires an easement over the seller's property.

Easement by Prescription—Arises when a non-owner continuously and openly uses property over a period of time and is not impeded by the property owner.

Easement in Gross—A right to use another's property, usually for a specified purpose. Utility easements and railroad rights-of-way are examples of easements in gross.

Economic Area—A geographic area, typically encompassing a group of neighborhoods, defined on the basis that the properties within its boundaries are more or less equally subject to a set of one or more economic forces that largely determine the value of the properties in question.

Economic Life—The period during which a given tangible asset, building, or other improvement to property is expected to contribute (positively) to the value of the total property. This period is typically shorter than the period during which the improvement could be left on the property, that is, its physical life.

Economic (External) Obsolescence—(1) A cause of depreciation that is a loss in value as a result of impairment in utility and desirability caused by factors outside the property's boundaries. (2) Loss in value of a property (relative to the cost of replacing it with a property of equal utility) that stems from factors external

to the property. For example, a buggy-whip factory, to the extent that it could not be used economically for anything else, suffered substantial economic obsolescence when automobiles replaced horse-drawn buggies.

Economic Rent—See **rent, economic**.

Edit—See **data edit** and **procedural edit**.

Effective Age—The typical age of a structure equivalent to the one in question with respect to its utility and condition, as of the appraisal date. Knowing the effective age of an old, rehabilitated structure or a building with substantial deferred maintenance is generally more important in establishing value than knowing the chronological age.

Effective Gross Income (EGI)—The potential gross rent, less vacancy and collection loss, plus miscellaneous income.

Effective Tax Rate—(1) The tax rate expressed as a percentage of market value; will be different from the nominal tax rate when the assessment ratio is not equal to 1. (2) The relationship between dollars of tax and dollars of market value of a property. The rate may be calculated either by dividing tax by value or by multiplying a property's assessment level by its nominal tax rate.

Effective Yield—The actual return on an investment rather than the yield anticipated or promised when the investment is made. For example, when a bond sells for more than its face value, the effective yield will be below the coupon rate.

Egress—An outlet or exit or means of exiting.

Elasticity—(1) The responsiveness of supply and demand to changes in price. Supply or demand that changes rapidly in response to price changes is "elastic." Supply or demand that changes slowly in response to price changes is "inelastic." (2) A measure of the responsiveness of tax yields to changes in economic conditions. The yield of an elastic tax increases rapidly in a growing economy. The yield of an inelastic tax increases slowly. Often measured by the formula: percent change in tax ÷ percent change in personal income.

Electromagnetic Radiation (EMR)—(1) Energy propagated through a vacuum or material medium in the form of an advancing interaction between electrical and magnetic fields. Includes radio waves, heat waves, light waves, and the like, depending on frequency. The term “radiation” is used commonly for this type of energy, although it actually has a broader meaning. Also called “electromagnetic energy” or “simple radiation.” (2) Waves emitted by various sources, including powerlines, radio transmitters, and microwave sources. Property value may be affected by proximity to sources.

Electromagnetic Spectrum—The ordered array of all electromagnetic radiation that propagates at the velocity of light and is characterized by wavelength and frequency. Wavelengths in the range of 0.3û15.0 micrometers are used most frequently in remote sensing.

Elevation—The distance of a point above a specified surface of constant potential; the distance is measured along the direction of gravity between the point and the surface.

Ellipsoid—A closed surface whose planar sections are either ellipses or circles.

Ellwood Formula—See **mortgage equity analysis**.

Emblements—Annual crops.

Eminent Domain—The right by which a sovereign government, or some person acting in its name and under its authority, may acquire private property for public or quasi-public use upon payment of reasonable compensation, but without consent of the owner. See **condemnation**.

Encroachment—The unauthorized trespassing of an improvement on the domain of another person’s land.

Encumbrance—Any limitation that affects property rights and value.

Engineering Breakdown Method—A detailed age/life method that can be used in conjunction with the quantity survey or unit-in-place methods of estimating replacement cost new.

Enhancement—The process of altering the appearance of an image so that the interpreter can extract more information. Enhancement may be done by digital or photographic methods.

Enterprise Zone—A designated area within a depressed, usually inner-city, area in which firms are given favorable tax treatment and freedom from a number of planning constraints.

Entrepreneur—One who assumes the risks and management of an enterprise or business.

Environmental Assessment—A report showing the results of investigation into environmental contamination. This report is often required by the EPA and other regulatory agencies to establish the extent of contamination. Depending on the type and extent of contamination suspected, “Phase I” or more extensive “Phase II” assessments may be required. See **Phase I and Phase II reports**.

Environmental Contaminant—Any tangible substance or intangible occurrence that may degrade property, resulting in decreased utility or having an effect on value. See **physical contaminant** and **nonphysical contaminant**.

EPA—The United States Environmental Protection Agency.

Equalization—The process by which an appropriate governmental body attempts to ensure that all property under its jurisdiction is assessed at the same assessment ratio or at the ratio or ratios required by law. Equalization may be undertaken at many different levels. Equalization among use classes (such as agricultural and industrial property) may be undertaken at the local level, as may equalization among properties in a school district and a transportation district; equalization among counties is usually undertaken by the state to ensure that its aid payments are distributed fairly.

Equalized Values—Assessed values after they have all been multiplied by common factors during equalization.

Equilibrium—A state of rest achieved by a balance of the forces that impel change. A market is said to be in equilibrium when the factors of production are used in the production of an array of consumer goods that maximize consumer welfare.

Equitable Ownership—The interest or estate of a person who has a beneficial right in property legally owned by another, for example, the beneficiary of a trust has equitable ownership in the trust property.

Equity—(1) In assessment, the degree to which assessments bear a consistent relationship to market value. Measures include the coefficient of dispersion, coefficient of variation, and price-related differential. See **horizontal inequity** and **vertical inequity**. (2) In popular usage, a synonym for tax fairness. (3) In ownership, the net value of property after liens and other charges have been subtracted.

Equity Capitalization Rate—Equity component of an overall direct capitalization rate. Computed by dividing equity earnings by the market value of equity.

Equity Dividend—A synonym for before-tax cash flow.

Equity Market Multiple (P/Book)—Sometimes referred to as the “market-to-book multiple.” The ratio of the current market price per share to net book value per share of common stock.

Equity of Redemption—A right recognized by courts of equity whereby a person who has transferred legal title to property as security for an obligation is permitted, after defaulting on the obligation, to retain possession of the property for such period as may be prescribed by law or by the court and to reacquire legal title to the property upon fulfillment of the obligation within such period.

Equity Yield Rate—(1) The required rate of return on equity capital. A component of the capitalization rate (or discount rate or mortgage-equity overall rate) that must be separately specified in band-of-investment analysis and mortgage-equity analysis. (2) The equity yield rate reflects all yield to equity, whether from annual cash flows or future reversions; considers the effect of debt financing on the cash flow of the equity investor.

Error—The difference between the actual value of a variable and the expected value of the variable exclusive of sampling problems. Errors may be positive or negative, although in common speech taking the absolute value of the errors is sometimes implied. In multiple regression analysis, the term “error” is often used loosely to mean residual.

Escalation Clause—A clause in an agreement that allows for an increase.

Escape Assessment—An assessment made outside the regular assessment period in order to correctly tax property that was not assessed during the regular assessment period.

Escheat—The right to have property revert to the state for nonpayment of taxes or when there are no legal heirs of someone who dies without leaving a will.

Escrow—(1) A written instrument that by its terms imparts a legal obligation but that is placed by the grantor in the hands of a third party, to be held by him or her until the occurrence or non-occurrence of a specified event, and then only to be delivered to the grantee and to take effect. (2) The agreement under which such instrument is so placed, held, and conditionally delivered.

Estate—(1) The interest which a person possesses in a single concrete article of property. (2) The aggregate interests of any person in articles of property of all descriptions. (3) The aggregate property of all descriptions left by a decedent. See **tenancy**; **real estate**.

Estate, Leasehold—Any possessory interest in land less than estate of freehold, that is, an estate for years, an estate from year to year (periodic estate), an estate at will, or an estate at sufferance. See **leasehold**.

Estate, Real—See **real estate**.

Estate, Trust—See **trust estate**.

Estate for Years—A possessory interest in land which cannot endure beyond a date specified in the conveyance or a date precisely determinable at the time the interest becomes possessory.

Estate in Fee Simple—An inheritable, possessory interest in land that may endure until the extinction of all lineal and collateral heirs of the first owner and that may be freely conveyed by its owner; the largest possible estate in land.

Estate in Severalty—Any estate held by a single person is an estate in severalty.

Estate of Freehold—Any one of the three types of possessory interests in land—fee simple, fee tail, and estate for life—that in feudal times were granted only to freemen. Note: Estates of freehold are said to be estates of indefinite duration and any other estate is said to be “less than freehold.”

Estate Tax—A tax based on the value of the estate of a deceased person.

Euclidean Distance Metric—A measure of straight-line distance between two points. In property valuation, it is used to find the nearest neighbor or similar property based on an index of dissimilarity between property location or attributes. When using multivariate selection, the squared difference is divided by the standard deviation of the variable so as to normalize the differences. See **Minkowski Metric**.

Examination—A limited audit qualified by words or phrases indicating the character of the limitation.

Examine—To prove records or inspect documents, procedures and scope, for the purpose of arriving at opinions of accuracy, propriety, sufficiency, or the like.

Excess Condemnation—The taking of more property, by right of eminent domain, than is necessary for the intended purpose.

Exemption, Absolute—A complete or total exemption that excludes an entire property from taxation without regard to its value; a reduction in the property tax base.

Exemption, Homestead—Freedom of part or all of the value of a homestead from property taxation; a reduction in the property tax base.

Exemption, Industrial—An exemption granted to property used in industrial pursuits as a means of stimulating industrial development or inducing relocation of plants; a reduction in the property tax base. See **enterprise zone**.

Exemption, Institutional—Freedom from the property tax granted to property owned and/or used by charitable, educational, or religious institutions or agencies, in recognition of the public services rendered by them; a reduction in the property tax base.

Exemption, Personal—Freedom from the property tax of some or all classes of property in limited or unlimited amounts by reason of its ownership by natural persons or particular groups of natural persons, or persons with certain attributes; a reduction in the property tax base.

Exemption, Pseudo—Freedom from the property tax granted to property in recognition of the fact that it is taxed either directly or indirectly by other means; a reduction in the property tax base. Sometimes called “technical exemption.” Note: For example, public utility property may be exempt from ad valorem property taxation but subject to a gross earnings tax in lieu thereof; corporation stock may be exempt in recognition of the taxation of the corporate assets.

Expense—A cost, or that portion of a cost, which, under accepted accounting procedures, is chargeable against income of the current year.

Expense Account—An accounting record maintained for recording particular expenses.

Expense Ratio—The ratio of expenses to gross income. A “typical” expense ratio is the relationship of normal expenses to effective gross income.

Expert Witness—One who is qualified to render expert testimony.

Exploratory Data Analysis—That part of concerned with reviewing the data set to isolate structures, uncover patterns, or reveal features that may improve the confirmatory analysis.

Exponent—A symbol usually written to the right and above an expression to indicate particular mathematical operations. For example, 6^2 means 6×6 , or six squared. Fractional exponents indicate inverse operations; for example, an exponent of $1/2$ signifies a square root. Exponents are also called powers. Valuation models make use of the following properties of exponents: A number raised to the exponent 0 is always 1.00; zero raised to any power is zero; any number raised to the power 1 is itself. Negative numbers cannot have exponents less than 1.

Expropriation—See **condemnation**.

External Diseconomies—Forces outside the activities of any single firm that cause resource prices to rise.

External (Economic) Obsolescence—The loss of appraisal value (relative to the cost of replacing a property with property of equal utility) resulting from causes outside the property that suffers the loss. Usually locational in nature in the depreciation of real estate, it is more commonly marketwide in personal property, and is generally considered to be economically infeasible to cure.

External Economies—Forces outside the activities of any single firm that cause resource prices to fall.

F

Facade—The main exterior face of an improvement.

Face Value—See **value, face**.

Factor—(1) An underlying characteristic of something (such as a house) that may contribute to the value of a variable (such as its sale price), but is observable only indirectly. For example, construction quality is a factor defined by workmanship, spacing of joists, and materials used. Factor definition and measurement may be done subjectively or by a computer-assisted statistical algorithm known as factor analysis. (2) Loosely, any characteristic used in adjusting the sale prices of comparables. (3) The reciprocal of a rate. Assessments may be equalized by multiplying them by a factor equal to the reciprocal of the assessment ratio, and value can be estimated using the income approach by multiplying income by a factor equal to the reciprocal of the discount rate.

Factor, Depth—See **depth factor**.

Factors of Production—The four ingredients available for the production of goods and services that satisfy human wants: land, labor, capital, and management. Also called “agents of production.”

Fair Rate of Return—A fair rate of return is that amount of profit that represents a fair, reasonable, and appropriate compensation to the owners for (1) their investment in the enterprise, (2) their assumption of the risks and uncertainties of operation, and (3) management functions not otherwise rewarded.

Fair Return—As used with regulated properties such as utility companies, fair return denotes an amount of income a regulatory agency authorizes as sufficient for a utility to attract necessary additional capital and render adequate service.

Fairness—See **equity**.

False Color Image—A color image in which the dye color or ink is not the same as the scene color. Digital processing may produce false color images where the infrared wavelengths are represented by red, the red band as green, and the green as blue.

Fannie Mae—See **Federal National Mortgage Association**.

Feasibility Analysis—A study of the cost-benefit relationship of an economic endeavor.

Federal Home Loan Mortgage Corporation (FHLMC) (Freddie Mac)—An organization that facilitates secondary residential mortgages, for savings and loan associations, to increase availability of residential mortgage financing.

Federal National Mortgage Association (FNMA) (Fannie Mae)—A quasi-governmental agency that purchases mortgages from originators; intended to increase liquidity in the home mortgage market.

Federal Rectangular Survey System—A rectangular grid system, the basic elements of which are townships approximately six miles on each side. Each township is divided into thirty-six sections, nominally one mile square and containing 640 acres. Sections are further subdivided into quarter sections, and so on.

Fee—(1) A charge imposed by a government for the performance of a specific nonproprietary act that is made in recognition of the special benefit conferred by such act, or the special cost incurred thereby, and in an amount intended to be substantially equal to or less than the incurred cost. (2) A form of compensation for occasional personal services, especially of public officers or professional persons, measured in terms of services performed rather than in terms of time required for their performance. (3) An estate in fee simple or a corresponding personal property interest.

Fee Appraisal—Appraisal of properties one at a time for pay.

Fee Simple—In land ownership, complete interest in a property, subject only to governmental powers such as eminent domain. Also fee simple absolute. See **estate in fee simple**; **fee**; and **absolute ownership**.

Fee Simple Condition Subsequent—Gives an owner fee simple title to property so long as a specified event (usually a change in use) does not occur. The person granting fee simple condition subsequent title must file suit to recover ownership if the condition is not met.

Fee Simple Determinable—Identical to fee simple condition subsequent except that the grantor (the original owner) does not need to file suit to regain title.

Fee Simple Title—Fee simple title indicates ownership that is absolute and subject to no limitation other than eminent domain, police power, escheat, and taxation.

Feedback—See **adaptive estimation procedure**.

Ferret, Tax—A special agent who is employed by a government to discover taxable property escaping assessment by the regular assessing agencies and who is compensated on the basis of the assessment of property so discovered or the amount of taxes levied or collected thereon.

Fiduciary—Any person who occupies a position of special trust in certain of his or her relationships to another person or persons, for example, an administrator, executor, guardian, receiver, or trustee.

Field Canvass—The practice of collecting the data needed in assessment operations by systematically going from property to property coding the specified information.

Field Review—The practice of reviewing the reasonableness of assessments by viewing the properties in question, sometimes by examining their interiors but more often by looking at their exteriors.

Film—The light-sensitive photographic emulsion and its transparent base.

Finished Goods—Inventory at the end stage of a manufacturing process. Finished goods are the result of combining raw materials with labor, capital, machine time, and other components of production.

First In First Out (FIFO)—An inventory cost procedure in accounting whereby unsold inventory, including inventory carried over from prior years, is valued at the prices most recently paid for inventory purchases.

Fiscal Year—The period covering a full year (not necessarily a calendar year) to which the annual budget and accounts apply. At the end of the fiscal year, the books of account of a government, person, firm, or association are closed in order to determine financial condition and the results of current operations.

Fixed Assets—(1) Personal property that has been brought to the point of highest and best use, that is, fully installed and used to produce income in an economically feasible manner. (2) In a business, permanent assets required for the normal conduct of a business.

Fixed Liability—Long-term (over one year's duration) debts.

Fixed Operating Expenses—Fixed operating expenses are those costs of doing business that do not vary with occupancy or output and that have to be paid whether the property is occupied or vacant. Fire insurance and property taxes are examples.

Fixture—(1) Attached improvements that can be real or personal property. If attached to the realty in such a manner that its removal would damage the real property or the fixture, the fixture is realty. If the fixture is removable without damage, it is generally considered personal property. (2) An item of equipment that, because of the way it is used, the way it is attached, or both, has become an integral part of a building or other improvement. A fixture, such as a bathtub, is classified as real property, but trade fixtures (fixtures used in the conduct of business) are classified as personal property.

Floor Area of Building—The total area of all floors within the finished portion of a building, measured to the center of party walls and to the outside surfaces of other exterior walls. *Compare* **cubic content of building**; **ground area of building**.

Floor Planned Goods—Inventory in the possession of a seller in which the seller has no equity. They differ from consigned goods in that the seller does have control of the merchandise, may set the selling price, and earn profit rather than commission. Such property may not be reported by the business and may not be easy to locate in the accounting records. Therefore, the assessor must be careful not to overlook it.

Flowchart—Any of a number of kinds of graphic descriptions of an algorithm, showing the operations, data flow, equipment, and so on.

Focal Length—The distance measured along the lens axis from the rear nodal point of the camera lens to the plane of best average definition over the entire field used in the aerial camera.

Foot, Front—See **front foot**.

Foot, Unit—See **unit foot**.

Foreclosure—The legal process by which a lien on a property is enforced.

Forfeiture—Reversion of property (to the state) based on a violation of a law or a stipulated restriction by the owner.

Formaldehyde—Chemical constituent of certain insulating materials and glues. May enter air and become a contaminant.

Format—The size and scale of an image.

Fractional Appraisal Method—Appraisal of the individual components of a property rather than appraisal of the entire system or unit as a single operating entity.

Fractional Assessments—Assessments that by law or by practice have assessment ratios different from 1. Usually the assessment ratio is less than 1 and, if assessment biases are present, different classes of property may have different fractional ratios. Fractional assessments are often condemned as offering a way to obscure assessment biases.

Fractional Section—A subdivision of a township containing more or less than 640 acres of land. Typically, accounting for the overage or deficiency in acreage is done on the north and/or west side of a section, and fractional sections are found on the north and/or west side of a township.

Franchise—A privilege or right that is conferred by grant of government on an individual or a group of individuals; usually an exclusive right to furnish public services or to sell a particular product in a certain geographical area.

Franchise, Corporate—The privilege belonging to a corporation by virtue of which it is permitted to exist and act as a legal entity distinct from its owners.

Franchise, Special—The exclusive privilege conferred by a government on one or more persons by which public property is used in furnishing a public service for private profit.

Freddie Mac—See **Federal Home Loan Mortgage Corporation**.

Free and Clear—Property that is unencumbered by any liens or mortgages.

Freehold—See **estate of freehold**.

Freight In—Freight paid on incoming shipments, treated as an element of cost of goods received.

Frequency Distribution—A table showing the number or percentage of observations falling in the boundaries of a given set of classes. Used in ratio studies to summarize the distribution of the individual ratios. See **class**; **histogram**; and **mode**.

Front Foot—The unit or standard of linear measure used in measuring frontage. *Compare* **unit foot**.

Frontage—The extent of a parcel of land along a street, road, river, or other traffic artery on which the parcel is said to face.

Full Disclosure Requirements—See **truth-in-taxation requirements**.

Full-Market-Value Assessment Standard—Assessments for which a law or other standard requires that the assessment ratio equals one.

Functional Obsolescence—Loss in value of a property resulting from changes in tastes, preferences, technical innovations, or market standards.

Functional Organization—A method of organizing personnel and practices under which the primary division is what is done to achieve the goals of the organization (such as producing the assessment roll) rather than where the activities are done. The latter method is called geographical organization. Functional organization of assessment usually means that special divisions are

responsible for appraising properties by type: personalty, residential property, agricultural property, commercial property, industrial property, and vacant land. Improved land is generally the responsibility of the appraiser of the improvement.

Functional Specialization—In assessment, appraiser specialization by type of property being appraised; sometimes also used to mean specialization by appraisal approach used, namely cost, income, or sales comparison. *Compare* **geographical specialization**.

Functional Utility—The ability of improvements to satisfy market standards and demands.

Furlong—A land measure of 1/8 mile or ten chains or forty rods.

Future Gross Income—The estimated gross income for a particular future year.

Future Net Income—The estimated net income for a particular future year.

Future Worth of 1—(Also called the compound amount of 1 or the amount of 1 at compound interest.) The amount to which one dollar will grow at compound interest over a specified number of years and at a specified interest rate.

Future Worth of 1 per Period—(Also called compound amount or accumulation of 1 per period.) The amount to which a series of equal periodic payments will accumulate at compound interest for a specified number of years and at a specified interest rate.

G

Gantt Chart—A form of bar chart used in project management. Each element (task) of a project is represented by a horizontal bar. The bars are placed on the chart according to a time scale. The left end of each bar indicates when the task is to begin. The length of each bar indicates the duration of the task. The right end of each **bar indicates when the task is to be completed**.

General Equilibrium—Simultaneous equilibrium of all individual economic units in the economy. Implies a condition in which consumers maximize their welfare given their income, producers maximize profits, and resources are employed in their most productive uses.

General Equilibrium Analysis—An economic analysis that attempts to understand how resources should be allocated to maximize a society's welfare.

General Journal—The book of original (chronological) entry listing all transactions and indicating the accounts to which they belong.

General Ledger—A book of accounts in which all the transactions of a business enterprise are classified in detail or in summary as final entry from original (chronological) postings.

General Tax Policy—Any purposeful course of action by governmental bodies that affects or determines the way taxes are created, levied, collected, or spent.

General Warranty Deed—The most common type of deed, a general warranty deed, implicitly promises that (1) the grantor owns the property and may convey title, (2) there are no hidden liens against the property, (3) no one else has better title to the property, (4) the grantor will obtain and deliver any documents needed to make good the transfer, and (5) the grantor will be liable for damages if future competing claims to the property prove valid.

Generally Accepted—Given authoritative recognition by professional bodies such as the Financial Accounting Standards Board and its Generally Accepted Accounting Principles (GAAP).

Geocode—A code used to locate or identify a point, such as the center of a parcel of real estate, geographically. The code is composed of the east-west and north-south coordinates of the point relative to some standard point of reference.

Geocoding—Geographical referencing or coding of data.

Geodesy—(1) The science concerned with determining the size and shape of the earth. (2) The science that locates positions on the earth and determines the earth's gravity field.

Geodetic Control Network—A system of monuments that are used as reference points in calculating, through triangulation, the location of other points on surveys and maps.

Geographic Coordinates—See **rectangular coordinates**.

Geographic Information System (GIS)—(1) A database management system used to store, retrieve, manipulate, analyze, and display spatial information. (2) One type of computerized mapping system capable of integrating spatial data (land information) and attribute data among different layers on a base map.

Geographical Specialization—Specialization of personnel, especially appraisers, by region rather than by type of property. *Compare functional specialization.*

Geoid—A theoretical figure of the earth using a continuous surface that is perpendicular at every point to the direction of gravity. The geoid would coincide with the ocean surface if the latter were undisturbed and affected only by the earth's gravity field.

Geometric Mean—A measure of central tendency computed by multiplying the values of all of the observations by one another and then taking the result to an exponent equal to one divided by the number of observations. The geometric mean is particularly appropriate when a typical rate of change is being calculated, such as an inflation rate or a cost index.

Geometrical Transformations—Adjustments made in image data to change its geometric (spatial) character.

GIM—See **gross income multiplier**.

Ginnie Mae—See **Government National Mortgage Association**.

GIS—See **geographic information system**.

Global Positioning System (GPS)—A navigational and positioning system by which the location of a position on or above the earth can be determined by a special receiver at that point interpreting signals received simultaneously from several of a constellation of special satellites.

Globe—A spherical body.

Going-Concern Value—The enhanced or synergistic value of assets due to their existence within, or assemblage into, an operating and economically viable business that is expected to continue its operation in the future with no intention or necessity of liquidation or the material alteration of the scale of operation.

Goodness-of-Fit Statistics—Statistics used in multiple regression analysis and other kinds of statistical modeling to express the amount, and hence the importance, of the errors or residuals for all the predicted and actual values of a variable.

Goods—Items of tangible personal property that have market value; items intended for resale (merchandise items).

Goods Held for Sale or Resale—Any inventory in the hands of a wholesaler, distributor, or retailer after having passed through one or more other levels of trade.

Goods in Process—Inventory, formerly raw materials, that has begun to undergo the manufacturing process that will result in finished goods.

Goods in Storage—Merchandise or other assets intended for resale, but held in facilities designed solely to hold merchandise. Goods in storage may also legally be goods in transit.

Goods in Transit—Merchandise items that are in the hands of a common carrier or other carrier. In most such situations, the goods cannot be assessed if they have not reached their destination.

Goodwill—The economic advantage over competitors that a business has acquired by virtue of habitual patronage of customers.

Government National Mortgage Association (GNMA) (Ginnie Mae)—A government-owned and government-financed agency that subsidizes mortgages through its secondary mortgage market and issues federally insured mortgage-backed securities. This agency falls within the Department of Housing and Urban Development.

Government Survey—A ground survey authorized by the Continental Congress in 1775 and by subsequent acts; conducted in Florida, Alabama, Mississippi, and all states (except Texas) north of the Ohio or west of the Mississippi, in which the land was divided into townships approximately six miles square, each township normally containing thirty-six sections and each section normally containing 640 acres. See **Public Land Survey System**.

Government Survey System—A general term referring to such surveys as the federal rectangular survey system in the United States.

Grade—See **quality class**.

Grand List—See **list, grand**.

Grantee—One who acquires property by voluntary conveyance.

Grantee Index—Lists alphabetically the name of every grantee whose name appears on a deed recorded for the year the index covers.

Grantor—One who voluntarily conveys property, whether by sale, gift, lease, or otherwise.

Grantor Index—Lists alphabetically the name of every grantor whose name appears on a deed recorded for the year the index covers.

Graticule—A network of lines on a map representing geographic parallels and meridians.

Green Buildings— Buildings that incorporate practices said to help the environment, reduce energy use and costs by energy-efficient design, contribute to a healthier and more pleasant environment for occupants, contribute to increased productivity, and experience faster leasing at more favorable rates for the lessor.

Grid—(1) A network composed of two families of lines such that a pair of lines, one from each family, intersects in no more than two points. (2) In geodesy, a grid composed of two sets of uniformly spaced straight lines intersecting at right angles (derived from a square Cartesian coordinate system).

Grid Tick—A very short line (tick) drawn perpendicularly to the neat line of a map, to indicate a point on the neat line through which a line of a grid would pass if drawn. Grid ticks come in pairs, one on each of two opposite neat lines.

GRM—See **gross rent multiplier**.

Gross—The total units with no allowances or deductions.

Gross Assessed Value—The official dollar value listed on an assessment roll, including any partial exemptions.

Gross Domestic Product—The aggregate annual flow of a country's wealth, measuring value of output as the sum of spending by consumers, investors, and government, or as the sum of factor incomes.

Gross Income Multiplier (GIM)—A capitalization technique that uses the ratio between the sale price of a property and its potential gross income or its effective gross income. Once calculated for several similar assets, a GIM may be multiplied against the income of a property to obtain an estimate of value.

Gross Leasable Area—All area within the outside walls, including lobbies, washrooms, janitor's closets, and so on, but excluding building stairs, fire towers, elevator shafts, flues, vents, stacks, pipe shafts, and vertical ducts if they serve more than one floor.

Gross Lease—See **lease, gross**.

Gross Rent Multiplier (GRM)—(1) The factor by which gross rent is multiplied in order to obtain an estimate of value (2) The ratio between sale price and potential gross income or effective gross income. By convention, the gross rent multiplier is typically the term used when developing the relationship based on monthly rent.

Ground Area of Building—The total area included at mean grade level within the outside surfaces of the exterior walls and the center lines of party walls, not including the area under open porches or steps or in courts or shafts. *Compare* **cubic content of building; floor area of building**.

Ground Control Point (GCP)—A geographic feature of known location that is recognizable on images and can be used to determine geographic corrections.

Ground Data—Information concerning the actual state of ground conditions at the time of a remote sensing overflight.

Ground Receiving Station—A facility that records image data transmitted by satellites.

Ground Rent—See **rent, ground**.

Ground Resolution Cell—The area on the terrain that is covered by the instantaneous field of view of a detector. Size of the ground resolution cell is determined by the altitude of the remote sensing system and the instantaneous field of view of the detector.

Guideline Companies—Similar companies used for comparison purposes.

H

Habendum Clause—The clause in a real estate document that defines the extent of ownership interest conveyed.

Harmonic Mean Ratio—The reciprocal of the arithmetic mean of the reciprocals of each value in the data set. The harmonic mean ratio is less affected by extreme values in the data set than the arithmetic mean or the geometric mean.

Harper Rule—An empirical rule that states that the value of a lot varies directly with the square root of its depth. For example, if a lot 100 feet deep is worth \$100 per front foot, then a lot 49 feet deep is worth seven-tenths as much, or \$70 per front foot. *Compare* **Hoffman rule; 4-3-2-1 rule; one-third, two-thirds rule.**

Hazardous Substances—Any substance designated under various federal acts as toxic or hazardous, including hazardous solid waste, toxic air pollutants, and imminently hazardous chemicals and mixtures. This term does not include petroleum and natural gas products or synthetic fuel gas.

Hazardous Waste—A solid waste that may pose a present or potential hazard to health or to the environment. This includes any solid waste that is ignitable, corrosive, toxic, or reactive.

Hectare—Unit of land measure equal to 100 meters square. Equivalent to 2,471 acres.

Hedonic Model—Hedonic pricing attempts to take observations of the overall goods or services and obtain implicit prices for the goods and services. Prices are measured in terms of quantity and quality. When valuing real property, the spatial attributes and property-specific attributes are valued in a single model. Calibration of the attribute components is performed statistically by regressing the overall price onto the characteristics.

Heterogeneous—Unlike; without interrelation. The opposite of homogeneous.

Heteroscedasticity—The quality of a dependent variable having inconstant variance for all values of the independent variables. The opposite of homoscedasticity.

Highest and Best Use—A principle of appraisal and assessment requiring that each property be appraised as though it were being put to its most profitable use (highest possible present net worth), given probable legal, physical, and financial constraints. The principle entails first identifying the most appropriate market, and, second, the most profitable use within that market. The concept is most commonly discussed in connection with underutilized land.

Histogram—A bar chart or graph of a frequency distribution in which the frequencies of the various classes are indicated by horizontal or vertical bars whose lengths are proportional to the number or percentage of observations in each class.

Historical Age—The number of years elapsed since an original structure was built. Synonyms are actual age and chronological age. See **cost**, **original**.

Hoffman-Neill Rule—An extension of the Hoffman Rule to cover lots of depths other than half that of the standard lot.

Hoffman Rule—An empirical rule that ascribes two-thirds of the value of a lot to the front half. *Compare* **Harper rule**; **Hoffman-Neill rule**; **4-3-2-1 rule**; **one-third, two-thirds rule**.

Holding Period—The length of time an investor expects to own a given property before selling it to someone else.

Holdout Sample—See **control sample**.

Homestead—A building occupied by the owner of the freehold and his or her family, with the primary intention of making it their home, together with the parcel of land on which it stands and the other improvements appurtenant to it. See **estate of freehold**. Note: This is a term variously defined by the several states and for several purposes. Most definitions pertain to the exemption of property from levy and sale and, as such, are not concerned with the nature of the estate that a householder owns in his or her home. The above definition, which is intended only for purposes of homestead tax exemption laws, requires further elaboration to indicate what constitutes a family, what constitutes occupancy primarily as

a home, how large a parcel of land can be included as part of the homestead, and what constitutes an improvement appurtenant to the home. There is as yet no substantial agreement on these points among the states.

Homogeneous—Possessing the quality of being alike in nature and therefore comparable with respect to the parts or elements; said of data if two or more sets of data seem to be drawn from the same population; also said of data if the data are of the same type (that is, if counts, ranks, and measures are not all mixed in together).

Homoscedasticity—The quality of a dependent variable having constant variance for all values of the independent variables. For example, if regression residuals were plotted against living area, a band of uniform width would indicate homoscedasticity; a trapezoid would indicate heteroscedasticity.

Horizontal Inequity—Differences based on criteria other than value range in the levels of assessment of groups of properties. For example, properties in one neighborhood may have a higher level of assessment than similar properties in another neighborhood. See **vertical inequity**.

Hotspot—A geographic area where sales activity is unusually strong and, usually, market values are rising and assessment ratios are declining.

Household Goods—Household goods are furnishings, appliances, utensils, and other tangible personal property used primarily in or around a residence by the residents and their guests.

Hybrid Model—A model that incorporates both additive and multiplicative components. See **additive model** and **multiplicative model**.

Hypothesis—A statement in inferential statistics the truth of which one is interested in determining. The usual procedure is to state what one chooses to accept in the absence of sufficient evidence to the contrary (the statement is called the null hypothesis), specify

the relationship or statement to be proved (the alternative hypothesis), and analyze the available data to determine whether the null hypothesis can be rejected (and hence the alternative hypothesis accepted) at some confidence level.

I

IAAO—International Association of Assessing Officers.

Image—The representation of a scene as recorded by a remote sensing system. Although image is a general term, it is commonly restricted to representations acquired by nonphotographic methods.

Image Enhancement—Any one of a group of operations that improves the detectability of the targets of interest. These operations include, but are not limited to, contrast enhancement, edge enhancement, spatial filtering and noise suppression, and image sharpening.

Imagery—Collectively, the representations of objects reproduced electronically or by optical means on film, electronic display devices, or other media.

Improper Expenses—Expenses incurred in the ownership of income-producing property that are not used to calculate value in the income approach.

Improvement—Anything done to raw land with the intention of increasing its value. A structure erected on the property constitutes one very common type of improvement, although other actions, such as those taken to improve drainage, are also improvements. Although such cases are rarely intentional, “improvements” can conceivably diminish the value of the land; note, however, that easements restricting the use and value of land are not considered improvements.

Improvement to Land—Designed to enhance a site’s utility for general use (fill, water, and wastewater lines, for example), or to reshape the land’s natural contours for more specific use (stock tanks, for example). Any publicly constructed improvement that does not fulfill a specific use—such as curbs, gutters, and sidewalks—constitutes an improvement to land.

Improvements—Buildings, other structures, and attachments or annexations to land that are intended to remain so attached or annexed, such as sidewalks, trees, drives, tunnels, drains, and sewers. Note: Sidewalks, curbing, sewers, and highways are sometimes referred to as “betterment,” but the term “improvements” is preferred.

Improvements other than Buildings—A fixed asset account that reflects the acquisition value of permanent improvements, other than buildings, that add value to land. Examples of such improvements are fences, retaining walls, sidewalks, pavements, gutters, and tunnels. This account contains the purchase or contract price; if improvements are obtained by gift, the account reflects the appraised value at time of acquisition.

In Personam—Against a person. Note: A property tax is said to be in personam when it is a charge against a person, collectable out of any of his or her property or income, rather than a lien against the property subject to the tax. Some taxes are both in rem and in personam.

In Rem—Against a thing. Note: A property tax is said to be in rem when it is a charge against the property on which levied and is secured by a lien thereon. The fact that a property tax is a lien on other property of the owner does not make it an in rem tax.

Inadequacy—The inability of a property to yield a reasonable return on the value of the land and the reproduction cost of the improvements (less accumulated physical depreciation) because of its lack of capacity.

Inadequate Rate of Return —A percentage of income to investment that does not allow a company both to service debt and to earn the required rate of return for shareholders and bondholders.

Income—The payments to its owner that a property is able to produce in a given time span, usually a year, and usually net of certain expenses of the property.

Income Approach—One of the three approaches to value, based on the concept that current value is the present worth of future benefits to be derived through income production by an asset over the remainder of its economic life. The income approach uses capitalization to convert the anticipated benefits of the ownership of property into an estimate of present value.

Income Capitalization—The process of dividing a property's net annual income by a capitalization rate in order to arrive at an estimated value.

Income Path—The series of payments from an investment expressed as a percentage of the first year's payment; the plot or trajectory of the income stream.

Income Stream—The series of payments (usually net income payments) receivable from an investment over the life of the investment. The series, of course, may be of any conceivable nature, including a constant series of equal payments (level), a series of decreasing payments that decrease by equal amounts each period (arithmetically decreasing), a series of increasing payments that grow larger each period at a constant rate (geometrically increasing), and so on.

Increment, Alley—See **alley influence**.

Increment, Unearned—An increase in value of property due primarily to the operation of social forces rather than to the efforts or initiative of the owner; usually, but not necessarily, applied to land.

Increment, Value—See **value increment**.

Incurable—A part of depreciation for which it is not economical to correct the condition, and if corrected, the cost of correcting the condition exceeds the value added.

Indemnification—Bonds established to provide security against future costs resulting from previously existing contamination; usually provided by the seller to facilitate a sale of contaminated property.

Independent Appraisal—An estimate of value using a model different from that used for assessment purposes. Independent appraisals are used to supplement sales in sales ratio studies or in appraisal ratio studies.

Independent Variable—A variable whose value is not determined by other (dependent) variables.

Indirect Capitalization—Any of several techniques used in the income approach to value. The indirect methods stand in contrast to direct sales analysis methods, whereby a typical relationship between incomes and sale prices is found by dividing observed

incomes by sale prices of comparable properties; the fraction thus obtained is then applied (in the form of a gross income multiplier or an overall rate) to the properties being appraised. The indirect methods, on the other hand, involve certain subtleties and assumptions that vary according to the particular method employed, but include estimating such factors as the required rate of return on investment, the remaining economic life of the property, an investment holding period, the income path, anticipated depreciation or appreciation, and reversionary value upon the end of economic life. See **building residual technique**; **discount rate**; **land residual technique**; **mortgage-equity analysis**; **property residual technique**; and **yield capitalization**.

Indirect Costs—(1) Overhead costs (see **cost, overhead**). (2) Costs incurred in construction away from the site. For example: fees, permits, insurance, and loans.

Indirect Equalization—The process of computing hypothetical values that represent the oversight agency's best estimate of taxable value, given the legally required level of assessment or market value. Indirect equalization allows proper distribution of intergovernmental transfer payments between state or provincial and local governments despite different levels of appraisal between jurisdictions or property classes. See **equalization** and **direct equalization**.

Industrial property—See **property use category**.

Inelastic—See **elasticity**.

Inferential Statistics—The branch of statistical studies concerned with making predictions about the values of a large number of observations of a variable on the basis of a small number of observations of that variable and related facts. (2) By extension, the statistics calculated in such predictions.

Inferior Goods—Goods the consumption of which decreases as consumer income increases.

Influence, Corner—See **corner influence**.

Influence, Depth—See **depth influence**.

Infrared Film—Photographic film sensitized to record near infrared wavelengths beyond the red end of the light spectrum; also sensitive to blue and ultraviolet light and must be used with a red filter to screen out these wavelengths.

Infrared Radiation (IR)—Pertaining to or designating that portion of the electromagnetic spectrum lying between the red end of the visible spectrum (about 0.7 micrometers) and an indefinite upper boundary sometimes arbitrarily set at 1,000 micrometers, the lower limit of the microwave region of the spectrum.

Infrared Scanner—An instrument for obtaining thermal infrared imagery through line-scanning techniques.

Infrared Thermal Sensing—Line-scanning techniques using infrared scanners with detectors. Usually, the imagery is obtained from selected portions of the 3 to 14 micron region of the spectrum.

Ingress—An entrance or means of entering.

In-lot—Any lot within an original or subdivision plat other than an outlot.

Innocent Landowner—A landowner who purchased property subsequent to contamination, but who had no knowledge of and did not contribute to, the contamination. The landowner must have made all “appropriate inquiries” into the property prior to purchase. Purchasers who qualify as innocent landowners are not liable under CERCLA.

Inputs—See **factors of production**.

Insolvent—Being incapable of meeting current debts.

Installment Contract—A purchase contract in which payment is made in prescribed installments that are usually forfeited if default occurs.

Instrument—A formal legal document such as a deed, contract, will, or lease.

Intangible Personal Property—See **property**.

Integrity—The quality of a data element or program being what it says it is; usually distinguished from validity, the quality of its being what it should be in terms of some ultimate purpose. After data are edited and encoded and programs are prepared, their integrity is ensured by safeguards that prevent accidental or unauthorized tampering with them. *Compare* **accuracy**; **precision**.

Interactive—Possessing the quality of being able to get reactions to proposals or instructions one at a time rather than merely all at once at the end of a session; usually said of a kind of computer system.

Intercept—Graphically, the point at which a line, such as a regression line, intersects the axis on which the dependent variable is represented; the value of the predicted variable when the value of all the other values in the model is zero; the constant b_0 .

Interest (Interest Rate)—The premium paid for the use of money; a (rate of) return on capital; the equilibrium price in money markets. The interest rate usually incorporates a risk factor, an illiquidity factor, a time-preference factor, an inflation factor, and potentially, other factors. See **discount rate**.

Interest (Interest Transferred, Interest Acquired)—The ownership rights of a person in a property. Complete ownership is called fee simple interest. It is possible to sell (transfer) and to own separately the component interests, such as mineral rights and air rights, that make up the fee interest. See **bundle of rights**.

Interest, Possessory—See **possessory interest**.

Interest, Undivided—See **undivided interest**.

Internal Controls—The elements of a system for monitoring performance and ensuring integrity that are employed more routinely than procedural edits and are often performed automatically.

Internal Rate of Return—(1) The annualized yield rate on capital that is (or could be) generated by an asset or within a group of capital assets over a period of ownership. (2) The rate that discounts all future cash flows to a net present worth equal to the original investment. The internal rate of return is calculated, usually by trial and error, from a knowledge of the relevant cash flows.

Interquartile Range (Interquartile Deviation [IQR])—The result obtained by subtracting the first quartile from the third quartile. By definition 50 percent of the observations fall within the IQR.

Intestate—The state of having died without leaving a valid last will and testament.

In-Transit Goods—Personal property that is in movement from one jurisdiction to another; the property is not assessable because of lack of situs.

Intrinsic value—(1) The inherent worth of a thing. (2) Value that remains when cost to cure a contamination problem exceeds original market value. See **value in use**.

Inventory—(1) The group of personal property items whose value is exhibited by value in exchange, that is, ownership is solely for the purpose of sale rather than use. (2) In general, any detailed list showing quantities and descriptions, and usually values or prices, of property. (3) Frequently used in the plural form to designate all types of current, physical assets that are customarily listed by quantities, descriptions, and values or prices for regular accounting purposes; for example, raw materials, goods in process, finished goods, office supplies, stores. (4) Occasionally (for example, in Vermont), a tax list.

Inventory, Perpetual—An inventory which is kept up to date by recording and valuing additions to stock and withdrawals therefrom as they occur. Synonymous with “running inventory.”

Inventory, Physical—An inventory that is made up periodically on the basis of an actual count and valuation of all items then on hand.

Investment Analysis—A study that evaluates the relationship between acquisition price and anticipated future benefits of a real estate investment.

Investment Holding Period—The length of time that typical investors generally hold an investment of a specified type.

Investment Trust—A type of investment company that sells its stock and invests the money received in stocks and bonds of other companies, real estate, or other investments. Investment trusts can be open-end or closed-end. See **REIT**.

Investment Value—The worth of an investment property to a particular investor. Investment value may or may not coincide with market value depending on the requirements of the specific investor.

Investment Yield—The rate of return on capital that is generated from an investment over a period of ownership, including both income and resale.

Inwood Coefficient—A factor used to obtain the present worth of a level stream of income; also known as the present worth of 1 per period factor.

Iowa Type Curve—A classification of survivor curves by their basic mathematical shape into three families of, respectively, 6, 7, and 5 curves; hence the alternate designation of “Iowa 18 type curves.” Type survivor curves are used to smooth original survivor curves, to help determine the probable life of single units, and as a means of checking the adequacy of the depreciation reserve balance or of estimating an adjustment factor in the appraisal procedure.

Irrevocable—That which cannot be recalled or revoked.

IRV—A mnemonic for the basic equation of the income approach: $\text{Income} = (\text{Capitalization}) \text{ Rate} \times \text{Value}$.

Iteration—One repetition or repeated cycle in a process of estimating values as close as possible to actual values by repeated approximations. The results of each approximation are used in the next one.

J

Joint estate—See **tenancy, joint**.

Joint tenancy— See **tenancy, joint**.

Jurisdiction—(1) The right and power to interpret and apply the law; also, the power to tax and the power to govern. (2) The territorial range of authority or control.

K

Kilometer—Unit of length equal to 1,000 meters. Equals 0.6214 statute miles.

Kruskal-Wallis Test—A test in inferential statistics, valid for all types of numerical data, that seeks to determine whether the observations in a sample came from one population as opposed to three or more distinct, homogeneous subpopulations. This test is used in assessment to analyze assessment ratios from three or more classes of property to determine whether significant assessment biases are present among the classes of property. When only two classes are being compared, the appropriate test is the Mann-Whitney test.

L

Land—(1) In economics, the surface of the earth and all the natural resources and natural productive powers over which possession of the earth's surface gives man control. (2) In law, a portion of the earth's surface, together with the earth below it, the space above it, and all things annexed thereto by nature or by man. See **improvement**.

Land, Improved—Land that has been made more valuable by the application of labor or labor

and capital to it or public property adjacent to it.

Land, Parcel of—See **parcel**.

Land, Patented—Land formerly owned by a state or national government as part of the original public domain that has been voluntarily conveyed by such government to a private owner by a proceeding authorized by general statute, the conveyance being evidenced by an instrument known as a "land patent."

Land, Platted—Land that has been surveyed and divided into marketable lots delineated on a plat; applied especially to urban land used or intended for use as building sites.

Land Contract—An executory contract for the purchase of real property under the terms of which legal title to the property is retained by the vendor until such time as all conditions stated in the contract have been fulfilled; commonly used for installment purchase of real property. See **contract for deed**.

Land Cover—The biophysical materials covering the surface of the land, including soil, water, vegetation, and human cultural activities.

Land Description Systems—Organized uniform written descriptions of the physical boundaries of property rights; commonly referred to as legal descriptions.

Land Grant—A legal document in which the federal government conveys land title to an individual.

Land Ratio—The ratio of land area to building area. The land ratio can be an important factor in grouping properties for income approach appraisal by means of direct sales comparisons.

Land Ratio Method—A technique used to estimate the value of property from a knowledge of normal net income, the discount rate, the remaining economic life of a property, the value of the building, the income path attributable to the building, and the income path attributable to the land. The technique estimates total value by discounting the income stream attributable to the land and adding the result to an independent estimate of the value of the building. See **allocation method**.

Land Residual Technique—See **abstraction method**.

Landlord—Synonymous with lessor.

Landsat—A series of unmanned earth-orbiting NASA satellites that transmit multispectral images in the 0.45- to 12.5-micrometer region of the spectrum to earth receiving stations. Formerly ERTS.

Land-to-Building Ratio (Land-to-Improvement Ratio)—The proportion of land area to gross building (improvement) area. For a given use, the most frequently occurring ratio will be that of a functioning economic unit.

Last In First Out (LIFO)—An inventory cost accounting procedure whereby unsold inventory, including inventory carried over from the prior year, is valued at the prices paid for the earliest inventory purchases.

Latitude—The angular distance north or south of the equator, measured in degrees along a meridian, as on a map or globe.

Law of Variable Proportions—Often called law of decreasing returns or the law of proportionality. States that when the quantity of one productive service is increased by equal increments, the quantities of other productive services remaining fixed, the resulting increment of product will decrease after a certain point.

Lease—A written contract by which the lessor (owner) transfers the rights to occupy and use real or personal property to another (lessee) for a specified time in return for a specified payment (rent).

Lease, Cash—See **cash lease**.

Lease, Graduated Rental—A long-term lease with increases or decreases (specified in a step-up or step-down clause) in the rent that are to take effect at established intervals at set amounts or at amounts to be reached by subsequent appraisal and arbitration.

Lease, Gross—A lease under the terms of which the lessor (landlord) receives stipulated rent and pays the expenses of operating and maintaining the leased property. *Contrast* **lease, net**.

Lease, Ground—A lease conveying an interest in land exclusive of any improvements constructed thereon.

Lease, Net—A lease under the terms of which the lessee pays the agreed rental and also all expenses of operating and maintaining the leased property, including taxes on it, but not including depreciation. *Contrast* **lease, gross**.

Lease, Percentage—A lease in which the consideration is measured by, or dependent on, the operating earnings or sales of the business using the leased property.

Lease, Proprietary—A type of lease used by tenant-shareholders in a cooperative apartment; the tenant purchases a specific number of shares of stock to occupy a unit, then makes monthly payments for operations and debt service.

Lease, Sandwich—A lease that lies between the fee title and a subsequent lease. For example, A leases to B and B to C; the first of these leases is a sandwich lease. The lessee in a sandwich lease is not the person using the property. The lessor may or may not be the owner of the fee; if it is a sublease, he or she is not.

Lease, Step-Up—A lease that calls for set increases in rent at specified intervals.

Lease, Straight—A lease that calls for a set amount of rent to be paid periodically over the term of the lease.

Leased Fee Estate—An ownership interest held by a lessor with the rights of use and occupancy conveyed by lease to another.

Leasehold Estate—Interests in real property under the terms of a lease or contract for a specified period of time, in return for rent or other compensation; the interests in a property that are associated with the lessee (the tenant) as opposed to the lessor (the property owner). May have value when market rent exceeds contract rent.

Leasehold Improvements—Items of personal property such as furniture and fixtures associated with a lessee (the tenant) that have been affixed to the real property owned by a lessor.

Least Cost Combination of Resources—A combination of resources at which the marginal physical product per dollar's worth of one resource is equal to the marginal physical product per dollar of every other resource.

Legal Description—A delineation of dimensions, boundaries, and relevant attributes of a real property parcel that serve to identify the parcel for all purposes of law. The description may be in words or codes, such as metes and bounds or coordinates (see **coordinate system**). For a subdivided lot, the legal description would probably include lot and block numbers and subdivision name.

Lessee—The person receiving a possessory interest in property by lease, that is, the owner of a leasehold estate.

Lessor—The person granting a possessory interest in property by lease, that is, the conveyor of a leasehold estate, the holder of a leased fee estate.

Level of Appraisal—The common, or overall, ratio of appraised values to market values. Three concepts are usually of interest: the level required by law, the true or actual level, and the computed level, based on a ratio study.

Level of Assessment; Assessment Ratio—The common or overall ratio of assessed values to market values. *Compare level of appraisal.* Note: The two terms are sometimes distinguished, but there is no convention determining their meanings when they are. Three concepts are commonly of interest: what the assessment ratio is legally required to be, what the assessment ratio actually is, and what the assessment ratio seems to be, on the basis of a sample and

the application of inferential statistics. When level of assessment is distinguished from assessment ratio, “level of assessment” usually means either the legal requirement or the true ratio, and “assessment ratio” usually means the true ratio or the sample statistic.

Level of Trade—See **trade, level of**.

Leverage—The effect of borrowed funds on investment return.

Levy—See **property tax levy**.

Liability—(1) Any debt or legal obligation. (2) Used broadly to include the obligations, legal or equitable, of a business entity to its owners as well as its creditors.

Lien—(1) The legal right to take or hold property of a debtor as payment or security for a debt. (2) Any legal hold or claim, whether created voluntarily or by operation of law, which a creditor has on all or specified portions of the property owned by a person indebted to him. *Compare mortgage*.

Lien Date—The date on which an obligation, such as a property tax bill (usually in an amount yet to be determined), attaches to a property and the property thus becomes security against its payment. The term is usually synonymous with appraisal date but is not necessarily so.

Life, Economic—See **economic life**.

Life, Physical—The period over which a physical property is capable of functioning without being scrapped or reconstructed.

Life, Structural—See **life, physical**.

Life Estate—An interest in property that lasts only for a specified person’s lifetime; thus the owner of a life estate is unable to leave the property to heirs.

Life Tenant—The recipient of a life estate.

Light Detection and Ranging (LiDAR)—An airborne collection system that uses a scanning infrared laser sensor comprising a transmitter and receiver, Global Positioning System (GPS) receiver and an Inertial Navigation System (INS) unit to obtain the geospa-

tial x, y, and z coordinate value of ground surface points. This data can be used to develop very accurate digital elevation, surface and terrain models. These models can form the base for orthoimagery and geospatial analysis.

Limits on Assessment Increases—A form of tax and expenditure limitation, applicable to all local governments in the state, in which an upper limit is placed on the dollar value of assessments, on the dollar amount of assessment increases, or on the rate of the assessment increase. See **assessment, acquisition-based**.

Limits on General Revenue or Expenditure Increases—A form of tax and expenditure limitation, applicable to all local governments in the state, in which an upper limit is placed on the dollar value of increases in revenues gathered or on expenditures made, or on the rate of increase in revenues gathered or expenditures made.

Lindsay-Bernard Rule—See **Bernard rule**.

Line, Base—See **base line**.

Line, Coincidence—Synonymous with preferred term merge line.

Line, Lot—A line bounding a lot.

Line, Lot—A line bounding a lot.

Line, Merge—See **merge line**.

Line, Property—A line bounding a parcel of land. *Compare* **line, lot**. Note: A property line may or may not coincide with a lot line, depending on whether or not the parcel and the lot are coterminus.

Line, Range—See **range line**.

Line, Township—See **township line**.

Linear Regression—A kind of statistical analysis used to investigate whether a dependent variable and a set of one or more independent variables share a linear correlation and, if they do, to predict the value of the dependent variable on the basis of the values of the other variables. Regression analysis of one dependent variable and only one independent variable is called simple linear regression, but it is the word simple (not linear) that distinguishes it from multiple regression analysis with its multiple independent variables.

Link—(1) A land measure of 7.92 inches. (2) Successive ownership of a particular property in the chain of title.

Liquid Assets—Assets that can quickly be converted into cash.

Liquidation Value—The estimated gross dollar amount that could be typically realized at properly conducted public auction held under forced conditions and under present-day economic trends.

Liquidation Value-in-Place—The estimated proceeds of a forced sale of an entire facility or property.

Liquidity—The ease with which an asset may be converted into cash.

List, Grand—(1) The combined contents of all individual tax lists within a given tax or assessment district after the completion of the original assessment and administrative review. (2) Occasionally, a list of the record owners of real estate. *Compare* **assessment roll**.

List, Tax—(1) A list made up by or for each taxpayer during the assessment process, containing an itemized inventory of taxable property with one or more columns for the insertion of valuation figures (preferred). (2) Occasionally used synonymously with assessment roll. *Compare* **declaration; inventory; and rendition**.

Lister—A term used in Vermont synonymously with assessor.

Listing—The process by which the assessor ensures that records for the taxable property identified during discovery are preserved with integrity, available for use in valuation activities, and ultimately reflected in the assessment roll.

Loan constant—See **mortgage constant**.

Loan-to-Value Ratio (M)—The relationship (usually as a percentage) between the amount of a mortgage and the value of the security pledged as security for the mortgage.

Loan Term—The length of time over which a loan must be repaid.

Locally Assessed Property—Property for which the assessed value is set by the assessing official of the local jurisdiction within which the property is located.

Local Multiplier—An adjustment to replacement or reproduction cost new or historic cost, to reflect local costs.

Location—The numerical or other identification of a point (or object) sufficiently precise so the point can be situated. For example, the location of a point on a plane can be specified by a pair of numbers (plane coordinates) and the location of a point in space can be specified by a set of three numbers (space coordinates). However, location may also be specified in other terms than coordinates. A location may be specified as being at the intersection of two specific lines by identifying it with some prominent and known feature (for example, “on top of Pikes Peak” or “at the junction of the Potomac and Anacostia Rivers”).

Location Value Response Surface Analysis—A mass appraisal technique that involves creating value influence centers, computing variables to represent distances (or transformations thereof) from such points and using the variables in a multiple regression or other model to capture location influences. Implementation of the technique is enhanced by the use of a geographic information system. Some geographic information systems permit the value influence centers to be displayed and measured as a three-dimensional grid surface, the results of which can be likewise used in calibration techniques to arrive at the contribution of location based on the model specification.

Location Variable—A variable, such as the distance to the nearest commercial district or the traffic count on an adjoining street, that seeks to measure the contribution of locational factors to the total property value.

Locational Obsolescence—A component of economic obsolescence; loss in value due to suboptimal siting of an improvement.

Log-Linear Relationship—A correlation between two variables such that if the value of one variable changes by a certain percentage, the value of the other changes by a certain amount. (Recall that logarithms permit multiplication to be done by means of adding logs.) For example, there is a log-linear relationship between x and y in the following sequence:

x	5	6	7	8
y	20	30	45	67.5

Logarithm; Log—The number that, when used as an exponent for another number (called the base), results in a third number of some practical interest (called the antilogarithm). There are two bases that are used with any frequency; the base 10 produces what are called common logarithms, and the base 2.71828 (e) produces what are called natural logarithms. For example, $\log_{10} 100 = 2$; $10^2 = 100$. Logarithms were originally used to simplify complex calculations involving multiplications inasmuch as two numbers can be multiplied by adding their logarithms and taking the antilog of the result.

Long-Lived Items—Items that are the basic structure of a building and are not usually replaced during economic life. For example: foundation, roof structure, and framing.

Long-Term Debt—The unpaid balance of notes, bonds and other evidences of debt payable after one year from the date issued plus any unamortized debt discount and debt expense and any reacquired long-term debt.

Long and Short Rule—Any rule for computing depth factors.

Long Run—A planning period long enough for a firm to be able to vary quantities of all resources it uses.

Longitude—A linear or angular distance measured east or west from a reference meridian (usually Greenwich) on a sphere or spheroid.

Loran-C—A radio navigation system. The term Loran was originally an acronym for Lo(ng)Ra(nge) N(avigation).

Lot—Any one of the marketable parcels into which a tract of land is divided upon platting; applied especially to urban land. Note: A lot may or may not be coterminous with a parcel of land.

Lot, Corner—A lot located in the angle formed by two intersecting streets.

Lot, Government—One of the nonrectangular areas into which sections not evenly or approximately divisible into square forty-acre tracts were divided in the course of the government survey.

Lot, In—See **in-lot**.

Lot, Inside—A lot sufficiently far from the intersection of any streets to be assumed to be free of corner influence.

Lot, Irregular—A lot which is not rectangular in shape.

Lot, Merged—Used synonymously with the preferred term “through lot.”

Lot, Off-Grade—A lot that must be cut or filled to bring it to normal grade.

Lot, Out—See **outlot**.

Lot, Restricted—A lot whose owner is restricted as to its use or sale by the terms of a private contract or by operation of law; for example, a lot upon which construction is restricted to residential buildings of an approved style and of a minimum cost. Note: Restrictions are ordinarily created by zoning laws and ordinances or by private contract on the deed of property.

Lot, Standard—A lot that is selected as the standard in size, shape, grade, and alley influence, usually because it is representative of the majority of lots within a given area.

Lot, Through—A lot fronting on two streets which are parallel or which run in the same general direction. Synonymous with merged lot. Note: The term “through parcel” is more appropriate if the parcel was formed by assemblage of two lots with a common rear line.

Lot and Block Survey—A plat in which a larger parcel of land is subdivided into small units for the purpose of sale. Conveyances need to refer only to the lot, block, and plat book designation.

Lot and Block Survey System—A system used to describe small parcels of land, primarily urban, using in most cases a section or plat number or name, and a lot number.

Lower of Cost or Market—An inventory accounting concept which states that the present value of inventory is based on the lower of either historical cost or current selling price.

M

Macroeconomics—The economics of the economy as a whole—the forces causing recession, depression, and inflation together with the forces resulting in economic growth.

Macroidentification—A method of studying an entire manufacturing process by identifying the major components contributing to the design capacity of a plant.

Maintenance—An expenditure on a fixed asset that increases or tends to preserve the asset's value but that, under accepted accounting procedure, is not reflected in an increase in its book value. *Contrast* **betterment**.

Management Rate—A rate that reflects the costs of managing the property. This management rate is added to the risk rate, the safe rate, and the nonliquidity rate to yield the return rate in the summation method.

Mann-Whitney Test—A test in inferential statistics, similar to the Kruskal-Wallis test, that seeks to determine whether the differences in values between two sets of observations from any population are statistically significant.

Map—A conventional representation, usually on a plane surface and at an established scale, of the physical features (natural, artificial, or both) of a part or the whole of the earth's surface. Features are identified by means of signs and symbols, and geographical orientation is indicated.

Map, Aerial—A map constructed on the basis of aerial photographs.

Map, Base—A map with points of reference and other physical features to facilitate data plotting.

Map, Highway—A (usually) planimetric map whose features are roads and streets, access ways, railroads, airports, and other transportation activities and their support services.

Map, Land Value—A map that shows all streets, watercourses, railroads, and other principal features, and the unit-foot values, square-foot values, or acre values assigned to all land in the area covered. Synonymous with equalization map; base value map.

Map, Lot, and Block—A map of an urban area showing the division of land into lots and blocks, with dimensions.

Map, Planimetric—A map that shows only the horizontal positions of the features represented. See **map, topographic**.

Map, Tax—A map drawn to scale and delineated for lot lines or property lines or both, with dimensions or areas and identifying numbers, letters, or names for all delineated lots or parcels.

Map, Topographic—A map showing the horizontal and vertical locations of natural and artificial features. It is distinguished from a planimetric map by the presence of quantitative symbols showing the relief.

Map, Unit-Foot Value—See **map, land value**.

Map Book and Page System—A system for parcel identification in which a code (usually numeric) is used to identify each parcel, each code containing four elements: the volume or book of maps in which the parcel is to be found, the page on which it is to be found, the block, and the individual parcel on the block.

Margin of Error—A measure of the uncertainty associated with statistical estimates of a parameter. It is typically linked to consumer surveys or political poll questions. A margin of error is a key component of a confidence interval. It reports a “plus or minus” percentage or proportion quantity in a confidence interval at a specified level of probability (typically 95 percent). See **confidence interval**.

Marginal Cost—The change in a firm’s total costs per unit change in its output level.

Marginal Physical Product—The change in total output of a firm resulting from a one-unit change in the employment of a resource, holding the quantities of other resources constant.

Marginal Revenue—The change in a firm’s total revenue per unit change in its sales level; marginal revenue equals price in pure competition only.

Marginal Unit—The unit last added to any economic process.

Marginal Utility—The change in the total utility to a consumer that results from a one-unit change in the consumption level of an item.

Marginal Utility Theory—A theory of consumer choice that says that consumers will maximize welfare by allocation of their budget such that the marginal utility per dollar is equalized across all purchased goods.

Market—(1) The topical area of common interest in which buyers and sellers interact. (2) The collective body of buyers and sellers for a particular product.

Market Adjustment Factors—Market adjustment factors, reflecting supply and demand preferences, are often required to adjust values obtained from the cost approach to the market. These adjustments should be applied by type of property and area and are based on sales ratio studies or other market analyses. Accurate cost schedules, condition ratings, and depreciation schedules will minimize the need for market adjustment factors.

Market Analysis—A study of real estate market conditions for a specific type of property.

Market Analyst—An appraiser who studies real estate market conditions and develops mathematical formulas that represent those market conditions.

Market Approach—A valuation term with several meanings. In its broadest use, it might denote any valuation procedure intended to produce an estimate of market value, or any valuation procedure that incorporates market-derived data, such as the stock and debt technique, gross rent multiplier method, and allocation by ratio. In its narrowest use, it might denote the sales comparison approach..

Market Area—See **economic area**.

Market Price—The price a particular buyer and seller agree to in a particular transaction; the amount actually paid. *Compare market value.*

Market Rate of Return—The typical return on an investment in a given type of property in a given market. It is distinct from the actual rate of return indicated by a property's actual income.

Market Rent—The rent currently prevailing in the market for properties comparable to the subject property. Market rent is capitalized into an estimate of value in the income approach.

Market System—A type of economic system in which the questions of what to produce, for whom, and how are decided by the workings of an open and competitive market.

Market Value—Market value is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States is: The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: The buyer and seller are typically motivated.

Both parties are well informed or well advised, and acting in what they consider their best interests.

A reasonable time is allowed for exposure in the open market.

Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto.

The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Marketability—The salability of a property at a specific time, price, and terms.

Market-Related Adjustment—Accounts for changes in market conditions between the time a comparable sold and the effective date of the appraisal. See **market adjustment factors**.

Market-to-Book Multiple—See **equity market multiple**.

Market-Value Standard—A requirement of law or practice that the assessment ratio of all properties be equal to 1. Two issues are implicit here: that fractional assessment levels be avoided and that all property be assessed on the basis of its market value and not on the basis of its value in some particular use—for example, agriculture—unless that use is the only use to which the property can legally be put (in which case its use value would be equal to its market value).

Mark-up—A mark-up is an amount added to a cost in calculating a selling price to account for overhead and profit.

Mass Appraisal—The process of valuing a group of properties as of a given date, using standard methods, employing common data, and allowing for statistical testing.

Mass Appraisal Model—A mathematical expression of how supply and demand factors interact in a market.

Mean—A measure of central tendency. The result of adding all the values of a variable and dividing by the number of values. For example, the mean of 3, 5, and 10 is 18 divided by 3, or 6. Also called arithmetic mean.

Measure of Tax—The unit that makes up the tax base. Note: The measure of a tax is distinguished in law from the subject of tax. For example, the measure of a gasoline tax is a gallon, whereas the subject of the tax may be the privilege of selling gasoline; the measure of a property is \$1, \$100, or \$1,000 worth of property, and the subject may be either the property or the person owning it. *Compare* **object of tax; subject of tax.**

Median—A measure of central tendency. The value of the middle item in an uneven number of items arranged or arrayed according to size; the arithmetic average of the two central items in an even number of items similarly arranged; a positional average that is not affected by the size of extreme values.

Median Absolute Deviation—The median of the absolute deviations from the median. In a symmetrical distribution, the measure approximates one-half the interquartile range.

Median Percent Deviation—The median of the absolute percent deviations from the median; calculated by dividing the median absolute deviation by one-hundredth of the median.

Mercator Projection—Refers to one of several mathematical projections of the curved surface of the earth on an imaginary cylinder, which is then flattened. The original Mercator projection was on a cylinder the axis of which was in a north-south direction. Transverse Mercator projections are on imaginary cylinders with an east-west orientation. Transverse Mercator projections are more common than the original Mercator projection. In addition to the universal transverse Mercator (UTM) projection, there are the modified transverse Mercator system (MTMS), and the state transverse Mercator (STM) system.

Merge Line—An imaginary line dividing a through lot or parcel into two parts, along which, corner and alley influence being ignored, the value of the land is at its minimum and is the same whether the depth be calculated from one street or the other. Note: It is customary to locate the merge line of a rectangular through lot at a point at which the ratio of its distances from the two streets is equal to the ratio of the respective unit-foot values of the two streets. This formula, however, does not produce results consistent with the above definition when used in conjunction with any of the standard depth tables.

Merge Point—Any point on the merge line.

Merger—Union of two or more entities; absorption of a lesser entity by a greater one.

Meridian—(1) An imaginary line on the earth's surface running due north and south from which differences of longitude (or departures) and azimuths are reckoned. (2) A principal north-south line in the rectangular land survey system.

Meridian, Grid—A line of a map grid parallel to the line representing the central meridian.

Meridian, Principal—A true meridian from which range lines are established by the government survey. *Contrast* **base line**.

Metes and Bounds—Measurement of angles and distances; a description of a parcel of land accomplished by beginning at a known reference point, proceeding to a point on the perimeter of the property being described, and then tracing the boundaries until one returns to the first point on the perimeter, usually a corner. The angles are described by reference to points of the compass, and the distances are described in feet or chains; curves are treated as arcs on a circle.

Microeconomics—The economics of units, such as firms and neighborhoods, of an economic system (as opposed to macroeconomics, which studies the economy as a whole).

Microidentification—The process of finding the individual characteristics of equipment.

Microwave Region—Commonly, that region of the electromagnetic spectrum in the wavelength range from 1 micrometer to beyond 1 meter.

Mill—One mill is one-thousandth of one dollar or one-tenth of one cent.

Millage; Mill Rate—A tax rate expressed as mills per dollar. For example, a 2 percent tax rate is \$2 per \$100, \$20 per \$1,000, or 20 mills per dollar.

Mineral Rights—The right to extract ore, petroleum, or other minerals from a property.

Ministerial Duty—A duty prescribed by law that can be discharged without the exercise of official discretion or judgment.

Minkowski Metric—Any of a family of possible ways of measuring distance. Euclidean distance, a member of this family, computes straight-line distances by squaring differences in like coordinates, summing them, and taking the square root of the sum. In mass appraisal model building, Minkowski metric usually refers to the sum of absolute differences (not squared) in each dimension, and resembles a “taxicab” or city block pattern. Other alternatives are possible, including the distance as calculated only for the dimension of greatest difference, but the city block distance is most common.

Mode—A measure of central tendency. (1) In an array of the values of a variable, the most frequently occurring value. (2) By extension for grouped data, the class with the greatest number of observations.

Model—(1) A representation of how something works. (2) For purposes of appraisal, a representation (in words or an equation) that explains the relationship between value or estimated sale price and variables representing factors of supply and demand.

Model Calibration—The development of adjustments, or coefficients based on market analysis, that identifies specific factors with an actual effect on market value.

Model Specification—The formal development of a model in a statement or equation, based on data analysis and appraisal theory.

Money Market—The interaction of buyers and sellers of short-term credit instruments.

Monument—A term used in land surveying and geodesy to mean a permanent object placed in the ground marking a point, the location of which is known, on the surface of the earth. See **geodetic control network**.

Moratorium—A period of suspension of legal remedies or rights that is commonly used by local government agencies.

Mortgage—A contract under the terms of which the legal, but not the equitable, title to a specific property of one person (the mortgagor) is conditionally conveyed to a second person (the mortgagee) as security for the payment of a debt or performance of some other act. Note: In some states, legal title to mortgaged property passes to the mortgagee on execution of the mortgage; in others, legal title passes when the debt secured by the mortgage is in default; in still others, the mortgage is simply a lien, and legal title does not pass until foreclosure proceedings have been completed.

Mortgage, Balloon—See **balloon mortgage**.

Mortgage, Blanket—See **blanket mortgage**.

Mortgage, Chattel—A mortgage in which the security consists of tangible personal property. Note: A chattel mortgage usually takes the form of a bill of sale drawn in favor of the mortgagee with a clause defeating the transfer during compliance by the mortgagor with specified conditions.

Mortgage, Direct Reduction—A debt secured by real estate that is repaid in periodic, usually equal, installments that include repayment of part of the principal and the interest due on the unpaid balance, such as a level-payment, fixed-rate, fully amortizing mortgage.

Mortgage, Equitable—A written agreement which is a lien against real property and is considered a mortgage but does not follow usual mortgage wording.

Mortgage, First—The mortgage that has the highest priority for repayment over all other liens on a property.

Mortgage, Insured—A mortgage insured by a party other than the borrower that satisfies the balance in the event of default by the mortgagor.

Mortgage, Junior—A lien on a property that is subordinate to any other prior mortgage claims.

Mortgage, Open-End—A mortgage that permits the mortgagor to borrow additional money, with certain conditions, under the same mortgage.

Mortgage, Package—A mortgage that covers both personal and real property.

Mortgage, Purchase Money—A mortgage given to the seller from the buyer as part of a purchase consideration.

Mortgage, Real—A mortgage in which the security consists of real property.

Mortgage, Second—A mortgage that ranks after a first mortgage in precedence. Legal priority determines whether they are specified as a first, second, third, or so on, mortgage.

Mortgage, Wrap-Around—A junior or second mortgage that has a face value of both the amount it secures and the balance due under a first mortgage.

Mortgage Coefficient—A component of the basic rate in the Ellwood variant of mortgage-equity analysis.

Mortgage Constant (R_M)—Annual debt service expressed as a percentage of the initial principal amount of the loan; also called the “mortgage capitalization rate.”

Mortgage-Equity Analysis—A technique used to estimate the value of a property from a knowledge of the equity yield rate, typical mortgage terms (including the interest rate, the loan-to-value ratio, the term of the loan, and the amortization provisions), the holding period, and the percentage by which the property will appreciate or depreciate over the holding period. The solution is reached by using the Ellwood formula.

Mortgaged Fee Interest—The borrower’s ownership interest in a mortgaged property.

Mortgagee—The person who lends money in a mortgage transaction

Mortgagor—The person who borrows money in a mortgage transaction.

Movables (or Movable)—(1) In civil law states (Louisiana), a term used instead of, and more or less synonymously with, the term “personal property.” (2) All things that are subject to ownership other than land and improvements.

Moving Average—A statistic used to smooth the values of a variable when those values are erratic over distance or time, as in the case of land values and mortgage commitments. For example, a five-block simple moving average of land values along a major street would assign to block 16 the average of the values for blocks 14–18; it would assign to block 17 the average of the values for blocks 15–19, and so on.

Multicollinearity—The phenomenon of two or more variables being correlated. If the two correlated variables are both independent variables (note that if they are correlated they are not truly independent in the relationship sense) used to predict the value of some other, dependent, variable, then modeling problems will arise. If the multicollinearity is perfect, the multiple regression algorithms simply will not work; if the multicollinearity is serious but imperfect, the coefficients generated by the algorithm will be individually meaningless (although the model as a whole may still be useful).

Multiple Listing Service (MLS)—A computerized database subscription service used by real estate brokers and agents to share information about properties for sale. Hundreds of systems are located throughout the U.S. and Canada to serve local market areas.

Multiple Regression, Multiple Regression Analysis (MRA)—A particular statistical technique, similar to correlation, used to analyze data in order to predict the value of one variable (the dependent variable), such as market value, from the known values of other variables (called “independent variables”), such as lot size, number of rooms, and so on. If only one independent variable is used, the procedure is called simple regression analysis and differs from correlation analysis only in that correlation measures the strength of relationship, whereas regression predicts the value of one variable from the value of the other. When two or more variables are used, the procedure is called multiple regression analysis. See **linear regression**.

Multiplicative Model—A mathematical model in which the coefficients of independent variables serve as powers (exponents) to which the independent variables are raised or in which independent variables themselves serve as exponents; the results are then multiplied to estimate the value of the dependent variable.

Multiplicative Transformation—A transformation of a set of variables accomplished by multiplying a variable by one or more other variables. For example, room area is a multiplicative transformation of length and width.

Multispectral—Refers to remote sensing in two or more spectral bands, such as visible and near-infrared regions of the spectrum.

Multispectral Scanner—A nonphotographic imaging system that uses a rotating mirror and a fiber-optic bundle sensor. The mirror sweeps from side to side and sequentially records brightness values (that is, signal strengths) on magnetic tape for successive pixels, one swath at a time. The forward motion of the sensor platform carries the instrument to a position along the orbital path where an adjacent swath can be imaged.

Multivariate Statistical Technique—Any of a number of statistical analyses in which data (such as the information on a single property record card) containing a number of variables (such as lot size, number of rooms, and construction type) are analyzed to predict the value of some other variable. See **multiple regression analysis**.

Municipal Notes—Short-term promises to pay issued by local governments.

MVS—Marshall Valuation Service, published by Marshall & Swift.

N

NAPL—Non-aqueous phase liquids. Liquid contaminants often trapped in soil or bedrock.

National Map Accuracy Standards (NMAS)—For horizontal accuracy maps at publication scales larger than 1:20,000, 90 percent of all well-defined features, with the exception of those unavoidably displaced by exaggerated symbolization, will be located within 1/30 inch (85 mm) of their geographic positions as referred to the map projection; for maps at publication scales of 1:20,000 or

smaller, 1/50 inch (50 mm). For vertical accuracy, 90 percent of all contours and elevations interpolated from contours will be accurate within one-half of the basic contour interval. Discrepancies in the accuracy of contours and elevations beyond this tolerance may be decreased by assuming a horizontal displacement within 1/50 inch.

Natural Logarithm—See **logarithm**.

Navigation System, Doppler—In general, any navigation system that makes use of the measured shift in frequency to determine the velocity of the receiving system relative to the signal source and, from these measurements, the location of the receiver.

Navigation System, Inertial—Any navigation system in which gyroscopes or accelerometers are used to provide a coordinate system that has a fixed orientation with respect to the distant galaxies.

Navigation System, Satellite—(1) Navigation system used for the navigation of satellites. (2) A navigation system having beacons or transponders placed on satellites rather than at fixed points on land.

Neat Line—On a map of the earth's surface, a line that marks the limits of a specific area in precise measurements; commonly encloses the map, legend, scale, title, and other information; serves as the (imaginary) link to an adjacent map.

Neighborhood—(1) The environment of a subject property that has a direct and immediate effect on value. (2) A geographic area (in which there are typically fewer than several thousand properties) defined for some useful purpose, such as to ensure for later multiple regression modeling that the properties are homogeneous and share important locational characteristics.

Neighborhood Analysis—A study of the relevant forces that influence property values within the boundaries of a homogenous area.

Neighborhood Binary Variable—A binary variable used in a valuation model to separate the effects on value of distinct neighborhoods.

Net Assessed Value—The official dollar value remaining on an assessment roll after deducting the amount of any applicable partial exemptions from the gross assessed value.

Net Book Value—The value at which an asset is carried on the balance sheet. An asset's book value at any time is its cost less accounting depreciation.

Net Income—(1) The income expected from a property, after deduction of allowable expenses. (2) Net annual income is the amount generated by a property after subtracting vacancy and collection loss, adding secondary income, and subtracting all expenses required to maintain the property for its intended use. The expenses include management fees, reserves for replacement, maintenance, property taxes, and insurance, but do not include debt service, reserves for building additions, or income tax.

Net Income Multiplier—A factor expressing the relationship between value and net operating income; the reciprocal of the overall rate.

Net Income Ratio—The ratio of net income to total gross income. This ratio can be expressed as a percentage of potential gross income or of effective gross income. Traditionally, the net income ratio is expressed as a percentage of effective gross income, and is used as a comparison unit for income-producing properties.

Net Lease—A lease in which the landlord (lessor) receives a stipulated rent amount and the tenant (lessee) pays all operating expenses and taxes attributable to the property. A net lease produces net income to the lessor.

Net Leasable Area—The area within a building or structure that is actually occupied by an individual tenant. Net leasable area does not include any of the common areas, such as lobbies and restrooms, shared by other tenants.

Net Operating Income (NOI)—Annual net income after operating expenses are subtracted from effective gross income. Does not include payments for interest or principal.

Net Profit—Excess of revenue over operating expenses.

Net Worth—The aggregate of the equities representing proprietary interest; the excess of the going-concern value of assets over liabilities to outsiders; in the case of a corporation, the total of paid-in capital and retained earnings; in a sole proprietorship, the owner's capital account; in a partnership, the sum of the partners' capital accounts.

Neural Network (ANN)—A collection of mathematical models that emulate some of the observed properties of biological nervous systems and draw on the analogies of adaptive biological learning. An artificial neural network has several key elements: input, processing (calibration), and output. Other names associated with neural networks include: connectionism, parallel distributed processing, neuro-computing, natural intelligent systems, and machine learning algorithms.

NOI—See **net operating income**.

Nominal—Pertaining to the named or stated value of something.

Nominal Tax Rate—The stated tax rate, which does not necessarily correspond to the effective tax rate.

Noncapitalized Leased Property—See **operating leased property**.

Nonconforming Use—(1) A use of property that does not comply with the applicable zoning ordinance. (2) Uses that differ noticeably from prevailing uses in a neighborhood are sometimes also referred to as “nonconforming.”

Nonliquidity Rate—In building a rate of return by the summation approach, an appraiser must add in a factor or rate for nonliquidity. This rate compensates the investor for his or her inability to make immediate use of the investment amount. Generally, the longer the holding period for the investment, the higher the nonliquidity rate will be.

Nonoperating property—See **property, nonoperating**.

Nonparametric Statistic—A statistic whose interpretation or reliability does not depend on the distribution of the underlying data.

Nonphysical Contaminant—Recognized contaminant that does not consist of any tangible, physical substance.

Nonsampling Error—The error reflected in ratio study statistics from all sources other than sampling error. While nonsampling error is unavoidable due to the inefficiencies inherent in real property markets, the imperfections of the appraisal process, and the imperfections of conducting ratio studies, all practicable steps must be taken to minimize nonsampling error in ratio studies.

Normal Distribution—A theoretical distribution often approximated in real-world situations. It is symmetrical and bell-shaped; 68 percent of the observations occur within one standard deviation of the mean, and 95 percent within two standard deviations.

Normal Goods—Goods the consumption of which increases as consumers' income increases.

Note—An agreement acknowledging and promising to repay a debt.

Null Hypothesis—A hypothesis that one chooses to accept in the absence of sufficient evidence to the contrary.

Numerator—In a fractional expression, the number that is divided by some other number (the denominator). For example, 3 is the numerator of the fraction $3/4$, 4 is the denominator.

O

Object of Tax—(1) The objective element on which a tax is imposed. (2) The aims or purposes for which the tax is designed. Note: This term, as defined in (1) above, does not seem to be distinguished adequately from “measure of tax,” “subject of tax,” and “tax base.” Such distinction as can be drawn is pedantic, and the use of the term in this sense is not recommended. It is also recommended that the term “purpose of tax” be substituted for the second usage given above. *Compare* **measure of tax; subject of tax; tax base.**

Objective—The quality of being definable by specific criteria without the need for judgment. Quantitative variables are objective.

Objective Data—Objective data are variables for which the correct value can be verified. Examples include zoning, corner lot (yes or no), land area, and front feet.

Observation—One recording or occurrence of the value of a variable, for example, one sale ratio among a sample of sales ratios.

Observed Condition Breakdown Method—This divides depreciation into all its various components—curable physical deterioration, incurable short-lived-item physical deterioration, incurable basic structure (long-lived items) physical deterioration, curable functional obsolescence, incurable functional obsolescence, and economic (external) obsolescence—often for each major building component.

Obsolescence—A decrease in the value of a property occasioned solely by shifts in demand from properties of this type to other types of property and/or to personal services. Some of the principal causes of obsolescence are: (1) Changes in the esthetic arts; (2) changes in the industrial arts, such as new inventions and new processes; (3) legislative enactments; (4) change in consumer demand for products that results in inadequacy or overadequacy; (5) migration of markets that results in misplacement of the property. *Contrast* **depreciation, physical; depreciation, economic**.

Occupancy—The act of taking or holding possession of property.

Occupancy Ratio—(1) The ratio of the occupied units (for example, square feet of floor space, living units, or rooms) of a property to the total available units. (2) The ratio of the actual gross income from leased units of a property to the total gross income that would be obtained if all units were leased at standard rates.

Off-Line Equipment—Computing machinery not under the direct control of the computer's central processing unit.

Offsets—Environmental permits allow certain amounts of air pollutants to be released into the environment. If an industry wishes to expand and increase air pollution emissions, it may first be required to reduce its current level of emissions, so that the expanded plant will not emit more air pollution than did the original plant. A company may also trade air pollution allowances with another company to facilitate expansion of the first company. Both these exchanges (intercompany and intra-company) are called "offsets."

On-Line—See **interactive**.

One-Third, Two-Thirds Rule—An empirical rule that ascribes half of the value of a lot to the front third and the other half to the rear two-thirds. *Compare* **4-3-2-1 rule; Harper rule; Hoffman rule**.

Open Market—A freely competitive market in which any buyer or seller may trade and in which prices are determined by competition.

Operating Expenses—Expenses necessary to maintain the flow of income from a property. These are deducted from effective gross income to obtain net operating income, which is then capitalized in the income approach to obtain an indication of market value. Such expenses generally include the costs of property insurance; heat, water, and other utilities; repairs and maintenance; replacement reserves for such items as heat and air-conditioning systems, water heaters, built-in appliances, elevators, roofing, floor coverings, and other items whose economic life will expire before that of the structure itself; management; and other miscellaneous items necessary to operate and maintain the property. Not considered operating expenses are depreciation charges, debt service, income taxes, capital improvements, and personal or business expenses of the owner. In addition, for assessment purposes, property taxes are usually treated as an adjustment to the capitalization rate rather than as an expense item.

Operating Leased Property—Property under an operating lease not included as an asset on the books of the lessee company.

Operating Property—See **property, operating**.

Operating Statement—Summarizes in writing the gross income, annual expenses, and resulting net operating income of a business during a specified period of time.

Operating Unit—(1) The property, taken as a whole, that is used in a public utility operation. (2) A term used to define an integrated set of assets whose value is based on the interaction and contribution of the assets as a whole.

Opportunity Cost—The principle that the cost of a resource for one use is the value of the resource in its best alternative use.

Optical Character Recognition (OCR)—The ability of some kinds of computing machinery to translate a written symbol, such as a handwritten number or a letter typed on one of a few standard typewriters, into electrical pulses processable by the rest of the machinery, thereby avoiding the necessity for keypunching.

Orderly Liquidation Value—The amount of gross proceeds that could be expected from the sale of the appraised assets, held under orderly conditions, given a period of time in which to find a purchaser(s), considering a complete sale of all assets, as is, where is, and all sales made free and clear of all liens and encumbrances.

Ordinance—A statute or law that designates an enactment by a county's or municipal corporation's legislative body.

Original Cost—See **cost, original**.

Origination Fee—A fee charged by a lender (called the loan “originator”) for making a real estate loan.

Orthographic Projection—A map-plotting system whereby parallel lines project from points on the sphere to a plane tangent to the sphere at the map center.

Orthophoto Mosaic—An assembly of orthophotographs, usually precisely controlled, to form a uniform-scale photographic representation of a portion of the earth's surface.

Orthophotograph—A photograph derived from perspective photographs and equivalent to a photograph made by orthographic projection. In a perfect orthophotograph, there are no displacements of images because of tilt or relief.

Orthophotomap—A photomap prepared from an orthophotograph or a precisely controlled assembly of orthophotographs; generally published in standard map format.

Orthophotoquad—An orthophotograph or mosaic of orthophotographs at the size of a standard quadrangle (a scale of 1:24,000) with little or no cartographic work added to it.

Orthophotoscope—An instrument for converting conventional perspective photographs into orthophotographs by differential rectification.

Other and Unallocable—Includes any property not classified within any of the preceding groups. Examples are mineral rights, timber rights, and oil rights, if they are separately assessed as real estate.

Outliers—Observations that have unusual values, that is, they differ markedly from a measure of central tendency. Some outliers occur naturally; others are due to data errors.

Outlot—A relatively large lot that is included within the boundaries of an original or subdivision plat, but that is excepted from the general platting pattern for building lots and is usually intended for occupancy (as, for example, a truck farm or country estate).

Outputs—(1) Goods produced by a firm. (2) The information returned by a computer to its user.

Overadequacy—The inability of a property to yield a reasonable return on value of the land and the reproduction cost of improvements (less accumulated physical depreciation) because of its adaptation to the production of more goods or services that can be profitably sold in the market available to it. See **superadequacy** and **functional obsolescence**.

Overall Age/Life Method—Method of estimating accrued depreciation based on straight-line depreciation in which the building is assumed to depreciate by a constant percentage each year over its economic life.

Overall Property Tax Rate Limits—A form of tax and expenditure limitation, applicable to all governments in the state, in which an upper limit is placed on either the property tax rate or the rate of increase in the property tax rate.

Overall Rate (OAR)—A capitalization rate that blends all requirements of discount, recapture, and effective tax rates for both land and improvements; used to convert annual net operating income into an indicated overall property value.

Overimprovement—An improvement whose cost exceeds the cost of an alternative improvement by more than the excess of the present worth of the given improvement and the land over the present worth of the alternative improvement and the land, often because a structure is too large or too costly for the most profitable use of the site. *Contrast* underimprovement.

Overlap—The amount by which one photograph duplicates the area covered by another photograph, usually expressed as a percentage. Overlap may be end or forward (along the flight path) or side taken during two or more parallel flights); both end and side overlap are customary when more than one line is flown.

Overlay—(1) A transparent medium on which data or features (for example, floodplains, flight lines and/or area to be photographed) are plotted to be superimposed on a map, thus avoiding defacing the map. (2) Digitally merging two digital data sets.

Owner, Equitable—One who, under rules of equity, has rights to some or all of the benefits deriving from property, although legal ownership and actual possession may be vested in another person. See **beneficiary** and **cestui que trust**.

Owner, Legal—One who has dominion over property under the rules of law, as distinguished from rules of equity.

Ownership—The rights to the use of property, to the exclusion of others.

P

Panchromatic—Photographic emulsion sensitive to all colors of light.

Panel—(1) A target used for ground control or point identification during aerial photography. (2) A group of individuals who are engaged for some service because of their expertise.

Paneling—Marking points on the ground with material of suitable contrast, size, and shape to provide images that can be positively identified on aerial photographs.

Par Value—The face value of an item of intangible property that has both a stated face value and a fluctuating market value; applied especially to corporate stocks.

Parallax—The apparent displacement of position of a body with respect to a reference point or system of coordinates, caused by moving the point of observation.

Parallel, Geographic—A line on the earth, or a representation thereof, that represents the same latitude at every point. Also called a parallel of latitude or, when no misunderstanding is possible, a parallel.

Parameter—Numerical descriptive measure of the population, for example, the arithmetic mean or standard deviation. Parameters are generally unknown and estimated from statistics calculated from a sample of the population.

Parametric Statistic—A statistic whose interpretation or reliability depends on the distribution of the underlying data.

Parcel—A contiguous area of land described in a single legal description or as one of a number of lots on a plat; separately owned, either publicly or privately; and capable of being separately conveyed.

Parcel Identification Number—A numeric or alphanumeric description of a parcel that identifies it uniquely. Assessors use various systems, many with common features. A growing number of these systems include geocoding. In the thirty states where it exists, the Public Land Survey System, authorized by the United States government in 1785, is often a basis for parcel identification.

Parcel Identification System—The scheme by which parcel identifiers are generated. Parcel identifiers are constructed from elements relating them to surveying systems, map projection systems, map-page numbers, and geographic areas.

Parcel Identifier—A code, usually numerical, representing a specific land parcel's legal description. The purpose of parcel identifiers is to permit reference to legal descriptions by using a code of uniform and manageable size, thereby facilitating record-keeping and handling. Also called parcel identification number.

Parcel of Land—A contiguous urban or rural land area that is considered as a unit, is subject to single ownership, and is legally recorded as a single piece. *Compare* **lot**; **plot**.

Partial Equilibrium—Equilibrium of individual economic units or subsections of the economy in light of constraints imposed from outside the unit.

Partial Equilibrium Analysis—An analysis of one unit of the economy in light of constraints imposed by economic forces outside the unit. An example would be a highest and best use analysis of vacant land where the land use is limited by zoning.

Partial Exemption—The amount of otherwise-taxable assessed value removed from tax liability by constitutional and/or statutory action. Examples of partial exemptions are those for qualifying homesteads, veterans, and senior citizens.

Partial Interest—An interest (in property) that is less complete than a fee simple interest.

Partial Payment Factor—Also known as the “amortization” or “periodic repayment” factor. The equal periodic payment that has a present worth of \$1, for a specified number of periods and at a specified discount rate.

Partial Taking—Taking of part rather than all of real property by means of eminent domain. Compensation will be both for the part taken and for any loss of value affecting the remainder.

Partnership—An association of two or more persons to carry on as co-owners of a business under a partnership agreement.

Passive System—A sensing system that detects or measures radiation emitted by the target.

Patent—(1) The exclusive right granted by a government for a limited period to an inventor, his or her heirs, legatees, or assigns, to make, use, and vend an article or process invented by him or her. (2) The instrument by which government lands are granted to private persons under the proceedings set forth in the general statutes. See **land, patented**.

Percent Condition—The difference between observed physical depreciation, expressed as a percentage of original or reproduction cost, and 100 percent.

Percent Good—An estimate of the value of a property, expressed as a percentage of its replacement cost, after depreciation of all kinds has been deducted.

Percent of Cost—A technique of valuation by establishing the ratio of the sale price to the cost new of an asset at the time of sale. With sufficient data, similar property can be analyzed statistically and relationships developed between age, selling price, and cost; it is logical then to estimate value by determining the current cost of the subject and applying the appropriate percentage.

Percentile—The values that divide a set of data into specified percentages when the data are arrayed in ascending order. The tenth percentile includes the lowest 10 percent of the values, the twentieth percentile includes the lowest 20 percent of the values, and so forth.

Perfect Competition—The requirements of pure competition plus an additional condition of perfect knowledge on the part of buyers and sellers about all activity in the marketplace.

Perfect Market—In economics, a market in which neither sellers nor buyers individually or collectively have a competitive advantage and in which the things traded are homogenous. The stock market is a more nearly perfect market than a real estate market.

Performance Bond—Insurance issued by a third party to guarantee the satisfactory completion of a contract.

Performance Ratio—A ratio of the income of an investment to its cost that reflects historical performance of the investment.

Perimeter Sketch—A graphic presentation of the boundaries of a property, either the land or the buildings on the land.

Period, Assessment—See **assessment period**.

Personal Effects—Personal effects are items of tangible personal property that an individual normally wears, carries, or uses in activities that do not involve the production of income.

Personal Judgment—Courts may issue a personal judgment against the defendant in a delinquent tax suit. This judgment holds the person named in the suit personally liable for a delinquent property tax and exposes his or her personal assets to payment of the obligation.

Personal Property—See **property**.

Personal Property Specialist (PPS)—A professional designation conferred by the International Association of Assessing Officers.

Personalty—A synonym for personal property.

Phase I and II Reports—Used for properties that may be affected by contamination. Phase I reports include historical information about the subject property and the neighborhood, and a review of pertinent government records to determine any prior violation

pertaining to hazardous wastes or substances. This report requires physical inspection of the property. Phase II reports are required when potential problems are identified in the Phase I study. Phase II is an in-depth study of groundwater, air, soils, and improvements, to determine existence of any hazardous waste or substance, or other contaminant. See **environmental assessment**.

Photogrammetry—(1) The art and science of obtaining reliable measurements by means of photography. (2) The making of maps based on aerial photographs taken under rigidly controlled conditions.

Photogrammetry, Aerial—Photogrammetry in which photographs or other images of the earth taken from aircraft or satellites are used.

Photogrammetry, Analytical—Photogrammetry in which the shape and size of an object are determined mathematically from measurements directly on the images, rather than mechanically from measurements on the stereoscopic model.

Photograph—A representation of objects formed by the action of light on silver halide grains within an emulsion.

Photographic Map—An actual picture of a piece of land. The majority of photographic maps are taken from airplanes or from satellites.

Photography—The process of producing images on sensitized material by exposure to light.

Photomap—An assemblage of aerial photographs that, wholly or partially, substitutes for or supplements a map. The photographs may or may not be rectified or restituted.

Photomosaic—An assemblage of photographs, each of which shows part of a region, put together in such a way that each point in the region appears once and only once in the assemblage, and scale variation is minimized.

Phototriangulation—(1) The determination of horizontal or vertical coordinates from measurements of angle, distance, or coordinates of points on overlapping photographs. (2) The method by which horizontal or vertical control is determined from measurements of angle, direction, or coordinates of points on overlapping photographs.

Physical Contaminant—Any substance recognized as hazardous by the EPA or local or regional authorities. See **hazardous substances**.

Physical Deterioration—A cause of depreciation that is a loss in value due to ordinary wear and tear and the forces of nature.

Pilot Testing—Attempting to determine the workability of a system by testing it under realistic operating conditions before adopting it and abandoning the former system.

Pixel—An element of surface resulting from subdividing an image into the smallest identically shaped figures that give information about the location, intensity, and perhaps color of the source, but of which no smaller subdivision will provide more information. The concept “pixel” (diminutive of “picture element”) is valid only for images made up of discrete patches. It is not valid for continuous images. The term is sometimes assumed to be the equivalent of resolution expressed in terms of area. However, it is not exactly equivalent, because resolution can be defined for pictures that do not contain pixels. The size of a pixel is set principally by the size of the smallest individual radiation-sensitive element in the instrument creating the image. For example, in the human eye, the pixel region is the region occupied on the retina by a cone.

Place of Business, Principal—See **principal place of business**.

Plat—A map intended to show the division of land into lots or parcels. Upon recordation with the appropriate authorities, land included in the plat can thenceforth be legally described by reference to the plat, omitting a metes and bounds description.

Plat, Original—A plat constituting the original plan or layout of a municipality and showing its location and division into blocks and lots.

Plat, Private—A privately prepared plat that has not yet been accepted by the constituted authority.

Plat, Recorded—A plat that has been accepted by the constituted authority and that may henceforth be used as the basis for a legal description of land within its boundaries.

Plat, Subdivision—A plat showing the location of a subdivision and its layout into lots, streets, alleys, and the like.

Plat, Township—A plat of a survey township prepared by, or under the direction of, the United States General Land Office.

Platbook—A book containing a series of plats that are used by assessors as tax maps. See **map, tax**.

Platform (Sensor)—Vehicle on which a remote sensing device is mounted and carried aloft; an aircraft platform, space platform.

Plot—(1) A relatively small area of land, generally used for a specific purpose. (2) A measured area of land; lot.

Plottage—(1) Those factors of size, shape, and location with reference to other plots that add or detract from the value of a plot for a given purpose (preferred). (2) The assembling of adjacent parcels of land into a single unit. (3) The excess cost of assembling adjacent parcels of land into a single unit under single ownership over the estimated cost at which such parcels might be acquired individually by independent purchasers. (4) plottage value. Note: Because of the variety of meanings attached to this term and its derivatives, it is suggested that the more descriptive term “assemblage” and its derivatives be used to convey all of the above meanings except the first. *Compare* **assemblage**.

Plottage Value—(1) The increment of value ascribed to a plot because of its suitability in size, shape, and/or location with reference to other plots (preferred). (2) The excess of the value of a large parcel of land formed by assemblage over the sum of the values of the unassembled parcels. *Compare* assembly value.

Point Estimate—A single numerical value that can be used to estimate a population parameter. It is calculated on the basis of information collected from a sample. Point estimates are generally constructed to provide the best unbiased estimate of the population parameter consistent with the sample data. However, the point estimate is only an estimate, and is unlikely to have the same value as the population parameter. (See **Confidence interval** and **Reliability** for discussion of precision of the sampling process.)

Point, Merge—See **merge point**.

Points—Prepaid interest on a loan; one point is equal to 1 percent of the amount of the loan. It is common to deduct points in advance of the loan, so that an individual pays interest on 100 percent of the loan but gets cash on, say, only 99 percent.

Pole—See **rod**.

Police Power—The power of the state that curtails individual rights for the health, safety, and general welfare of all society.

Polygon—A line chart.

Pooled Regression—Combining two or more strata to form one regression model.

Population—All the items of interest, for example, all the properties in a jurisdiction or neighborhood; all the observations in a data set from which a sample may be drawn.

Position—A numerical or other description of the location and orientation (attitude) of a point or object. In particular, in geodesy and navigation, (a) data that give the location of a point in a specific coordinate system, (b) the place occupied by a point on the earth, (c) the coordinates giving the location of a point on the geoid or ellipsoid.

Position, Geographic—The location of a point on the surface of the earth, expressed in terms of either geodetic or astronomic latitude and longitude. Geo-position is a contraction of this term.

Positioning System—Generally, a system (equipment, procedures, and personnel) used for locating a vehicle or, less frequently, an instrument. A navigation system can also be used for positioning, but a system designed specifically for positioning generally gives more accurate locations.

Positioning System, Doppler—A positioning system consisting of a radio receiver at the point whose coordinates are to be determined, one or more beacons in orbit about the earth, and a computing system for determining the orbits of the beacons.

Positioning System, Inertial—A positioning system consisting of a computer and an assemblage of three accelerometers and two or three gyroscopes.

Positioning System, Radio—A positioning system in which the travel time or phase shift of radio waves is measured.

Positioning System, Satellite—A positioning system consisting of a radio receiver, or a receiver and transmitter, at the point whose location is to be determined, one or more beacons or transponders in orbit about the earth, and a computing system for determining and predicting the orbits.

Possession—Physical control of personal or real property.

Possessory Interest—(1) An interest of a person in an article of property arising from a physical relationship to the article of such nature as to confer on him or her a degree of physical control over it, coupled with the intent so to exercise such control as to exclude the general public from use of it. (2) The right to occupy and use any benefit in a transferred property, granted under lease, licenses, permit, concession, or other contract. (3) A private taxable interest in public tax-exempt property, for example, a private service station in a federal military base. Assessment of this interest presents complex valuation problems. Among the issues are whether the ownership or the use is exempt, whether the parcel should be split, and whether market rent differs from contract rent.

Posting—The act of transferring to an account in a ledger the data, either detailed or summarized, contained in a book or document of original entry.

Potential Gross Income—The sum of potential gross rent and miscellaneous income, that is, the income from rent and other sources that a property could generate with normal management, before allowing for vacancies, collection losses, and normal operating expenses.

Potential Gross Rent—The total rent a property would produce if 100 percent occupied at market rent.

Power of Attorney—A written authorization in which one person gives authority to another person to act on his or her behalf.

PPS—See **personal property specialist**.

PRD—See **price-related differential**.

Preaudit—An examination for the purpose of determining the propriety of proposed financial transactions that have already taken place, but that have not yet been recorded, or, if such approval is required, before the approval of the financial transactions by designated officials for recording.

Precision—The level of detail in which a quantity or value is expressed or represented. It can be characterized as the number of digits used to record a measurement. A high level of represented precision may be used to imply a greater level of accuracy; however, this relationship may not be true. Precision also relates to the quality of an operation or degree of refinement by which results are obtained. A method of measurement is considered precise if repeated measurements yield the same or nearly the same numeric value. See **accuracy** and **statistical precision**.

Preferred Capitalization Rate—(1) The capitalization rate applicable to the band of investment financed by preferred stock. (2) A component of the overall direct capitalization rate calculated by dividing dividends by the market value of preferred stock.

Preferred Stock—See **stock, preferred**.

Preprocessing—Application of digital image processing techniques to the raw remote sensor data before visual or further machine-assisted image analysis.

Present Worth—(1) The value of something after discounting future payments and receipts. (2) The present value of income that is expected to be received at some future date or dates, as ascertained by the process of discounting both the income and the anticipated expenses incident to its receipt, that is, the amount of money that, if presently invested and allowed to accumulate at compound interest, would yield net income in the same amounts and at the same intervals as is anticipated of a given property. Synonymous with “capital value” and “present value.”

Present Worth of 1—(Also called the reversion factor.) The lump-sum amount that would have to be set aside to accumulate with compound interest to \$1 at the end of a specified number of years and at a specified rate of interest. Alternatively, it can be viewed as the present value of \$1 receivable at the end of a specified number of years and discounted at a specified rate.

Present Worth of 1 per Period—(Also called the annuity factor, or Inwood coefficient). The present worth of a series of payments of \$1, receivable at the end of each year, for a specified number of years and at a specified interest rate.

Price—The amount asked, offered, or paid for a property. (See **USPAP** for additional comments.)

Price, Adjusted Sale—The sale price that results from adjustments made to the stated sale price to account for the effects of time, personal property, atypical financing, and the like.

Price, Market—The value of a unit of goods or service, expressed in terms of money, as established in a free and open market. Note: This term is sometimes distinguished from “market value” on the ground that the latter term assumes that buyers and sellers are informed, but this assumption is also implied by the phrase “free and open market.” *Compare price, sale.*

Price, Sale—(1) The actual amount of money exchanged for a unit of goods or services, whether or not established in a free and open market. An indicator of market value. (2) Loosely used synonymously with “offering” or “asked” price. Note: The sale price is the “selling price” to the vendor and the “cost price” to the vendee.

Price-Earnings Ratio (P/E)—The ratio of the market price per share of the common stock of a specific company to the earnings per share of common stock of that company during a twelve-month period. Typically, the ratio is based on the current market price and the most recent twelve-month period for which earnings are known. This ratio is the reciprocal of the earnings-price ratio (E/P).

Price Equilibrium—In a specific period, that price at which the quantity that buyers want is exactly equal to the quantity that sellers want to sell.

PRB—See **coefficient of price related bias**.

Price-Related Differential (PRD)—The mean divided by the weighted mean. The statistic has a slight bias upward. Price-related differentials above 1.03 tend to indicate assessment regressivity; price-related differentials below 0.98 tend to indicate assessment progressivity.

Price-to-Book Multiple (P/Book)—See **equity market multiple**.

Primary Assessing Jurisdiction—The unit of government having initial responsibility for determining the assessed value against which general property taxes are levied by local government and, where applicable, by state government.

Principal Meridian—See **meridian, principal**.

Principal Place of Business—The place at which the person or persons responsible for the management of a business enterprise exercise their managerial powers. Note: Generally the president, treasurer, and chairman of the board of directors have their headquarters at the principal place of business. The board of directors will probably meet here, and, at any rate, the policies determined by the board will be put into operation by or through the offices at this place. The principal place of business in any given state may be a district or even a branch office.

Principle of Anticipation—The appraisal principle that value depends on the expectation of benefits to be derived in the future.

Principle of Balance—The principle of balance as used in appraising is that the greatest value in property will occur when the type and size of improvements and uses are proportional to each other as well as to the land.

Principle of Change—The principle of change asserts that all markets are in a continual state of change. According to this principle, properties generally go through the three stages of integration (development), equilibrium (stasis), and disintegration (decline).

Principle of Conformity—The principle of conformity states that the value of a group of properties will rise to its highest possible level in an area where architectural styles are reasonably homogeneous and surrounding land uses are compatible with the use of the specified properties.

Principle of Contribution—The principle of contribution requires an appraiser to measure the value of any improvement to a property by the amount it contributes to market value, not by its cost.

Principle of Progression—The principle of progression holds that the worth of an inferior property is increased by its proximity to better properties of the same use class.

Principle of Substitution—The principle of substitution states that no buyer will pay more for a good than he or she would have to pay to acquire an acceptable substitute of equal utility in an equivalent amount of time.

Private Encumbrances—Private hindrances that affect value and sale price such as easements, condominium controls, and deed or subdivision restrictions.

Private Restrictions—Private parties, such as a group of homeowners, may establish private restrictions on ownership rights. Deed restrictions are a common form of private restriction.

Procedural Edit—An audit, or review of operations, intended to discover erroneous and inefficient practices.

Production Function—The physical relation between a firm's resource inputs and the output of goods and services per unit of time.

Productive Value—In monetary terms, the capacity of a property to produce or contribute to production.

Productivity Value—Productivity value measures the worth of land based on its income-producing ability in its current use. Owners of farm and ranch property apply for agricultural-use or open-space valuation (both are forms of productivity value) to avoid having their properties assessed at a different highest and best use that would bring higher assessed values and presumably higher taxes. *Compare use value.*

Profit and Loss Statement—An accounting statement that shows the income and expenses of a business over a specified time.

Progressivity—See **assessment progressivity (regressivity)**.

Projection—A systematic drawing of lines on a plane surface to represent the parallels of latitude and meridians of longitude of the earth or a section of the earth.

Property—(1) An aggregate of things or rights to things. These rights are protected by law. There are two basic types of property: real and personal. (2) The legal interest of an owner in a parcel or thing (see **bundle of rights**).

Real Property—Consists of the interests, benefits, and rights inherent in the ownership of land plus anything permanently attached to the land or legally defined as immovable; the bundle of rights with which ownership of real estate is endowed. To the extent that "real estate" commonly includes land and any permanent improvements, the two terms can be understood to have the same meaning. Also called "realty."

Personal Property—Consists of every kind of property that is not real property; movable without damage to itself or the real estate; subdivided into tangible and intangible. Also called "personalty."

Tangible Personal Property—Personal property that has a substantial physical presence beyond merely representational. It differs from real property in its capacity to be relocated. Common examples of tangible personal property are automobiles, boats, and jewelry.

Intangible Personal Property—Property that has no physical existence beyond merely representational, nor any extrinsic value; includes rights over tangible real and personal property, but not rights of use and possession. Its value lies chiefly in what it represents. Examples include corporate stock, bonds, money on deposit, goodwill, restrictions on activities (for example, patents and trademarks), and franchises. Note: Thus, in taxation, the rights evidenced by outstanding corporation stocks and bonds constitute intangible property of the security holders because they are claims against the assets owned and income received by the corporation rather than by the stockholders and bondholders; interests in partnerships, deeds, and the like are not ordinarily considered intangible property for tax purposes because they are owned by the same persons who own the assets and receive the income to which they attach.

Property, Distributable—(1) Property subject to central assessment that is certified by the central assessing officer or body to local tax districts, according to the property's actual or constructive tax within such districts, for inclusion in the local assessment and/or tax rolls. See **assessment, central**. (2) The personal property of an intestate available for distribution by the administrator to the heirs.

Property, Income—A property that yields to its owner a gross money income.

Property, Investment—A property that has been developed with the intention and expectation of renting it, in whole or in part, for profit. (Term not recommended for use.)

Property, Noninvestment—A property that has not been developed with the intention and expectation of renting it, in whole or in part, for profit. (Term not recommended for use.)

Property, Nonoperating—Property not included in the unit being appraised, usually where the nonoperating property is not necessary to the operation of the unit and is readily assessed locally.

Property, Nonrepresentative Intangible—(1) Intangible property that, while constituting an asset of the owner, does not at the same time represent a liability of another person; for example, patents, copyrights, trademarks, goodwill, and special franchises (preferred). (2) Intangible property that does not represent an interest of any sort in specified tangible property; for example, goodwill, patents, unsecured personal notes, accounts receivable. Note: The term “liability,” as used in this definition, includes the equitable obligations of a corporation to its stockholders.

Property, Operating—(1) Property actually used in the business of the owner, as distinguished from intangible property representing investments in property actually used in the business of some other person or persons. (2) As applied to public utilities, the property actually used in a public service enterprise conducted by the owner, as distinguished from intangible property representing investments in property actually used in the business of some other person or persons and the property used by the owner in the conduct of a nonpublic service enterprise. Synonymous with “operative property.” See **property, nonoperating**.

Property, Personal—See **property**.

Property, Ratable (or Rateable)—Taxable property.

Property, Real—See **property**.

Property, Representative Intangible—(1) Intangible property that, while constituting an asset of the owner, represents, at the same time, a liability of another person (preferred). (2) Intangible property that represents an interest of some sort in specified tangible property; for example, a mortgage or a share of stock. Note: The term “liability,” as used in this definition, includes the equitable obligations of a corporation to its stockholders.

Property, Service—A property, such as a church, school, or hospital, that is not operated for profit and has no marketability in the ordinary sense of the term. (Term not recommended for use.) Note: The division of properties into “investment,” “noninvestment,” and “service” properties is made on the assumption that investment properties can be appraised by capitalization of income, noninvestment properties by comparison with properties recently sold, and service properties by neither method.

Property Line—The boundary line that defines a parcel of land.

Property Record Card (Form)—An assessment document with blanks for the insertion of data for property identification and description, for value estimation, and for property owner satisfaction. The basic objectives of property record forms are, first, to serve as a repository of most of the information deemed necessary for identifying and describing a property, valuing a property, and assuring property owners that the assessor is conversant with their properties, and, second, to document property appraisals. Use of properly designed property record forms permits an organized and uniform approach to amassing a property inventory.

Property Residual Technique—A technique used to estimate the value of a property from a knowledge of its net operating income, discount rate, remaining economic life, the amount of the reversion, and the income path attributable to the property over the holding period (generally the remaining economic life of the property). The technique estimates total value by discounting anticipated income and adding the result to the present worth of the reversion.

Property Rights—See **bundle of rights**.

Property Split—A result of the sale of property held by a single owner such that different pieces of the property are owned by different owners. Splits may or may not occur along plat lines. Assessors need to monitor splits not only to ensure the correctness of the property listing, but also to monitor the land and its adequacy as a lien against past and present tax liabilities.

Property Tax Base—See **assessment base**.

Property Tax Levy—(1) The total amount of money to be raised from the property tax as set forth in the budget of a taxing jurisdiction. (2) Loosely, by extension, the millage rate or the property tax bill sent to an individual property owner.

Property Tax Levy Limits—A form of tax and expenditure limitation, applicable to all local governments in the state, in which an upper limit is placed on either the proceeds of the property tax or the rate of growth in the proceeds of the property tax.

Property Tax Policy—Any purposeful course of action by governmental bodies that affects or determines the way property taxes are created, levied, collected, or spent. Property tax policy issues can include determining the division of responsibility between local

and state/provincial governments, equalization, appeals, public relations, reappraisal systems, the market value standard, exemptions and abatements, fractional assessments (ratios), and limits on taxes and assessed values.

Property Taxes—See **tax, general property; tax, property; tax, special property.**

Property Use Category—A United States Census Bureau classification scheme based on actual utilization of real property. There are seven classes of real property:

Residential (Nonfarm) Single-Family—Includes each detached, semidetached, or attached house, if separately assessed and not on a farm, that is a residence for one family only. For detached houses, this would include one-family rural properties or suburban estates not used primarily for farming, and mobile homes assessed as real property. This category includes each condominium unit in a multiunit dwelling structure, plus each condominium's share of the common area, unless the common area is separately assessed.

Residential (Nonfarm), Multifamily—Includes each residential property that contains two or more living units, including duplexes, apartment houses, and cooperatives that are assessed as a single entity. The category encompasses street level stores and doctors' offices in apartment buildings, but excludes motels or hotels.

Acreage (or "Acreage and Farms")—Includes farms, timberland, recreational acreage, idle land, and waste land in rural locations. Excludes vacant platted lots that lie within or adjacent to a municipality and that usually carry a lot/block system designation rather than acreage. Separately assessed timber or mineral rights are omitted from this category.

Vacant Platted Lots—Unimproved parcels described in terms other than acreage, usually by a convention using lot, block, and subdivision name. Vacant platted lots are often located either within a municipality or in areas of higher population density than the surrounding territory.

Commercial Property—Generally any nonindustrial, nonresidential realty of a commercial enterprise. Includes realty used as a retail or wholesale establishment, retail establishment with living quarters, office building, hotel or motel, gasoline service station, commercial garage, parking lot, warehouse, theater, bank, clinic, nursing home, proprietary school, and the like.

Industrial Property—Generally any property used in a manufacturing activity, including a factory, wholesale bakery, dairy plant, food processing plant, mill, mine, quarry, all locally assessed utility property, and the like.

Other and Unallocable—Includes any property not classified within any of the preceding groups. Examples are mineral rights, timber rights, and oil rights, if they are separately assessed as real estate.

Proprietary Lease—See **lease, proprietary**.

Protraction—In land and cadastral surveying, the subdivision of land by drawing or extending lines on maps or plats of the region being subdivided. The lines are drawn before surveying and monumenting the subdivisions and are therefore indicated by dashed, straight lines.

Public Land Survey System (PLSS)—A rectangular survey system established in the United States by the Land Ordinance of 1785. The basic survey unit is the six-square-mile township. Townships are located by baselines and meridians parallel to latitude and longitude lines; they are defined by range lines running parallel (north-south) to meridians and township lines running parallel (east-west) to baselines.

Public Policy—Any purposeful course of action by governmental bodies (whether successful or unsuccessful and whether implementable or not).

Pure Competition—A market situation in which (1) individual buyers or sellers of an item buy or sell an amount too small relative to the market to be able to influence the price of the good, and (2) the units of the item are homogeneous.

Q

Qualified Sale—A property transfer that satisfies the conditions of a valid sale and meets all other technical criteria for inclusion in a ratio study sample. If a property has undergone significant changes in physical characteristics, use, or condition in the period between the assessment date and sale date, it would not technically qualify for use in ratio study.

Qualitative Data—Pertaining to the subjective nature of some variable of interest. For example, view, fire protection, quality, or site/location.

Qualitative Variable—Something that can be appreciated but not objectively reduced to an unambiguous scale. For example, view is a qualitative variable.

Quality Class—A subjective classification of a structure by an appraiser, intended to describe materials used, workmanship, architectural attractiveness, functional design, and the like. Quality class, or its synonym “grade,” is the key variable in most cost schedules.

Quantitative Variable—Pertaining to the objective nature of some variable of interest, that is, something that can be measured or counted with little ambiguity. For example, number of bathrooms is a quantitative variable.

Quantity Survey Method—A method of estimating reproduction cost in which a complete itemization is made of all labor and material costs by component and subcomponent and all indirect costs; these are added to obtain an estimate of the cost of a structure or a reasonable bid for a contractor to submit on a proposed project.

Quarter Section—A subdivision of a section containing 160 acres more or less, described by referencing the center point in the section, that is, the NE + is north and east of the center point.

Quartiles—The values that divide a set of data into four equal parts when the data are arrayed in ascending order. The first quartile includes the lowest quarter of the data; the second quartile, the second lowest quarter, and so forth.

Quasi Rent—See **rent, economic**.

Quitclaim Deed—See **deed, quitclaim**.

Quotient Transformation—A transformation of two or more variables accomplished by dividing one by the other. For example, the length of a room is a quotient transformation of its area and its width. Like the multiplicative transformation, many useful quotient transformations are less intuitively obvious than the one in the example given.

R

Radar, Side-Looking—A form of radar, mounted on aircraft, in which the beam is pointed, either by scanning or by shaping, in a direction perpendicular to the longitudinal axis of the aircraft so that the returned signals come from a long, narrow strip of ground approximately parallel to the airplane's line of flight. The ground is mapped as a set of adjacent, overlapping strips.

Radar, Synthetic-Aperture—A radar containing a moving or scanning antenna; the signals received are combined to produce a signal equivalent to that which would have been received by a larger, stationary antenna.

Radiation—Process by which electromagnetic energy is propagated through free space by virtue of joint undulatory variations in the electric and magnetic fields in space.

Radon—Radioactive gas that may enter structures from beneath the ground level and contaminate the air within.

Random Sample—A sample for which each item of the population has an equal chance of being included and, by extension, each possible combination of n items has an equal chance of occurrence.

Range—(1) The maximum value of a sample, minus the minimum value. (2) The difference between the maximum and minimum values that a variable may assume.

Range Line—One of a series of survey lines running due north and south at six-mile intervals, used for locating parcels of land under government survey. See **meridian**, **principal**. Contrast **township line**.

Rank—(1) The position of an item relative to others in a set ordered according to the value of each member of the set in relation to the others. (2) The act of ordering the members of a set according to the value of each member in relation to the others. For example, the numbers 0.95, 0.87, 1.09, and 0.83 have ranks of 3, 2, 4, 1. See **Spearman rank test**.

Raster Image—An image represented by a series of lines and samples.

Ratables (or Rateables)—Synonymous with property, ratable.

Rate, Capitalization—See **capitalization rate**.

Rate, Discount—See **discount rate**.

Rate, Mill—See **mill rate**.

Rate, Tax—See **tax rate**.

Rate-Driven Levy—The property tax rate to be applied is specified in the budget or tax levy ordinance of a taxing jurisdiction, as opposed to the usual situation in which the total revenue to be raised is specified and the rate is calculated. See **tax and expenditure limitations**.

Rate Base—Under perfect regulation, the dollar amount on which a return is allowed as established by a regulatory agency.

Rate of Return—See **discount rate**.

Ratio, Assessment—See **assessment ratio**.

Ratio, Occupancy—See **occupancy ratio**.

Ratio Study—A study of the relationship between appraised or assessed values and market values. Indicators of market values may be either sales (sales ratio study) or independent “expert” appraisals (appraisal ratio study). Of common interest in ratio studies are the level and uniformity of the appraisals or assessments. See **level of appraisal** and **level of assessment**.

Raw Materials—Goods purchased for use as an ingredient or component part of a finished product.

RCN—Replacement cost new or reproduction cost new.

RCNLD—Replacement cost new less depreciation or reproduction cost new less depreciation.

Read-and-Write Instruction—A kind of command embedded in a computer program that has the capability of both accessing a data file and altering it.

Read-Only Instruction—A kind of command embedded in a computer program that has the capability of only accessing the records in a data file, not of altering them.

Real Estate—The physical parcel of land and all improvements permanently attached. *Compare* **real property**.

Real Estate Transfer Documents—The various kinds of deeds whereby real property is conveyed. *Compare* **conveyances**.

Real Property—*See* **property**.

Real Time—To make images or data available for inspection simultaneously with their acquisition.

Realty—(1) Any tangible thing whose fee ownership constitutes real property, that is, land or improvements. (2) A synonym for real estate.

Reappraisal—The mass appraisal of all property within an assessment jurisdiction accomplished within or at the beginning of a reappraisal cycle (sense 2). Also called revaluation or reassessment.

Reappraisal Cycle—(1) The period of time necessary for a jurisdiction to have a complete reappraisal. For example, a cycle of five years occurs when one-fifth of a jurisdiction is reappraised each year and also when a jurisdiction is reappraised all at once every five years. (2) The maximum interval between reappraisals as stated in laws.

Reassessment—(1) The relisting and revaluation of all property, or all property of a given class, within an assessment district by order of an authorized officer or body after a finding by such an officer or body that the original assessment is too faulty for correction through the usual procedures of review and equalization. (2) The

revaluation of all real property by the regularly constituted assessing authorities, as distinguished from assessment on the basis of valuations most or all of which were established in some prior year. See **revaluation**.

Recapture—A portion of the overall capitalization rate in an income approach representing the return of an owner's investment in property, expressed as the current year's percentage of the remaining economic life.

Recapture, Straight-Line—The recovery of capital invested in a wasting asset in equal periodic amounts over the remaining economic life of the asset.

Recapture Rate—The return of an investment; the annual amount that can be recaptured from an investment divided by the original investment; primarily used in reference to wasting assets (improvements).

Receiver—One who is appointed by a court of equity as its representative to manage property owned by an insolvent debtor until the claims of creditors have been met or to manage property that is the subject of a law suit pending its outcome.

Reciprocal—The result obtained when 1 is divided by a given number. For example, the reciprocal of 4 is 0.25. Factors are reciprocals of rates.

Reclamation—The process of physically changing economically unusable land to be suitable for use.

Reconciliation—The final step in the valuation process wherein consideration is given to the relative strengths and weaknesses of the three approaches to value, the nature of the property appraised, and the quantity and quality of available data in formation of an overall opinion of value (either a single point estimate or a range of value). Also termed "correlation" in some texts.

Recordation/Recording—The filing of documents affecting real property for public record, which usually requires the witnessing and notarizing of the document.

Rectangular Coordinates—A land description system where boundaries are described as lines running from points on an X and Y grid.

Rectangular Land Surveys—Land description systems based on permanent, uniformly sized rectangular grids that can be subdivided into smaller units of land.

Rectangular Survey System—See **federal rectangular survey system**.

Rectification—(1) The process by which the geometry of an image area is made planimetric. (2) The process of converting a tilted or oblique photograph to the plane of the vertical by projecting it onto a horizontal reference plane, with the angular relationship determined by the use of control points recognizable on the photograph and an accurate map.

Rectify—To reconcile photographs or other representations of a curved surface, such as the earth, in order to form a single, two-dimensional representation, such as a map, of the surface features on the curved object.

Redemption—The process by which the owner of real property sold at a tax sale buys back the property from the purchaser at an enhanced price within a specified redemption period.

Reflectance—A measure of the ability of a surface to reflect energy in the various regions of the electromagnetic spectrum. Reflectance is affected not only by the nature of the surface itself, but also by the angle of incidence and the viewing angle.

Region of Rejection—In tests of hypotheses, that range in which one has at least the specified degree of confidence that a calculated statistic will not fall when the null hypothesis is true.

Registration—The process of superimposing two or more images or photographs so that equivalent geographic points coincide. Registration may be done digitally or photographically.

Regression Analysis—See **multiple regression analysis**.

Regression Coefficient—The coefficient calculated by the regression algorithm for the data supplied that, when multiplied by the value of the variable with which it is associated, will predict (for simple regression) or help to predict (for multiple regression) the value of the dependent variable. For example, in the equation, $\text{Value} = \$10,000 + \$5,000 \times \text{number of rooms}$, \$5,000 is a regression coefficient.

Regression Line—The line on a graph that represents the relationship defined by the regression coefficients. For example, the line from the relationship given in the definition of regression coefficient would cross the y-axis at the value \$10,000 and would go up \$5,000 for each movement of 1 to the right. This example illustrates one of the subtleties required in understanding regression analysis: in fact, there is no line, because the independent variable is not a continuous variable, but it is easier to talk about the relationship by pretending that the variable is continuous and represent the relationship by a line rather than the more nearly correct series of vertical bars on a bar chart.

Regressivity—See **assessment progressivity (regressivity)**.

Regressivity Index—See **price-related differential**.

Regular Section—A one-square-mile subdivision of a township containing 640 acres.

Regulatory Lag—The time intervening between the initiation of a proceeding before a commission and the effective date of the final decision or disposition of the case.

Regulation—For public utilities, the action of government as arbitrator between a (usually monopoly) utility and its customers. The goal is to balance just and reasonable rates and terms of service with fair profits.

REIT—Real estate investment trust; combines capital of many investors to acquire or finance real estate through formation of a corporation whose shares are traded in a market.

Reject Code—A flag applied to a record indicating that it should not be used for certain purposes.

Reliability—In a sampling process, the extent to which the process yields consistent population estimates. Ratio studies typically are based on samples. Statistics derived from these samples may be more or less likely to reflect the true condition in the population depending on the reliability of the sample. Representativeness, sample size, and sample uniformity all contribute to reliability. Formally, reliability is measured by sampling error or the width of the confidence interval at a specific confidence level relative to the central tendency measure.

Relationship—The phenomenon whereby knowledge of the value of one variable tells you something about the probable value of another. (See **correlation**.) Relationships may be positive (an increase in the value of one variable implies an increase in the value of the other variable) or negative (a change in the value of one variable implies a change in the other direction for the value of the other variable). Independence of two variables means that there is no relationship between them.

Relief—The variation in elevation between the high and low parts of a surface.

Remainder—(1) A remainderman's ownership interest in a property. The "remainderman" will acquire full title to a property when a life estate ends. (2) In eminent domain cases, remainder is used to refer to the property that remains after a partial taking.

Remaining Economic Life (REL)—As of the appraisal date, the number of years in the future over which the operation of an asset is anticipated to be economically feasible; often expressed as a percentage of the total economic life (REL %).

Remediation—The act or process of eliminating environmental contamination on, in, or under property, to restore the property to an uncontaminated state.

Remodel—To improve a structure by changing its floor plan, functions, or characteristics.

Remote Sensing—Collecting information about an object without being in physical contact with the object.

Rendition—A term occasionally used synonymously with declaration.

Rent, Economic—(1) In appraisal, the annual rent that is justified for the property on the basis of a careful study of comparable properties in the area; market rent. (2) In economics, the payment received by an owner of something being bought or rented in excess of the minimum amount for which he or she would have sold or rented it.

Rent, Gross—The total amount received by a lessor from a lessee, without deduction for taxes, maintenance, or any other payments made by the lessor on account of the leased property. *Contrast rent, net.*

Rent, Ground—The rent paid for the right of use and occupancy of a parcel of unimproved land, or that portion of the rent paid for the right of use and occupancy of a parcel of improved land that is imputed to the land as distinguished from the improvements. *Compare* **rent, economic**. *See* **lease, ground**.

Rent, Net—The amount remaining to the lessor out of gross rents after deducting taxes on the property, insurance, repairs, expenses of management, and any other operating and maintenance expenses payable by him or her on account of the leased property. Note: Net rent is arrived at before deduction of depreciation expenses, interest on the lessor's investment in the property, and income taxes payable by the lessor.

Rentable Area—A specified unit area of leasable space.

Repeat Sales Analysis Model—Aggregates changes in value and statistical means for properties sold more than once during a specified period of time in a given geographic area. For example, in a zip or postal code area, estimate market-level housing price changes. If an individual property has not been substantially changed since its last sale, this analysis matches each pair of sales transactions (thus the name "repeat sales"). The amount of appreciation (or depreciation) is calculated from the time of the first sale to the second and so on, providing an estimate of the overall appreciation of that local housing market during that time period. The larger the number of available sales pairs, the more statistically reliable the estimate of overall housing price trends will be. Because this analysis is based on identifying properties where more than one sale has occurred, the challenge is to identify enough observations to provide a meaningful index of housing values, while keeping to as small a geographic area as possible. A repeat sales index may also overestimate market appreciation if the data contains pairs of sales in which the second sales price reflects substantial improvements (or other alterations) made to the property after the first sale. On the other hand, repeat sales indices can and do provide very useful valuation estimates in jurisdictions where the data is insufficient to support hedonic models. In addition, they may prove to be more accurate in tracking housing values for the houses that a hedonic model may struggle with (especially those subject to extreme positive or negative influences) when a prior sale is known on the property.

Replacement Cost; Replacement Cost New (RCN)—The cost, including material, labor, and overhead, that would be incurred in constructing an improvement having the same utility to its owner as a subject improvement, without necessarily reproducing exactly any particular characteristics of the subject. The replacement cost concept implicitly eliminates all functional obsolescence from the value given; thus only physical depreciation and economic obsolescence need to be subtracted to obtain replacement cost new less depreciation (RCNLD).

Replacement Cost New Less Depreciation (RCNLD)—In the cost approach, replacement cost new less physical incurable depreciation.

Replacement Reserve—An allowance in an annual operating statement for replacement of short-lived items that will not last for the remaining economic life of a property.

Report—Any communication, written or oral, of an appraisal, review, or consulting service that is transmitted to the client upon completion of an assignment.

Representative Sample—A sample of observations from a larger population of observations, such that statistics calculated from the sample can be expected to represent the characteristics of the population being studied.

Reproduction Cost; Reproduction Cost New (RCM)—The cost of constructing a new property, reasonably identical (having the same characteristics) with the given property except for the absence of physical depreciation, using the same materials, construction standards, design, and quality of workmanship, computed on the basis of prevailing prices and on the assumption of normal competency and normal conditions.

Repurchase Agreement—A short-term financing arrangement whereby those needing funds sell securities but agree to repurchase them at a fixed price at a specified time.

Required Rate of Return on Equity—A component of the discount rate, as it is understood from the point of view of band-of-investment analysis, and a component of the overall rate developed according to mortgage-equity analysis.

RES—See **Residential Evaluation Specialist**.

Resale Factor—The percentage of reproduction cost new added in estimating the value of a property to cover carrying charges during construction and other costs and profits of a person who manages property being prepared for occupancy, provided such items are not included in reproduction cost.

Reserve, Valuation—An account to which is credited the amount of depreciation expenses, anticipated losses on bad debts, and other charges representing a downward revaluation of assets that are carried on the books at a figure making no allowance for such revaluation. Note: Valuation reserves are sometimes carried on the liabilities side of the balance sheet. Good accounting procedure, however, requires that they be carried on the assets side of the balance sheet directly after the assets to which they pertain, and that their amounts be deducted from gross book values in arriving at total sales.

Reserve Requirement—The amount, expressed as a percentage of deposits, a commercial bank that is a member of the Federal Reserve System must keep on deposit in the Federal Reserve Bank of its region.

Residence—(1) A domicile. (2) A domicile at which a person is actually dwelling. (3) A dwelling place, whether or not it constitutes a domicile (preferred). Note: Ordinarily, in the law of taxation, “residence” means “domicile” unless a contrary meaning is specified or is indicated by the context.

Residential (nonfarm) Multifamily—See **Property**.

Residential (nonfarm) Single Family—See **Property**.

Residential Evaluation Specialist (RES)—A professional designation conferred by the International Association of Assessing Officers.

Residential Property—Real property that might be vacant land or an improved parcel of land devoted to or available for residential use. See **property use category**.

Residual—The difference between an observed value and a predicted value for a dependent variable.

Residual Technique—A method of arriving at the unknown value of a property component by subtracting the known values of other components from a known overall value.

Residual Value—The value of the property after cleanup of environmental contamination. This may be more or less than the original value depending on counterbalancing effects of stigma and improvements to plant efficiency.

Residual Value of Improvements—A value ascribed to improvements on a parcel of land by deducting from the total value of land and improvements (as determined by composite appraisal) the value of the land alone (as determined by comparison with other parcels). *Contrast residual value of land.* Note: A residual value of improvements is usually estimated only when the land is obviously not improved to its highest and best use.

Residual Value of Land—A value ascribed to land alone by deducting from the total value of land and improvements (as determined by composite appraisal) the value of the improvements (as determined by the depreciated reproduction cost method). *Contrast residual value of improvements.*

Resolution—A measure of the finest detail distinguishable in an image. Resolution usually varies from point to point of an image, so an average value (area-weighted average resolution) is often used as the resolution of the entire image.

Resolution, Ground—The size, in length or area, of the smallest pattern or region on the ground that can be distinguished on an image.

Restricted-Use Value— See **use value**.

Restriction—A described limitation on use of a property.

Revaluation—A reappraisal of property; especially a complete reappraisal of real property after assessment for one or more years on valuations most (or all) of which were established in some prior year. *Compare reassessment and reappraisal.*

Revenue—The gross dollars received for materials furnished or services rendered. Operating revenue means revenue from the operations of the primary business, for example, electric revenues of an electric utility.

Reversion—The right of possession commencing on the termination of a particular estate.

Reversion Factor—See **present worth of 1**.

Review—(1) Consideration by a board of appeals, a board of equalization, a board of review, or a court, of individual, property class, or district assessments, whether for the purpose of adding omitted taxable property, removing exempt property, or equalizing the valuations placed on listed property. *Compare* **equalization**. (2) The act or process of critically studying a report, such as an appraisal, prepared by another.

Review, Administrative—Review by any body that is not part of the organized judiciary.

Review, Judicial—Review by a body that is part of the organized judiciary.

Right, Air—A right to use and occupy the space lying above a stated elevation or within certain distances above the ground surface, in conjunction with specified spaces on the surface for the support of foundations; for example, the rights granted by railroads to build above their right-of-ways.

Right, Littoral—Any right attaching to a parcel of land that appertains to standing water bordering on such parcel. *Compare* **right, riparian**.

Right, Riparian—Any right attaching to a parcel of land that appertains to running water bordering on or flowing over such parcel; for example, the right to natural flow unobstructed by artificial checks or barriers, to freedom from unreasonable pollution, of access to the water, of accretion. *Compare* **right, littoral; right, water**.

Right, Water—The right to a supply of water.

Right-of-Way—(1) An easement consisting of a right of passage through the servient estate (preferred). (2) By extension, the strip of land traversed by a railroad or public utility, whether owned by the railroad or utility company or used under easement agreement.

Rights, Property—See **bundle of rights**.

Rod—A land measure of 16+ feet or twenty-five links. Also called a “pole.”

Roll, Assessment—See **assessment roll**.

Roll, Tax—See **tax roll**.

Root Mean Square (RMS)—The square root of the average value of the sum of the squares of the differences between values in a set and the corresponding values that have been accepted as correct or standard. Used to measure map accuracy.

Royalty—(1) A payment made periodically or at irregular intervals to the owner of a patent or copyright for the privilege of reproducing or using a patented or copyrighted article. (2) A payment made periodically or at irregular intervals to the owner of an interest in mineral land for the privilege of exploring for, and/or mining and disposing of, mineral deposits.

Rule—See **Baltimore rule**, **Harper rule**, and so on.

Russell-NCREIF Index—A performance measure for institutional real estate, maintained by the National Council of Real Estate Investment Fiduciaries Research Institute.

S

Sale, Arm's-Length—A sale in the open market between two unrelated parties, each of whom is reasonably knowledgeable of market conditions and under no undue pressure to buy or sell.

Sale, Conditional—A sale, especially of chattels, in which the transfer of title is made to depend on the performance of a condition subsequent to the making of the sales contract and delivery of goods. Note: The most common condition is that the remainder of the purchase price be paid. Property held under a conditional sales contract may be repossessed without foreclosure proceeding, and the former holder has no equity of redemption. *Compare mortgage, chattel.*

Sale, Distress—A sale made to meet the immediate and pressing needs of the seller at whatever price the property will bring.

Sale, Forced—A sale made pursuant to law; usually an auction sale that is involuntary on the part of the owner.

Sale, Normal—A sale in which neither the buyer nor the seller acts under legal or economic compulsion, in which both parties are reasonably well informed, and in which both are primarily actuated by economic motives. *Compare value, market and sale, arm's-length.*

Sale-Leaseback—A sale and subsequent lease given by the buyer back to the seller as part of the same transaction.

Sale of Convenience—A sale designed to correct defects in a title, create a joint or common tenancy, or serve some similar purpose. Such sales generally are transacted at only a nominal price.

Sale Price—See **price, sale; price, adjusted sale**.

Sale Price-Assessment Ratio—The reciprocal of the assessment-sale price ratio.

Sale Terms—The amount of down payment, the interest on the mortgage, and information on points and other fees involved in a real estate sale. Also called “terms of financing” or “financing terms.”

Sales Chasing—Sales chasing is the practice of using the sale of a property to trigger a reappraisal of that property at or near the selling price. If sales with such appraisal adjustments are used in a ratio study, the practice causes invalid uniformity results and causes invalid appraisal level results, unless similar unsold parcels are reappraised by a method that produces an appraisal level for unsold properties equal to the appraisal level of sold properties. (2) By extension, any practice that causes the analyzed sample to misrepresent the assessment performance for the entire population as a result of acts by the assessor’s office. A subtle, possibly inadvertent, variety of sales chasing occurs when the recorded property characteristics of sold properties are differentially changed relative to unsold properties. Then the application of a uniform valuation model to all properties results in the recently sold properties being more accurately appraised than the unsold ones.

Sales Comparison Approach—One of three approaches to value, the sales comparison approach estimates a property’s value (or some other characteristic, such as its depreciation) by reference to comparable sales.

Sales Data—(1) Information about the nature of the transaction, the sale price, and the characteristics of a property as of the date of sale. (2) The elements of information needed from each property for some purpose, such as appraising properties by the direct sales comparison approach.

Sales File—A file of sales data.

Sales Ratio/Assessment Ratio—The ratio of an appraised (or assessed) value to the sale price or adjusted sale price of a property. See **assessment-sale price ratio**.

Sales Ratio Study—A ratio study that uses sale prices as proxies for market values.

Salvage Value—See **value, salvage**.

Sample—A set of observations selected from a population. If the sample was randomly selected, basic concepts of probability may be applied.

Sampling Error—The error reflected in ratio study statistics that results solely from the fact that a sample of the population is used rather than a census of the population.

Sandwich Lease—See **lease, sandwich**.

Scale—The reduction ratio that characterizes a particular map. A ratio of 1: 100, for example, is said to be a larger scale than 1: 1,000.

Scanner—(1) An optical-mechanical imaging system in which a rotating or oscillating mirror sweeps the instantaneous field of view of the detector across the terrain. (2) A device for capturing and digitally encoding images in computer files.

Scatter Diagram or Scatterplot—A graphic means of depicting the relationship or correlation between two variables by plotting one variable on the horizontal axis and one variable on the vertical axis. Often in ratio studies it is informative to determine how ratios are related to other variables. A variable of interest is plotted on the horizontal axis, and ratios are plotted on the vertical axis.

Scene—The area on the ground that is covered by an image or photograph.

Schedule, Building Classification—See **building classification schedule**.

Schedule, Building Cost—See **building cost schedule**.

Schedules—Tables, equations, or some other means of presenting the relationship between the values of two or more variables that are functionally related. For example, cost schedules present the relationship between cost per square foot and living area for a number of quality classes, building heights, and other characteristics.

Scrap Value—See **value, scrap**.

Secondary Mortgage Market—A market in which the originator of a mortgage, such as a local savings bank, may sell it to another investor, such as a pension fund.

Section—A unit of land approximately one mile square and normally containing 640 acres, as laid out by the government survey.

Sensor—Any device that gathers energy (electromagnetic radiation [EMR] or other), converts it into a signal, and presents it in a form suitable for obtaining information about the environment.

Separated Rights—Rights to property that have been separated by deed, such as air, mineral, water, and leasehold rights.

Separation of Sources—The act of allocating a particular subject of taxation to some one or more, but not all, of the several levels of government within whose jurisdiction the subject lies.

Service Life—The period of time (or service) for an asset from the date of its installation to the date of its retirement from service.

Settlor—One who transfers to a trustee title to property that constitutes the trust estate. *Contrast* **trustee**; **cestui que trust**.

Short Run—A planning period so short that a firm is unable to vary the quantities of some of the resources that it uses.

Short-Lived Items—Items of a structure that have a shorter life than the basic structure. For example, roofing, water heaters, floor covering, and interior finish.

Signature—(1) Personalized evidence indicating authentication of the work performed by the appraiser and the acceptance of the responsibility for content, analyses, and conclusions in the report. (2) A characteristic, or combination of characteristics, by which a material or object may be identified on an image or photograph.

Significance—A measure of the probability that an event is attributable to a relationship rather than merely the result of chance.

Single-Property Appraisal—Systematic appraisal of properties one at a time.

Sinking Fund—A real or accounting fund or pool of money into which deposits are periodically made; these deposits, together with the compound interest they earn, are projected to accumulate to a given amount on a given date. Some sinking funds are dedicated to a particular purpose, such as replacing a heating system; others are simply convenient ways of thinking about flows of money.

Sinking-Fund Factor—The amount that must be periodically set aside to accumulate with compound interest to \$1 at the end of a specified number of years and at a specified interest rate. The sinking-fund factor is sometimes known (in connection with annuity capitalization) as the capital recovery rate.

Sinking-Fund Method—A way of calculating the recapture rate in the income approach. It assumes that an investor will deposit recapture income in an interest-bearing account and will thus, in effect, accelerate recapture. To use it, an appraiser goes to a compound interest table to locate the interest rate the investor would probably get and looks down the column of sinking-fund factors to the number of years equal to remaining economic life of the improvements. Adding that sinking-fund factor to the discount rate gives the recapture rate.

Sinking-Fund Method-Annuity Premise—Assumes that the interest rate on a sinking fund is equal to the investor's discount rate.

Site—The location of a person, thing, or event.

Site Amenities—The specific location-related positive attributes of a property: topography, utilities, street traffic, view, and so on.

Site Analysis—A study that determines the suitability of a specific parcel of land for a specific purpose.

Site Characteristics—(1) Characteristics of (and data that describe) a particular property, especially land size, shape, topography, drainage, and so on, as opposed to location and external economic forces. (2) By extension, any characteristics of either the site or the improvement.

Site Development—Improvements made to a land site (for example, grading, utility installation, roadways, and curbs) before a building is constructed.

Situs—The actual or assumed location of a property for purposes of taxation. In personal property, situs may be the physical location of the property or, in the instance of highly mobile property, the more-or-less permanent location of the property owner.

Situs, Business—The place at which intangible property is given a legal tax situs by reason of its association with a localized business.

Situs, Constructive—The tax situs established by reasonable rules of law or practice for intangible property, or for tangibles when they are not continuously within a given tax district for the full assessment year. For example, a constructive situs is established for freight cars by allocating to a tax district a fraction of the total number of cars owned equal to the ratio of car miles operated within the district to the total number of car miles operated within and without the district.

Situs, Tax—The place at which property is legally taxable, that is, the jurisdiction within which property actually lies or is said to lie for tax purposes.

Skewed—The quality of a frequency distribution that makes it asymmetrical. Distributions with longer tails on the right than on the left are said to be skewed to the right or to be positively skewed; distributions with longer tails to the left are said to be skewed to the left or to be negatively skewed.

Slope—The change in the dependent variable associated with a change of one in the independent variable of interest. The slope is given by the coefficient of the independent variable.

Software—(1) Computer programs. (2) Those parts of a computer system that are not machinery or circuits; thus procedures and possibly documentation are included along with programs.

Sole Proprietorship—A business enterprise net worth that belongs entirely to one individual.

Somers System—A system of standardized assessment developed by the late William A. Somers and first used by him in the 1896 reassessment of St. Paul, Minnesota.

Sonar—An apparatus that detects the presence of, or determines the distance or direction of, an object underwater by receiving and interpreting sound from the object.

Spatial—Refers to the location of, proximity to, or orientation of objects with respect to one another in N-dimensional space. Generally refers to phenomena that can be mapped in two or three dimensions on or near the earth's surface.

Spatial Resolution—(1) The ability of an entire remote sensor system, including lens, antennas, display, exposure, processing, and other factors, to render a sharply defined image. (2) A measure of the smallest angular or linear separation between two objects that can be resolved by the sensor.

Spearman Rank Test—A standard nonparametric test useful in examining assessment bias, among other things. It is based on the correlation of two sets of ranks.

Special Benefits—Any benefits that remain with a property after partial taking by eminent domain.

Specific Property Tax Rate Limits—A form of tax and expenditure limitation, applicable to specific types of local government or specific functions in the state, in which an upper limit is placed on either the property tax rate or the rate of increase in the property tax rate.

Specifications—A written, detailed, drawing that shows a contractor how to proceed with construction.

Spectral Band—An interval in the electromagnetic spectrum defined by two wavelengths or frequencies.

Spectral Reflectance—The reflectance of electromagnetic energy at specified wavelength intervals.

Spectral Resolution—The dimension and number of specific wavelength intervals in the electromagnetic spectrum to which a sensor is sensitive.

Spheroid—(1) Any surface differing only slightly from a sphere. (2) By extension, a surface close to the geoid or approximating the geoid.

Split—See **property split**.

Square Foot—A unit of area equal to a square one foot in length on each side.

Standard Building—See **building, standard**.

Standard Deviation—The statistic calculated from a set of numbers by subtracting the mean from each value and squaring the remainders, adding together all the squares, dividing by the size of the sample less one, and taking the square root of the result. When the data are normally distributed, one can calculate the percentage of observations within any number of standard deviations of the mean from normal probability tables. When the data are not normally distributed, the standard deviation is less meaningful, and one should proceed cautiously.

Standard Error—A measure of the precision of a measure of central tendency; the smaller the standard error, the more reliable the measure of central tendency. Standard errors are used in calculating a confidence interval about the arithmetic mean and the weighted mean.

Standard Error of the Estimate (SEE)—An expression for the standard deviation of the observed values about the regression line; thus it provides an estimate of the variation likely to be encountered in making predictions from the regression equation.

Standard Lot—See **lot, standard**.

Standard 6—See *Uniform Standards of Professional Appraisal Practice*.

Standardize—(1) To transform a variable to standard form; that is, to make the mean of the frequency distribution equal to zero and the standard deviation equal to one. (2) To adjust, for appraisal purposes, reported data such as income and expenses, so as to remove the effects of non-real estate factors, such as abnormally good or bad management, weather, and the like. The more common term for this adjustment process is “normalization.”

State Assessed Property—That property for which the assessed value is set by a state agency, either for taxation by the local jurisdiction affected, or for state taxation. Most often, this term applies to utility property or property with special characteristics where the state preempts local authority to achieve uniformity in assessments.

State Plane Coordinates—Geographic coordinates based on the state plane coordinate system. See **coordinate system, state plane**.

State Plane Coordinate System—See **coordinate system, state plane**.

State Property Tax Tribunal—A quasi-judicial administrative review agency organized by at least one state (Michigan) to separate the state's review and appeal responsibilities from its administrative and equalization functions.

Statistical Accuracy—The closeness between the statistical estimate and the true (but unknown) population parameter value it was designed to measure. It is usually characterized in terms of error or the potential significance of error and can be decomposed into sampling error and nonsampling error components. Accuracy can be specified by the level of confidence selected for a statistical test. See **accuracy**.

Statistical Precision—A reference to how closely the survey results from a sample can reproduce the results that would be obtained from the entire population (a complete census). The amount by which a sample statistic can vary from the true population parameter is due to error. Even if all the sample data are perfectly accurate, random (sampling) error affects statistical precision (measured by the standard error or standard deviation). The dispersion of ratios in the population and the sample size have a controlling influence over the precision of any statistical estimate. When the reliability of a statistical measure is being evaluated, narrower confidence intervals have greater precision. See **precision**.

Statistics—(1) Numerical descriptions calculated from a sample, for example, the median, mean, or coefficient of dispersion. Statistics are used to estimate corresponding measures, termed parameters, for the population. (2) The science of studying numerical data systematically and of presenting the results usefully. Two main branches exist: descriptive statistics and inferential statistics.

Statute—A written law that comes from a legislative body.

Stepwise Regression Analysis—A kind of multiple regression analysis in which the independent variables enter the model, and leave it if appropriate, one by one according to their ability to improve the equation's power to predict the value of the dependent variable.

Stereoscope—An instrument that uses a stereoscopic pair of images to produce a visual effect of depth or solidity, numerical data, or topographic maps showing depth (height).

Stereoscopic Coverage—Aerial photography taken with sufficient overlap to permit complete stereoscopic observation. Sixty percent forward overlap between frames is usually recommended for adequate stereoscopic coverage.

Stereoscopic Pair—Two photographs of the same area taken from different camera stations so as to afford stereoscopic study of the overlap area. Also called “stereo pair.”

Stigma—A perception that a property continues to be contaminated even though it has been cleaned up. Stigma may affect property value.

Stock, Capital—The book value of the outstanding shares of a corporation; the capital stock represents the permanently invested capital of the corporation that cannot legally be impaired by payment of ordinary dividends. *Compare surplus, corporate.*

Stock, Common—Corporation stock that has a residual claim on net profits and on assets, on dissolution of the corporation, after satisfaction of the claims of all creditors and of the preferred stockholders, if any, or stock that is subordinate in any other respect to a second issue of stock by the same corporation.

Stock, Preferred—(1) In general, corporation stock that has preference in any request over the common stock. (2) Specifically, corporation stock on which a dividend must be declared at a specified rate per share before any is declared on common stock, and on which liquidation dividends must be paid to the full face value of the stock before any such dividends are paid on common stock. Note: If the preferred stock is cumulative, dividends that are passed or paid in an amount less than the specified rate per share must be paid in full before a dividend may be declared on common stock in any subsequent year; if it is noncumulative, dividends passed in whole or in part in one year need not be paid in a subsequent year before declaration of dividend on common stock. Participating preferred stock shares in any additional dividends after payment at specified rates on both preferred and common stocks.

Stock and Debt Technique—A method of appraisal in which the liabilities and equity on a company's balance sheet are valued to yield a value for the operating assets (after nonoperating properties are deducted). A substitute for the sales comparison approach when sales are insufficient, as the total value of the various interest positions (taken from stock and bond sale prices in the daily newspaper or elsewhere) when summed provides a relatively objective indication of market value.

Stock Cooperative—See **cooperative**.

Stock in Trade—Stock in trade refers to merchandise items (1) on display, (2) in easy-access storage, (3) being received, or (4) being prepared for shipment.

Straight-Line Capitalization—A means of estimating value whereby net operating income is divided by a capitalization rate composed of the discount rate, the reciprocal of remaining economic life as the recapture rate, and sometimes the effective tax rate. The method implicitly assumes that net operating income will decline by an equal dollar amount each year.

Straight-Line Method—A method of amortizing investments and other sources of cash flows so that equal amounts are attributed to each of several equal intervals of time.

Stratification—The division of a sample of observations into two or more subsets according to some criterion or set of criteria. Such a division may be made to analyze disparate property types, locations, or characteristics, for example.

Stratify—To divide, for purposes of analysis, a sample of observations into two or more subsets according to some criterion or set of criteria.

Stratum, Strata (pl.)—A class or subset that results from stratification.

Street, Main—Among two or more streets affecting the value of a lot, the one that is considered to contribute the highest unit-foot value. Synonymous with "principal street."

Street, Rear—Among two or more streets affecting the value of a lot, the one that is either parallel to the main street or that runs in the same general direction as the main street.

Street, Side—Among two or more intersecting streets affecting the value of a lot, the one that is considered to contribute the lower unit-foot value. Synonymous with “cross street.”

Structure—Any man-made improvement that rises above ground level.

Stumpage—The amount of timber “on the stump.”

Stumpage Value—The value of uncut timber.

Subclass—A group of properties within a class, smaller than the class, usually (although not necessarily) defined by stratification rather than by sampling.

Subdivision—A tract of land that has been divided into marketable building lots and such public and private ways as are required for access to those lots, and that is covered by a recorded plat.

Subjective—Having the quality of requiring judgment in arriving at an appropriate answer or value for a variable (such as the quality class of a structure). See **objective**; **qualitative variable**; **quantitative variable**.

Subjective Data—Subjective data are items for which the proper value is a matter of judgment and more difficult to verify. Examples include construction class, condition, effective year built, neighborhood desirability, and view.

Subject of Tax—(1) The persons, property, act, privilege, or other circumstance on which a tax is levied or the existence of which gives rise to tax liability. (2) The natural persons on whom the tax burden falls after shifting (not recommended). *Compare* **measure of tax**; **object of tax**.

Subject Property—The property being appraised.

Sublease—A lease in which the lessor is a lessee in a prior lease.

Subpoena Duces Tecum—A subpoena requiring the person served therewith to appear at the appointed place and before the designated tribunal with those documents or other things called for in the subpoena.

Subset—A group of properties within a sample, smaller than the sample, usually although not necessarily defined by stratification rather than by sampling.

Substitute Goods—Goods related in such a way that an increase in consumption of one decreases consumption of the other.

Substitution—The appraisal principle that states that a potential owner will pay no more for a property than the amount for which a property of like utility may be purchased; that a property's value tends to be set by the cost of acquiring an equally desirable substitute.

Succession—The passing of real property by inheritance or will.

Sum of Squared Errors—The sum of the squared deviations from the predicted values (rather than the mean value).

Sum of Squares—The result obtained by adding all the squares of the individual deviations from some given value. Usually it is the sum of the squares of the deviations of the individual values of a variable from the mean value.

Sum of the Years' Digits—The method of accounting for depreciation in which a percentage of depreciable cost is allocated to each year, which percentage is equal to the number of years of remaining economic life divided by the sum of the digits for each year in the total economic life.

Summation Approach—See **cost approach**.

Sunset Provision—A provision within a statute creating a law or agency providing for the automatic termination of that law or agency at a fixed date in the future.

Superadequacy—A feature of a property exceeding in quality or amount the corresponding feature in a typical property of the same use. Superinsulation is one example. Superadequacies fall into the larger category of functional obsolescence.

Superpositioning—The capability of overlaying, normally an aerial image and a line map, for the purpose of data collection or data maintenance.

Supplies—A type of personal property, usually treated as inventory, that is consumed as part of the process of bringing other assets to a salable condition.

Supply—The amount of a good or service that would be offered for sale at various prices during a given period.

Surplus, Corporate—(1) Broadly, the equity of the stockholders in the assets of a corporation in excess of that represented by the capital stock. (2) More narrowly, the equity of the stockholders in the assets of a corporation in excess of that represented by the capital stock, undivided profits, and reserves. (3) Sometimes erroneously used to refer to the assets that are assumed to represent such equity.

Surplus Productivity—The income from a property remaining after the costs of labor, management, and capital have been paid. This income is attributable to the land.

Surplus Value—The value of a commodity over and above the quantity of labor required to produce it.

Survey, Control—A survey that provides coordinates (horizontal or vertical) of points to which supplementary surveys are adjusted.

Survey, First-Order—A geodetic survey of the highest prescribed order of precision and accuracy.

Survey, Geodetic—A survey that takes into account the size and shape of the earth (as distinguished from a plane survey, in which the surface of the earth is considered a plane).

Survey, Government—See **government survey**.

Surveying, Plane—Surveying done under the assumption that the surface of the earth is flat.

Survivor Curve—In depreciation analysis, a method of estimating the probable service life of unit properties and the probable average service life of group properties based on past experience; indicates the percentage of the property or asset (in physical units or dollars) that survives at ages (usually in years) from zero to maximum life. See **Iowa Type Curve**.

Synoptic View—The ability to see or measure large areas at the same time and under the same conditions (that is, the overall view of a large portion of the earth's surface that can be obtained from satellite altitudes).

System—(1) Structured organization of people, theory, methods, and equipment to carry out an assigned set of tasks. (2) The property operated as an integral unit under one control, management, or operating supervision. (3) An integrated group of assets that may be related entities or may be property elements such as machinery, buildings, land, and other property used in the performance of service(s) or manufacture of product(s).

T

Table, Depth—See **depth table**.

Tangible Property; Tangibles—See **property**.

Task Force—A kind of organizational unit, usually temporary, composed of employees from different functional areas whose assignment is usually some kind of nonroutine task, such as assisting in a system development effort.

Tax—A compulsory charge levied by a government unit against the income or property of a person, natural or corporate, for the common benefit of all citizens. The term does not include specific charges made against particular persons or property for current or permanent benefits and privileges accruing only to those paying such charges, such as licenses, permits, and specific assessments.

Tax, Ad Valorem—A tax levied on a base that is measured by value. Note: This term is often used to refer only to property taxes or to general property taxes, although technically it is applicable to income taxes, ad valorem tariffs, special property taxes, and so on. *Contrast* **tax, specific**.

Tax, Betterment—See **assessment, special**.

Tax, Classified Property—An ad valorem property tax that, in contemplation of the law, is administered uniformly with respect to two or more classes of property, except that the effective tax rate differs by law for different classes of property either through the use of different tax rates or different fractional assessments. *Compare* **tax, special property**. See **classification; classified property tax system**.

Tax, Degressive—A progressive tax in which the rate increases with the size of the base but by a decreasing increment. Note: Most progressive taxes are of this character in at least the higher brackets. *Compare* **tax, progressive; tax, proportional; tax, regressive**.

Tax, Differential—Synonymous with the preferred term classified property tax.

Tax, Direct—A tax that is intended to have its incidence (see **tax incidence**) on the person on whom it is levied; for example, a poll tax, an income tax, and usually a property tax. *Contrast* **tax, indirect**.

Tax, Elasticity—See **elasticity**.

Tax, General Property—(1) Originally, an ad valorem property tax that, in contemplation of law, was administered uniformly with respect to all tangible and intangible property (with the exception of a few classes specifically exempt) and that involved a uniform rate throughout each tax district. (2) Currently, the remnants of such a tax after its continued curtailment through classification, exemptions, use-value assessment laws, and special property tax laws applicable to various types of personal property. *Compare* **tax, special property; tax, classified property**.

Tax, Graduated—A progressive tax in which certain brackets of wealth or income (or of whatever else constitutes the tax base) are established, with a fixed or proportional tax within each bracket.

Tax, Indirect—A tax that is intended to have its incidence on some person other than the one on whom it is levied, for example, an import duty, a sales tax. *Contrast* **tax, direct**.

Tax, Land Value—An ad valorem property tax measured by the value of land exclusive of any improvements thereon. *Compare* **tax, single**.

Tax, Net Worth—An ad valorem property tax based on the difference between the total assets and total liabilities of the taxpayer. Note: This is a tax that is used in a number of countries but not in the United States.

Tax, Progressive—(1) A tax in which the effective rate is higher for a taxpayer subject to taxation on a large tax base than for a taxpayer subject to taxation on a small tax base. (2) Loosely used to refer to any tax that absorbs a larger proportion of the wealth or income of the well-to-do classes than of the poorer classes. *Contrast* **tax, proportional; tax, special property; tax, graduated.**

Tax, Property—Any tax that is imposed on persons on account of their ownership or possession of property and is measured by the number of units, the value, or some presumptive evidence of number of units or value, of such property. Note: This tax is generally, but not necessarily, intended to be a direct, proportional ad valorem tax. *Compare* **tax, general property; tax, special property; tax, classified property.**

Tax, Proportional—A tax in which the effective tax rate is the same for all taxpayers regardless of the sizes of the tax bases on which they are subject to taxation. *Contrast* **tax, progressive; tax, regressive.**

Tax, Recording—A property tax, generally nonrecurring, paid on recording with a designated public officer or body particular types of intangible property, such property usually being specifically exempt from the general property tax or exempt by reason of such recordation. Synonymous with “recordation tax.”

Tax, Regressive—(1) A tax in which the effective rate is higher for a taxpayer subject to taxation on a small tax base than for a taxpayer subject to taxation on a large tax base. (2) Loosely used to refer to any tax that absorbs a smaller proportion of the wealth or income of the well-to-do classes than of the poorer classes. Note: A tax is said to be regressive in administration, though not legally regressive, when the ratio of the actual base to the statutory base declines as the statutory base increases, in such manner as to nullify a proportional statutory rate or to make a progressive statutory rate actually regressive. The same usage is conversely applicable to the terms “progressive tax” and “proportional tax,” but is less commonly associated with them. *Contrast* **tax, progressive; tax, proportional.**

Tax, Severance—A tax imposed on the privilege or act of removing or severing specified natural resources, such as minerals or timber, from a state of nature. Note: Such a tax may be measured by gross or net proceeds or by units of production, and may be in lieu of, or in addition to, a property tax on the severed or remaining natural resources. *Compare* **tax, yield**.

Tax, Single—(1) In general, any tax that is intended to serve the fiscal needs of a sovereign government and its political subdivisions without being supplemented by other tax revenues. (2) Specifically, the tax exclusively on land espoused by Henry George and his disciples.

Tax, Special—(1) In general, an unusual, extraordinary, or unique tax. (2) Specifically, as applied to property taxes, (a) a property tax that is levied subsequent to the levying of the regular annual property tax; (b) a property tax levied for a single purpose rather than for the general purposes of government. (Not to be confused with specific tax or special property tax.)

Tax, Special Property—A property tax that applies to a single class of property (for example, oil and gas properties, motor vehicles) and differs substantially in one or more respects from the general property tax. Note: Such difference may be in the base of the tax (for example, it may consist of gross earnings instead of property values), in the rate, or in important administrative aspects. *Compare* **tax, general property; tax, classified property**.

Tax, Specific—(1) A tax in which the base is a physical, rather than a value unit, for example, a head tax, a gallonage tax. (2) Sometimes (for example, in Michigan) incorrectly used to mean a special property tax. *Contrast* **tax, ad valorem**.

Tax, Transfer—The tax payable to a state (and sometimes to a locality) upon the sale of real property and the recordation of the transfer. The payment is usually proportional to the sale price and is commonly used by appraisers in the absence of more accurate information to deduce the price for which the property sold.

Tax, Value Increment—A tax on increases in value of property between two specific dates, accruing either periodically or at the time property is transferred. Note: This tax is currently found in the capital gains features of many income tax laws, but is generally thought of as a land tax on the unearned increment. See **increment, unearned**.

Tax, Windfall—An unexpected, unbudgeted increase in the proceeds of a tax.

Tax, Yield—A tax based on gross income from all or specified sources accruing to the owner of a property by reason of such ownership; generally applied to forestlands in lieu of property taxes on the timber or on the land and timber. *Compare* **tax, severance**.

Tax and Expenditure Limitations (TEs)—Statutory and constitutional limitations imposed by states on local fiscal autonomy. TEs are designed ostensibly to (1) control and reduce property taxes, (2) control the growth of government and public spending, and (3) improve fiscal accountability. The six basic types of TEL are overall property tax rate limits, specific property tax rate limits, property tax levy limits, limits on general revenue or expenditure increases, limits on assessment increases, and truth-in-taxation (full disclosure) requirements. By the beginning of 1995, forty-six states had enacted TEs.

Tax Assessed Value Model—Derive an estimate of value by examining market values attributed to properties by the local taxing authorities. As a matter of local law and custom, the values reported by the taxing authorities often (but not always) vary from the current market value in some reasonably predictable manner. For example, some jurisdictions require the taxing authority to report the value at 25 percent of estimated market value. In others, values are reassessed only on an infrequent basis. Some jurisdictions report multiple values—assessed, appraised and market values. By examining local laws and customs with respect to how that value is derived, it is often possible to provide a general adjustment to values reported by taxing authorities to better approximate current market value.

Tax Base—The aggregate of the values or units to which the tax rate or rates are applied to determine the tax liability of a person or a group of persons, for example, \$10,000 worth of property, \$2,500 of income. *Compare* **measure of tax**; **object of tax**; **subject of tax**.

Tax Base, Property—The total of all the assessed values in a given community.

Tax Burden—Economic costs or losses resulting from the imposition of a tax. Burden can be determined only by detailed economic analysis of all economic changes resulting from the tax. In popular usage, the term often refers to the initial incidence rather than to ultimate economic costs.

Tax Calendar, Property—A calendar of the assessment year that lists important dates in the property tax system.

Tax District—(1) In general, a state or any political subdivision thereof having or exercising the power to levy taxes. (2) As applied to property taxes, any area, whether coterminous with or within a state or a political subdivision thereof, within which the tax rate levied by such state or political subdivision is required by law to be uniform on properties of the same class.

Tax Incidence—The distribution of a tax on natural persons who bear the tax after the completion of the process of tax shifting, to be distinguished in particular from the distribution of the tax on the persons, natural or legal, who pay it in the first instance.

Tax Incidence Analysis—Economic analysis that compares the way different taxes affect the distribution of income; requires analysis of the impact of taxes on the market for the taxed item and the market for all factors (land, labor, and capital) used in producing the taxed item.

Tax Increment Bonds—Debt instruments that governments may issue to allow them to pay for projects in a reinvestment zone. Tax revenues pay off the bonds.

Tax Increment Finance (TIF)—The idea that property taxes, or other revenue, resulting from the increase in a tax base (for example, property values or retail sales) in a specific area can be used to repay the costs of investment in that area. Funds may be invested in various programs, such as public infrastructure improvements or land writedown subsidies to private investors. See **enterprise zone**.

Tax Levy—(1) The act by which a legislative body fixes either the amount of taxes to be placed in collection or the rate to be applied to a predefined tax base. (2) The amount of taxes authorized to be placed in collection by a competent legislative body.

Tax Policy Analysis—The process of gathering and interpreting economic data to provide information that can be used by policy-makers to formulate tax policy.

Tax Rate—(1) The amount of tax stated in terms of a unit of the tax base, for example, 30 mills per dollar, 2 percent, 2 cents per gallon. (2) For the property tax, the percentage of assessed value at which each property is taxed in a given district. Distinguish between effective tax rate and nominal tax rate.

Tax Roll—An official list showing the amount of taxes charged against each taxpayer and/or each property within the jurisdiction of a tax district. Note: In property taxation, the tax roll is sometimes combined with the assessment roll into a single document.

Tax Rollback—A tax rollback results in assessment of back taxes on land that was previously taxed according to special-use value. When land no longer qualifies for use valuation, the taxing unit assesses taxes for a number of years as specified by statute. The additional tax is the difference between the amount of tax imposed and the amount that would have been imposed if the land had been appraised at (and taxed on the basis of) full market value.

Tax Sale—Sale of a taxpayer's property by a public authority so that delinquent taxes may be collected from the proceeds; usually preceded by a period during which the taxpayer can pay delinquent taxes, and followed by a period during which the taxpayer can redeem the property from the purchaser. See **certificate of redemption; redemption**.

Tax Shifting—The act of a taxpayer in transferring a tax to another person by means of price changes. Note: A tax is said to be fully shifted when it results in price changes that maintain the taxpayer's net income at the level that would obtain in the absence of the tax. So long as price changes occur that forestall the reduction of net income by the full amount of the tax payment, some shifting has occurred. Shifting may be forward, as in the case of a tax on a retail concern that is shifted by increasing the retail price, or backward, as when such a tax is shifted by a reduction in the wages of employees or in wholesale prices.

Tax Warrant—The tax collector may ask a court to issue a document called a tax warrant directing a peace officer and tax collector to take as much of a person's personal property as is necessary to pay all taxes, penalties, and interest the person owes.

Taxable Value—Taxable value is the appraised value minus all applicable partial exemptions. Property taxes are levied on taxable value.

Taxation, Double—In general, the subjection of the same income or source of income, or both the income and its source, to taxation by the same governmental unit, or by coordinate governmental units, twice in the same tax period. Note: The courts generally recognize the existence of double taxation when a single object is taxed by the same governmental unit, or by coordinate governmental units, twice in the same tax period. Economists further recognize double taxation when both wealth and representative intangible property are taxed; when both property and property income are taxed; and when income is taxed to a corporation and subsequently to the stockholder upon distribution as dividends. Double taxation is not necessarily undesirable or illegal; it is only when it is discriminatory that it is to be condemned.

Tax-Exempt Property—Property entirely excluded from taxation because of its type or use. The most common examples are religious, charitable, educational, or governmental properties. This definition omits property for which the application of a partial exemption reduces net taxable value to zero.

Taxing Unit—Any political unit of a state that imposes property taxes. Counties, school districts, incorporated municipalities (cities), and special districts may be taxing units. See **tax district**.

Taxpayer—(1) A person who pays a tax in the first instance, whether he or she finally bears the burden or shifts it; generally defined in law to include all persons liable for payment of a tax whether or not they actually pay it. (2) Figuratively used to mean a more or less temporary improvement that produces enough in earnings to cover taxes and perhaps some of the other carrying charges on the land. (Term should be placed in quotation marks when used in the latter sense.)

TEls—See **tax and expenditure limitations**.

Tenancy—The act of using or occupying property, especially real property whose fee title is vested in someone other than the occupant.

Tenancy, Joint—A state of tenancy involving two or more persons owning undivided possessory interests which have arisen out of a single conveyance, no one of the tenants being free to create interests in the estate without the consent of the others, and the surviving tenants acquiring the interest of any tenant who may die. *Compare* **tenancy in common; tenancy by the entirety**.

Tenancy by the Entirety—A state of tenancy, recognized by some states, in which the husband and wife are considered as a single person, neither one being free to create interests in the estate without the consent of the other and the survivor acquiring the whole interest upon the death of either. *Compare* **tenancy, joint**.

Tenancy in Common—A state of tenancy involving two or more persons owning undivided possessory interests that have arisen out of separate and distinct conveyances, any one of the tenants being free to create interest in his portion of the estate and the heirs or devisees acquiring the interest of any tenant who may die. *Compare* **tenancy, joint; tenancy by the entirety**.

Tenancy in Severalty—A state of tenancy involving one person who owns a divided possessory interest.

Tenant—One who holds or possesses a property.

Tenement—(1) Real property and the rights to ownership, especially those of a permanent nature that relate to and pass with the land. (2) A building intended for rental residence.

Terminal—The on-line device used to communicate with a computer.

Testate—The state of having died after executing a valid last will and testament.

Thermal Infrared—Electromagnetic radiation emitted by any substance as a consequence of the thermal excitation of its molecules. Thermal radiation ranges in wavelength from the longest infrared radiation to the shortest ultraviolet radiation.

Theodolite—A precision surveying instrument for measuring horizontal and vertical angles. The graduated circles are usually read by means of optical microscopes and are more precisely graduated than are the circles on a transit.

Three Approaches to Value—A convenient way to group the various methods of appraising a property. The cost approach encompasses several methods for estimating replacement cost new of an improvement less depreciation plus land value. The sales comparison approach estimates values by comparison with similar properties for which sale prices are known. The methods included in the income approach are based on the assumption that value equals the present worth of the rights to future income.

Tier—The area included between two township lines.

TIGER File—Topographically Integrated Geographic Encoding and Referencing data file. A location (address) file developed within the Bureau of the Census.

Tilt—(1) The space (dihedral) angle between the plane of the photograph and the horizontal plane. (2) The angle between the photograph perpendicular and the plumbline, measured at the perspective center.

Time Series Analysis—A family of techniques that can be used to measure the cyclical movements, random variations, seasonal variations, and secular trends observed over a period of time.

Time Value of Money—The principle that an amount of money anticipated as income in the future is always worth less than an equal amount in hand at the present time.

Time-Adjusted Sale Price—The price at which a property sold, adjusted for the effects of price changes reflected in the market between the date of sale and the date of analysis.

Time-Share Unit—A residence, usually a condominium at a vacation or resort site, whose ownership is divided among the owners by weeks or months, giving each owner the right to occupancy for a specified time each year.

Title—The union of all elements constituting proof of property ownership or the instrument that is evidence of ownership.

Title Search—An examination of public records to ensure the quality of the seller's title to a property. Preparation of an abstract of title requires a complete title search, as does preparation to foreclose on a property in a delinquent tax suit.

Tolerance—An acceptable margin of error or inaccuracy.

Topographic Map—Refers to the basic description and elevation of a piece of land.

Topography—The contour of land surface, for example, gently rolling, mountainous, or flat.

Torrens System—A land registration system in which ownership interests in real property are established and transferred pursuant to a governmental registration and certification process rather than by, for example, deed or will.

Total Economic Life—The period of time or units of production over which the operation of an asset is economically feasible, not necessarily the same as its physical life.

Total Station—A fully automated surveying device that measures both distances and horizontal and vertical angles, recording them on a magnetic device.

Town—(1) A small incorporated or unincorporated political subdivision of a state. (2) A civil township. (3) A small urban area.

Township—An approximately thirty-six-square mile division of land used in the Federal Rectangular Survey System. Townships are bounded by two successive range lines on the east and west and two successive township lines on the north and south.

Township, Civil—An unincorporated political subdivision of the state, usually coterminous with a survey township or with that portion thereof that remains after the incorporation of cities and villages situated therein.

Township, Survey—The area included between two township lines and two range lines, normally containing thirty-six sections of approximately 640 acres each. Synonymous with “Congressional township”; “geographical township.”

Township Line—One of a series of survey lines running due east and west at six-mile intervals on either side of a base line, used for locating parcels of land under government survey. See **base line**. *Contrast* **range line**.

Trade, Level of—Refers to the production and distribution stages of a product. Appraisers recognize three distinct levels of trade: The manufacturing level, the wholesale level, and retail level. Personal property should be assessed at the trade level at which it is found. The valuation of the inventory of one owner should be based on the price for which it would be exchanged with a similar business, at the same trade level, for example, from one manufacturer to another. Value in exchange increases as a property moves from manufacturing through retail levels of trade.

Trade Fixture—Property attached to a rented space or building by a tenant, used in conducting a business and owned by the tenant. Also called “chattel fixture.”

Trademark—A name, symbol, or other sign that identifies a product or service; officially registered and legally restricted to use by the owner alone.

Transfer Tax—See **tax, transfer**.

Transformation—The process of changing the values and definitions of one or more variables so as to make them more useful for further analyses. If market value changes with living area, for example, a valuable transformation would be to change length and width to area, and if market value does not change proportionally with area, a valuable transformation might be to use the logarithm of area.

Transit—A repeating surveying instrument for measuring horizontal and vertical angles. The graduated circles are usually not graduated as precisely as are those on a theodolite.

Transverse Mercator Coordinates—Geographic coordinates based on a transverse Mercator projection and usually expressed in meters. See **universal transverse Mercator**.

Treasury Bills—Short-term debt obligations of the United States Treasury.

Trended Original Cost—(1) The cost of constructing an improvement at a particular time, adjusted to reflect inflation and deflation, as well as changes in construction costs, between that time and the appraisal date. (2) Method of cost estimating that obtains an estimate of the reproduction cost of a structure by adjusting its original, or historical, cost with a factor from an appropriate construction cost index.

Trending—Adjusting the values of a variable for the effects of time. Usually used to refer to adjustments of assessments intended to reflect the effects of inflation and deflation and sometimes also, but not necessarily, the effects of changes in the demand for microlocational goods and services.

Trending Factor—A figure representing the increase in cost or selling price over a period of time. Trending accounts for the relative difference in the value of a dollar between two periods.

Triangular-Lot Table—A schedule of adjustments used to appraise a lot having a triangular shape (in whole or in part) by comparison with a base lot or a given unit of comparison factor, such as a front-foot rate.

Trimmed Mean—The arithmetic mean of a data set identified by the proportion of the sample that is trimmed from each end of the ordered array. For example, a 10 percent trimmed mean of a sample of size ten is the average of the eight observations remaining after the largest and smallest observations have been removed.

Trust—An agreement whereby the owner of property (the settlor) transfers legal title to a second party (the trustee), such property to be held, managed, or disposed of for the benefit of a third party (the beneficiary) or the settlor, or both, as set forth in the trust agreement.

Trust, Investment—A corporation or trust association whose assets are largely or exclusively stocks and bonds purchased for investment purposes rather than as a means of controlling the policies of other corporations.

Trust, Revocable—A trust in which the grantor of the property held in trust retains the right to repossess the legal and equitable titles. See **deed, trust**.

Trust Estate—The aggregate interests of a trustee in property of all sorts held under a trust agreement.

Trustee—One who holds legal title to property under a trust agreement. Compare **settlor; beneficiary**.

Truth-in-Taxation (Full Disclosure) Requirements—Legal obligations for local government officials to make taxpayers aware of assessment increases, levy increase proposals, and so on, and to give taxpayers an opportunity to participate in public hearings on the changes.

t-Statistic—A particular statistic important in inferential statistics for certain kinds of hypothesis testing of certain kinds of data.

t-Test—A particular parametric statistical test useful, among other things, in testing the level of assessment.

Turnkey—Describes a project in which the manufacturer, builder, or contractor delivers a completed product or facility; the tenant, user, or owner has only to “turn the key” to begin operations.

Turnover—A figure signifying a relationship between sales over a stated period (usually a year) and average inventories during such period, arrived at by dividing either (a) total cost of sales by total cost of the average inventory or (b) total sales receipts by total sale price of the average inventory.

Turnover Ratio—A valuation guideline based on sales activity, the number of times per period (usually a year) a business sells the average sale value of its inventory during the same period.

Two-Tailed Test—A test in which the alternative hypothesis does not specify the direction of the relationship, as opposed to a one-tailed test, in which the direction of relationship is specified. For example, the alternative hypothesis that “a does not equal b” implies a two-tailed test, whereas “a is greater than b” implies a one-tailed test. See **null hypothesis**.

Type Survivor Curves—See **survivor curve**; **Iowa type curve**.

U

Underground Storage Tank (UST)—Any tank and associated piping that has more than 10 percent of its volume underground. If leaking, these tanks are known as LUSTs.

Underimprovement—An improvement that does not develop a site to its highest and best use; usually a violation of the principle of conformity. *Contrast* **overimprovement**.

Undivided Interest—An interest in a property that is not distinct from the interest or interests of one or more other persons as to the time during which the interest is possessory or as to the portion of the property to which the interest attaches, for example, the interest of a joint tenant or a tenant in common.

Unencumbered Fund Balances—Funds or appropriations left over at the end of the budget year that are not committed to any fiscal purpose. An encumbrance is a reservation of funds in the form of purchase orders, signed contracts, salary commitments, and the like, chargeable to an appropriation.

Unencumbered Value—The value of property without consideration of any detrimental environmental contamination.

Uniform Standards of Professional Appraisal Practice—Annual publication of the Appraisal Standards Board of The Appraisal Foundation: “These Standards deal with the procedures to be followed in performing an appraisal, review or consulting service and the manner in which an appraisal, review or consulting service is communicated. . . .Standard 6 sets forth criteria for the development and reporting of mass appraisals for ad valorem tax purposes or any other universe of properties” (p. 1).

Uniformity—The equality of the burden of taxation in the method of assessment.

Unit—The property being appraised. Everything used or useful to the ongoing economic operation of the business (property). Includes tangible and intangible property.

Unit Appraisal—See **appraisal, composite**.

Unit Cost—A valuation guideline expressing the relationship between cost or value of property and some unit of measure, for example, cost per square foot or per employee.

Unit Foot—A rectangular portion of urban land with a frontage of one foot and a depth equal to that of the standard lot. Synonymous with “standard unit foot” and “standard front-foot unit.”

Unit-in-Place Method—A method of cost estimating in which all the direct and some of the indirect costs of individual construction components (such as the foundation walls) are specified in appropriate units (such as cost per unit of area, volume, or length), multiplied by an estimate of the quantity required by the particular structure, and added to obtain an estimate of the cost of the structure. *Compare* **comparative unit method** (*sense 2*); **quantity survey method**.

Unit of Comparison—A property as a whole or some smaller measure of the size of the property used in the sales comparison approach to estimate a price per unit.

Unit Value—The value of one of a number of similar items or units contained in, or making up, a property. *Compare* **unit cost**.

Unitary Method of Valuation—The unit rule is a method that values the property within a particular jurisdiction based on the fair share of the value of an operating enterprise, of which the property is an integral part. The unit value concept values all the property as a going concern without geographical or functional division of the whole and includes tangible and intangible assets. The unit rule concept is typically associated with the valuation of public utilities, telecommunications networks, railroads, and other transportation properties. However, the concept of unit valuation is similarly applicable to the appraisal of a single-family residence when comparable sales are used to value the entire property without segregation of land values. Similarly, when rents are capitalized into a value estimate for commercial properties, the unit rule is used.

United States Federal Reserve System—A United States banking system charged with responsibility for maintaining the health of the economy through its regulation of the money supply and the rate of interest.

United States Public Land Survey—The land survey authorized by the United States Congress in 1785 upon which the federal rectangular survey system is based.

United States Public Land Survey System—A rectangular land survey employed in most of the United States, based on township lines and base lines.

Universal Transverse Mercator—The transverse Mercator projection used in the United States. Universal transverse Mercator projection zones are six degrees of longitude wide and cross civil boundaries. See **Mercator projection**.

Unweighted Mean—A mean in which each value is considered only once. See **weighted mean**.

Usable Area—The area of land that can be used, or the equivalent area after allowance for irregular topography.

Use, Highest and Best—See **highest and best use**.

Use Class—(1) A grouping of properties based on their use rather than, for example, their acreage or construction. (2) One of the following classes of property: single-family residential, multifamily residential, agricultural, commercial, industrial, vacant land, and institutional/exempt. (3) Any subclass refinement of the above—for example, townhouse, detached single-family, condominium, house on farm, and so on. See **property use category**.

Use Code—A code (used on a property record form) to indicate a property's use class or, less often, potential use.

Useful Life—Estimated normal operating life in terms of utility to the owner of a fixed asset or group of assets.

Use Value—(1) The value of property in a specific use. (2) Property entirely used for a specific purpose or use that may entitle the property to be assessed at a different level than others in the jurisdiction. Examples of properties that may be assessed at use value under the statutes include agricultural land, timberland, and historical sites. Compare **value in use**.

Use-Value (Farmland) Assessment Laws—Laws that require or permit assessors to appraise and assess property as though the property were subject to an enforceable restriction that forbade putting the land (or the entire property) to any use but the present one.

Typically there is no such permanent enforceable restriction, but assessors may nevertheless be required to assess certain property types, especially agricultural land, and to a lesser extent historic properties, as though the restriction were real. In such instances, the sales comparison approach may be inapplicable, and a version of the income approach may be required.

USPAP—See *Uniform Standards of Professional Appraisal Practice*.

U-Test—See **Mann-Whitney test**.

Utility—(1) The quality of a property or service that enables it to satisfy human wants. (2) The satisfaction obtained from the goods and services that a consumer consumes.

UTM—See **universal transverse Mercator**.

V

Vacancy and Collection Loss—The amount of money deducted from potential annual gross income to reflect the effect of probable vacancy and turnover, or nonpayment of rent by tenants. Vacancy and collection loss is commonly expressed as a percentage of potential annual gross income, and it should be based on market research, not actual rental history of a property.

Vacant Platted Lots—Unimproved parcels described in terms other than acreage, usually by a convention using lot, block, and subdivision name. Vacant platted lots are often located either within a municipality or in areas of higher population density than the surrounding territory.

Validity—The quality of a data element or procedure being what it should be in terms of some ultimate purpose or use. See **integrity**. Compare **accuracy**, **precision**.

Valuation—(1) The process of estimating the value—market, investment, insured, or other properly defined value—of a specific parcel or parcels of real estate or of an item or items of personal property as of a given date. (2) The process or business of appraising, of making estimates of the value of something. The value usually required to be estimated is market value.

Valuation, Assessed—See **assessed value**.

Valuation Date—The specific date as of which assessed values are set for purposes of property taxation. This date may also be known as the “date of finality.” See **assessment date**.

Value—(1) The relationship between an object desired and a potential owner; the characteristics of scarcity, utility, desirability, and transferability must be present for value to exist. (2) Value may also be described as the present worth of future benefits arising from the ownership of real or personal property. (3) The estimate sought in a valuation. (4) Any number between positive infinity and negative infinity. See **market value**.

Value, Actual—Market value, especially as distinguished from so-called book, par, or face values.

Value, Assembly—See **assembly value**.

Value, Assessed—See **assessed value**.

Value, Base—Synonymous with the preferred term “unit-foot value.”

Value, Book—(1) The money figure at which an asset is carried on the regular books of account of the owner, after deduction of any valuation reserve carried against it. (2) The value ascribed to corporation stock by the books of account of the issuing corporation, as determined by the stated amount of the corporation’s capital, surplus, undivided profits, and reserves that can reasonably be expected to accrue to the stockholders. Note: The book value of preferred stock is generally not affected by surplus, undivided profits, and reserves.

Value, Capital—Value as estimated by the discounting process, that is, present worth.

Value, Cash—Market value in terms of cash.

Value, Constructive Market—An approximation of market value arrived at through the application of reasonable rules and procedures of appraisal, such as corner influence and depth rules, building classification and cost schedules, and physical depreciation schedules.

Value, Economic—Worth in a use, transaction, or exchange, as distinguished from ethical worth, esthetic worth, historical worth, and the like.

Value, Exchange—Synonymous with the preferred term “market value.”

Value, Face—See **face value**.

Value, Fair—(1) In taxation, market value. (2) In public utility regulation, a term inappropriately applied to the combination of costs and values that commends itself to the courts as a fair rate base.

Value, Full—Synonymous with the preferred term market value.

Value, Going—The value of an entire property in active service and with an established clientele, as distinguished from its value immediately before being put into service or upon retirement from service.

Value, Improved—A loose term generally defined as that portion of the present worth of a property that represents the resale factor. (Term not recommended for use.)

Value, Intrinsic—(1) The value of an article due to its own physical qualities rather than to the rights, privileges, or immunities with respect to other properties or persons which its possession confers. (2) A term used to designate “value” that is supposed to reside within an article rather than within the minds of its actual or would-be possessors. Note: This is a term that is much abused and that might well be discarded. Although it is proper to say that the intrinsic value of a stock certificate is the value, if any, of the paper, it is not correct to say that real estate has an intrinsic value in excess of, or less than, its market value.

Value, Investment—The present worth of an investment property. (Term not recommended for use.)

Value, Junk—Synonymous with the preferred term “scrap value.”

Value, Liquidation—The value of one or more of the assets of a business concern under conditions in which the business is discontinued and the assets disposed of either in their entirety or separately. *Contrast* **going-concern value**.

Value, Market—See **market value**.

Value, Money—Synonymous with the preferred term “cash value.”

Value, Normal—A loose term used to denote some sort of mean between high and low market prices obtaining over a period of time or in different markets at any moment of time. (Term not recommended for use.)

Value, Objective—Synonymous with “market value.” *Contrast value, subjective.*

Value, Par—See **par value**.

Value, Plottage—See **plottage value**.

Value, Reflected—The enhancement in value of a lot ascribed to its proximity to other valuable property. (Term not recommended for use.)

Value, Residual—See **residual value**.

Value, Salvage—The value which badly depreciated improvements, machines, or equipment would have if dismantled and sold in separate parts or pieces; the value of an asset at the end of its economic life. *Compare value, scrap.*

Value, Scrap—The value that the basic, recoverable materials (usually metals) of a physical property would have as junk if it were completely broken up or too badly deteriorated to serve its normal purpose; the value of an asset at the end of its physical life. *Compare value, salvage.*

Value, Sound—The value that would obtain if a property were worth its reproduction cost less physical depreciation. (Term not recommended for use.)

Value, Speculative—A loose term used to distinguish actual market prices and market values from the appraiser’s estimate of present worth. (Term not recommended for use.)

Value, Street—The unit-foot value ascribed to inside lots on a given side of the street over a given proportion of its length.

Value, Stumpage—See **stumpage value**.

Value, Subjective—The amount of money or money's worth in return for which the owner would willingly part with a piece of property, whether or not there exists a willing purchaser at such a price. Note: Subjective value may differ from market value either because the owner incorrectly estimates the market value or because the property is worth more to the owner than to others in the market.

Value, True—Synonymous with the preferred term “market value.”

Value, Unit—See **unit value**.

Value, Unit-Foot—The value per front foot of an inside standard lot.

Value in Exchange—(1) The amount an informed purchaser would offer for property under given market conditions. (2) The concept that states value is based on the ability of property to command another asset, such as money, in trade.

Value Increment—The amount by which a property has increased in value. See **increment, unearned**.

Value in Use—The value of property for a specific use. The concept that holds value to be inherent in property itself, that is, the value is based on the ability of the asset to produce revenue through ownership.

Variable—An item of observation that can assume various values, for example, square feet, sale prices, or sales ratios. Variables are commonly described using measures of central tendency and dispersion.

Variable Costs—The costs of the variable resources used by a firm in either the short run or the long run.

Variable Proportions, Law of—Also called the “law of decreasing returns,” this states that as quantities of one productive factor increase, the quantities of other productive factors remaining fixed, the resulting additional increments of product or output will decrease after a certain point.

Variable Resources—The resources used by a firm that can change in quantity in either the short run or the long run.

Variance—A measure of dispersion equal to the standard deviation squared.

Variation—(1) A general term meaning dispersion. (2) A reference to a particular statistic called the coefficient of variation.

Vendee—One who purchases. Synonymous with “buyer.”

Vendor—One who transfers property by sale. Synonymous with “seller.”

Verify—To check the accuracy of something. For example, sales data may be verified by interviewing the purchaser of the property, and data entries may be verified by check digits.

Vertical Inequity—Differences in the levels of assessment of properties related to the value ranges of the properties. That is, properties of higher value have assessment levels different from properties of lower value. See **horizontal inequity**.

Vertical Photograph—An aerial photograph taken with the axis of the camera being maintained as closely as possible to a truly vertical position, with the resulting photograph lying approximately in a horizontal plane.

W

Wasting Asset—A property or other thing of value whose value diminishes with the passage of time. For example, buildings are a wasting asset, but land and gold, traditionally, are not.

Wavelength—Wavelength equals velocity/frequency. In general, the mean distance between maxima (or minima) of a roughly periodic pattern. Specifically, the least distance between particles moving in the same phase of oscillation in a wave disturbance. Optical and infrared wavelengths are measured in nanometers, micrometers, and angstroms.

Wealth—Valuable material objects that are owned, either individually or collectively; that is, all tangible property. Note: In popular usage, the term “wealth” is synonymous with “property” and, as such, embraces intangibles as well as tangible property. This usage is considered incorrect by economists and is not recommended. Intangible property, with the possible exception of goodwill, patents, and the like, is not a real source of income, but only a means of distributing income derived from the two primary sources, tangible property and persons. The adding together of tangible property

and intangibles to secure total wealth results in multiple counting of the same values. Some authorities consider nonrepresentative intangible property as wealth, but this usage has received only limited acceptance. *Compare* **property**.

Weighted Average Method—In personal property appraisal, a method of inventory cost accounting whereby inventory is valued according to the unit price of all units owned throughout the year, calculated by dividing total acquisition cost of all inventory by the number of units owned.

Weighted Coefficient of Dispersion—The coefficient of dispersion when the absolute differences between individual assessment ratios and the measure of central tendency (for example, median ratio) are weighted on the basis of sale price.

Weighted Coefficient of Variation—The coefficient of variation when the squared differences between individual assessment ratios and the arithmetic mean ratio are weighted on the basis of sale price.

Weighted Mean; Weighted Average—An average in which each value is adjusted by a factor reflecting its relative importance in the whole before the values are summed and divided by their number.

Weighted Mean Ratio—Sum of the appraised values divided by the sum of the sale prices (or independent estimates of market value), which weights each ratio in proportion to the sale price (or independent estimate of market value).

Worth, Present—See **present worth**.

Y

Yield Capitalization—Any of several methods used in the income approach to value. Yield methods involve certain subtleties and assumptions that vary according to the particular method employed, but include estimating such factors as the required rate of return on investment, the remaining economic life of the property, an investment holding period, the income path, anticipated depreciation or appreciation, and reversionary value. The yield methods stand in contrast to direct sales analysis methods, in which a typical relationship between incomes and sale prices is found by simply dividing observed incomes by sale prices for comparable proper-

ties, the fraction thus obtained then being applied (in the form of a gross income multiplier or an overall rate) to the properties being appraised. See **building residual technique**, **discount rate**, **mortgage-equity analysis**, and **property residual technique**.

Yield Rate—(1) The return on investment applicable to a series of incomes that results in the present worth of each. Examples of yield rates are interest rate, discount rate, equity yield rate, and internal rate of return. (2) The required rate of return on equity capital; a component of the capitalization rate (or discount rate or mortgage-equity overall rate) that must be separately specified in band-of-investment analysis and mortgage equity analysis.

Yield to Maturity (YTM)—The average rate of return on outstanding debt issues taking into consideration current price, interest payments, and capital gains or losses at maturity of the issue.

Z

Zangerle Curve—A corner influence graph devised by John A. Zangerle, showing, for any given main street frontage, the percentage of the side street value to be added as corner influence to the value of the lot computed as an inside lot fronting on the main street. Compare **Bernard rule**.

Zoning—The exercise of the police power to restrict land owners as to the use of their land and/or the type, size, and location of structures to be erected thereon.

z-Statistic—The number calculated in a z-test, whose significance is evaluated by reference to a z-table.

z-Table—A table of critical values associated with the z-test.

z-Test—A test of any of a number of hypotheses in inferential statistics that has validity if sample size is sufficiently large and the underlying data are normally distributed.

Glossary



for Property Appraisal and Assessment

Second Edition

INTERNATIONAL ASSOCIATION *of* ASSESSING OFFICERS

IAAO Guide to Assessment Standards

Prepared by the Technical Standards Committee

June 2016

International Association of Assessing Officers

IAAO assessment standards represent a consensus in the assessing profession and have been adopted by the Executive Board of the International Association of Assessing Officers (IAAO). The objective of the IAAO standards is to provide a systematic means for assessing officers to improve and standardize the operation of their offices. IAAO standards are advisory in nature and the use of, or compliance with, such standards is voluntary. If any portion of these standards is found to be in conflict with national, state, or provincial laws, such laws shall govern. Requirements found in the Uniform Standards of Professional Appraisal Practice (USPAP) also have precedence over technical standards.

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This document is intended to serve as a subject index to IAAO standards that provide guidelines with respect to assessment administration. In addition to referencing standards, many of the items are discussed in detail in IAAO textbooks.

For additional guidance refer to state, provincial, and national statutes, constitutional provisions, regulations and case law.

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Standard on Assessment Appeals

Standard on Public Relations

10.7 Public Education

Standard on Environmental Contamination

Standard on Public Relations

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Assessment Standards of the International Association of Assessing Officers

Guide to Assessment Standards

Standard on Assessment Appeal

Standard on Automated Valuation Models

Standard on Contracting for Assessment Services

Standard on Digital Cadastral Maps and Parcel Identifiers

Standard on Manual Cadastral Maps and Parcel Identifiers

Standard on Mass Appraisal of Real Property

Standard on Oversight Agency Responsibilities

Standard on Professional Development

Standard on Property Tax Policy

Standard on Public Relations

Standard on Ratio Studies

Standard on Valuation of Personal Property

Standard on Valuation of Property Affected by Environmental Contamination

Standard on Verification and Adjustment of Sales

To download the current approved version of any of the standards listed above, go to:

[IAAO Technical Standards](#)

Guide to Real Property Demonstration Mass Appraisal Report Writing



Professional Designation Program

International Association of Assessing Officers

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Demonstration Mass Appraisal Report

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A Message to the Candidate from the Professional Designations Subcommittee

We wish to compliment and congratulate you for your commitment to IAAO's Professional Designation Program and your candidacy.

This 2014 edition of the *Guide to Real Property Demonstration Mass Appraisal Report Writing (Guide)*, published fifty-nine years after the first Certified Assessment Evaluator (CAE) designations were awarded, represents the continuing professional growth of IAAO's Professional Designation Program. IAAO's designations are widely regarded as the standards of excellence in ad valorem appraisal and assessment administration.

It is the Professional Designations Subcommittee's belief that publication of this *Guide* will aid candidates by supplying them with prerequisites and guidelines essential for the successful completion of a demonstration mass appraisal report. It is one of the principal documents the IAAO has published to help you meet program requirements and earn a professional real property designation. This *Guide* is used by all IAAO graders as an outline for grading real property demonstration reports.

The Professional Designations Subcommittee hopes this *Guide* not only helps candidates through the demonstration mass appraisal report-writing process but also encourages them to complete all requirements of the designation program. The achievement of a professional designation is an honor not only to the person who earns one, but to IAAO and the entire profession.

Introduction

The most challenging and time-consuming requirement for attaining an IAAO professional designation is writing an acceptable demonstration appraisal report. Writing a demonstration appraisal report requires original research, extensive data gathering, a careful and systematic explanation of the appraisal problem, and clarity and originality of expression, combined with a painstaking organizational effort. From the perspective of candidate and grader alike, the demonstration appraisal report is much like a self-administered thesis or open-book examination.

The *Guide to Real Property Demonstration Mass Appraisal Report Writing* has been designed to acquaint the IAAO professional designation candidate with the requirements of form and content for the preparation of an acceptable real property demonstration mass appraisal report. Each candidate is provided with a copy of this *Guide* when accepted into candidacy. **The candidate should retain the *Guide* and refer to it when writing the demonstration mass appraisal report.** Strict adherence to this *Guide* ensures that the candidate will prepare a report meeting the requirements of the IAAO Professional Designation Program.

A demonstration mass appraisal report is a detailed, written presentation of the valuation of a universe of real properties. A successful report includes the analysis of all relevant factors and data that lead to the conclusions of value. The report is an exhaustive narrative and testing device representing the appraiser's best effort.

Writing a demonstration appraisal report is a vital part of the education of any professional appraiser, assessor, or property tax administrator. Estimation of value is a complex technical process. Although concepts can be learned in the classroom, an in-depth understanding of these concepts can only be gained by an application of the process to a real-life situation(s). All who have successfully completed a demonstration report state emphatically that it increased their understanding of the process and yielded self-confidence unequalled by the completion of any other course of

instruction.

This *Guide* provides a step-by-step outline of the procedures and regulations that must be followed in writing and submitting the real property demonstration mass appraisal report. A report grading sheet is included in the back of this *Guide*.

A successful report is written so that a non-appraiser or layperson can understand and follow the appraiser's reasoning. The theoretical basis of each approach to value, the sources and use of data, and the careful justification of each decision and conclusion must be presented and explained in the report. **All adjustments, assumptions, conclusions, and all comments must be substantiated by documented data and analysis in the report.** Merely stating an opinion in the demonstration mass appraisal report is insufficient and contrary to the objectives of the report. The successful candidate will understand the difference between opinions and supportable conclusions drawn from the analysis of actual data contained in the report.

Sources of Assistance

Professional Designation Advisors

Many candidates feel the need for guidance and assistance in preparing their demonstration mass appraisal report. Professional Designation Advisors (PDAs) have been appointed to provide encouragement and assistance to candidates. PDAs are IAAO professional designees who have volunteered to assist candidates in the program. A list of advisors is published annually by IAAO, and each candidate is put in contact with the PDA in his or her area. Candidates who encounter problems or questions in developing their demonstration mass appraisal reports should contact the PDA for their area or the Professional Designations Subcommittee. IAAO headquarters may assist with additional referrals.

Jeff Hunt, CAE, Memorial Candidates Assistance Trust

For those candidates who demonstrate financial need, the Jeff Hunt, CAE, Memorial Candidates Assistance Trust will consider requests for grants. These funds can be used to pay any of the costs associated with completion of the designation program, such as report preparation, data gathering, or grading fees. Applications for grants can be obtained from IAAO.

Originality of Work

When submitting a demonstration mass appraisal report for grading, candidates must certify on the Application for Appraisal Report Approval that:

1. The report has been personally prepared in its entirety, exclusive of typing, by the candidate
2. The appraisal and facts contained in the report are actual and not hypothetical
3. The mass appraisal is of existing parcels of real property

The candidate must do original work. Copying from another's report is unacceptable and will result in suspension from candidacy. This prohibition does not apply to the use of basic definitions of terms such as market value and highest and best use when the sources for these definitions are cited in the report.

The candidate is further cautioned against relying on previously submitted “passing” reports as guides. No report is perfect. The unwary candidate may compound errors or omissions contained in such reports, resulting in a failing submission.

A demonstration mass appraisal report is considered fraudulent if it does not represent original work or if it contains nonfactual or unacceptable hypothetical data. Fraudulent work is grounds for an immediate suspension of the grading. A grader who suspects the use of fraudulent data will suspend the grading and return the report to the grading chairman with a written report of the problem and a request for further investigation. Verified evidence of a fraudulent submission will result in a suspension from candidacy for at least one year and perhaps permanently. The Professional Designations Subcommittee reviews all such cases to determine suspension periods and may recommend further action to the IAAO Ethics Committee.

Group work is acceptable and encouraged as long as the composition, analyses, and conclusions are the candidate’s own. Please note that most data may be shared; however, verification, data extraction, and analysis must be the original work of the candidate author.

Form

The professional appearance, logical organization, and absence of grammatical and spelling errors are important to the report and to the impression the report makes on the grader. The following are three major criteria for proper form of the report:

1. *Organization.* A well-organized report flows logically within each section and throughout the entire report. Different readers will arrive at the same conclusions when they read the presentation of data and the analysis. A well-organized report follows the outline of the grading sheet. The sections of the report will interrelate and not contradict each other.
2. *Grammar and Spelling.* Simplicity is the key. All technical terms should be defined using *Fundamentals of Mass Appraisal* (2011), *Mass Appraisal of Real Property* (1999), or the most recent edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP). Although typographical errors may be found in the best proofread report, they should be minimized by constant proofreading and by use of word-processing software’s tools for checking grammar and spelling.
3. *Appearance.* No letterhead, printed names, or logos may be used except for the Letter of Transmittal. Maps and other addenda should be presented in a way that adds to the professional appearance of the report.

Selecting the Market Area

The selection of a market area is a critical step in the preparation of a demonstration mass appraisal report. For either residential or commercial property, the candidate should be careful to select a market area that exhibits adequate market data that permit the thorough demonstration of **all three approaches to value**.

As a rule, residential neighborhoods should have several hundred residences, the more the better. There should be at least five sales per neighborhood; strive for at least 15 and preferably 30 or more sales per neighborhood. This will help ensure statistical reliability.

Minimum Requirements

Demonstration mass appraisal reports submitted to IAAO for grading and credit must meet minimum requirements. The omission of any of the following requirements will result in the immediate return of the report to the candidate. Although the return of a report does not constitute a grading, it obviously slows down the grading process.

1. The IAAO form, Application for Appraisal Report Approval, must be completed, signed by the applicant, and submitted with the report.
2. The appraisal report must be in a narrative, Appraisal Report format.
3. The Letter of Transmittal must be dated, signed, and contain all items referenced in this *Guide*.
4. The report must be submitted electronically, preferably in a searchable PDF format.
5. The report must be professional in appearance.
6. The report must include a thorough demonstration of all three approaches to value.
7. The date of appraisal must be within five years of the date the report is submitted to IAAO.
8. The report must contain a statement of certification **signed** by the candidate.
9. All facts and appraisal data contained in the report must be actual and verifiable. Hypothetical data are unacceptable and their use is grounds for immediate rejection of the report. Exceptions to this rule must be granted by the Professional Designations Subcommittee and disclosed in the report.
10. The candidate must certify that the final report conforms to the IAAO Code of Ethics and Standards of Professional Conduct and to the *Uniform Standards of Professional Appraisal Practice*.

Each report will be given a cursory, preliminary review for compliance with these minimum standards before being forwarded to the grader.

Submission and Grading of Reports

The demonstration mass appraisal report may be submitted at any time after official notification by IAAO of an applicant's acceptance into candidacy. The Professional Designations Subcommittee recommends that candidates complete the education requirements before writing a report.

To submit a report for grading, the candidate must:

1. Submit a completed and signed IAAO Application for Appraisal Report Approval with the report
2. Submit the report and proper payment for grading to the IAAO headquarters office

The report will be reviewed to ensure that it meets all minimum requirements for form, content, and procedure. Reports failing this review will be returned to the candidate and the review will not constitute an official grading.

All submitted reports that go through a full, official grading become the property of IAAO. The candidate should keep a good copy of any report submitted for future reference or use.

After grading, a completed copy of the Real Property Demonstration Mass Appraisal Report Grading Sheet is sent to the candidate, along with the grader's and grading chairman's comments. The candidate should review the comments on rejected reports carefully and use them as the minimum requirements for successful revision. Most required revisions can be made from and with the original data included in the report. Candidates are cautioned against assuming that insufficient data for analysis will excuse required revisions. An additional grading fee is required when a revised report is submitted for second grading.

When a report is resubmitted after disapproval on the first grading, the second grader is not restricted in any way by the score or comments of the first grader. The candidate is advised to review the entire report, not just the deficiencies noted in the first grading report. The second grading may or may not go to the same grader.

If the report is found unacceptable on a second grading, the candidate is notified and again receives the report sheet and grader's comments. After a second disapproval of a report, no further revisions are allowed. The candidate must submit a new report on another market area.

The Grading Process

The grader uses the criteria outlined in the grading sheet, the *Guide to Real Property Demonstration Mass Appraisal Report Writing* (2014), *Fundamentals of Mass Appraisal* (2011), *Mass Appraisal of Real Property* (1999), and *Uniform Standards of Professional Appraisal Practice (USPAP)*, in grading submitted reports. The demonstration mass appraisal report grader is an IAAO designee who has received extensive training and guidance in how to review demonstration mass appraisal reports fairly and accurately. The graders and grading chairs are required by the Professional Designations Subcommittee to provide constructive comments on the reports. These comments are designed to point out strengths and weaknesses to the candidate and provide help in the event a revision is necessary.

Appeal of Grading

Any candidate aggrieved by the failure of his or her report on a second grading may ask the Professional Designations Subcommittee to review the report and the subcommittee will conduct a thorough examination and render a written decision.

Demonstration Mass Appraisal Report Outline and Requirements

The purpose of this *Guide* is to help the candidate write an acceptable demonstration mass appraisal report and to stress to the candidate items of the report that need close attention. The candidate should refer to the grading sheet and use this grading sheet as an outline in preparing the demonstration report.

It is recommended sections of the report be presented in the same order as outlined on the grading sheet. Page references are from *Fundamentals of Mass Appraisal (FMA)* and *Mass Appraisal of Real Property (MARP)*. All technical terms should be defined using *Fundamentals of Mass Appraisal (FMA)*, *Mass Appraisal of Real Property (MARP)*, and *Uniform Standards of Professional Appraisal Practice (USPAP)*.

Part 1 Introduction

A. Title Page

The title page should include:

- Identification of the report as a mass appraisal
- Type of properties
- Market area
- Effective date of appraisal
- Date of the report
- Name and address of the appraiser
- Name and address of the client and intended user (IAAO Professional Designations Subcommittee)

B. Letter of Transmittal

A letter of transmittal is a business letter to the Professional Designations Subcommittee that accompanies the report. Sign and date the letter and include the conclusions of the report and other important items. The body of the letter should include:

- Date of letter (date of report)
- Identification of the market area
- Type of properties
- Purpose, intended use and intended user(s) of the appraisal
- Property rights appraised
- Definition of value and its source
- Summarize final estimates of value and final ratio study results
- Effective appraisal date
- The perspective of the appraiser (prospective, current, or retrospective) and appraisal report format
- Statement that the letter is accompanied by a complete mass appraisal report
- Appraiser's signature

C. Table of Contents

The table of contents gives page references for the main headings of the report and should refer to all major sections and to the appendices or addenda at the end of the report. The numbering the pages should begin after the table of contents.

D. Summary of Important Facts and Conclusions

This section should be a summary of the important data and conclusions of the report. The reader should be able to read this page and learn the significant information contained in the report. Brief statements should be given for the following:

- Purpose of the appraisal
- Property rights appraised
- Properties to be appraised
- Description of the improvements
- Description of the sites, including zoning
- Highest and best use conclusions
- Final model testing and performance analysis for each approach to value
- Final sales ratio study results
- Effective valuation date and date of report
- Any other information considered important by the appraiser

Part 2 Appraisal Problem and Scope of Work

A. The Appraisal Process (*FMA* p.4; *PAV* p.63; *MARP* p.13)

List the steps involved in the appraisal process. Define single property appraisal and mass appraisal and cite the source. Discuss the similarities and differences between the two disciplines.

B. Type of Appraisal and Report

State the type of appraisal (prospective, current, or retrospective) and report format, including definitions.

C. Identification of the Client

Define and state the identity of the client (IAAO Professional Designations Subcommittee).

D. Intended Use of the Appraisal and Intended User(s)

The intended use of the appraisal should be to satisfy the demonstration mass appraisal report requirement for an IAAO professional designation, either the RES or CAE. The intended user will be the same as the client, the IAAO Professional Designations Subcommittee.

E. Identification of the Properties to be Appraised (*FMA* p.8; *MARP* p.14)

Provide a brief narrative description of the properties to be appraised. This identification should include the number and type of properties; sources for location, describing and listing the properties; references to legal descriptions, addresses, parcel identifiers, photos, and building sketches.

F. Property Rights Appraised (*FMA* pp.8-9; *MARP* p.14)

The rights to the properties that are being appraised must be identified and defined. These rights will be for fee simple ownership assuming no encumbrances.

G. Purpose of the Appraisal (*MARP* p.14)

The purpose of the appraisal is to estimate the market value of the defined rights in the properties that are being appraised as of a given date.

H. Definition of Value and Date of Value Estimates (*FMA p.8; MARP p.14*)

Provide a definition of market value and give its source in a footnote. The conditions implicit in the market value definition should be included, one of which must be reasonable exposure time. The estimate of value should be in terms of cash or of financing terms equivalent to cash. The effective date of the value estimates must be stated in the report. The effective date of appraisal must be within five years of the date the report is submitted to IAAO.

I. General Assumptions and Limiting Conditions (*IAAO Mass Appraisal Revaluation Template*)

Disclose all assumptions, limiting conditions, and jurisdictional exceptions including any that result in deviation from recognized methods and techniques or that affect analyses, opinions, and conclusions. Following are assumptions and limiting conditions typically found in mass appraisal reports:

This mass appraisal has been made with the following general assumptions:

- The properties were assumed to be free of any and all liens and encumbrances. Each property has also been appraised as though under responsible ownership and competent management.
- Surveys of the appraised properties have not been provided. We have relied upon tax maps and other materials in the course of estimating physical dimensions and the acreage associated with appraised properties.
- We assume the utilization of the land and any improvements is located within the boundaries of the property described. It is assumed that there are no adverse easements or encroachments for any parcel that have not already been addressed in the mass appraisal.
- In the preparation of the mass appraisal, interior inspections *have/have not* been made of the parcels of property included in this report. All inspections are made from the exterior only. It is assumed that the condition of the interior of each property is similar to its exterior condition, unless the assessor has received additional information from qualified sources giving more specific detail about the interior condition.
- Property inspection dates will have ranged in time from both before and after the appraisal date. It is assumed that there has been no material change in condition from the latest property inspection, unless otherwise noted on individual property records retained in the assessor's office.
- We assume that there are no hidden or unapparent conditions associated with the properties, subsoil, or structures, which would render the properties (land and/or improvements) more or less valuable.
- It is assumed that the properties and/or the landowners are in full compliance with all applicable federal, state, and local environmental regulations and laws.
- It is assumed that all applicable zoning and use regulations have been complied with.
- It is assumed that all required licenses, certificates of occupancy, consents, or other instruments of legislative or administrative authority from any private, local, state, or national government entity have been obtained for any use on which the value opinions contained within this report are based.
- We have not been provided a hazardous condition's report, nor are we qualified to detect hazardous materials. Therefore, evidence of hazardous materials, which may or may not be present on a property, was not observed. As a result, the final opinion of value is predicated upon the assumption that there is no such material on any of the properties that might result in a loss, or change in value.
- Information, estimates, and opinions furnished to the appraisers and incorporated into the analysis and final report were obtained from sources assumed to be reliable, and a reasonable effort has been made to verify such information. However, no warranty is given for the reliability of this information.
- The Americans with Disabilities Act (ADA) became effective January 26, 1992. We have not made compliance surveys nor conducted a specific analysis of any property to determine if it conforms to the various detailed requirements identified in the ADA. It is possible that such a survey might identify nonconformity with one or more ADA requirements, which could lead to a negative impact on the value of the property(s). Because such a survey has not been requested and is beyond the scope of this appraisal assignment, we did not take into consideration adherence or non-adherence to ADA in the valuation of the properties addressed in this report.
- Possession of this report does not carry with it the right of reproduction, and disclosure of this report is governed by the rules and regulations of the _____, and is subject to jurisdictional exception and the laws of _____.

This appraisal has been made with the following general limiting conditions:

- The distribution of the total value estimated between the land and the improvements in this report is applicable only under the stated program of utilization. The values allocated to the land and buildings are not to be used in conjunction with any other appraisal and are invalid if they are.
- The intended use of this appraisal report is to satisfy the demonstration mass appraisal report requirement for an IAAO professional designation. The client is the sole intended user. This appraisal may not be appropriate for other uses or users.

I. Extraordinary Assumptions and Hypothetical Conditions

Define extraordinary assumptions and hypothetical conditions and cite the source. If the value opinions are subject to an extraordinary assumption, the assumption must be disclosed along with a statement that its use might have affected the value conclusions.

J. Scope of Work (FMA, p.9)

Include a description of the extent of the process of collecting, confirming, and reporting the data. The extent of the appraisal must comply with the requirements of the *Uniform Standards of Professional Appraisal Practice*. The scope of work defines the type and intent of research and analysis that an appraiser must complete in order to develop credible appraisal assignment results and includes, but is not limited to:

- the extent to which properties are identified
- the extent to which tangible properties are inspected
- the type and extent of data researched
- the type and extent of analyses applied to arrive at opinions or conclusions

Part 3 Presentation of Data

A. Preliminary Analysis and Plan (PAV p.65, pp.68-70; FMA pp.2-3, pp.166-195; MARP pp.1-13, pp.18-20)

Determine a tentative estimate of highest and best use. Discuss the appropriate valuation approaches. Describe and justify model specifications considered, the inventory of data to be collected, and the models chosen. The rationale for each model, the calibration techniques to be used, and the performance measures to be used should be included in the discussion.

B. General Data (FMA pp. 10-11; MARP pp.15-17; PAV pp.66-67)

Market areas are groups of neighborhoods. Properties in a market area are subject to the same economic forces and tend to change in value similarly. The subject properties are influenced by physical, economic, governmental, and social factors that shape and determine value. These forces affect the supply and demand for real estate within the market area and are to be examined and analyzed on a broad regional basis to determine this influence. If the property is located within a city, generally this is a broad enough basis on which to perform the analysis. If not, a county, township, area, or regional basis may be applicable. Only data relevant to the properties being appraised should be discussed and analyzed. A map locating the city (or area) with the boundaries clearly delineated should be included in the appendix. Following are some of the factors that should be considered and analyzed:

- Physical Factors
 - Geographical location of the market area
 - History of the area
 - Street and traffic patterns
 - Climate
 - Topography
 - Location of support services
 - Land use patterns

- o Nuisances and hazards
 - o Natural barriers
- Economic Factors
 - o Interest rates and credit availability
 - o Interest rates available to builders/developers
 - o Income levels and purchasing power
 - o Ownership – tenancy ratios
 - o Consumer and business confidence
 - o Current stock of property type
 - o Land available for development
 - o Cost and availability of building materials
 - o Labor costs
 - o Occupancy rates for various types of property
 - o Price, rental levels and trends
 - o Employment (major employers and their stability, potential new employers, and unemployment rates)
 - o New construction
- Governmental Factors
 - o Governmental services (schools, transportation, parks, etc.)
 - o Governmental regulations
- Social Factors
 - o Demographics (population trends over several decades, population projections, and breakdown of population by age and income)
 - o Life cycle of the economic area
 - o Cost of living
 - o Household size
 - o Education levels
 - o Crime

The candidate should also discuss both positive and negative factors and should be sure that the data analyzed and presented are relevant to the properties being appraised. The important factors will differ depending on the typical market behavior in the area and the type of properties.

The primary emphasis of the analysis should be the influence of the four forces on the type of properties being appraised. The conclusion should discuss the probable future of the area and the probable direction of property values, relating these future conditions to the properties being appraised. Is the area growing, declining, or stable? What are the prospects for the future for values of the properties being appraised? What will be the effects on the value of the subject properties?

Neighborhoods make up a market area and properties within a neighborhood have similar location value. Begin with a definition of a neighborhood and cite its source. Mass appraisers usually group properties into neighborhoods prior to model building as location tends to be a primary basis for stratification. Describe and support the boundaries of the neighborhoods. The boundaries, which may be man-made, political, or natural, should be clearly delineated and described in detail, and the reasons why they form the boundaries should be explained. Zoning and highest and best use are universally important. Discuss the three economic stages of a neighborhood and identify what stage each neighborhood is in. To bolster sample size, neighborhoods in the same stage can sometimes be combined for analysis. A map locating the neighborhoods with their boundaries clearly delineated should be included in the appendix.

C. Specific Data

Describe the procedure for collecting, validating, and reporting land/site, building, and location data. Data to consider include:

- o Land data
 - o Size, shape, and area of lots
 - o Frontage and depth
 - o Slope
 - o Topography
 - o Available utilities
 - o Site amenities (e.g., golf course, lake view)
 - o Nuisances (e.g., traffic, airport noise)
- o Improvement data – will vary by property type and use
 - o Residential
 - Style/stories
 - Quality rating
 - Size of improvement
 - Heating/cooling
 - Bedrooms/bathrooms
 - Basement area/finish
 - Fireplaces
 - Porch, deck, patio areas
 - Effective age and condition
 - Detached Structures
 - o Commercial
 - Construction type, quality, or grade
 - Stories
 - Gross and net usable area
 - Main, upper, and basement areas
 - Ceiling height
 - Effective age
 - Condition
 - Other
- o Location
 - o Residential features
 - Water or golf course
 - Parks/greenbelts
 - View
 - Traffic
 - Proximity to amenities
 - Proximity to nuisances
 - o Commercial features
 - Street type
 - Corner location
 - Access
 - Public utilities and services

D. Comparative Data

Describe the procedure for collecting, validating, and reporting cost, sales, and income/expense data.

Information to consider include:

- o Cost
 - o General cost data
 - o Specific cost data
- o Sales
 - o Price, date, etc.
 - o Description of property sold
 - o Usability of sale
- o Income and expense data, for commercial property reports
 - o Description of property rented
 - o Market rents
 - o Vacancy rates
 - o Stabilized allowable expenses
 - o Overall capitalization rates
- o Income data, for residential property reports
 - o Description of property rented
 - o Market rents
 - o Gross rent multipliers (GRMs)

E. Exploratory Data Analysis (FMA pp. 111-136)

Prior to model building, mass appraisers should develop a comprehensive understanding of the local market. This section should begin with a discussion, including definitions, of the various tools available for exploratory data analysis. Provide appropriate statistical analyses of land/site data, building data, and location data by market area, by neighborhood, and any other relevant stratification. Include in the analysis:

- o Data quality review
- o Data distribution
- o Market patterns and relationships
- o Time trends
- o Ratio study including IAAO Ratio Study standards

Part 4 Data Analyses and Conclusions

A. Highest and Best Use Analysis (FMA p. 12; MARP pp.17-18)

Mass appraisers must make a determination of the highest and best use of property. This is ordinarily done for groups of property. Begin this section by defining highest and best use including the source. The candidate should then proceed with separate analyses of the site as if vacant and as improved. The four tests for highest and best use, the interaction of a highest and best use analysis with the appraisal principles, and the market forces that affect value should be discussed. By analyzing the four criteria for highest and best use for all scenarios, the use that is maximally productive should be established.

B. The Valuation Process in Mass Appraisal (FMA pp. 2-3, pp.13-15, pp.166-194, 249-272, 279-318; MARP pp.5-12, pp.18-21) and Types of Variables and Data Transformations (FMA pp. 94-108)

This section is included in order to:

1. Define and discuss modeling in mass appraisal, model specification and calibration, economic basis of model building, generalized model structures, and types of models. Describe the types of variables used in modeling. Explain the importance of transformations when modeling and review the four broad categories of transformations used in modeling.
2. Define the approaches to value in the report (include definitions and their sources)
3. Describe the underlying economic principles and how they apply to each approach
4. Discuss the theory of each approach and outline the step-by-step procedures in mass appraisal

5. Give an overview of mass appraisal model structures for the three approaches to value
6. List the primary steps in building a mass appraisal model
7. Define and discuss the three statistical calibration techniques
8. Describe in detail additive multiple regression analysis, including the output statistics. Discuss, including definitions, the importance of analyzing residuals and predicted values, and how to handle outliers. Explain the assumptions in using multiple regression analysis
9. Finish with a discussion on the reconciliation process

C. Cost Approach

- Specify the models used to estimate market value based on the cost approach (model specification)
 - Land Value
 - Replacement Cost New
 - Accrued Depreciation
- Describe calibration methods considered and chosen
- Determine the mathematical form of the market value model including coefficients (model calibration)
- Review of model coefficients
- Review of model estimates
- Individual value estimates
- Model Validation (Describe the appraisal performance tests used and the performance measures attained such as ratio studies, measures of central tendency, appraisal level and appraisal bias.)

D. Income Approach

- Specify the models used to estimate market value based on the income approach (model specification)
- Describe calibration methods considered and chosen
- Determine the mathematical form of the market value model including coefficients (model calibration)
- Review of model coefficients
- Review of model estimates
- Individual value estimates
- Model Validation (Describe the appraisal performance tests used and the performance measures attained such as ratio studies, measures of central tendency, appraisal level and appraisal bias.)

E. Sales Comparison Approach

- Specify the model used to estimate probable selling prices or market value based on physical and location characteristics (model specification)
 - The model structure should additive
- Describe calibration methods considered and chosen – multiple regression analysis should be the chosen method
- Determine the mathematical form of the market value model including coefficients (model calibration)
- Review of model coefficients
- Review of model estimates
 - Goodness of fit statistics
 - Statistics of variable importance
- Individual value estimates
- Model Validation (Describe the appraisal performance tests used and the performance measures attained such as ratio studies, measures of central tendency, appraisal level and appraisal bias.)

F. Reconciliation

Describe the reconciliation performed, in accordance with Standards Rule 6-7. The reconciliation should clearly summarize the quantity and quality of data, the applicability and relevance of the approaches considered, and the methods and techniques employed to ensure accuracy (including recognized testing procedures).

G. Exposure time

Reasonable exposure time should be one of a series of conditions in the market value definition used for the demonstration mass appraisal. The candidate must define and develop an opinion of reasonable exposure time linked to the value opinion.

H. Certification

Each real property demonstration appraisal report must contain a signed certification that is similar in content to the following form:

I certify that, to the best of my knowledge and belief:

- ☐ the statements of fact contained in this report are true and correct.
- ☐ the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- ☐ I have no (or the specified) present or prospective interest in the property that is the subject of this report, and I have no (or the specified) personal interest with respect to the parties involved.
- ☐ I have no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.
- ☐ Any services regarding the subject performed by the appraiser within the three year period immediately preceding acceptance of the assignment, as an appraiser or in any other capacity is identified in the body of the report.
- ☐ my engagement in this assignment was not contingent upon developing or reporting predetermined results.
- ☐ my compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- ☐ my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
- ☐ I have (or have not) made a personal inspection of the properties that are the subject of this report. (If more than one person signs the report, this certification must clearly specify which individuals did and which individuals did not make a personal inspection of the appraised property.)
- ☐ no one provided significant mass appraisal assistance to the person signing this certification. (If there are exceptions, the name of each individual providing significant mass appraisal assistance must be stated.)

The certification must be signed by the appraiser and include the date signed.

Part 5 Addenda

The candidate is expected to provide supporting addenda as necessary. For orientation purposes, all maps in the appendix should include arrows indicating north. Wherever addenda appear, the candidate should remember to reference them accurately in the narrative portions of the report.

Minimum required addenda are:

- Maps of the area and city showing the location of the subject properties
- Map of the neighborhoods, with neighborhood boundaries drawn
- Maps showing location and zoning of all comparable sales, rentals, and gross rent multiplier rentals/sales
- Syntax of all transformations and related syntax
- Qualifications of the appraiser, including employment, education, and experience

After Writing the Report

Aside from the obvious tasks of proofreading and checking the grammar and mathematical accuracy of the final draft, the candidate should review the report using a copy of the actual grading sheet to make sure that all sections have been covered. Also, ask someone to review the report. An IAAO designee or Professional Designation Advisor may be willing to critique the report.

Appendices

Appendix 1

Writing Guide

Proper writing style, grammar, punctuation, and form are essential to impressing the reader that a report is professionally done. This appendix does not allow for in-depth coverage of these topics but discusses a few basic principles and pinpoints common violations of proper style and form. The goal is to help you avoid common errors that detract from the report as a whole.

Sources of Help

Many tools are available to help you produce a flawless report. Books and Internet resources are listed at the end of this appendix. Sophisticated word-processing programs, such as Microsoft Word or WordPerfect, help identify errors in spelling and grammar and can be set to hyphenate words properly at the end of lines. Even if you have excellent writing skills, use the word-processing program's tools for checking grammar and spelling to help you spot typographical and careless errors. Dictionaries not only help you spell and hyphenate words correctly, but can alert you to the connotations of synonymous words and point to the right one for the context.

Basic Principles

Consistency

Choose a style and stick to it. Before you start writing, make decisions about the style of headings, footnotes or endnotes, punctuation, capitalization, form of technical terms, and treatment of numbers. Create a style sheet to record your decisions so you can refer to it as you write. A written style sheet will save you time and help keep the report consistent during the weeks or months of writing.

Headings

The purpose of headings is to make the structure of your report clearer to the reader. The various levels of headings indicate the level of importance or generalization you assign to each topic and display for the reader your idea of the relationships among topics. The headings should follow your outline of the report. The structured format has made some of those decisions for you, but you may want to modify the scheme presented to fit your own needs.

Set up a style for three or four levels of headings (or heads, as they are called by editors). A major, or primary, section head is called an A-head; a secondary head is called a B-head; the next level, a C-head; and so on. Decide on the distinguishing features of each level of head: type style (roman, bold, or italics, underlined or not), size (the same size or different sizes), different font or the same as the type in the body of the report, position (centered, indented, or run into the text), capitalization (all letters capitalized, first letter of each word capitalized, or only the first word capitalized), and spacing after the head.

Word-processing programs allow you to choose a font for some of your heads that distinguishes them from the body of the report. For example, using Helvetica (a sans-serif font) for the A-heads and B-heads makes a nice contrast with Times Roman (a serif font). However, more than two type-faces in your report will make it look amateurish. The next page shows two sample heading schemes.

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Samples of Heading Schemes

DATA ANALYSIS (A-head)

Status of Data (B-head)

Data Collection (C-head)

Sales data. (D-head) For the sales comparison approach....

DATA ANALYSIS (A-head)

Status of Data (B-head)

Data Collection (C-head)

Sales Data. (D-head) For the sales comparison approach....

Footnotes and Endnotes

Decide whether your sources will be recognized in footnotes or endnotes. Use a style manual (see list at the end of this appendix) to choose a particular style for your references. Add to your style sheet examples of the style you choose—one for periodical articles, one for books, one for unpublished material, and so on. The style you choose does not matter, as long as you apply it consistently. Pay attention to how your examples use capitalization, punctuation, italics, and so on. Footnotes and endnotes are discussed in more detail in appendix 2.

Punctuation

The purpose of punctuation is to make a writer's meaning clear. Most punctuation follows strict rules, but some punctuation is optional. You can choose, for example, whether to place a comma before *and* in a series:

Appraisal theory, data analysis, and research....

Appraisal theory, data analysis and research....

Both are correct, but once you choose a style, apply it consistently—always place the comma before the *and* or always leave it out.

Some specific rules of punctuation are covered later in this appendix.

Capitalization

Rules about capitalization can be boiled down to the following: Capitalize infrequently, and do not use capitalization as a device for emphasis. Observe the following rules for capitalizing in ordinary text (heads and table heads have their own rules).

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1. Capitalize proper names of cities, states, countries, streets, bodies of water, organizations, and institutions. Do not capitalize city, state, street, association, and like words unless they are part of the proper name.

Massachusetts; the state of Massachusetts*; the state

Omaha; the city of Omaha*; the city

Lincoln Park; the park

4146 Grand Avenue; the avenue Lake

Huron; the lake

International Association of Assessing Officers; the association Bureau of Census;
the bureau

Oklahoma State University; the university

*When formal reference to the government entity is intended, it may be correct to use
City of Omaha and State of Massachusetts.

2. Do not capitalize titles of individuals except when used in direct address: Mr. Jones is

Grant County assessor.

Mr. Jones is the assessor of Grant County.

I believe that President Jones has arrived.

Mr. Jones is the president of the university.

3. Do not capitalize technical terms such as cost approach, gross rent multiplier, or correlation. When an acronym is used for a term (geo-graphic information system—GIS), there is no need to capitalize the written-out term.

4. Do not capitalize references to pages, chapters, tables, addenda, and so forth.

See page 6

This is explained in section 3

See table 1 in the addenda Compare

sale 6 with sale 5

Form of Technical Terms

Many acceptable variants of technical terms are used—*sales comparison approach* v. *comparative sales approach* v. *market approach*. Decide which variant you will use and then use it consistently. For example, if the term *incurable functional obsolescence* is used in one part of the depreciation section, the terms *functional incurable obsolescence* or *incurable obsolescence*, *functional*, should not be used in another part of the section. Use the glossary or index in your textbooks to identify the variants preferred by the IAAO. Similarly, if the word *data* is plural (the data are useful) in the beginning of a report, it should not become singular later (the data is useful). (Note: *Data* as a plural is correct; the singular is *datum*. Use of *data* in the singular is recognized by many authorities, however.)

Define technical terms when they first appear. If you use an abbreviation for a technical term, introduce it in parentheses after the first use of the term: *computer-assisted mass appraisal* (CAMA) system. Avoid sprinkling your report with abbreviations and stick to abbreviations that are well known. Abbreviations acceptable in informal situations should be avoided in a formal report: *capitalization rate*, not *cap rate*; *effective gross income*, not *effective gross*.

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Treatment of Numbers

Decide when you will use numerals and when you will use words to represent numbers. According to some manuals, whole numbers from one through ninety-nine are always written out; according to others, only whole numbers from one to nine are written out. In general, the following rules apply.

1. In nonscientific text matter, whole numbers of less than one hundred should be spelled out, and numbers of one hundred or more should be expressed in figures:

The appraiser used ten comparables.

There were 325 sales in the subject neighborhood last year.

Note: An exception to this rule is made for references to parts of a book or report:

The comparables are listed in chapter 10, page 8.

2. Numbers applicable to the same category should be treated the same way in a paragraph; numerals should not be used for some numbers and words for others. If the largest number contains three or more digits, use numerals for all. If one number is a decimal, use numerals for whole numbers of other items in the same category:

There were 25 properties in this neighborhood and 116 properties in the other.

In the past five years, a 101-story building and two buildings of 20 and 30 stories were built.

Comparable A had 2.5 bathrooms, comparable B had 2, and the subject property had 3.

3. Notwithstanding any other rules, at the beginning of a sentence all numbers should be written out:

Three hundred sales and 105 comparables were found.

4. In sections of the narrative appraisal report dealing with valuation discussions, numbers may be expressed as figures, in accordance with rules for scientific usage:

The subject property has 4 rooms per unit. Sale 4 has 4.5 and appears to be the most comparable. Using the price for sale 4 as an estimate, we have

$45 \text{ apartments} \times \$8,067 \text{ per apartment} = \$363,015.$

5. Use the word *percent* within the text of a report instead of the sign %: The adjustment was 10 percent.

Because mathematical formulas and equations are used extensively in demonstration appraisal reports, it is important to follow consistently established conventions in their representation. There are different conventions for representing mathematical relationships ($2 \div 1$ or $2/1$). Choose one style, add the choice to your style sheet, and use it consistently. Also pay careful attention to consistent internal logic within an equation or formula. Following are some points to bear in mind:

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1. Decimal fractions should always be preceded by a zero if the quantity expressed can equal or exceed 1.00. If the quantity cannot, in practice, equal or exceed 1.00, the zero is omitted:

The capitalization rate is .10. The probability is less than .05. The level of appraisal is 0.90.

2. Avoid using percentages within equations. Decimals are preferred. In either case, do not use decimals in equations sometimes and percent- ages at other times:

$\$2,500 \times .25 + .10 \times \$300 = \$655$,
not $\$2,500 \times .25 + 10\% \times \$300 = \$655$.

3. Do not express statements or headings that occur outside a formula or equation as if they were part of one. For example, the following heading is poor form, unless it is part of a formula:

Vacancy and credit loss for the subject property = 4 percent.

The proper form for this heading is

Vacancy and credit loss for the subject property: 4 percent.

The equals sign denotes that what follows is a result of a calculation, when in fact what is being expressed is that the vacancy and credit loss *is* 4 percent.

4. Use either symbols expressing mathematical relationships or use words represented by the symbols, but not both in the same expression. It is poor form to write:

$\$280,500$ *divided by* 0.28 = \$1,001,786,

or

$\$280,500/0.28$ *equals* \$1,001,786.

5. Punctuate equations at the end as though they were sentences or parts of sentences.
6. Within the same category, round decimals to the same number of places.
7. In tables and calculations, be sure numbers are properly aligned. Using the tab key rather than the space bar is one way to achieve proper alignment.

Clarity and Coherence

Clarity and coherence are inseparable in good writing. Clear writing expresses meaning precisely and unambiguously. Coherence in its literal sense means sticking together; in technical writing, it means that parts large and small are logically connected and congruous with one another. Consistency is an important tool in clear, coherent writing. Everything from the choice of words to sentence structure to paragraph structure to the grand outline of the whole contributes to both clarity and coherence. This section focuses on writing clear, coherent sentences and clear, coherent paragraphs.

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Clear Sentences

Wordiness, lack of parallelism, double meanings, and overly complex sentences get in the way of clear expression of ideas.

Omit needless words.

- Avoid expressions containing “the fact that.” *Due to the fact that* can be replaced by *Because*.
- Use apposition instead of *which is* or *who are*: Instead of *The building, which is the oldest in the neighborhood*, write, *The building, the oldest in the neighborhood*,...
- Avoid constructions requiring *that*.

Property that is typical of that business type

Property typical of that business type

It might be that a quick phone call can remedy the situation.

A quick phone call might remedy the situation.

- Avoid *a period of* and *a time frame of*

For a period of a few years

For a few years

Sales from a time frame of two years

Sales from two years

Avoid the passive voice, extraneous ideas, and big words when the active voice and smaller words will communicate your meaning. Instead of, *The base home approach was developed to be used as a communication tool that will facilitate the understanding and interpretation of assessments by taxpayers*, write, *The base home approach is a tool to help taxpayers understand and interpret assessments*. If the reason behind development of the base home approach is important, write, *The base home approach was developed as a tool to help taxpayers understand and interpret assessments*.

Writing is often cluttered by repetition of phrases that are clear from the context. Examine each sentence you write to see if it contains ideas that are already implied by the context. For example, in the following sentence, is *in the cost approach* necessary? *To analyze physical depreciation in the cost approach*.... If you are writing a section on the cost approach, it's already understood.

Make parallel ideas parallel in structure. In the following list, *how old the building is* should be replaced by *age*:

Elements of comparison include the following:

- overall quality
- architectural attractiveness
- how old the building is
- size

Avoid ambiguity.

Appendix 1 continued

- For example, consider the following sentence: *The property was appraised as a whole, owned in fee simple title, and free of any encumbrance.* It is unclear whether the property was appraised as (if) owned in a fee simple title or whether the property was actually owned in fee simple title. Is *property* the subject of the passive verb *was owned* or is *owned* a participle modifying *whole*?
- Dangling modifiers may not completely obscure meaning, but disrupt the flow of thought. Consider, *Subtracting the accrued depreciation, the present value of the property was \$180,000.* Clearly the present value did not subtract the accrued depreciation. However, meaning in the following is not clear: *I used comparable sales from a period of two years to construct a sales comparison grid, which proved to be successful.* What was successful—using sales from two years or constructing a grid?
- Avoid overly complex sentences. Consider this sentence: *Adjust the indicated value of the property for any personal property (such as fixtures, furniture, and equipment) that may be included in the cost estimate and, if necessary, adjust this value, which reflects the value of the fee simple interest, for the property interest being appraised to arrive at the indicated value of the specified interest in the property.* It is difficult to discern the meaning. Possibly, the following is meant: *Adjust the indicated value of the property for personal property included in the cost estimate. The result reflects the value of the fee simple interest. If a partial interest is being appraised, adjust the value of the fee simple interest to obtain the value of the specified interest.*

Coherent Paragraphs

A paragraph is a group of sentences developing either a single topic or a specific part of a larger topic. Begin each paragraph with a sentence that states the topic or, occasionally, with a sentence that makes a transition from the previous paragraph. Reread each paragraph you have written to see if each sentence develops the topic of the paragraph. If you start another topic mid-paragraph, divide the paragraph and develop a new topic sentence or move material that does not belong to an appropriate place.

Some Rules of Punctuation

The Period

The period is used primarily to indicate the end of a declarative sentence. Rules for using periods in lists and with parentheses often cause confusion.

1. In vertical lists, do not use periods (or any end punctuation) unless one of the items is a complete sentence:
 1. sinking-fund method
 2. mortgage-equity method
 3. annuity method

Note: As in the above example, numbers in vertical lists are followed by a period; within a paragraph, numbers in a list are enclosed in parentheses: (1) sinking-fund method, (2) mortgage-equity method, and (3) annuity method.

Appendix 1 continued

2. Periods are placed *within* the parentheses used to enclose an independent sentence. Periods are placed *outside* the parentheses if the enclosed matter is part of an including sentence:

The result of my calculation is \$24,250. (I multiplied \$12,125 by 2.)

The result of my calculation is \$24,250 (derived by multiplying \$12,125 by 2).

The Comma

The comma indicates a small interruption in the continuity of a thought or sentence. One source of confusion is the compound sentence v. the compound predicate.

1. Clauses of a compound sentence (a sentence in which each clause has a different subject) are generally divided by a comma:

The income approach suggests one value estimate, but the cost approach gives another.

The land value is estimated first, and then the building value is considered.

2. A comma is *not* used in a sentence with a compound predicate (two or more verbs with the same subject):

The income approach gives a value estimate and acts as a check against the other approaches.

The land value is estimated first but bears no relationship to the building value.

3. A dependent clause preceding an independent clause is usually set off by a comma:

If the city data were useful, I would incorporate it in the report.

Although there is little market data to support such a conclusion, it can be supported in other ways.

4. A comma is used in full dates but not with simply the month and year. April 1, 1999
April 1999

The Semicolon

The semicolon indicates a more marked interruption in a sentence than does a comma. Following are a few common rules for its use.

1. A semicolon is used to separate the two parts of a compound sentence when unconnected by a conjunction:

The subject city has six parks; two are located in the subject neighborhood.

2. When used between clauses of a compound sentence, the following words should be preceded by a semicolon: then, however, thus, hence, yet, so:

Appendix 1 continued

No items of curable functional obsolescence could be found; hence, the amount is zero.

This amount is difficult to verify in the market; however, it is deemed an appropriate amount.

3. For clarity, a semicolon should be used to divide clauses of a compound sentence or items in a series subdivided by commas:

The cost of improvements, such as walks, driveways, and stoops; the cost of plans, including permits, fees, and insurance; and the market value of the land are all discussed in this section.

The gross rent multipliers are as follows: sale 1, 7.5; sale 2, 6.1; and sale 3, 7.2.

The Hyphen and the Dash

Hyphens are used within words to separate parts of a compound word or to indicate a word break at the end of a line. Questions about the appropriate use of hyphens may be resolved by the dictionary or a style guide. Over time, words such as *data base* become hyphenated, and then become a single word, *database*, and some authorities accept the unbroken compound more quickly than others. Some compounds are temporary—two or more related modifiers are hyphenated to prevent ambiguity.

It is an eight-unit apartment building of masonry construction.

The house has a 12-foot ceiling.

The property was of brick-and-mortar construction. The appraiser used the straight-line method.

The Chicago Manual of Style, 16th Ed. has a useful table of compounds and their treatment. (See Table 1 at the end of chapter 7.)

Dashes are marks of punctuation. Typesetters distinguish the en dash, which is longer than a hyphen, and the em dash, which is twice the length of the en dash. The two kinds of dashes have different functions. On a type- writer, the em dash is indicated by two hyphens closed up to the words around them. Some word processing programs can be set to insert the en or em dash using a symbol font or special characters menu.

En dashes are used most frequently to indicate inclusive numbers or dates: 1994–96

April–June 1999

However, if you use *from*, be consistent and pair it with a *to*: from 1994 to 1996, *not* from 1994–96.

An em dash is used in two ways: (1) to emphasize a thought and (2) to indicate a parenthetical element or a break in thought that would disrupt the sentence structure.

The appraiser finds data in the market—not a cost manual.

The appraiser estimated the reproduction cost—the cost of reproducing an exact replica of the building—as \$12 million.

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Reference Materials for Style

Books

A classic resource and a wonderful book for tuning your ear to good writing is Strunk and White, *The Elements of Style*. This slim book can be found in any number of editions and even on line (see web resources below). Strunk and White sets forth elementary rules of usage and principles of style with an abundance of examples.

For more specific help with questions of usage, try Copperud's *American Usage and Style: The Consensus*, last revised and updated in 1980 and now out of print. Copperud compares the judgments of nine authorities on a variety of expressions and usages, such as the difference between *infer* and *imply*. The book is arranged alphabetically, which makes it easy to use.

Fowler's Dictionary of Modern English Usage, edited by Jeremy Butterfield, is also arranged alphabetically and is not as strict on many issues as previous editions and pays more attention to differences between British and American English.

The Chicago Manual of Style, referenced at the end of appendix 2, is a complex and sometimes confusing book. It will not teach you how to write well, but it is thorough in its treatment of the details of punctuation, capitalization, references, numbers, and so on. The book is well indexed and cross-referenced.

Web Resources

The world wide web contains an abundance of information on usage and style—from resources for esoteric grammatical questions to basic tutorials on English sentence structure. A few of these resources are listed below, and they can lead you to more.

Guide to Grammar and Writing—contains helpful hints on basic concepts

<http://grammar.ccc.commnet.edu/grammar/>
or <http://grammar.ccc.commnet.edu/grammar/index2.htm>

A structured course produced by the University of Ottawa

<http://www.uottawa.ca/academic/arts/writcent/hypergrammar>

A searchable on-line version of Strunk and White

<http://www.bartleby.com/141>

Common errors in English—lists and explains errors in usage, such as confusion between accept and except

<http://public.wsu.edu/~brians/errors/errors.html>

Grammar Girl's Guide to the English Language—a collection of the author's pet peeves gleaned from her years of experience as a technical editor with many useful tips, as well as links to other sites on grammar

<http://www.quickanddirtytips.com/grammar-girl>

Appendix 2

Footnotes and Endnotes—Citation of Authorities

Throughout the *Guide to Real Property Demonstration Appraisal Report Writing* there are reminders to authors of demonstration appraisal reports that each step in the appraisal process must be explained and substantiated. The authority for a statement in the text of the report is often a written work, published or unpublished. Authors may wish to use written sources as authorities for definitions, explanations of techniques, or facts. Notes are used to cite authorities for statements in the text of the report.

Footnotes or Endnotes?

Notes can be either footnotes or endnotes, but not both in the same text. Footnotes are placed on the same page as the material they document. Endnotes are gathered at the end of the section with the heading “Notes.” Footnotes have the clear advantage of requiring no leafing back and forth between statement and documentation. They no longer suffer from the disadvantage of making typing of a page difficult. Word-processing programs make preparation of footnotes or endnotes easy. The program numbers and arranges the notes automatically. Footnotes may be used to comment on, to expand, and to qualify material in the text, and to acknowledge personal help. Because of their physical separation from the text, endnotes are less suited for these purposes.

By these criteria, the author whose notes are exclusively references to pages in one or more books or articles, each of which is cited infrequently, may decide to use endnotes. However, the author who wishes to comment on discrepancies between census data and city planning data in describing a neighborhood, to comment on reasons for favoring a particular method of capitalizing income, or to name authors in the text while giving page numbers in the notes should choose footnotes as the appropriate format.

Form and Content of Notes

Whether you choose footnotes or endnotes, you must present them in a standard form. Notes are numbered consecutively through the report in Arabic numbers, beginning with 1. A word-processing program will treat the numbers of the notes as superscripts. In the text, these numbers are placed after all punctuation marks (except a dash) at the end of a quotation or a sentence or, if necessary for clarity, at the end of a clause. A note prepared as commentary should be written as a single paragraph beginning with a capital letter immediately after the reference number. A note written to cite the authority for a statement begins immediately after the reference number with the initial letter capitalized.

The purpose of notes is to provide enough information for the reader to find the work cited for themselves. The arrangement of the note's content varies according to the style chosen but should always be the same within that style. The following information should be included:

Appendix 2 continued

- Full name of author or authors (sometimes an institution rather than a person)
- Full title of work (include any subtitle)
- Editor if there is one (sometimes the editor is used in place of the author if no author is listed)
- Edition (unless it is the first)
- Title of larger work of which this is part
- Volume number or series title
- Publisher
- City of publication
- State or province if not clear (use two-letter abbreviation)
- Date of publication
- Page numbers or volume, issue, and page number
- URL of source if referenced from the Internet

Examples

The following examples have been chosen from the kinds of works that candidates might wish to cite. Numbers in parentheses refer to the notes below, which illustrate the form of citations for a variety of source materials. Other styles for notes are acceptable as long as the style is self-consistent.

The name of the person or group responsible for the work is entered in its usual order as given on the title page of the work cited. Responsibility may lie with one or more persons (1–4), an association (5–7), or a governmental agency (8–10). The person or group responsible for the work may not be an author but may be an editor or compiler (11–13). When it is not clear where responsibility lies, this element is omitted (14).

The title is transcribed in full as it appears on the title page, not the book's cover or spine (1,12). The title of the larger work is italicized; that of the smaller work (an article or a chapter) is enclosed in quotation marks (2–4).

The description of the larger work includes series number, edition number, volume number, and editor for books; it should include volume number for magazines and journals. Not all publications have all these characteristics (1–14).

The facts of publication are presented as: (place: publisher, date). The place must be distinguished from any other place with that name (1, 2, 8, 13), although if the state is clear, the state abbreviation may be omitted (9). The publisher may be a commercial firm, an organization (and one of its divisions, as in 12), or a government agency. The date is the publication date taken from the book's title page or cover. For magazines and journals appearing at regular intervals (and for annual volume, if desired) place and publisher are omitted; only the date of issue is inside the parentheses.

The final element is the exact page or pages being cited. For books, this element is preceded by a comma; for magazines, journals, and serial volumes it is preceded by a colon.

1. William N. Kinnard, Jr., *Income Property Valuation: Principles and Techniques of Appraising Income-Producing Real Estate* (Lexington, MA: Heath Lexington Books, 1971), 107–8.

2. Thomas H. Hall III, "Hotel and Motel Valuation," in *Encyclopedia of Real Estate Appraising*, 3rd ed., ed. Edith J. Friedman (Englewood Cliffs, NJ: Prentice-Hall, 1978), 635.

Appendix 2 continued

3. Bernice T. Dowell, "Hotel Investment Analysis: In Search of Business Value," *Proceedings of the Sixty-second Annual International Conference on Assessment Administration* (Chicago: International Association of Assessing Officers, 1996): 200.
4. Richard R. Simonds, "Accuracy of the Yield and Direct Capitalization Methods: A Twenty-Year Empirical Study of the Electric Utility Industry," *Assessment Journal* 6(4) (July/August 1999): 53.
5. International Association of Assessing Officers, *Property Assessment Valuation*, 2nd ed. (Chicago: International Association of Assessing Officers, 1996), 19–23.
6. International Association of Assessing Officers, Technical Standards Subcommittee, *Standard on Ratio Studies* (Chicago: International Association of Assessing Officers, 1999), 4.
7. Appraisal Institute, *The Appraisal of Real Estate*, 11th ed. (Chicago: Appraisal Institute, 1996), 100–104.
8. U.S. Bureau of the Census, *Taxable Property Values*, vol. 2, of 1992 *Census of Governments* (Washington, DC: Government Printing Office, 1994), 143–45.
9. California, State Board of Equalization, *1997–98 Annual Report* (Sacramento: State Board of Equalization, 1999), 19.
10. Washington County, Oregon, Department of Assessment and Taxation, *Summary of Assessment and Tax Roll, Fiscal Year 1999–2000* (Hillsboro: Department of Assessment and Taxation, 1999), 54.
11. Edith J. Friedman, ed., *Encyclopedia of Real Estate Appraising*, 3rd ed. (Englewood Cliffs, NJ: Prentice-Hall, 1978), 1.
12. Robert M. Clatanoff, comp., *The Valuation of Utility and Transportation Property: A Classified Annotated Bibliography*, Bibliographic Series, no. 5 (Chicago: International Association of Assessing Officers, Research and Technical Services Department, 1983), 16.
13. Byrl N. Boyce, comp. and ed., *Real Estate Appraisal Terminology*, rev. ed. (Cambridge, MA: Ballinger, 1981), 42.
14. *Webster's Third New International Dictionary*, s.v. "market value."

Note: For *well-known* reference books the facts of publication are omitted, but the edition (if not the first) is specified. Page numbers are not used; the item is given, preceded by "s.v." (*sub verbo*, "under the word").

Abbreviated References

After the first full reference in a note, subsequent references to a particular source give author, short title, and page (for example, Kinnard, *Income Property Valuation*, 34).

Notes to Tables and Charts

Notes to tables and charts are numbered separately for each table and chart (not in the sequence of notes to the text) and are placed at the end of the particular table or chart.

Appendix 2 continued

References for Style of Notes

Many style manuals—some tied to specific professions—have been published. The IAAO favors *The Chicago Manual of Style*. The Associated Press also publishes a well-regarded manual, *The Associated Press Stylebook*. A visit to a library or a bookstore (physical or on-line) will give you a good idea of what is available.

The following two resources should serve most purposes.

- *The Chicago Manual of Style*, 16th ed. (Chicago: University of Chicago Press, 2010).
- Kate L. Turabian, John Grossman, and Alice Bennett, *A Manual for Writers of Term Papers, Theses, and Dissertations*, 8th ed. (Chicago: University of Chicago Press, 2013).

Appendix 3

Suggested Authorities and Materials for Review

The *Guide* is built upon and referenced to the IAAO textbook, *Property Assessment Valuation*. This source should suffice for most of the needs of the candidate. However, no one authoritative work is so complete that others may not be needed. The works listed below have been used by others for demonstration appraisal reports. They are also excellent sources for review of concepts that will be helpful to the candidate as the report is developed and written.

Student reference manuals for all IAAO courses, particularly:

- Course 101: Fundamentals of Real Property Appraisal
- Course 102: Income Approach to Valuation
- Course 112: Income Approach to Valuation II
- Course 311: Residential Modeling Concepts
- Course 312: Commercial/Industrial Modeling Concepts

The Appraisal of Real Estate. Latest edition. Chicago: Appraisal Institute.

Fundamentals of Mass Appraisal. Latest edition. Chicago: International Association of Assessing Officers.

Mass Appraisal of Real Property. Latest edition. Chicago: International Association of Assessing Officers.

Property Appraisal and Assessment Administration. Latest edition. Chicago: International Association of Assessing Officers.

Appendix 4

REAL PROPERTY DEMONSTRATION MASS APPRAISAL REPORT GRADING SHEET

Name of Candidate _____

File Number _____

First Submission _____

Revised Submission _____

Column

- A** 100% Satisfactory
- B** 75% Marginally Satisfactory
- C** 50% Improvement Needed
- D** 25% Unsatisfactory
- E** 0% Omitted

I. PART 1 INTRODUCTION

- A. Title Page
- B. Letter of Transmittal
- C. Table of Contents
- D. Summary of Salient Facts and Conclusions

A	B	C	D	E	SCORE

Maximum Value Part1

2.00					
Final Score Part1					

II. PART 2 APPRAISAL PROBLEM AND SCOPE OF WORK

- A. The Appraisal Process
- B. Type of Appraisal and Report
- C. Identification of Client
- D. Intended Use and Intended User(s)
- E. Identification of Subject Properties
- F. Property Rights Appraised
- G. Purpose of the Appraisal
- H. Definition of Value and Date of Value Opinion
- I. General Assumptions and Limiting Conditions
- J. Extraordinary Assumptions and Hypothetical Conditions
- K. Scope of Work

A	B	C	D	E	SCORE

Maximum Value Part2

2.80					
Final Score Part2					

III. PART 3 PRESENTATION OF DATA

A. Preliminary Analysis and Plan

B. General Data

1. Physical Factors
2. Economic Factors
3. Governmental Factors
4. Social Factors
5. Analysis and Conclusions Relative to Subject Properties

C. Specific Data

1. Land Data
2. Improvement Data
3. Location

D. Comparative Data

1. Cost Data
2. Sales Data
3. Income and Expense Data

E. Exploratory Data Analysis

1. Data Quality Review
2. Data Distributions
3. Market Patterns and Relationships
4. Time Trends
5. Ratio Study

Maximum Value Part3

A	B	C	D	E	SCORE

21.45					
Final Score Part3					

IV. PART 4 DATA ANALYSIS AND CONCLUSIONS

A. Highest and Best Use Analysis

1. Definition and Source
2. Analysis and Support of Sites as if Vacant
3. Analysis and Support of Properties as Improved

B. Valuation Process in Mass Appraisal

1. Definitions
2. Approaches to Value
3. Economic Principles
4. Theory and Procedures of Each Approach
5. Mass Appraisal Model Structures
6. Steps in Model Building
7. Calibration Techniques
8. Multiple Regression Analysis
9. Reconciliation

C. Cost Approach

1. Model Specification
2. Model Calibration
3. Model Validation

D. Income Approach

1. Model Specification
2. Model Calibration
3. Model Validation

A	B	C	D	E	SCORE

E. Sales Comparison Approach

1. Model Specification
2. Model Calibration
3. Model Validation

F. Reconciliation and Final Estimate of Value

1. Review of Developed Data
2. Analysis of Strengths and Weaknesses of Each Approach
3. Logical Selection of Final Values
4. Value Estimates and Effective Date of Appraisal

G. Exposure Time

H. Certification

1. Proper Statement of Facts
2. Signature of Candidate

Maximum Value Part4

70.00					
Final Score Part4					

V. PART 5 ADDENDA

A. Addenda

1. Map of Area
2. Maps of Neighborhoods
3. Maps of Comparable Sales, Rentals, and Rental/Sales
4. Syntax of Transformations
5. Qualifications of Appraiser

A	B	C	D	E	SCORE

B. Structure

1. Neatness, Grammar, Punctuation, and Spelling
2. General Organization of the Report

Maximum Value Part5

3.75					
Final Score Part5					

Grader

Approved _____ Rejected _____

Graded by _____

Date _____

Grading Chairman

Approved _____ Rejected _____

Reviewed by _____

Date _____

Standard on Assessment Appeal

Approved July 2016

International Association of Assessing Officers

This standard replaces the January 2014 *Standard on Assessment Appeal*. IAAO assessment standards represent a consensus in the assessing profession and have been adopted by the Executive Board of the International Association of Assessing Officers (IAAO). The objective of the IAAO standards is to provide a systematic means for assessing officers to improve and standardize the operation of their offices. IAAO standards are advisory in nature and the use of, or compliance with, such standards is voluntary. If any portion of these standards is found to be in conflict with national, state, or provincial laws, such laws shall govern. Requirements found in the *Uniform Standards of Professional Appraisal Practice (USPAP)* also have precedence over technical standards.

Acknowledgments

At the time of the 2016 revision (approved July 2016) the Technical Standards Subcommittee was composed of Alan Dornfest, AAS, Subcommittee Chair, Josh Myers, Carol Neihardt (associate member); Wayne Forde, August Dettbarn, Bill Marchand, and Chris Bennett, staff liaison. The chair of the Research and Standards Committee was Doug Warr.

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Standard on Assessment Appeal

1. Scope

This standard provides broad guidance for property assessment appeals initiated by taxpayers. It does not address specific instances as required by local laws and regulations, nor does it apply to appeals between taxing districts and assessment agencies or between different levels of assessment agencies (e.g., local versus state). This standard is not intended to recommend a single-model appeal procedure applicable to all assessment jurisdictions. Rather it suggests the features of a simple, understandable, responsive, cost-conscious appeal system that will be effective in addressing assessment inequities. The recommendations contained in this standard should be considered in the context of the entire property tax system. For example, the recommendations in Section 6 concerning the timing of assessment notices and appeal filings should be viewed in the context of providing sufficient time for the appeal process without unduly delaying tax collections or restricting appellant rights.

In this standard, the term *assessor* means any local, state, or provincial authority that has primary responsibility for assessment of property. The term *property owner* signifies the person or entity liable for property taxes. It is understood that a representative or agent may be acting on behalf of the property owner during an appeal.

2. Introduction

Assessment appeals are an important component in the assessment process. Appeals provide an opportunity for property owners to meet with the assessor to inquire about their assessments and to learn about assessment and appeal procedures. In the case of disputes about assessments, an appeal system should provide opportunities for both informal meetings with the assessor and formal hearings before independent bodies to resolve disputed issues and thus assure the public that assessments are correct, fair, and equitable.

Key to any assessment appeal system is an open and transparent process that relies on a clearly written set of procedures and provides due process.

3. Structure of the Recommended Appeal System for Locally Assessed Property

There are two aspects of an assessment appeal: matters of valuation or fact, such as the amount of an assessment, and matters of law, such as interpretation of statutes. Matters of valuation or fact should be addressed at the administrative level, with the state or provincial property tax tribunal the final resort for administrative appeals.

For locally assessed property, the appeals system should consist of

1. Informal appeal
2. One or more levels of formal appeal
3. Court of law.

At each of these levels, the appeal body should publish and make available deadlines, operating procedures, rules, and regulations so that all parties understand what is required of them and how the appeal will be conducted.

The second level of appeal is handled by administrative or quasi-judicial appeal boards and tribunals, which are concerned primarily with the accuracy of assessments for specific classes of properties, taxpayers, or areas. These boards and tribunals should provide a broad base of expertise to determine individual assessments.

Further appeals of the legality of an assessment are dealt with by the courts assigned jurisdiction over matters of law. An appeals system should direct taxpayers to the appropriate court and explain the procedures for filing an appeal.

3.1 Informal Review by the Assessor

Property owners may seek informal review of an assessment notice for the following reasons:

- Factual error, that is, a data collection or clerical error
- Equity and uniformity claim of discriminatory level of assessment
- Belief that the valuation is inaccurate
- Exemption, classification, or assessment limitation.

An objection on any of these grounds may not technically be an appeal but should be stated in writing (or in an acceptable electronic substitute) and dated. All requests for an informal hearing should be recorded and acknowledged so that the property owner does not inadvertently lose the right to appeal because of lack of timeliness.

The appeal process should begin with an informal consultation between the assessor and the property owner in order to

- Identify and document errors
- Review the equity and uniformity of assessment

- Determine what issues (facts) the parties to a valuation dispute can agree on, such as
 - Clarification of the property owner’s concern or basis for dispute
 - Property characteristics
 - Property boundaries, use, or classification
 - Gross and net income and other relevant financial data
 - Particulars of a sale
 - Construction costs
- Identify and clarify the basis for an exemption or assessment limitation claim.

This informal consultation may, at the option of the property owner, be a face-to-face meeting, telephone conference, or correspondence by mail, fax, or electronic mail. An informal consultation allows both parties to consider their positions before a formal appeal is filed. The informal process is highly recommended because it allows a large number of property owners to obtain information, state their grievances, and resolve their appeals in a simple, low-cost manner. At this level, the property owner should be able to receive information and provide responses to broad requests. Strict confidentiality of information must be maintained as required by statute, rules and regulations, and specific operating procedures. The property owner or representative should be provided with a copy of the jurisdiction’s confidentiality policy to prevent misunderstandings concerning what is and what is not protected as confidential.

After this informal review, the assessor’s office should notify the property owner of its findings and provide information about the next level of review and the forms required to file a formal appeal.

The property owner who decides to file a formal appeal should be required to state the grounds of the appeal in writing on an appeal form or in a letter documenting the relief desired. This document and any written decision resulting from the informal appeal, if available, should be prerequisites to any further appeal.

3.2 The Local or Regional Appeal Board

The local or regional appeal board should serve as the first level of formal appeal for the following purposes:

- Determine property value or classification
- Rule on equity or uniformity issues
- Consider claims for property tax exemption.

For matters within its authority, the board may initiate an investigation into assessments or practices that merit review by an outside authority. Such investigations should be undertaken only after records have been reviewed and the assessor’s decisions or actions provide

compelling evidence that an investigation is warranted. A mechanism should be made available for reporting the outcomes of investigations to the public.

Procedures should be established requiring disclosure of all issues and principal arguments before the formal hearing convenes.

After this level of review, the appeal board should notify the property owner of its findings and provide information about the next level of review and the forms required for filing a formal appeal.

The property owner who decides to appeal to the next level should be required to state the grounds of the appeal in writing on an appeal form or in a letter documenting the relief desired. This document and the written decision resulting from the local or regional appeal, if available, should be prerequisites to any further appeal.

3.3 The State or Provincial Property Tax Tribunal

The state or provincial property tax tribunal should be the final administrative arbiter for individual appeals. However, unresolved legal and appraisal issues may be appealed to the courts. For efficiency, state or provincial property boards may constitute the only level of formal appeal before appeal to the courts.

After this level of review, the appeal board should notify the property owner of its findings and provide information about the next level of review and the forms required for filing a formal appeal.

The property owner who decides to appeal to the next level should be required to state the grounds of the appeal in writing on an appeal form or in a letter documenting the relief desired. This document and the written decision resulting from the local or regional appeal, if available, should be prerequisites to any further appeal.

3.4 The Courts

When administrative remedies including arbitration have been exhausted, taxpayers and agencies may appeal to the courts unresolved matters of law and fact, such as interpretation of statutes, eligibility for exemptions, or the jurisdiction of appellate boards and tribunals, as well as unresolved questions of value.

4. Structure of the Recommended Appeal System for Centrally Assessed Property

For those property valuations or assessments completed by a central assessment agency, such as railroads, telecommunications properties, and public utilities, the authority for review is different than that for local assessment appeals. However, the general structure of a system that promotes informal review and then formal

appeal, if necessary, should be similar to that recommended in Section 3 for locally assessed property.

The general aspects of an appeal of an assessment for centrally assessed property are the same as those for locally assessed property: matters of fact, valuation, uniformity, classification, and matters of law.

Matters of fact, classification, valuation, and uniformity should be reviewed at an informal level of appeal between the taxpayer and the assessment agency. Efforts should be made to resolve the issues or errors of fact at an informal conference to eliminate further appeal or litigation to a higher administrative or tax appeal court.

Matters of law should be reviewed by state boards of appeal, boards of equalization, or tax tribunals. At each of these levels, the appeal body should publish operating procedures or rules and regulations and make them readily available to taxpayers, so all parties understand what is required of them and how the appeal will be conducted. These levels of appeal should be chiefly concerned with the accuracy of assessments, use of generally accepted appraisal methods, proper allowance of exemptions, and the uniformity of assessments. Boards and tribunals should use a broad base of expertise to evaluate assessment and valuation procedures.

4.1 Central Assessment Appeal Board

The central assessment appeal board should serve the following purposes:

- Provide for a direct appeal from the assessing agency's final decision on the assessed value of a company or property
- Provide a direct avenue for review of disputes on equity or uniformity issues
- Examine claims for property tax exemptions
- Initiate a review of the contested issues relating to the property under litigation. Such review should be undertaken in the form of a de novo hearing based on written and oral testimony.

The board should maintain a complete transcript of the proceedings with all exhibits attached. The board should hold a hearing within a reasonable amount of time because funds paid in protest are unavailable to the general budget or to the taxpayer, who may be entitled to a refund. In many instances, central assessment appeals can carry forward for many months or years depending upon the nature and complexity of the case. Every effort should be made to achieve timely resolution.

4.2 The Courts

When all administrative remedies at the central assessment board or hearing board level have been exhausted and taxpayers or agencies need further legal relief on unresolved issues of law or questions of mixed

law and fact, such as the interpretations of statutes, applications of rules and regulations, and calculations of amended or upheld valuations, the taxpayers or agencies may appeal to the courts. These may be district courts, appellate courts, or the supreme court of the state or province. In some instances, the final level of review may be the highest court of the land. Final decisions set precedents that may be followed to avoid re-trial of the same issues.

4.3 Information To Be Provided Prior to Hearings

Prior to any hearing at the administrative hearing level, the appellant should provide the central assessment agency with a statement outlining unresolved issues to be raised at the hearing. This may be done by using standardized appeals forms or an appeal format adopted by the central assessment agency. Specific procedures should be established for disclosure of all issues, principal arguments, and evidence before the formal hearing convenes.

5. Qualifications and Training of Appeal Board and Tribunal Officials

Tribunals and appeal boards should comprise individuals such as real estate appraisers, real estate brokers, mortgage loan officers, public accountants, and lawyers, who have knowledge of property tax principles, laws, and ratio studies. To exercise these duties, board members should attend formal training on the duties of the board or tribunal, and demonstrate competency.

A review and appeal board or tribunal at any level should have the authority to adjust individual assessments and may have the authority to broadly adjust assessments and assessment levels within a jurisdiction.

A member of an appeal board or a state or provincial tax tribunal who has a conflict of interest, a personal bias or prejudice, or an interest in a property, either apparent or not, must disclose the conflict and may, upon his or her own volition or at the request of an appellant, a respondent, or the assessor, be recused from hearing a specific appeal or appeals.

6. Notification and Appeals

The appeal procedure should provide adequate time for property owners to inquire informally about their assessments and to file informal protests with the assessor and for the assessor to render a written decision on each such appeal. Time also should be provided for property owners to file formal appeals of those decisions with the appeal board and for the board to act on all such appeals. All appeals to the board should be decided, if possible, before tax bills are issued. However, the period provided for appeals should not be so long as to delay tax collections unreasonably. Appeals

on complex properties, such as those assessed by the state or province, may require more time than a typical appeal period; thus, tax collection may have to proceed based upon the appealed value or on the amount of value not in dispute.

6.1 Notice of Assessment

When an assessment is changed, a notice of assessment that identifies the property, the property owner, the estimated market value, and the assessed value of the property should be mailed to each property owner.

The assessment notice should include material briefly explaining the appeal procedure. The property owner should be required to outline the reasons for objecting to or questioning the assessment. Adequate time from the date of mailing of the notice should be allowed for receipt of the objections. Objections received after this time limit should not be considered, unless the property owner shows just cause under statutory extension provisions.

The assessor should be given adequate time to respond to the objection by reviewing assessment records, inspecting the property, and interviewing the property owner. All results (decisions or withdrawals) should be sent in writing to all parties in all cases. With the written decision, the assessor should include appropriate forms for appeal to the local or regional appeal board.

6.2 The Local or Regional Appeal Board

The property owner should be allowed adequate time from the date of mailing of the written decision to appeal that decision to the local or regional tax appeal board. The local or regional tax appeal board should establish a timely schedule for hearings of either the record or a de novo case. Rules and regulations should advise a property owner or taxpayer of the type of case to be heard. After a hearing, the local or regional appeal board should be required to send a written decision to the parties and include the appropriate forms for appeal to the state or provincial property tax tribunal.

6.3 The State or Provincial Property Tax Tribunal

The property owner or taxpayer should be allowed adequate time from the date of mailing of the decision of the local or regional appeal board to appeal that order to the state or provincial property tax tribunal. The state or provincial property tax tribunal should establish a timely schedule for hearings.

7. The Hearing

The hearings of the boards or tribunals should be open to the public, and a complete transcript should be made of all proceedings. Notification of the hearing time and place should include the time allotted to the case and a brief explanation of procedures and rules of evidence.

To expedite appeals, boards, regardless of size, should have the option of sitting in smaller panels or of having appeals heard by a single board member, or master. Further, if the appeal warrants, the panel could request that the materials be put into an expedited written briefing by the parties. A final decision would still reside with the entire board.

The assessor or appropriate assessing personnel should provide, under oath, copies of the original assessment, ratio study data, if applicable, and a copy of any previous decision. Witnesses should be allowed to provide expert testimony in support of the assessing jurisdiction's actions.

Once under oath, the property owner should be given adequate time to explain why the decision should be altered. This explanation may be supported with written evidence and the testimony of expert witnesses.

An oral decision, if possible, can be given at the hearing or the matter can be reserved and a written decision provided after consideration. An oral decision would, of necessity, have to be followed by a written decision. Decisions should be rendered within a reasonable amount of time from the conclusion of the hearing. Timeliness of decisions is critical to all involved, especially if the decision is subject to further appeal.

Assessment Standards of the International Association of Assessing Officers

Guide to Assessment Standards

Standard on Assessment Appeal

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STANDARD ON **Automated Valuation Models (AVMs)**

A criterion for measuring fairness,
quality, equity and accuracy

(Approved July 2018)



IAAO

INTERNATIONAL ASSOCIATION
of ASSESSING OFFICERS

STANDARD ON AUTOMATED VALUATION MODELS (AVMS)

STANDARD ON AUTOMATED VALUATION MODELS (AVMS)

Revised Approved, July 2018

International Association of Assessing Officers

IAAO assessment standards represent a consensus in the assessing profession and have been adopted by the Board of Directors of the International Association of Assessing Officers (IAAO). The objective of the IAAO standards is to provide a systematic means for assessing officers to improve and standardize the operation of their offices. IAAO standards are advisory in nature and the use of, or compliance with, such standards is voluntary. If any portion of these standards is found to be in conflict with national, state, or provincial laws, such laws shall govern. Ethical and/or professional requirements within the jurisdiction^[1] may also take precedence over technical standards.

[1] For example, USPAP, CUSPAP, IVS, EVS.

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The International Association of Assessing Officers, formerly the National Association of Assessing Officers, was founded for the purpose of establishing standards for assessment personnel. IAAO is a professional membership organization of government assessment officials and others interested in the administration of the property tax. Over the years IAAO members have developed assessment practice and administration standards and many of these standards have been adopted by state and international oversight agencies, and some have been incorporated into legislation.

IAAO continues at the forefront of assessment in North America and has been expanding its reach to the global community for the last five decades. Because standards form the rules by which North American assessors perform their duties, they may not be directly applicable to an overseas audience. The standards have been updated to also present the broad principles upon which the rules are based. IAAO believes those principles may be adapted to many differing statutory and regulatory scenarios worldwide.

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STANDARD ON AUTOMATED VALUATION MODELS (AVMS)

1. SCOPE

The standard provides principles, guidance, and best practices for developing and using AVMs for the valuation of real property. The standard is organized with each major section beginning with the main principles covered in that section, followed by a description of all principles. Greater detail is found in appendices. Following are the key principles within this section.

Principles

- *Transparency*
- *Public trust — providing confidence for the stakeholders*
- *Broad applicability*
- *Based on statistically sufficient information*
- *Certification and quality assurance*

This standard provides guidance for public and private sector property valuation that depends on Automated Valuation Model (AVM) systems. AVMs can be used when sufficient economic data exists to permit development of representative and valid statistical samples. Models that adhere to the best practices for data verification, data analysis, market analysis, and ongoing quality control present the most reliable value estimates.

The general format of development and use of an AVM described in this standard is shown in *Figure 1*.

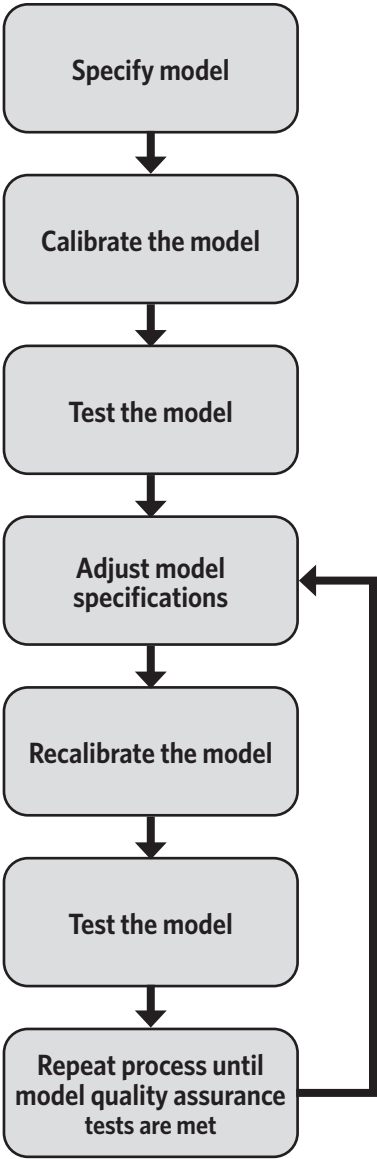


Figure 1

2. PRINCIPLES

- TRANSPARENCY
- Public trust — providing CONFIDENCE for the stakeholders
- Broad APPLICABILITY
- Based on statistically SUFFICIENT information
- Certification and QUALITY ASSURANCE
- Involvement of a QUALIFIED market analyst is highly advisable
- AVM products lead to the development of additional valuation services (APPLICABILITY)
- AVM value estimates developed and operated under this standard may be considered an appraisal (APPLICABILITY)
- Quality assurance for all phases of AVM development and operations is advised (QUALITY ASSURANCE)
- AVM development is a multiple step iterative process (STATISTICAL PRINCIPLES)
- Data availability will influence the model development (SUFFICIENCY)
- Data should be STATISTICALLY verified
- Quantitative data is more objective (STATISTICAL PRINCIPLES)
- Qualitative data is more subjective (STATISTICAL PRINCIPLES)
- Model specification should follow recognized APPRAISAL PRINCIPLES
- Adjustments should be considered for location and market trends (APPRAISAL PRINCIPLES)
- Market analysts should review the data to insure representativeness
- Variable selection requires in-depth knowledge of appraisal and advanced statistical analysis (QUALIFICATION)
- Account for the effects of location (APPRAISAL PRINCIPLES)
- The market analyst should statistically review the reasonableness of the data (STATISTICAL PRINCIPLES)
- Multiple years of market data may be used (STATISTICAL PRINCIPLES)
- Independent appraisals may be used as proxy sales when dealing with limited sales (APPRAISAL PRINCIPLES)
- Use of standardized geographical coordinate systems aids in the capture of location influences (APPRAISAL PRINCIPLES)
- Use of qualitative data requires specialized knowledge (QUALIFICATION)
- Data must be sufficient and representative (SUFFICIENCY)
- Statistical methods should form the basis of quality assurance (QUALITY ASSURANCE)
- Continuous run models require periodic statistical testing
- Sales and economic data should be open market transactions (APPRAISAL PRINCIPLES)
- Both point estimates and reliability measures should be used in evaluating central tendency and variability of results (STATISTICAL PRINCIPLES)
- Samples should be evaluated for outlier influence (STATISTICAL PRINCIPLES)

- Holdout samples or cross validation methods should be used to validate the model's performance (STATISTICAL PRINCIPLES)
- Documentation needs to be available to explain and support the model results (TRANSPARENCY)
- The type of AVM dictates the nature of documentation (PROPORTIONALITY)
- Report design should clearly indicate the value results output by the model (TRANSPARENCY)

3. INTRODUCTION

Principles

- *Involvement of a qualified market analyst is highly advisable*
- *AVM products lead to the development of additional valuation services*
- *AVM value estimates developed and operated under this standard may be considered an appraisal*
- *Quality assurance for all phases of AVM development and operations is advised*
- *AVM development is a multiple step iterative process*

3.1 DEFINITION OF AUTOMATED VALUATION MODEL (AVM)

A mathematically based computer software program that market analysts use to produce an estimate of market value based on market analysis of location, market conditions, and real estate characteristics from information that was previously and separately collected. The distinguishing feature of an AVM is that it is a market appraisal produced through mathematical modeling. Credibility of an AVM is dependent on the data used and the skills of the modeler producing the AVM. AVMs should be developed by appropriately qualified market analysts, e.g. appraisers/valuers, who use statistically-based applications to analyze data and select the best simulation of market activity for the analysis of location, market conditions, and property characteristics from previously collected data. AVMs are designed to generate value estimates for properties at specified points in time (retrospective or prospective dates as required by client).

3.2 EXAMPLES OF SPECIFIC AVM PROCEDURES

- AVM Assisting Appraisers [Preliminary Data AVM]
- Appraiser-Assisted AVM [Interactive Valuation Application AVM]
- Repetitive AVM [Continuous Application AVM]
- Blended or Cascading AVM
- Research AVM

AVMs use:

- sales comparison approach;
- cost approach;
- income approach

3.2.1 Preliminary Data AVM [AVM Assisting Appraisers]

After analysts develop the AVM application, appraisers use these AVMs in their professional assignments. Some common uses are:

- Location adjustments
- Time trend adjustments
- Contributory value of building features

The AVM sorts substantial amounts of electronic data and provides selected raw or basic data for interpretation by the appraiser. Appraisers may use the AVM applications to support their opinions of value. These appraisers may provide explanations and use their own data, which they have collected or properly verified.

3.2.2 Interactive Valuation Application AVM [Appraiser-Assisted]

This is a mathematical model application, or a set of applications, that is/are developed, calibrated and checked by analysts with valuation knowledge. In these model applications, an appraiser reviews results and then uses professional judgement to consider modifying model results. Any modification should be subject to quality assurance testing.

3.2.3 Repetitive AVM [Continuous Application AVM]

In this type of AVM, mathematical applications are prepared by an analyst after market analysis. The AVM application is intended to be used repeatedly to project values for future dates, without recalibration but through the addition of new sale prices and economic information. This process may reduce the reliability of the AVM application. If analysts are unsure of the valuation application's ability to generate prospective valuations, the AVM application should be recalibrated.

3.2.4 Blended or Cascading AVM

The cascade process allows application of two or more AVMs using a single interface. The cascade process allows the user to leverage the strengths of multiple AVMs by fitting for location, property type, and projected price range. The weakness of the cascading system is that the user can manipulate the final estimates of value.

3.2.5 Research AVM

Research AVMs are general valuation tools which resemble production AVMs in design, but have limited functionality. Research AVMs are used for initial testing of concepts and are only used for testing purposes. They are used in academic research to measure trends in real estate values. They are also used in public administration such as projecting values for planning or underwriting purposes.

3.3 PURPOSE OF AN AVM

The purpose of an AVM is to efficiently provide an accurate, uniform, equitable estimate of fair market value. Fair market value defined; allowable variance; factors to be considered in determining fair market value; generally accepted appraisal procedures to be utilized. “Fair market value” means the amount in terms of money that a well-informed buyer is justified in paying and a well-informed seller is justified in accepting for property in an open and competitive market, assuming that the parties are acting without undue compulsion. All AVM values should be reviewed for reliability. AVM values generated in compliance with regulations of the governing bodies are considered appraisals. Models that adhere to the best practices for data verification, data analysis, market analysis, and ongoing quality assurance present the most reliable value estimates.

3.4 DEVELOPMENT AND APPLICATION OF AVMS

AVMs are developed using appraisal principles and techniques. Data are acquired and analyzed to develop a market valuation model that can be applied to equivalent properties (sold or unsold) in the same market area. Two major components of valuation modeling are specification and calibration. The model specification process identifies property characteristics (variables) that impact and demand and develops the proposed model structure. Model calibration is the process of deriving coefficients for the variables previously specified in addition variables are created through transformations to avoid collinearity problems. Specification and calibration techniques vary with the purpose of the AVM, type of property, available data, and the experience and knowledge of the market analyst. The basic steps in the development of an AVM are:

- Creation of a scope of work
- Identification and acquisition of property data
- Exploratory data analysis
- Stratification
- Determination of data representativeness
- Model specification
- Model calibration
- Quality assurance
- Model application and value review

Model specification, calibration, and quality assurance are iterative processes that are repeated until statistical diagnostics are satisfactory.

3.4.1 *Scope of Work*

The scope of work defines the type of property and geographic area in which the AVM will be applied, and the steps required to develop and implement the AVM. The scope of work should state all assumptions, special limiting conditions, and hypothetical conditions.

A key assumption in many AVM applications concerns the current use of the property. Most AVMs implicitly assume the current use is the highest and best use.

3.4.2 Identification and Acquisition of Property Data

Property data needs to be identified and acquired prior to developing an AVM. If the data is not already available, the market analyst should determine what property data is necessary. Property data elements that have a relationship to value may dictate the data collection methods.

Data falls into three broad categories: property data, locational data, and market data. Property data are composed of elements that represent physical attributes of the property. Locational data takes into consideration market demographics, traffic, land use policies, and other geographic factors. Market data include sales, income, and replacement cost information. Data can be acquired from multiple sources:

- Internal resources
- Government sources
- Third party sources
- Public (news) sources
- Client and customer

A primary assumption is that data is reliable when adequate quality assurance is performed through exploratory data analysis. Checks and edits should be made as new data is introduced into the system to ensure compatibility with model specifications.

3.4.3 Exploratory Data Analysis

Data characteristic or attribute analyses include:

- **Data quality review** — completeness and consistency of data, outlier identification and removal
- **Data distributions** — frequency of value-related characteristics
- **Market patterns** — trends in property characteristics, locational analysis using sales data
- **Time trends** — sales frequency and sales dates
- **Discernable patterns and events in the market place** which show effect on buyers and sellers
- **Data element reasonableness**

3.4.4 Stratification

In stratification, properties are organized into homogeneous groups based on factors such as use, physical characteristics, or location. Properties are first stratified by use such as agricultural, apartments, commercial, industrial, or residential. Additional stratification by physical characteristics or value ranges may be performed to minimize the differences within strata and maximize differences among strata. Geographic stratification may be useful wherever the value of various property attributes varies significantly among areas and is particularly effective when housing types and styles are relatively uniform within areas (IAAO 2011, 139–143). However, excessive stratification may provide limited variation in the data. It may be possible to create a global valuation model without stratification, if adjustments for strata attributes (location, use, age, style, etc.) are included as part of the model specification and calibration processes.

3.4.5 Data Representativeness

Data used in developing an AVM model should reflect the subject property or population of properties to produce quality results. The available sales may limit representativeness and applicability of the AVM model. Adequate data means enough sales or economic data with given features for proper adjustments. (See section 6.1)

3.4.6 Model Specification

Model specification is the process of determining the format (mathematical format, such as additive and nonlinear) of the AVM and identifying the variables to be used in the model. (See section 3 and Appendix A)

3.4.7 Model Calibration

Calibration is the process of determining the coefficient associated with each variable, evaluating the significance of the computed coefficients, and examining the coefficients in an AVM to insure they are logical. (See Section 4). Several statistical tools for calibration are found in Appendix B.

3.4.8 Quality Assurance

An AVM should be tested to determine if it meets required accuracy and uniformity standards before initial use and after implementation, depending on risk management policies. This is accomplished through statistical diagnostics and ratio studies in which value estimates are compared to actual values for the same properties. GIS can be used to analyze the spatial trends of the value estimates. Before it is implemented, the AVM also should be tested using sale prices that were not used in the calibration process (e.g., holdout sample or other cross-validation techniques). Properties with unusually large residuals, atypical characteristics, or extreme ratios of model estimates to sale prices, termed “outliers,” should be reviewed. Outliers are cases where it is likely that the sale prices (or other value serving as the dependent variable in the model) are not representative, the data are partially incorrect, or the property exhibits atypical features that cannot be adequately accounted for in the model. If the data cannot be corrected, the property should be removed from the sample. (See Section 6)

3.4.9 Model Application and Value Review

Once tested and validated the AVM application can be applied to properties of the same type in the area or region where the model applies. These values should be reviewed for reasonableness and consistency.

4. DATA QUALITY

Principles

- *Data availability will influence the model development*
- *Data should be statistically verified*
- *Quantitative data is more objective*
- *Qualitative data is more subjective*

Data quality includes evaluation of data availability and accuracy of all physical and market data including property identification and location (e.g., Exploratory Data Analysis).

4.1 DATA AVAILABILITY

The integrity and availability of data will influence the specification of the model and may indicate the need for revisions in the specification and/or limit the usefulness of the resulting value estimates. Attributes used in the model should be examined for quality, completeness and to ensure that attributes are adequately represented. Publicly available data from sources, such as assessors and commercial sector third-party information services are the basis for most AVMs.

When using second and third generation data, it is good practice to verify the accuracy of elements found in the data prior to inclusion in the model. The AVM market analyst should use statistical data analysis to confirm the assumption that the quality of the data will provide reasonable support for the modeling process. The analyst should determine if the data is sufficiently accurate for the intended use.

AVM models are based on a sample of the population. In preparation for model specification the analyst should review the sample data to insure representativeness of the population to which the model will be applied.

4.2 DATA VERIFICATION

Data verification is common in government assessors' AVM development. Market analysts should verify data quality by its relationship to sale prices of properties with similar characteristics. When data items that appraisers would consider highly correlated to value do not prove to have that relationship (based on a correlation matrix or regression t or F values, etc.), this may be an indication of inconsistent data collection or scarcity of data. Data that are inconsistent or with elements missing from the sales file should not be used in the model specification or calibration phases.

4.3 QUALITATIVE AND QUANTITATIVE DATA

Data may be qualitative or quantitative. Quantitative data are objective and can be counted or measured. Ideally, qualitative data are discrete with categorical sublevels. Qualitative data may be descriptive and subjective. Qualitative data such as condition can significantly contribute to the overall value components of land, buildings, and overall general values.

4.4 PROPERTY IDENTIFICATION AND LOCATION

Geographic information systems (GIS) can be used to match AVM system property addresses to addresses in national address files that identify and locate properties by latitude and longitude. For more information on parcel identification see Standard on Digital Cadastral Maps and Parcel Identifiers.

4.5 DATA QUALITY ASSURANCE

Data used in model specification and calibration should pass the following screening tests:

1. Data should be sufficient to produce reasonable valuation models with regard to the property characteristics utilized. In general, the number of sales should be at least five times (fifteen times is desirable) the number of independent variables.
2. Sales used should be valid transactions that reflect market value. Data should be consistent across the population of properties to be valued using the model. Examples include quality, physical condition, and effective age.
3. Property characteristic data should be accurate for use in the model and its application to the population of properties.
4. Sales data and characteristics should be representative of the underlying population or the subset of properties that may be subject to valuation using the AVM.

For transparency, data quality assurance provides a means of evaluating the application of the developed AVM formula to a specific population of properties. The product of that evaluation may include the acceptable ranges of specific property characteristics and ranges of estimated market values to which the model can be applied.

In some circumstances sales used in developing AVM models may not be representative of subject properties for which value estimates are sought. This could be the case, for example, if the model contained few sales with prices or characteristics like those in a high end residential community under development. In this instance, no estimate of value should be provided at those points where the estimates become unreliable due to the data falling outside of acceptable parameters (IAAO Standard on Ratio Studies).

As AVM use increases, new commercial data brokers are emerging to service model developers and operators. These new data warehouses aggregate substantial amounts of data from all available sources, including the use of data scraping. If data scraping is to be used as a data source, it should be done with an understanding of the data format, a quality control plan to keep the data scraping program up-to-date with data formatting changes, and a plan to handle missing data and data in an unexpected form. When employing data scraping consideration must be given to terms of use, data ownership and legal requirements on data use.

5. SPECIFICATION AND CALIBRATION OF AVM MODELS

Principles

- *Model specification should follow recognized appraisal principles*
- *Adjustments should be considered for location and market trends*
- *Market analysts should review the data to insure representativeness*
- *Variable selection requires in-depth knowledge of appraisal and advanced statistical analysis*

In practice, specification and calibration are performed in an iterative process, which includes the following steps:

1. Specify a model
2. Calibrate the model
3. Test the model
4. Make adjustments to model specification
5. Recalibrate the model
6. Test the model
7. Repeat the process until model quality assurance tests are met

5.1 MODEL SPECIFICATION

AVM models are based upon one or more of the three approaches to value (cost, sales comparison, and income). Model specification starts with review of the data to determine which type of valuation model or models is/are likely to yield the optimal results with respect to the desired quality. Model specification is based on data analysis and appraisal theory. Specification techniques using the three approaches to value are outlined in Appendix A: Model Specification.

5.2 CALIBRATION TECHNIQUES

Model calibration is the development of coefficients through market analysis of the variables in the model. Most AVMs rely on statistics to test the calibration quality. The market analyst may make model specification adjustments via transformations and other techniques until the coefficients are optimized. In addition, coefficient signs should be reasonable and in line with economic theory (i.e.: if there is a statistically significant negative square foot or meter coefficient, the modeler should adjust the specification). Model calibration is part of an iterative process that is repeated until specified statistical diagnostics are met.

The various methods and procedures (some examples are: regression, artificial neural networks) used to calibrate the AVM drive accuracy and credibility of the estimate. Data integrity and the skill level of the analyst contribute to the accuracy of any calibration technique. Users of AVM results should be aware of the interdependence between analyst skills and calibration technologies.

5.3 TIME SERIES ANALYSIS

Time series analyses are techniques that can be used to measure the cyclical movements, random variations, seasonal variations, and cyclical trends observed over time. In property valuation, these analyses can be used to develop a multiplier or index factor to update existing appraised values or to adjust sale prices for individual properties to a valuation date. Since values can change at different rates in different markets, separate factors should be tested for each property type and market area. Specific methods are outlined in Appendix D: Time Series Analysis.

5.4 INDEPENDENT VARIABLE SELECTION FOR MODELS

Modelers should include statistically significant and reasonable variables. Variables (e.g., property characteristics) that are highly correlated with other variables or have a statistically insignificant effect should be excluded or used with caution in the model. Developing a comprehensive criterion for variable selection requires in-depth knowledge in appraisal of various property types, advanced statistical analysis, and mathematics.

5.5 LOCATION

Variables to express the influence of location are critical in any model. The effect of factors external to the property should be determined. To do so, equivalent properties may be grouped by geo-economic area or analyzed at the individual property level. More thorough location analysis should reduce the need for property variables that correlate with location. Methods for analyzing locational influence are explored in Appendix C: Statistical Methods for Developing Location Adjustments.

Geographic stratification is appropriate wherever the value of various property attributes varies significantly among areas and is particularly effective when housing types and styles are relatively uniform within areas. In lieu of geographic stratification, geographic coordinates may be used to account for location. In some populations location stratification and adjustments may not be necessary when model variables already explain most of the difference. (E.g. one location sells for more because it has a lot of homes in “very good” condition. If this is the only reason for the value difference, a variable for “condition” would account for the difference and no further segmentation or locational adjustments would be needed. It also helps make values more defensible

6. MARKET ANALYSIS AND INTENDED USE

Principles

- *Account for the effects of location*
- *The market analyst should statistically review the reasonableness of the data*
- *Multiple years of market data may be used*
- *Independent appraisals may be used as proxy sales when dealing with limited sales*
- *Use of standardized geographical coordinate systems aids in the capture of location influences*
- *Use of qualitative data requires specialized knowledge*

Market analysis steps are similar to those in traditional appraisal, except that more detailed data is used.

Market analysis requires:

- Identification of the property class/type to be valued
- Identification of intended use
- Identification of limited data response
- Identification of the valuation approach(es) to be used
- Identification of property characteristics that have the greatest influence on value
- Identification of geolocational and economic influences

6.1 IDENTIFY THE PROPERTY CLASS/TYPE TO BE VALUED

The AVM requirements to value different property types can vary significantly. An AVM should be optimized to provide accurate estimates of value for specific property types or classes.

6.2 IDENTIFY INTENDED USE

Once the property class or type is determined, the availability of property data and economic information should be used by the analyst to determine the applicability of the estimates of value. Examples of intended use are mortgage loan approval, evaluation of investment portfolios, valuing by assessment jurisdictions, and providing value estimates to the public.

6.3 IDENTIFY LIMITED DATA RESPONSE

Regardless of the property type, when economic or sales information is limited, sales and income data can be expanded by using data from multiple years for similar property types. This may require time trending and related adjustments of sale prices to bring them to current market levels. Independent appraisal of individual unsold properties can also provide comparable data as additional benchmarks.

6.4 IDENTIFY THE VALUATION APPROACH(ES) TO BE USED

The comparable sales, income and cost approaches may be used for all property types based on the data and intended use of the AVM application. Analysts should consider whether land and improvement values are to be presented as separate values from total market value.

When sufficient sales data is available the comparable sales approach is preferred.

When sufficient lease and rental information is available, the income approach may provide the best indicator of market values for income producing properties such as apartments, commercial, industrial and retail properties.

The cost approach provides good indicators of value for specialized properties and properties that have been recently built. The cost approach is also valuable when there is limited sales and/or income information.

Land market analysis may involve only land property characteristics or may be part of improved property market analysis.

AVM developers and analysts should understand the intended use of an AVM before choosing the valuation approach. All recognized valuation approaches may provide indicators of market value.

6.5 IDENTIFY PROPERTY CHARACTERISTICS THAT HAVE THE GREATEST INFLUENCE ON VALUE

The property characteristics that have the greatest influence on value should be identified. Most AVMs use size as the most important variable; land size for land models and building size for improved properties. Other important property characteristics are: age (year built), condition and location. Additional, important characteristics are use of property, type of property, and quality of construction.

Quantitative property characteristics are more reliable and objective. This type of data may be more consistent for use in a model specification. The use of qualitative property characteristics requires additional training and experience because it relies on subjective judgements about the property, therefore the qualitative property characteristics may be more difficult to adapt in model specification.

6.6 IDENTIFY GEOLOCATIONAL AND ECONOMIC INFLUENCES

Geographic coordinate systems may enhance the ability to identify spatial influences. Location analysis relates largely to identifying current use groups of properties subject to similar influences. Economic or outside influences (location) may be dependent on the use of the property. Nuisances for residential properties, such as a railroad track or heavy traffic patterns, could be an important amenity for commercial and industrial properties. It is important that locations adjustments not be based on factors restricted by law or regulation. For example religious orientation.

6.7 CAUTIONS

An analyst may assume that the highest and best use of a property is its current use; however, market analysis may prove otherwise. For example, improved properties (excluding agricultural properties), where the land value is greater than the improvement value, the highest and best use may be subject to change.

Commercial and industrial sales often contain significant amounts of intangible items, which contribute to the reported final settlement price, but are not part of the underlying real property market value. Adjustments during the sales validation process may be required to compensate for the intangible items included in the sale price. Sold properties that include significant amounts of intangible values may be categorized by the analyst as outliers and trimmed.

7. QUALITY ASSURANCE

Principles

- *Data must be sufficient and representative*
- *Statistical methods should form the basis of quality assurance*
- *Continuous run models require periodic statistical testing*
- *Sales and economic data should be open market transactions*
- *Both point estimates and reliability measures should be used in evaluating central tendency and variability of results*
- *Samples should be evaluated for outlier influence*
- *Holdout samples or cross validation methods should be used to validate the model's performance*

Quality assurance procedures are critical for testing the quality of the data and the applicability of the model.

7.1 MODEL REPRESENTATIVENESS

Samples may become less representative in dynamic markets. In this case, AVM estimates may suffer the effects of time-related errors. When adding sales to an existing model over time, care should be taken to insure the representativeness of the latest sales. During the operational lifetime of the model, periodic quality assurance should be used to capture time related errors.

7.2 MODEL DIAGNOSTICS

The specific diagnostic tools available to market analysts and users of automated valuation models will vary with the model methodology employed. Multiple regression analysis provides the market analyst and user with a wide range of diagnostic statistics that may not be available with other calibration methodologies. In any event, the market analyst must make effective use of the diagnostic tools available during model calibration and be prepared to explain their use and significance to end users.

Standards do not exist for goodness-of-fit statistics (such as the coefficient of determination) or measures of individual variable significance (such as the t-statistic). Nonetheless, the market analyst should be able to explain how those statistics were used and how they relate to the predictive quality of a specific model in relation to the sales data available for calibration.

Various confidence score methods may be found in vendor applications and are referred to in United States federal guidelines (see: Interagency Guidance, 75 Federal Register at 77,469). However, parameters and methodologies for these techniques have not been standardized and it may be difficult to compare similarly named measures produced by different vendor-provided models. This standard takes no position on the validity or usefulness of such guidance.

7.3 RATIO STUDIES

Ratio studies use statistics based on mathematical comparisons between estimated values and sale prices or other dependent variables subject to calibration. The ratios are subjected to statistical analysis to determine central tendency (level), and vertical (value related) and horizontal uniformity or variability. Variability statistics provide information about the degree to which model-determined values are uniform and consistent. While ratio study statistics provide valuable guidance as to the overall quality of the AVM value estimates, statistical measures do not specify the accuracy of individual property estimates.

Sales based ratio studies are among the most objective methods for testing the performance and quality of any valuation system. Because the development and utilization of AVMs are ongoing, without definitive beginning or end dates, sales ratio studies should be performed on a regular, periodic basis to establish the current performance status of the model. Guidance on calculating the statistics recommended in this section is found in the Standard on Ratio Studies. Studies should also be performed on holdout samples to check vertical equity.

7.3.1 Measures of Central Tendency

Measures of central tendency of the ratio of estimated values to sale prices provide an indication of the overall level, with respect to market value. Point estimates of these measures are calculated as shown in table 1, found in Appendix G: Statistical Tables. The median ratio, considered in conjunction with its confidence interval, and distribution of ratios using quantiles and the COD should be used to evaluate whether AVM results attain market value standards.

7.3.2 Measures of Variability

Several statistical tests are available and should be used to determine the degree of variability (uniformity) in the results of any AVM model. Common measures of variability include the coefficient of dispersion (COD) and coefficient of variation (COV). While the COV, based on the standard deviation, is typical in general statistical testing, because of potential for greater distortion of COVs due to outlier inclusion, the COD is recommended as the variability statistic of choice.

7.3.2.1 Coefficient of Dispersion (COD)

In real estate appraisal, the most commonly used measure of variability is the COD, which measures the average absolute percentage deviation of the ratios from the median ratio. The interpretation of the COD does not depend on the assumption that the ratios are normally distributed. Standards for interpreting CODs are contained in the Standard on Ratio Studies.

7.3.2.2 Coefficient of Variation (COV)

The COV is another measure of variability but it may be subject to more outlier effects than the COD. When the ratios are normally distributed the standard deviation and COV enable more specific predictions about the occurrence of various ratios in the population.

7.3.3 Measures of Reliability

An AVM quality assurance statistic calculated from a sample of properties is a point estimate of the corresponding unknown population parameter. A point estimate differs from the unknown value of the population parameter because of sampling error, inherent in every sample. For each measure of AVM quality assurance, the analyst should consider a measure of reliability which explicitly considers such sampling error. Confidence intervals are the most commonly used measure of reliability. A confidence interval is an estimate of the range of values in which an unknown population parameter lies with a given degree of statistical confidence. Confidence intervals can be calculated about any quality assurance measure. For example, if the analyst chooses a 90% confidence level and the sample median sales ratio point estimate from values predicted by the AVM for properties

with known sale prices is 95% with a confidence interval lower limit of 88% and upper limit of 102%, then the true median level for the population is between 88% and 102% with 90% confidence. Reliability improves as confidence intervals become narrower, assuming the confidence level remains constant, because the unknown true value for the population parameter falls within a smaller range around the point estimate. However, narrower confidence intervals that result from lower confidence levels may appear to indicate more reliable results, but add uncertainty (i.e. a 70% confidence level will produce a narrower interval than a 90% confidence level, but we have less statistical confidence that the true population parameter is inside the interval).

It is important to form conclusions about AVM quality assurance measures through statistical hypothesis testing because the AVM will ultimately be applied to the population of properties from which the sample was drawn. It is proper to conclude compliance with quality assurance standards unless there are statistical tests that prove, with a high degree of certainty, that standards have not been met. Confidence intervals may be used as such statistical tests and allow conclusions about the unknown population parameter. For example, say the standard is that the level of the value estimate indicated by model results should be within 10% of market value. This standard should be considered met if a 90% two-tailed confidence interval around the median sales ratio overlaps the range of 90% to 110% of market value. Confidence intervals for the applicable measures of appraisal (or AVM value estimate) level are demonstrated in table 1 in Appendix G: Statistical Tables. There are also formulas for developing confidence intervals around the Coefficient of Dispersion (COD) and Coefficient of Price-Related Bias (PRB) (Gloudemans 2011).

7.3.4 Price Related Vertical Inequities

The COD and COV relate to dispersion among the ratios in a stratum, regardless of the value of individual parcels. Another form of dispersion may be systematic differences in the AVM, AVM-assigned values of low-value and high-value properties, termed “vertical” inequity. An index statistic for measuring vertical inequity is the PRD (Price-Related Differential). This statistic should be close to 1.00. Measures above 1.00 tend to suggest regressivity while those below 1.00 tend to suggest progressivity. The PRD may not be a reliable measure of vertical inequities, when samples are small, or the weighted mean is heavily influenced by several extreme sale prices. If not representative, extreme sale prices may be excluded from the model prior to the calculation of the PRD. Another measure of vertical inequity is the PRB, which is found by regressing percentage differences from the median ratio on percentage differences in value. The PRB provides a percentage by which model-derived value estimates rise or fall as values double. As a general matter, the PRB coefficient should fall between -0.05 and 0.05 . PRBs for which 95% confidence intervals fall outside of this range indicate that one can reasonably conclude that assessment levels change by more than 5% when values are halved or doubled. PRBs for which 95% confidence intervals fall outside the range of -0.10 to 0.10 , indicate very serious vertical inequity. Negative PRBs indicate regressivity while positive PRBs tend to indicate progressivity. See IAAO Standard on Ratio Studies.

7.3.5 Importance of Sample Size

There is a general relationship between statistical precision and the number of observations in a sample drawn from a given population: the larger the sample, the greater the precision and the higher the confidence in the model results. All valid sales should be used unless this results in non-representativeness.

7.3.6 Outliers

Ratios that differ greatly from measures of central tendency may be considered outliers. When the number of outliers is large relative to sample size, the outliers tend to distort ratio study results. Some statistical measures, such as the median ratio, or median percent error are resistant to the influence of outliers. However, the mean and COV, and, to a lesser extent, the COD, are sensitive to extreme ratios. Trimming outliers may be acceptable. See Standard on Ratio Studies for techniques and limitations.

7.4 HOLDOUT SAMPLES

Holdout samples represent groups of valid sales selected in a manner that their characteristics approximate those of the population of properties covered by the automated valuation model. Statistical analysis of such samples can be used to verify results based on the sample of sales used in model development. AVMs can over fit data, and holdout samples are a method to protect against simply choosing the model or models that over fit the most. Inherent in the definition of holdout samples is the premise that the sales not be used in developing the original model. Sales that occur after model calibration can also be used in testing and validating the model. This method may be preferable when few sales are available. Alternatively, cross validation techniques can be used in lieu of traditional holdout samples.

The use of holdout samples to test and verify model-provided value estimates provides an analysis independent from the data used in developing the model. As such, statistical measures of level and variability on value estimates produced by the model, but compared to the holdout sales, would be expected to differ from those directly used in developing the model. The critical issue is the degree of difference in these measures. If there are substantially worse quality assurance statistics in the hold out sample, recalibration of the AVM model may be necessary.

7.5 FREQUENCY OF UPDATES

AVM estimates of value are based on formulas derived from market analysis of a specific geo-economic area during a specified period. Because AVM value estimates are dated, AVM providers should be prepared to update those estimates for significant changes in market conditions and periodically update the underlying models. Movements in the market and the availability of market information should dictate the frequency of this process. Ratio studies and ratio study standards can be used to detect values that drift out of alignment, thereby indicating a need for model updates.

7.6 RECONCILIATION OF VALUES

When a market analysis process involves more than one valuation model, a process of reconciliation is the best practice to adjust to a single final estimate of value. Reconciliation is the process of reviewing the quality/quantity of available data and determining which model to emphasize. Reconciliation includes quality assurance and performance analysis such as ratio studies.

8. DOCUMENTATION AND REPORTS

Principles

- *Documentation needs to be available to explain and support the model results*
- *The type of AVM dictates the nature of documentation*
- *Report design should clearly indicate the value results output by the model*

There should be detailed documentation to support the market analysis process and the final value formula. This documentation should consist of a file that supports the process and methods used to arrive at a final estimate of value and should be available to organize into a report upon request. This report may provide quality assurance statistics.

Some AVM reports are limited to a property identifier and AVM value. Other reports will provide additional information as requested by the clients. AVMs may use additional documentation in separate reports that support the entire AVM model process with individual reports per property that are considered the AVM report.

When more than one value estimate is produced for a subject property, documentation should contain a thorough explanation of the procedures followed to reconcile those candidate estimates into a final estimate of value. Those procedures should include analysis of the relative strengths and weaknesses of each model, and explanation of how that analysis results in a final value estimate.

At a minimum documentation should be comprehensive enough to enable compliance with professional, local, regional or national guidelines and laws. Examples and a list of uses are found in Appendix H: Uses of AVM Reports.

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APPENDIX

APPENDIX A. Model Specification

Model specification is the review of the data to determine which valuation models yield the best possible results. Model specification is based on the data analysis and appraisal theory. Model quality is dependent on the experience of the market analysts and the quality of the data. Sample model specifications are provided throughout this appendix.

A.1 COST APPROACH

The cost approach is an indirect method of arriving at market value, based on specification of replacement cost new less depreciation plus market derived land value. The cost approach is calibrated by review of construction costs and sales. This approach generally produces more acceptable results for newer properties, specialized properties and properties with insufficient sales. Model specification for the cost approach requires the estimation of separate land and building values.

Two cost approach formulas for model specification are:

$$MV = \varpi GQ \times [(1 - BQ_d) \times RCN + LV]$$

Where

- *MV* is the market value estimate;
- ϖGQ represents the general qualitative variables such as location, economic adjustments, and time of sale;
- BQ_d is a building qualitative variable representing depreciation;
- *RCN* is the replacement/reproduction cost new;
- *LV* is the land value.

(Gloudemans 1999, 124)

And

$$MV = \varpi GQ \times [(\varpi BQ \times \Sigma BA) + (\varpi LQ \times \Sigma LA) + \Sigma OA]$$

Where

- *MV* is the estimated market value;
- ϖGQ is the product of general qualitative variables;
- ϖBQ is the product of building qualitative variables;
- ΣBA is the sum of building additive variables;
- ϖLQ is the product of land qualitative variables;
- ΣLA is the sum of land additive variables; and
- ΣOA is the sum of other additive variables.

If a third party provides the cost tables, it is the responsibility of the AVM market analyst to calibrate the cost tables to the local market to provide a valid indicator of value by the cost approach. It is also the responsibility of the AVM market analyst to fully understand the assumptions made by the third party in constructing the cost tables, the original source of the construction costs used,

and the way the unit-in-place costs were aggregated by the third party to arrive at the published square foot rates.

A.2 SALES COMPARISON APPROACH

The Sales Comparison Approach can be implemented as a comparable sales model or as a direct market model.

A.2.1. Comparable Sales Model

There are two steps in a comparable sales routine. The first step involves the selection of the sales most comparable to the subject property, possibly utilizing a dissimilarity measure, such as the Minkowski or Euclidean distance metrics, and a series of data filters. The second step adjusts the sale prices of the comparable sale properties to the subject property based on difference in data characteristics. The adjusted sale prices are then used to determine the estimate of value for the subject property. Both steps in the comparable sales routine may be supported by statistics or a statistically-based direct market model. Model specification for the comparable sales method can be summarized as follows:

$$MV = SP_c + ADJ_c$$

- MV represents the market value estimate;
- SP_c represents the selling price of comparable sale properties; and
- ADJ_c represents adjustments to the comparable sales.

(GlouDEMANS 1999, 124)

A.2.2 Direct Market Model

An application of the Sales Comparison Approach, using direct market models may take one of three model structures:

- additive (also termed “linear”),
- multiplicative (also termed “log linear”), or
- hybrid (also termed “nonlinear”)

A.2.2.1 Additive models

Additive models have the form:

$$MV = B_0 + B_1 \times X_1 + B_2 \times X_2 + \dots$$

Where

- MV is the dependent variable;
- B_0 is a constant;
- X_1 represents the independent variables in the model; and
- B_1 are corresponding rates or coefficients.

In a direct market model, the dependent variable “ MV ” is either sale price or sale price per unit.

A.2.2.2 Multiplicative models

In a multiplicative model the variables are either raised to powers or are themselves powers to which coefficients in the model are raised; the results are then multiplied rather than added. An example follows:

$$MV = B_0 \times X_1^{B1} \times X_2^{B2} \times \dots$$

MV is the dependent variable;

- B_0 is a constant;
- X_1^{B1} where X represents the independent variables in the model; and
- X_1^{B1} where $B1$ represents the corresponding rates or coefficients.

In this example, each variable is raised to a corresponding power.

Multiplicative models consist of a constant B_0 and percentage adjustments. They have several advantages, including the ability to capture curvilinear relationships more effectively and the ability to adjust proportionately to the value of the property being appraised. Multiplicative models are usually calibrated using linear regression packages. This requires some of the variables to be mathematically transformed for calibration. In this case the market value would require a transformation.

A.2.2.3 Hybrid (Nonlinear) models

Hybrid (nonlinear) models are a combination of additive and multiplicative models. The following example of a hybrid model is specified the same as a cost model and demonstrates the flexibility of the hybrid model.

A hybrid (nonlinear) model specification that separates value into building, land, and “other” components (e.g., outbuildings) is:

$$MV = \varpi GQ \times [(\varpi BQ \times \Sigma BA) + (\varpi LQ \times \Sigma LA) + \Sigma OA]$$

Where

- MV is the estimated market value;
- ϖGQ is the product of general qualitative variables;
- ϖBQ is the product of building qualitative variables;
- ΣBA is the sum of building additive variables;
- ϖLQ is the product of land qualitative variables;
- ΣLA is the sum of land additive variables; and
- ΣOA is the sum of other additive variables.

A.3 INCOME APPROACH

The income approach is an indirect method for determining market value. The appraiser evaluates income for quantity, quality, direction, duration, and the expense incurred to earn this income, and then converts it by means of a capitalization rate into an estimate of market value.

In an income model, the dependent variable may be income, income per unit (net rentable area), expenses, and expenses per unit or capitalization rate. The steps in this approach are:

1. Estimate gross income, expenses, and net income from market data.
2. Select the appropriate capitalization method (model specification).
3. Derive a capitalization rate or income multiplier from the market (model calibration).
4. Compute value by capitalization.

While there are many model specifications of the income approach, the basic overall direct capitalization formula is:

$$MV = NOI/R$$

Where

- *MV* is the price examined in the calibration and the resulting estimate of market value;
- *NOI* is the net operating income; and
- *R* is the overall capitalization rate.

Another set of income approach methodologies uses the relationship between gross income and rent. These are commonly known as Gross Income Multipliers (GIM) and Gross Rental Multipliers (GRM).

The model takes the form of:

$$MV = GI_A \times GIM$$

Or

$$MV = GI_M \times GRM$$

Where

- *MV* is the price examined in the calibration and resulting estimate of market value;
- *GI_A* is the gross annual income;
- *GIM* is the gross income multiplier;

Or

- *MV* is the price examined in the calibration and resulting estimate of market value;
- *GI_M* is the gross monthly income;
- *GRM* is the Gross Rental Multipliers.

APPENDIX B. Calibration Techniques

Model calibration is the development of adjustments or coefficients through market analysis of the variables to be used in an AVM. Many AVMs in use today rely on statistical models as the method of calibration. Some example techniques may be based on regression, geographic-weighted regression, or neural networks. All regression programs are based in statistics, while neural networks draw on the analogies of adaptive biological learning.

B.1 CALIBRATION USING STATISTICALLY BASED METHODS

Multiple regression analysis (MRA) is a statistically based analysis that evaluates the linear and/or curvilinear relationship between a dependent (response) variable and several independent (predictor) variables. Models produced using MRA come with a rich set of diagnostic statistics that provide evaluation tools for the market analyst to compare results between and among specified models. These include “goodness of fit” statistics such as R², adjusted R², SEE, COV, and “measures of variable significance”, such as R, t, F, etc.

B.1.1 MRA Assumptions

The accuracy and credibility of an MRA model depends on the degree to which certain assumptions are met.

Complete and accurate data are required if MRA is to achieve predictive accuracy. The assumption is that sold properties’ data are representative of the properties to which they are applied. Data should also be divided into training samples used to develop the model, and holdout samples (control samples) used to test model results.

MRA requires the assumption of normally distributed errors. Another requirement is that as the price level changes, the error term remains constant or homoscedastic; when unequal variances occur at different price ranges, the error term is heteroscedastic. Multicollinearity describes the condition where independent variables are correlated with each other. A correlation matrix is a valuable tool to test for multicollinearity in which variables are correlated. Undetected multicollinearity may result in use of improper coefficients.

B.1.2 Diagnostic Measures of Goodness-of-Fit

The market analyst should understand how the various key statistical measures relate to the reliability of results. These statistics fall into two categories: overall measures of model performance and individual variable measures that determine how well an individual variable performs. Primary measures of goodness-of-fit for overall model performance are the coefficient of determination (R²), standard error of the estimate (SEE), COV, and average percent error.

Appraisers asked to review AVM results should understand the role that goodness-of-fit statistics play in evaluating AVM results.

B.1.3 MRA Strengths

- Goodness-of-fit statistics — gives credence to the validity of results.
- Software availability — many regression software products are available.
- Widely accepted calibration method.

B.1.4 MRA Weaknesses

- Requires a level of statistical knowledge — market analysts should possess significant background in data analysis and statistical methods.
 - Interactive and nonlinear market trends are difficult to measure without transforming data.
-

B.2 ARTIFICIAL NEURAL NETWORKS

Another system for calibrating real estate valuation models is Artificial Neural Networks (ANNs). Neural networks can calibrate models that consist of both linear and nonlinear terms simultaneously. The user inputs each variable with assigned weights (coefficients). The software exposes the data using an algorithm in a hidden layer where the weights are adjusted (calibrated) in a manner that reduces the squared error. This is an iterative process much like those found with hybrid (nonlinear) regression. The final output results in a single estimate of value with the exact algorithm remaining hidden from the market analyst.

B.2.1 Strengths of Neural Networks

- The ability of the neural network to “learn” as it goes and to take new information and process it as the network has been trained.
- Neural networks can recognize and match complicated, vague, or incomplete patterns in data.

B.2.2 Weaknesses of Neural Networks

- The complexity of how the process works is in the hidden layer.
 - Lack of a definable model structure at the output stage makes explanation of value and support of the value more difficult.
 - Lack of goodness-of-fit statistics
-

B.3 CALIBRATION SUMMARY

The various methods and procedures used to calibrate the AVM are the engines that drive accuracy and credibility of the estimate made. Data quality and the skill level of the analyst are key in defining the accuracy of one calibration technique as compared to others. Users of AVM products should be aware of the interdependence between skills and technologies of calibration when deciding how well the AVM will perform.

This standard encourages AVM market analysts and clients to understand that AVM development is not a black box process; instead, it is based on well-defined concepts surrounding the appraisal process. AVM clients understand that developers of AVM products are not limited to using a single method of calibration. Product market analysts often base their value estimates on multiple technologies.

APPENDIX C. Statistical Methods for Developing Location Adjustments

There are several methods of accounting for location. Two common methods for developing location adjustments are the creation or use of existing geo-economic areas and use of geocoordinates. Geo-economic areas are the traditional and most usual form of location analysis. In AVMs, geo-economic areas may be based upon streets and natural boundaries, and government designated areas.

Geographic coordinate techniques relate common elements such as price to each property's unique location. Software uses a variety of smoothing techniques to compute a unique location adjustment for each property. This variable is then included, along with other variables, in a multiple regression or other model to capture location influences. Geographically Weighted Regression, another method of accounting for location, works by allowing model coefficients to vary by location in order to pick up spatially heterogeneous effects

Model frameworks that incorporate these methods for accounting for location include the following:

- Spatial Regression Model (i.e. Spatial Lag Models, Spatial Error Models);
- Inclusion of Locational Variable in the Model Specification (i.e. - Regression with Locational Binaries, Random Forests with a Locational Variable as a Feature);
- Multi-Stage Locational Adjustment Models (i.e. - Regression Model Paired with Locational Value Response Surface, Market-Adjusted Cost by Geo-economic Area);
- Spatial Interpolation Models (i.e. Kriging);
- Locally-Weighted Regression Model (i.e. - Geographically-Weighted Regression);
- Segmented Models (i.e. - Separate Regression Models by Market Area);
- Cluster Analysis.

APPENDIX D. Time Series Analysis

Time series analyses are techniques that can be used to measure the cyclical movements, random variations, seasonal variations, and trends observed over a period. These analyses can be used to develop a multiplier or index factor to update existing appraised values or to adjust sale prices for individual properties to a valuation date.

Methods used to develop time trend factors for property valuation include:

- Value per-unit analysis;
- Re-sales analysis;
- Sales/assessment or sales/AVM value ratio trend analysis;
- Median/mean value per period in the form of a moving average/median sale price;
- Inclusion of time sale variables in MRA/AVM models.

Value per-unit analyses track changes in sale price per unit (e.g., per square foot for residential properties or per unit for apartments) over time. The method is easily understood and lends itself well to graphical representation, as well as to statistical modeling to extract the average rate of change. A downside is that the method does not account for the myriad of other value influences, such as age and construction quality, that affect per-unit values.

Re-sales analysis uses repeat sales occurring over a given period of time. Price changes between sales are converted to monthly rates and an average (or median) rate of change is extracted. The larger the number of repeat sales, the more reliable the estimated rate of change. The method can overestimate rates of change if repeat sales reflect substantial improvements (or other alterations) made to the property since the first sale. Repeat sales may be too selective and not represent the subject or population of properties to be valued by an AVM.

Sales/assessment (or sales/AVM value) ratio trend analysis involves tracking changes in the ratio of sales prices to existing assessments (or AVM values) made as of a common base date. Increases in the ratios indicate inflation and vice versa. The ratio also provides the index factor required to convert an AVM value to a full value estimate. Like value per-unit analysis, the method lends itself well to graphical and statistical analysis. An advantage of the method is that AVM values account for most value determinants and thus can isolate time trends better than the value per-unit method. The method assumes that the AVM values share a common basis, and its reliability depends partly on the accuracy or uniformity of the AVM values.

Median/mean value per period is taught in many of the courses offered to single property appraisal specialists and real estate sales personnel as a quick method to arrive at a time adjustment to allow the use of older sales in special cases. The modeler collects all sale prices from a region for a specific type of property under study. The sales are grouped into periods of one or three months and a simple average or median price per period is calculated. The average or median prices per period are regressed to establish a trend line. The trend value is then used to adjust the sale price to the effective date of the valuation. This has become popular with spreadsheet valuation models used for market analysis and price opinions found on local real estate sites. The method has the same limitation as value per-unit analysis, in that it does not account for the myriad of other factors that affect sales prices.

Once a time trend is established, it can be used to adjust values to any point within the sales period. Trend factors can be extrapolated for a brief period beyond the sales period, but this should be done with caution and grows increasingly unreliable as the period is lengthened.

APPENDIX E. Modeling For AVMs

When adequate sales data are available, the sales comparison approach is the preferred method of valuing all property. The approach may take two forms: direct market models and comparable sales. When adequate sales data are not available, cost or income approach models may apply.

Direct market models developed from sales analyses use various model structures, with coefficients derived via a mathematical calibration method. The comparable sales method is a two-part method in which comparable sales are found and then adjusted to the subject property. Whether automated or appraiser derived, all market analysis relies on the quality and experience real estate appraisers/valuers.

E.1 MARKET SALE BASED MODELS

E.1.1 Comparable Sales Models

Comparable sales models use sale prices of properties with attributes similar to the subject property to establish estimates of market value. It essentially requires two models. The first one is a comparable selection model. The advantage of this model is that all recent sales with proximity to the subject are considered. When the comparable sales have significant attribute differences, the confidence of the adjustments begins to suffer. For selecting quality comparable sales, an AVM analyst may consider a routine that uses a weighted selection model (e.g., regression coefficients, Minkowski or Euclidian distance metrics). Once the best comparable sales are selected, they should be adjusted for attributes that are dissimilar to the subject. Comparable sales models that are supported by direct market models that use quantitative methods to derive the adjustments are more stable, reliable and statistically supported than simple matched pairs analysis.

In its formatted form, the comparable sales approach should display how each attribute adjustment in the AVM contributes to the overall value estimate. Users of AVMs are cautioned that matched pairs analysis is not a statistical calibration method.

E.1.2 Direct Market Models

The basic premise of direct market models is that the price of a marketed good is related to its characteristics or the services it provides. Direct market models lend themselves well to the calibration methods and techniques discussed throughout this standard. Properly designed direct market models will produce AVMs capable of accurate and credible value estimates.

- Additive models sum the variables multiplied by their coefficients.
- In multiplicative models, variables are raised to powers or are themselves powers to which coefficients are raised. Results are multiplied together. These models may better provide for curvilinear functions.
- Hybrid (nonlinear) models provide the most flexibility because they accommodate monetary and percentage adjustments. In addition, non-linear hybrid models can produce separate land and building values. These models may better provide for curvilinear functions.

E.2 INCOME MODELS

The income approach can be used to develop AVMs for all leased properties (land and/or buildings), because most types of income producing property may be sold based on their income streams. The two most commonly used approaches are direct capitalization and gross income multipliers (GIM). Discounted cash flow (DCF) analysis may also be used. Assumptions for DCF analysis, including anticipated yield, holding period, and value at the end of that period, can be difficult to derive from the market.

E.2.1 Modeling Gross Income

Gross incomes may be obtained from local market surveys or industry publications. Gross income models are easier to develop than net income models because the data is easier to obtain and less subject to manipulation. Gross income models can be developed for either potential or effective gross incomes.

E.2.2 Vacancy and Collection Losses from Potential Gross Income (PGI)

Vacancy and collection losses are deducted from the PGI to account for typical losses due to vacancy and bad debts based on local market conditions. The vacancy and collection losses usually vary by property use and are expressed as a percentage of the annual PGI. The percentage may be determined by a market analysis of PGIs compared with actual income through market analysis, or from information supplied by local lenders, government assessors and industry trade publications.

E.2.3 Modeling Expenses

Expense data may be obtained from the same sources as revenue data. Expense ratios can be developed by either stratification or a modeling approach. Where insufficient data are available for multiple models, a single expense ratio model may be developed by determining a reference use or occupancy group.

E.2.4 Direct Capitalization

Direct capitalization involves developing an overall rate (OAR) directly from the market. The OAR is then used with the estimated net income to estimate the value by income capitalization. Like expense ratios, capitalization rates can be developed using either stratification or a modeling approach. The direct capitalization rate is the estimated net income divided by the sale price.

E.2.5 Gross Income Multiplier (GIM)

GIM models involve developing coefficients directly from the market place for either the potential gross income or the effective gross income, depending on the data collected. Effective Gross Income Multiplier models are generally more stable. GIMs have the advantage of not requiring expense data. It is important to ensure that variables related to differences in expense ratios are included because gross incomes are unadjusted for expenses.

E.2.6 Property Taxes

In income models care should be taken to treat property taxes consistently in the development and application of AVMs. Property taxes may be included as an expense or as a component of the OAR.

E.3 COST APPROACH BASED MODELS

E.3.1 Cost Models

The cost approach works best when applied to specialized properties or properties that do not exhibit a great deal of measurable depreciation, and where the land value can be reasonably estimated from recent land sales. Replacement cost models are anchored in tables developed by studying local building cost data. Many replacement cost new tables (RCN) are calibrated with sales of newly built properties. These RCN estimates need further calibration for actual property condition (depreciation), location (macro and micro), and a supportable estimate of vacant land value, to arrive at estimates of market value.

E.4 LOCATION VALUATION ADJUSTMENT

Two methods of accounting for location are the delineation of geo-economic areas and the use of GIS parcel coordinates. Geo-economic areas can be used as categorical variable in a model specification. Separate models can be developed by geo-economic area or areas. GIS parcel coordinates provide options for modeling, such as locational value response surface analysis (LVRSA) or geographically weighted regression (GWR). Methods of accounting for location are found in Appendix C.

When using geo-economic area approaches, boundaries may be drawn to coincide with major streets, natural barriers, and/or political subdivision boundaries. The market analyst should be aware that location adjustments can change abruptly from one submarket and boundaries may change over time.

GIS may be used as an aid in delineating geo-economic areas. GIS may be used to display an existing response surface or to calculate a response surface as the variance in value on a three-dimensional plane. Where a GIS is not available, geoeconomic areas can be developed based on appraisal judgment, or grids can be developed and x, y coordinates manually derived from the grids.

E.5 DEVELOPMENT OF THE LAND MODEL(S)

Sales comparison is the primary approach for estimating the market value of land. The valuation of land by sales comparison shares many of the same analyses and modeling processes with improved valuation models.

For leased land, and agricultural and rural properties, where insufficient sales are available, a capitalized income stream is commonly used to estimate the market value. Income land appraisal relies on capitalized income analysis.

Land values may be modeled separately from improved values, or vacant and improved property may be modeled in a single combined valuation model (Guerin 2000). The primary benefit of a combined model is that both vacant and improved sales are used, which significantly increases the sales sample size for analysis and modeling. When developing a combined model, a binary variable should be used to separate vacant and improved sales. In addition, separate time and size adjustments should be tested for vacant and improved sales.

Income data can be used to value rented or leased land. Income capitalization for land follows the same general principles as commercial and industrial properties.

APPENDIX F: Value Justification

Market analysts should be prepared to review and justify values developed through AVMs. The review process includes:

- finding evidence that data sources are accurate and consistently collected
- implementation of stratification testing
- preparation of a listing of comparable sales
- preparation of a list of listing prices
- performance of ratio studies on comparable sales as well as hold out samples
- evaluating the consistency of values or sales prices of similar properties within the locational area
- preparation of documentation

It may be possible to support value estimates derived from one AVM with estimates derived from alternative methods. The fact that a property sold for a price different from the AVM estimate does not mean that the AVM estimate is wrong. AVM estimates represent market value and price is an historical fact. Begins with checking the statistical accuracy of the data in the sample used to develop the AVM. It is strongly recommended that a stratification testing methodology be implemented. For example, stratification may be by neighborhood or age.

There should be documentation to allow clients and other intended users to understand in nontechnical terms how the model was developed and applied.

If the user modifies the AVM produced values, they assume complete responsibility for the results and the effects on the quality assurance measures. In this instance, original quality assurance measures may not be applicable.

APPENDIX G: Statistical Tables

TABLE 1. Example of Ratio Study Statistical Analysis Data Analyzed			
Rank of ratio of observation	Appraised Value (AV in \$)	Market Value (MV in \$)	Ratio (AV/MV)
1	48,000	138,000	0.348
2	28,800	59,250	0.486
3	78,400	157,500	0.498
4	39,840	74,400	0.535
5	68,160	114,900	0.593
6	94,400	159,000	0.594
7	67,200	111,900	0.601
8	56,960	93,000	0.612
9	87,200	138,720	0.629
10	38,240	59,700	0.641
11	96,320	146,400	0.658
12	67,680	99,000	0.684
13	32,960	47,400	0.695
14	50,560	70,500	0.717
15	61,360	78,000	0.787
16	47,360	60,000	0.789
17	58,080	69,000	0.842
18	47,040	55,500	0.848
19	136,000	154,500	0.880
20	103,200	109,500	0.942
21	59,040	60,000	0.984
22	168,000	168,000	1.000
23	128,000	124,500	1.028
24	132,000	127,500	1.035
25	160,000	150,000	1.067
26	160,000	141,000	1.135
27	200,000	171,900	1.163
28	184,000	157,500	1.168
29	160,000	129,600	1.235
30	157,200	126,000	1.248
31	99,200	77,700	1.277
32	200,000	153,000	1.307
33	64,000	48,750	1.313
34	192,000	144,000	1.333
35	190,400	141,000	1.350
36	65,440	48,000	1.363

TABLE 1.1. Results of statistical analysis

Statistic	Result calculated on preceding data
Number of observations in sample	36
Total appraised value	\$3,627,040
Total market value	\$3,964,620
Average appraised value	\$100,751
Average market value	\$110,128
Mean ratio	0.900
Median ratio	0.864
Weighted mean ratio	0.915
Price-related differential (PRD)	0.98
Price-related bias (PRB) coefficient (t-value)	0.233 (3.02)
PRB 95% two-tailed confidence interval	(0.081 - 0.384)
Coefficient of dispersion (COD)	29.8%
Standard deviation	0.297
Coefficient of variation (COV)	33.0%
Probability that population mean ratio is between 90% and 110%	49.7%
95% mean two-tailed confidence interval	0.799-1.000
95% median two-tailed confidence interval	0.684-1.067
95% weighted mean two-tailed confidence interval	0.806-1.024
Shape of distribution of ratios	Normal (based on binomial distribution)
Date of analysis	9/99/9999
Category or class being analyzed	Residential

TABLE 2. Ratio Study Performance Standards		
Type of property — General	Type of property — Specific	COD Range**
Single-family residential (including residential condominiums)	Newer or more homogeneous areas	5.0 to 10.0
Single-family residential	Older or more heterogeneous areas	5.0 to 15.0
Other residential	Rural, seasonal, recreational, manufactured housing, 2-4-unit family housing	5.0 to 20.0
Income-producing properties	Larger areas represented by large samples	5.0 to 15.0
Income-producing properties	Smaller areas represented by smaller samples	5.0 to 20.0
Vacant land		5.0 to 25.0
Other real and personal property		Varies with local conditions

These types of property are provided for guidance only and may not represent jurisdictional requirements.

Appraisal level for each type of property shown should be between 0.90 and 1.10, unless stricter local standards are required.

PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity.

PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted (see table 1-2).

Alternatively, assessing officials can rely on the PRB, which is less sensitive to atypical prices and ratios. PRB coefficients should generally fall between -.05 and .05. PRBs that are statistically significant and less than -0.10 or greater than 0.10 indicate significant vertical inequities.

**** CODs lower than 5.0 may indicate sales chasing or non-representative samples. (See Standard on Ratio Studies)**

APPENDIX H: Uses of AVM Reports

AVM reports may have many uses. This standard will only list some of the typical uses.

H.1 REAL ESTATE LENDERS

- Reduce time to approve real estate loan applications;
 - Provide unbiased estimate of value for loan underwriting;
 - Provide real estate value/scores to compliment borrower's credit scoring;
 - Standard estimates for annual review of individual appraiser's performance;
 - Quality assurance for selling pooled loans;
 - Review of loan portfolios;
 - Support for lending decisions and geographic distribution required by the Community Reinvestment Act;
 - Statistical support for litigation;
 - Updates current valuation of portfolio properties;
 - Support in purchase of loan portfolios or lending institutions;
 - Portfolio valuation reviews by secondary mortgage markets and bond rating firms;
 - Systematic review of mortgage loan transaction to assist in the discovery of potential systematic fraud.
-

H.2 REAL ESTATE PROFESSIONALS

- Support in setting listing price;
- Support in negotiation between sellers and buyers;
- Central database for appraisers;
- Selection of appropriate economic information to support subject property;
- Support for appraiser's opinions of value;
- Support for appraiser's review and desktop appraisal assignments;
- Support for appraisal consulting assignments that involve large numbers of properties;
- Statistical support for litigation.

H.3 GOVERNMENT

- Planning and land use decisions;
- Development of value estimates for review by assessment staff appraisers;
- Standardized estimates of value to annually review field appraisers' performances;
- Valuation substitutes for appraisals in ratio study reports;
- Screening of sale prices for valid market sales transactions;
- Audits of lenders by state and federal regulators;
- Assist states with standardized values to review property assessments in school funding formulas;
- Fraud identification and prevention by enforcement, taxation, customs, and oversight agencies (such as GSE, HUD, IRS, Canada Mortgage and Housing Corporation, Statistics Canada, and state and national bank regulators);
- Fraud prosecution by comparing transactions to standardized values;
- Assist in valuation for right-of-way and property condemnation cases;
- Support for prior values in disaster situations to provide efficiencies in economic rebound of communities.

H.4 GENERAL PUBLIC

- Support for various business development and economic decisions;
- Assistance in determining best listing price;
- Assistance in determining best offering price;
- Review of local government tax assessments;
- Estate estimates of real estate value by attorneys and estate administrators.

H.5 AD VALOREM TAX

- Estimating mass appraisal values;
- Support of values in appeals and litigation;
- Appraisal quality control;
- Study of the effects on valuation of contaminated properties;
- Studies used in the analysis of fiscal planning.

AVM reports may be sufficient as stand-alone products, or they may lead to a request for a more detailed appraisal report based on the needs and usage of the intended user. This listing is only a portion of the potential uses of AVMs. When clients request AVMs for a limited and specific use, the AVM report will provide quality information to the intended user quickly and inexpensively.

APPENDIX I: Use of AVM Reports as A Complete Single Property Appraisal Report

I.1 CREDENTIALING OF AVM DEVELOPERS AND END USERS

Appraisal reports used for the determination of collateral value, Ad valorem value or in meeting reporting requirements of regulated businesses and individuals often require value certification by a person holding formal credentials as an appraiser or valuer. One method of meeting this need is in the model developer and supervising end user holding credentials from a recognized organization in the development and use of mass valuation methods. Additionally the community of end users of AVM output should receive training in basic AVM theory and the strengths and weaknesses of AVM based valuation.

I.2 REPORTING FORMAT FOR FINIANCIAL AND AD VALOREM USES

Appraisal/valuation reports used for the determination of collateral value, Ad valorem value or regulated filing and reporting often require special reporting formats. Often these reports require presentation of the data used and the methods employed in the value estimate. The developer should be made aware of these requirements as an aid to insure required transparency.

GLOSSARY

Algorithm — Computer-oriented, precisely defined set of steps that, if followed exactly, will produce a prespecified result (for example, the solution to a problem).

Additive Model — A model in which the dependent variable is estimated by multiplying each independent variable by its coefficient and adding each product to the constant.

Automated Valuation Model — A mathematically based computer software program that market analysts use to produce an estimate of market value based on market analysis of location, market conditions, and real estate characteristics from information that was previously and separately collected. The distinguishing feature of an AVM is that it is a market appraisal produced through mathematical modeling. Credibility of an AVM is dependent on the data used and the skills of the modeler producing the AVM.

Backwards Regression — A form of stepwise regression starting with all candidate variables entering the model, then removing and testing the effect of each deletion of each variable using a chosen model fit criterion, deleting the variable (if any) whose loss gives the most statistically insignificant deterioration of the model fit, and repeating this process until no further variables can be deleted without a statistically significant loss of fit.

Binary (Dummy) Variable — (1) Binary variables are qualitative data items that have only two possibilities — yes or no (for example, corner location). (2) A variable for which only two values are possible, such as results from a yes-or-no question; for example, does this building have any fireplaces? Used in some models to separate the influence of categorical variables. Also called an indicator variable, dichotomous variable, or dummy variable.

Blended or Cascading AVM — An AVM that produces two or more value estimates that are reduced to a final value estimate through reconciliation.

Cluster Analysis — A statistical technique for grouping cases (for example, properties) based on specified variables such as size, age, and construction quality. The objective of cluster analysis is to generate groupings that are internally homogeneous and highly different from one another.

Coefficient — In a mathematical expression, a number or letter preceding and multiplying another quantity.

Comparable Sales Model — The model selects “similar sales” using some standard criteria. It then rates those comparable sales by suitability, based on the physical and sales characteristics of each comparable sale, by adjusting the varying elements (much as is done on an appraisal form); the model then calculates an estimate of value.

Confidence Interval — The range of values, calculated from the sample observations, which are believed, with a particular degree of confidence, to contain the true population parameter (mean, median, COD, etc.) The confidence interval is not a measure of precision for the sample statistic of point estimate, but a measure of the precision of the sampling process.

Confidence Score — The AVM Confidence Score is a value that indicates the level to which each of multiple AVM models “agrees” with the other estimated values for a given property.

Constrained Variable — A variable limited to a defined range of values in order to force a coefficient to take a defined value, it is used in multivariable linear regression to aid in explanation of the model. Land value is often constrained to the value used in the cost approach to avoid the discussion of land have one value in cost and another in market.

Cost Approach — One of the three approaches to value, the cost approach is based on the principle of substitution—that a rational, informed purchaser would pay no more for a property than the cost of building an acceptable substitute with like utility. The cost approach seeks to determine the replacement cost new of an improvement minus depreciation plus land value.

Cross Validation — A technique for validating an AVM where, iteratively, a subset of sales is held out of the model and the model is re-fit to the remaining sales. The analyst could then examine either the predictive results for the subsets of holdout sales or the model coefficients over the various iterations.

Data Scraping — A technique using software programs that can analyze human-readable data, typically unstructured, from websites and store it in a structured data file. Collection methods included text filtering, analysis and, capture and image analysis and optical character recognition.

Direct Capitalization — The conversion of expected income and rate of return into an estimated present value when using the income approach to determine value.

Direct Market Method/Analysis — One of two formats of the sales comparison approach to value (the other being the Comparable Sales Method). In the direct market method, the market analyst specifies and calibrates a model used to estimate market value directly using multiple regression analysis or another statistical algorithm.

Euclidean Distance Metric — A measure of straight-line distance between two points. In property valuation, it is used to find the nearest neighbor or similar property based on an index of dissimilarity between property location and attributes. When using multivariate selection, the squared difference is divided by the standard deviation of the variable to normalize the differences. (Also see Minkowski Distance Metric.)

Forward Regression — A form of stepwise regression which involves starting with no variables in the model, the model is tested with the addition of each variable using a chosen model fit criterion, adding the variable (if any) whose inclusion gives the most statistically significant improvement of the fit, and repeating this process until the addition of new variables improves the model to a statistically significant extent.

Geographic Information System (GIS) — (1) A database management system used to store, retrieve, manipulate, analyze, and display spatial information. (2) One type of computerized mapping system capable of integrating spatial data (land information) and attribute data among different layers on a base map.

Goeconomic Area — (1) The environment of a subject property that has a direct and immediate effect on value. (2) A geographic area (in which there are typically fewer than several thousand properties) defined for some useful purpose, such as to ensure for later multiple regression modeling that the properties are homogeneous and share important locational characteristics.

Goeconomic Area Analysis — A study of the relevant forces that influence property values within the boundaries of a homogeneous area.

Goodness-of-Fit — A statistical estimate of the amount and hence the importance, of errors or residuals for all the predicted and actual values of a variable. In regression analysis, for example, goodness-of-fit indicates how much of the variation between independent variables (property characteristics) and the dependent variable (sales prices) is explained by the independent variables chosen for the AVM.

Heteroscedasticity — Nonconstant variance in error terms and model residuals; specifically, in regression analysis, a tendency for the errors to increase (fan out) as the dependent variable increases.

Hit Rates — The number of times the model or cascading models return a useable value estimate. Not a measure of how well the models fit the data but a measure of the relative success of a model in providing a useable result. Systems with high hit rates often result in a lower cost per valuation because of wider area of property they may be used on.

Holdout Sample — Part of a set of data set aside for testing the results of analysis.

Homogeneous — Possessing the quality of being alike in nature and therefore comparable with respect to the parts or elements; said of data if two or more sets of data seem drawn from the same population; also said of data if the data are of the same type (that is, if counts, ranks, and measures are not all mixed together).

Income Approach — One of the three approaches to value, based on the concept that current value is the present worth of future benefits to be derived through income production by an asset over the remainder of its economic life. The income approach uses capitalization to convert the anticipated benefits of the ownership of property into an estimate of present value.

Interactive Valuation Application AVM [Appraiser-Assisted] — This is a mathematical model application, or a set of applications, that is/are developed, calibrated and checked by analysts. This provides estimates of value that are reviewed and used by valuer.

Location Value Response Surface Analysis (LVRSA) — A mass appraisal technique that accounts for location as a variable that is defined by a three dimensional surface.

Location Variable — A variable that seeks to measure the contribution of locational factors to the total property value, such as the distance to the nearest commercial district or the traffic count on an adjoining street.

Market — (1) The topical area of common interest in which buyers and sellers interact. (2) The collective body of buyers and sellers for a product.

Market Analysis — A study of real estate market conditions for a specific type of property.

Market Analyst — An analyst who studies real estate market conditions and develops mathematical algorithms that represent those market conditions.

Market Area — An area defined on the basis that the properties within its boundaries are more or less equally subject to a set of one or more economic forces that largely determine the value of the properties in question.

Market Value — Market value is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States is:

The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing title from seller to buyer under conditions whereby:

- The buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of currency or in terms of financial arrangements comparable thereto.

The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Mean — A measure of central tendency. The result of adding all the values of a variable and dividing by the number of values.

Median — A measure of central tendency. The value of the middle item of an uneven number of items arranged or arrayed according to size; the arithmetic average of the two central items in an even number of items similarly arranged.

Minkowski Distance Metric — The Minkowski Metric measures the distance between a subject property and potential comparable properties based on the sum of the absolute value of the differences. (See Euclidean Distance Metric)

Model — (1) A representation of how something works. (2) For purposes of appraisal, a representation (in words or an equation) that explains the relationship between value or estimated sale price and variables representing factors of supply and demand.

Model Calibration — The development of the adjustments or coefficients from market analysis of the variables to be used in an automated valuation model.

Model Deployment — the application of a finalized model to data (existing or new), typically in a platform outside of the statistical package used to specify, calibrate, and develop the model.

Model Specification — The formal choosing of a model methodology (e.g., multiple regression analysis, geographically weighted regression, multiplicative, or hybrid) and subsequent development in a statement or equation, based on data analysis and appraisal theory.

Multicollinearity — Correlation among two or more variables. In regression analysis, high multicollinearity among the independent variables complicates modeling and will compromise the reliability of the resulting coefficients. If the multicollinearity is perfect, the multiple regression algorithms simply will not work and either an error message may result, or the software may purge one or more of the problem variables.

Multiple Regression Analysis (MRA) — A statistical technique, similar to correlation, used to analyze data in order to predict the value of one variable (the dependent variable), such as market value, from the known values of other variables (called “independent variables”), such as lot size, number of rooms, and so on. If only one independent variable is used, the procedure is called simple regression analysis and differs from correlation analysis only in that correlation measures the strength of the relationship, whereas regression predicts the value of one variable from the value of the other. When two or more variables are used, the procedure is called multiple regression analysis.

Multiplicative Model — A mathematical model in which the coefficients of independent variables serve as powers (exponents) to which the independent variables are raised, or in which independent variables themselves serve as exponents; the results of which are then multiplied to estimate the value of the dependent variable.

Neural Network — An artificial neural network (ANN) is a collection of mathematical models that emulate some of the observed properties of biological nervous systems and draw on the analogies of adaptive biological learning. An artificial neural network has several key elements: input, processing (calibration), and output. Other names associated with neural networks include connectionism, parallel distributed processing, neuro-computing, natural intelligent systems, and machine learning algorithms.

Nonlinear Model — Model that incorporates both additive and multiplicative components. (See also Additive Model, and Multiplicative Model.)

Outlier — An observation that has unusual values, that is, it differs markedly from a measure of central tendency. Some outliers occur naturally; others are due to data errors.

Preliminary Data AVM [AVM Assisting Appraisers] — This AVM sorts substantial amounts of electronic data and provides selected raw or basic data for interpretation by the appraiser. The appraisers use the AVM applications to provide their opinions of value.

Ratio Study — In the context of AVM output, a study of the relationship between model-produced values and market values. Of common interest in ratio studies are the level and uniformity of the ratios.

Research AVM — general valuation tools which resemble production AVMs in design, but have limited functionality. Research AVMs are used for initial testing of concepts. They are finding application in value projection for public financing.

Repetitive AVM [Continuous Application AVM] — This AVM application is intended to be used repeatedly to project values for future dates, without recalibration but through the addition of new sale prices and economic information.

Sales Comparison — One of the three approaches to value, the sales comparison approach estimates a property’s value (or some other characteristic, such as its depreciation) by reference to the sales of similar/comparable properties.

Stepwise Regression — A kind of multiple regression analysis in which the independent variables enter the model, and leave it, if appropriate, one by one according to their ability to improve the equation’s power to predict the value of the dependent variable.

Stratification — The division of a sample of observations into two or more subsets according to some criterion or set of criteria. Such a division may be made to analyze disparate property types, locations, or characteristics, for example.

Time Series Analysis — A family of techniques that can be used to measure the cyclical movements, random variations, seasonal variations, and secular trends observed over a period.

Variable — An item of observation that can assume various values, such as square feet, sales prices, or sales ratios. Variables are commonly described using measures of central tendency and dispersion.

Weighted Mean — An average in which each value is adjusted by a factor reflecting its relative importance in the whole, before the values are summed and divided by their number.

Standard on Mass Appraisal of Real Property

Approved January 2012

International Association of Assessing Officers

This standard replaces the 2002 *Standard on Mass Appraisal of Real Property*. The 2002 standard combined and replaced the 1983 *Standard on the Application of the Three Approaches to Value in Mass Appraisal*, the 1984 *Standard on Mass Appraisal*, and the 1988 *Standard on Urban Land Valuation*. The IAAO's assessment standards represent a consensus in the assessing profession and have been adopted by the Executive Board of the International Association of Assessing Officers (IAAO). The objective of the IAAO's standards is to provide a systematic means by which concerned assessing officers can improve and standardize the operation of their offices. The IAAO's standards are advisory in nature and the use of, or compliance with, such standards is purely voluntary. If any portion of these standards is found to be in conflict with the *Uniform Standards of Professional Appraisal Practice (USPAP)* or state laws, *USPAP* and state laws shall govern.

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Revision Notes

The last full revision of the *Standard on Mass Appraisal of Real Property* was in February 2002.

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Standard on Mass Appraisal of Real Property

1. Scope

This standard defines requirements for the mass appraisal of real property. The primary focus is on mass appraisal for ad valorem tax purposes. However, the principles defined here should also be relevant to computer-assisted mass appraisals (or automated valuation models) used for other purposes, such as mortgage portfolio management. The standard primarily addresses the needs of the assessor, assessment oversight agencies, and taxpayers.

This standard addresses mass appraisal procedures by which property can be appraised at market value, including mass appraisal application of the three traditional approaches to value (cost, sales comparison, and income). Appraisals made on an other-than-market-value basis or on an individual basis are outside the scope of this standard. Where assessed value differs from market value because of statutory constraints such as use value, acquisition value, base year value, or classification, this standard does not provide guidance for determining assessed value.

Mass appraisal requires complete and accurate data, effective valuation models, and proper management of resources. Section 3 focuses on the collection and maintenance of property data. Section 4 summarizes the primary considerations in valuation methods, including the role of the three approaches to value in the mass appraisal of various types of property. Section 5 discusses certain managerial considerations: staff levels, data processing support, contracting for reappraisals, support of valuations, and benefit-cost issues.

2. Introduction

Market value for assessment purposes is generally determined through the application of mass appraisal techniques. Mass appraisal is the process of valuing a group of properties as of a given date using common data, standardized methods, and statistical testing (IAAO [1990, chapter 5] and Gloudemans [1999, chapter 5]). To determine a parcel's value, assessing officers must rely upon valuation equations, tables, and schedules developed through mathematical analysis of market data. Unless required by law, values for individual parcels should not be based solely on the sale price of a property; rather, valuation schedules and models should be consistently applied to property data that is correct, complete, and up-to-date.

Properly administered, the development, construction, and use of a computer-assisted mass appraisal system results in a valuation system characterized by accuracy, uniformity, equity, reliability, and low per-parcel costs

(see section 5.5). Except for unique properties, individual analyses and appraisals of properties are not practical for ad valorem tax purposes.

3. Collecting and Maintaining Property Data

Choose software wisely because it can limit the data that can be collected. The choice of data is largely dictated by the valuation software, whether it is programmed in house or supplied by a commercial service, a mass appraisal company, or a state agency.

3.1 Overview

Uniform and accurate valuation of property requires correct, complete, and up-to-date property data. Assessing offices must establish effective procedures for collecting and maintaining property data (that is, property ownership, location, size, use, physical characteristics, sales prices, rents, costs, and operating expenses). Such data are also used for performance audits, defense of appeals, public relations, and management information. The following sections recommend procedures for collecting these data.

3.2 Geographic Data

Assessors should maintain accurate, up-to-date cadastral maps (also known as assessment maps, tax maps, parcel boundary maps, and property ownership maps) covering the entire jurisdiction. At a minimum these maps should display a unique parcel number for each parcel. Such cadastral maps allow assessing officers to identify and locate all parcels, in both the field and the office. Maps become especially valuable in the mass appraisal process when a geographic information system (GIS) is used. A GIS permits graphic displays of sale prices, assessed values, inspection dates, work assignments, land uses, and much more. In addition, a GIS permits high-level analysis of nearby sales, neighborhoods, and market trends; when linked to a computer-assisted mass appraisal system, the results can be very useful. For additional information on cadastral maps, parcel identification systems, and GIS, see the *Standard on Manual Cadastral Maps and Parcel Identifiers* (IAAO 2004), *Standard on Digital Cadastral Maps and Parcel Identifiers* (IAAO 2009), and *Procedures and Standards for a Multipurpose Cadastre* (National Research Council 1983), and *GIS Guidelines for Assessors* (URISA/IAAO 1999).

3.3 Property Characteristics Data

The assessor should collect and maintain sufficient property characteristics data for classification, valu-

ation, and other purposes. Accurate valuation of real property by any method requires descriptions of land and building characteristics.

3.3.1 Selection of Property Characteristics Data

Property characteristics to be collected and maintained should be based on the following:

- factors that influence the market in the locale in question
- requirements of the valuation methods that will be employed
- requirements of classification and property tax policy
- requirements of other governmental and private users
- marginal benefits and costs of collecting and maintaining each property characteristic

Determining what data on property characteristics to collect and maintain for a computer-assisted mass appraisal system is a crucial decision with long-term consequences. A pilot program is one means of evaluating the benefits and costs of collecting and maintaining a particular set of property characteristics. (See IAAO [1990, chapter 5] and Gloudemans [1999, chapter 2].) In addition, much can be learned from studying the data used in successful computer-assisted mass appraisals in other jurisdictions. Data collection and maintenance are usually the most costly aspects of a computer-assisted mass appraisal. Collecting data that are of little importance in the assessment process should be avoided unless another governmental or private need is clearly demonstrated.

The quantity and quality of existing data should be reviewed. If the data are sparse and unreliable, a major recanvass will be necessary. Data that have been confirmed to be reliable should be used whenever possible. New valuation programs or enhancements requiring major recanvass activity or conversions to new coding formats should be viewed with suspicion when the existing database already contains most major property characteristics and is of generally good quality.

The following property characteristics are typically used in predicting residential property values:

Improvement Data

- Living area
- Construction quality or key components thereof (foundation, exterior wall type, etc.)
- Effective age or condition
- Building design or style
- Secondary areas including basements, garages, covered porches, and balconies

- Building features such as baths and central air conditioning
- Significant detached structures including guests houses, boat houses, and barns

Land Data

- Lot size
- Available utilities (sewer, water, electricity)

Location Data

- Market area
- Submarket area or neighborhood
- Site amenities, especially view and golf course or water frontage
- External nuisances, e.g., heavy traffic, airport noise, or proximity to commercial uses

For a discussion of property characteristics important for various commercial property types, see Gloudemans and Almy (2011, chapter 9).

3.3.2 Data Collection

Collecting property characteristics data is a critical and expensive phase of reappraisal. A successful data collection program requires clear and standard coding and careful monitoring through a quality control program. The development and use of a data collection manual is essential in achieving accurate and consistent data collection. The data collection program should result in complete and accurate data.

3.3.2.1 Initial Data Collection

A physical inspection is necessary to obtain initial property characteristics data. This inspection can be performed either by appraisers or by specially trained data collectors. In a joint approach, experienced appraisers would make key subjective decisions, such as the assignment of construction quality class or grade, and data collectors would gather all other details. Depending on the data required, an interior inspection might be necessary. At a minimum, a comprehensive exterior inspection should be conducted.

3.3.2.2 Data Collection Format

Data should be collected in a prescribed format designed to facilitate both the collecting of data in the field and entry of the data into the computer system.

A logical arrangement of the collection format makes data collection easier. For example, all items requiring an interior inspection should be grouped together. The coding of data should be as objective as possible, with measurements, counts, and check-off items used in preference to items requiring subjective evaluations (such as “number of plumbing fixtures” versus “adequacy of plumbing: poor, average, good”). With respect to check-off items, the available codes should be exhaustive and mutually exclusive, so that exactly one

code logically pertains to each observable variation of a building feature (such as type of room). The data collection format should promote consistency among data collectors, be clear and easy to use, and be adaptable to virtually all types of construction. Specialized data collection formats may be necessary to collect information on agricultural property, timberland, industrial parcels, and other property types.

3.3.2.3 Data Collection Manuals

A clear, thorough, and precise data collection manual is essential and should be developed, updated, and maintained. The written manual should explain how to collect and record each data item. Pictures, examples, and illustrations are particularly helpful. The manual should be simple yet complete, with a high degree of standardization for uniformity. Data collection staff should be trained in the use of the manual and related updates to maintain consistency. The manual should present guidelines for personal conduct during field inspections, and, if interior data are required, it should outline procedures to follow when the property owner has denied access or when entry might be risky.

3.3.2.4 Data Accuracy Standards

The following standards of accuracy for data collection are recommended.

- Continuous or area measurement data, such as living area and exterior wall height, should be accurate within one foot (rounded to the nearest foot) of the true dimensions or within 5% of the area. (One foot equates to approximately 30 centimeters in the metric system of measurement). If areas, dimensions, or volumes must be estimated, the property record should note where quantities are estimated.
- For each objective, categorical, or binary data field to be collected or verified, at least 95 percent of the coded entries should be accurate. Objective, categorical, or binary data characteristics include such attributes as exterior wall material, number of full bathrooms, and waterfront view. As an example, if a data collector captures 10 objective, categorical, or binary data items for 100 properties, at least 950 of the 1,000 total entries should be correct.
- For each subjective categorical data field collected or verified, data should be coded correctly at least 90 percent of the time. Subjective categorical data characteristics include data items such as quality grade, physical condition, and architectural style.

3.3.2.5 Data Collection Quality Control

A quality control program is necessary to ensure that data accuracy standards are achieved and maintained. Independent quality control inspections should occur

immediately after the data collection phase begins and may be performed by jurisdiction staff, project consultants, auditing firms, or oversight agencies. The inspections should review random samples of completed work for completeness and accuracy and keep tabulations of items coded correctly or incorrectly, so that statistical tests can be used to determine whether accuracy standards have been achieved. Stratification by geographic area, property type, or individual data collector can help detect patterns of data error. Data that fails to meet quality control standards should be re-collected.

The accuracy of subjective data should be judged primarily by conformity with written specifications and examples in the data collection manual. Subjective data judgment calls should be substantiated by field notes.

3.3.3 Data Entry

To avoid duplication of effort, the data collection form should be able to serve as the data entry form. Data entry should be routinely audited to ensure accuracy.

Data entry accuracy should be as close to 100 percent as possible, and should be supported by a full set of range and consistency edits. These are error or warning messages generated in response to invalid or unusual data items. Examples of data errors include missing data codes and invalid characters. Warning messages should also be generated when data values exceed normal ranges (for example, more than eight rooms in a 1,200-square-foot residence). The warnings should appear as the data are entered. When feasible, action on the warnings should take place during data entry. Field data entry devices provide the ability to edit data as it is entered and also eliminate data transcription errors.

3.3.4 Maintaining Property Characteristics Data

Property characteristics data should be continually updated in response to changes brought about by new construction, new parcels, remodeling, demolition, and destruction. There are several ways of doing this. The most efficient involves building permits. Ideally, strictly enforced local ordinances would require building permits for all significant construction activity, and the assessor would be given copies of the permits. This would allow the assessor to identify properties whose characteristics are likely to change, to inspect such parcels on a timely basis (preferably as close to the assessment date as possible), and to update the files accordingly.

Aerial photographs also can be helpful in identifying new or previously unrecorded construction and land use.

Some jurisdictions have used self-reporting, in which property owners are given the data in the assessor's records and asked to provide additions or corrections. Information derived from multiple listing sources and other third-party vendors can be used to update property records.

A system should be developed for making periodic field inspections to identify properties and ensure that property characteristics data are complete and accurate. Properties should be periodically revisited to ascertain that assessment records are accurate and current. Assuming that most new construction activity is identified through building permits or other ongoing procedures, a physical review at least every four to six years should be conducted, including an on-site verification of property characteristics. A reinspection should include partial remeasurement of the two most complex sides of improvements and a walk around the improvement to identify additions and deletions or independent review of the current measurements with specific requirements by an outside auditing firm or oversight agency. Photographs taken at previous physical inspections can help identify changes.

3.3.5 *Alternative to Periodic On-Site Inspections*

Provided that an initial physical inspection has been completed—and the requirements of a well-maintained data-collection and quality-management program (see sections 3.3.2.1 to 3.3.4) have been achieved, jurisdictions may employ a set of digital imaging technology tools to supplement field inspections with a computer-assisted office review. These imaging tools should include:

- Current high-resolution street-view images (at a sub-inch pixel resolution that enables quality grade and physical condition to be verified)
- Orthophoto images (minimum 6" pixel resolution in urban/suburban and 12" resolution in rural areas, updated every 2 years in rapid growth areas, or 6–10 years in slow growth areas).
- Low level oblique images capable of being used for measurement verification (four cardinal directions, minimum 6" pixel resolution in urban/suburban and 12" pixel resolution in rural areas, updated every 2 years in rapid growth areas or, 6–10 years in slow growth areas).

Effective tool sets validate CAMA data and incorporate change detection techniques that compare building dimension data (footprints) in the CAMA system to georeferenced imagery or remote sensing data from sources (such as LiDAR [light detection and ranging]) and identify potential CAMA sketch discrepancies for further investigation.

In addition, appraisers should visit assigned areas on an annual basis to observe changes in neighborhood condition, trends and property characteristics. An on-site physical review is recommended when significant construction changes are detected, a property is sold, or an area is affected by catastrophic damage. Building permits should be regularly monitored and affected prop-

erties that have significant change should be inspected when work is complete.

It is incumbent on assessment jurisdictions and oversight agencies to ensure that images meet expected quality standards. Standards required for vendor-supplied images should be spelled out in the RFP and contract for services, and images should be checked for compliance with specified requirements. For general guidance on preparing RFPs and contracting for vendor-supplied services, see the *Standard on Contracting for Assessment Services* [IAAO 2008].

3.4 Sales Data

States and provinces should seek mandatory disclosure laws to ensure comprehensiveness of sales data files. Regardless of the availability of such statutes, a file of sales data must be maintained. Sales data are required in all applications of the sales comparison approach, in the development of market-based depreciation schedules in the cost approach, and in the derivation of capitalization rates or discount rates. Refer to IAAO (1990, chapter 5) and Gloudemans (1999, chapter 2) for guidelines relating to the acquisition and processing of sales data.

3.5 Income and Expense Data

Income and expense data must be collected for income-producing property, as these data are required in the application of the income approach to value. (See section 4.4.) Refer to IAAO (1990, chapter 5) and Gloudemans (1999, chapter 2) for guidelines addressing the collection and processing of income and expense data.

3.6 Cost and Depreciation Data

Current cost and depreciation data adjusted to the local market are required for the cost approach (see section 4.2). Cost and depreciation manuals and schedules may be purchased from commercial services or created in-house. See Gloudemans (1999, chapter 4) for guidelines on creating manuals and schedules.

4. Valuation

4.1 Valuation Models

Any appraisal, whether single-property appraisal or mass appraisal, uses a model, that is, a representation in words or an equation of the relationship between value and variables representing factors of supply and demand. Mass appraisal models attempt to represent the market for a specific type of property in a specified area. Mass appraisers must first specify the model, that is, identify the variables (supply and demand factors) that influence value, for example, square feet of living area. Then, mass appraisers must calibrate the model, that is, determine the adjustments or coefficients that best represent the value contribution of the variables chosen, for example, the dollar amount the

market places on each square foot of living area. Careful and extensive market analysis is required for both specification and calibration of a model that estimates values accurately. All three approaches to value—the cost approach, the sales comparison approach, and the income approach—are modeled for mass appraisal.

Geographic stratification is appropriate when the value of property attributes varies significantly among areas. It is particularly effective when housing types and styles are relatively uniform within areas. Separate models can be developed for market areas (also known as economic or model areas). Subareas or neighborhoods can serve as variables in modeling and can also be used in land value tables and selection of comparable sales. (See Gloudemans [1999, chapter 3].) Smaller jurisdictions may find it sufficient to develop a single residential model.

Commercial and income-producing properties should be stratified by property type. In general, separate models should be developed for apartment, warehouse/industrial, and retail properties. Large jurisdictions may be able to stratify apartment properties further by type or area or to develop multiple commercial models.

4.2 The Cost Approach

The cost approach is applicable to virtually all improved parcels and, if used properly, can produce highly accurate valuations. The cost approach is more reliable for newer structures of standard materials, design, and workmanship.

Reliable cost data are imperative in any successful application of the cost approach. The data must be complete, typical, and current. Current construction costs should be based on the cost of replacing a structure with one of equal utility, using current materials, design, and building standards. Costs of individual construction components and building items should also be included in order to adjust for features that differ from the base specifications. These costs should be incorporated into a construction cost manual and related computer software. The software can perform the valuation function, and the manual, in addition to providing documentation, can be used when nonautomated calculations are required.

Construction cost schedules can be developed internally, based on a systematic study of local construction costs, obtained from firms specializing in such information, or custom generated by a contractor. Cost schedules should be verified for accuracy by applying them to recently constructed improvements of known cost. Construction costs also should be updated before each assessment cycle.

One weakness in the cost approach tends to occur in the estimation of accrued depreciation. This estimate must be based on non-cost data (primarily sales) and can involve considerable subjectivity.

Depreciation schedules can be extracted from sales data in several ways. Methods for extracting depreciation can be found in IAAO (1990, chapter 8) and Gloudemans (1999, chapter 4).

Another key difficulty in use of the cost approach is determination of land value, which is estimated independently from sales (often from sales of improved property because sales of vacant land are scarce). Land values used in the cost approach must be current and consistent. Section 4.5 provides standards for land valuation in mass appraisal.

4.3 The Sales Comparison Approach

The sales comparison approach estimates the value of a subject property by statistically analyzing the sale prices of similar properties. This approach is usually the preferred approach for estimating values for residential and other property types with adequate sales.

Applications of the sales comparison approach include direct market models and comparable sales algorithms (See Gloudemans 1999, chapter 3 & 4, IAAO 1990, chapter 6 & 15, and IAAO 1999, and the IAAO *Standard on Automated Valuation Models* 2003). Comparable sales algorithms are most akin to single property appraisal applications of the sales comparison approach. They have the advantages of being familiar and easily explained and can compensate for less well specified or calibrated models, since the models are used only to make adjustments to the selected comparables. They can be problematic if the selected comparables are not well validated or representative of market value. Because they predict market value directly, direct market models depend more heavily on careful model specification and calibration. Their advantages include efficiency and consistency, since the same model is directly applied against all properties in the model area.

Users of comparable sales algorithms should be aware that sales ratio statistics will be biased if sales used in the ratio study are used as comparables for themselves in model development. This problem can be avoided by (1) not using sales as comparables for themselves in modeling or (2) using holdout or later sales in ratio studies.

4.4 The Income Approach

In general, for income-producing properties the income approach is the preferred valuation approach when reliable income and expense data are available, along with well-supported income multipliers, overall rates, and required rates of return on investment. Successful application of the income approach requires the collection, maintenance, and careful analysis of income and expense data.

Mass appraisal applications of the income approach begin with collecting and processing income and expense

data. (These data should be expressed on an appropriate per-unit basis; such as per square foot or per apartment unit.) Appraisers should then compute normal or “typical” gross incomes, vacancy rates, net incomes, and expense ratios. These figures can be used to judge the reasonableness of reported data for individual parcels and to estimate income and expense figures for parcels with unreported data. Alternatively, models for estimating gross or net income and expense ratios can be developed using actual income and expense data from a sample of properties and calibrated using multiple regression analysis. For an introduction to income modeling, see IAAO (1990, chapter 14) and Gloudemans (1999, chapter 3). The developed income figures can be capitalized into estimates of value in a number of ways. The most direct method involves the application of gross income multipliers, which express the ratio of market value to gross income. At a more refined level, net income multipliers or their reciprocals, overall capitalization rates, can be developed and applied. These multipliers and rates should always be extracted from actual income and sale price data obtained from properties that have recently been sold. Income multipliers and overall rates tend to provide reliable, consistent, and readily supported valuations when good sales and income data are available.

4.5 Land Valuation

State or local laws may require the value of an improved parcel to be separated into land and improvement components. When the sales comparison or income approach is used, an independent estimate of land value must be made and subtracted from the total property value to obtain a residual improvement value. Some computerized valuation techniques provide a separation of total value into land and building components.

Land values should be reviewed annually. At least once every four to six years the properties should be physically inspected and revalued. The sales comparison approach is the primary approach to land valuation and is always preferred when sufficient sales are available. In the absence of adequate sales, other techniques used in mass appraisal include allocation, abstraction, anti-

pated use, capitalization of ground rents, and land residual capitalization. (See IAAO [1990, chapter 7] and Gloudemans [1999, chapter 3].)

4.6 Considerations by Property Type

The appropriateness of each valuation approach varies with the type of property under consideration. Table 1 ranks the relative usefulness of the three approaches in the mass appraisal of major types of properties. The table assumes that there are no major statutory barriers to obtaining cost, sales, and income data. Again, although certain approaches tend to produce better results for a given type of property, the use of two or more approaches should produce greater accuracy.

4.6.1 Single-Family Residential Property

The sales comparison approach is the best approach for single-family residential property, including condominiums. Automated versions of this approach are highly efficient and generally accurate for the majority of these properties. The cost approach is a good supplemental approach and should serve as the primary approach when the sales data available are inadequate. The income approach is usually inappropriate for mass appraisal of single-family residential properties, because most of these properties are not rented.

4.6.2 Multifamily Residential Property

The sales comparison and income approaches are preferred in valuing multifamily residential property when sufficient sales and income data are available. Multiple regression analysis and related techniques have been successfully used in valuing this property type. Income multipliers can also be highly effective. As with other residential property, the cost approach is useful in providing supplemental valuations and can serve as the primary approach when good sales and income data are not available.

4.6.3 Commercial and Industrial Property

The income approach is the most appropriate method to apply when valuing commercial and industrial property if sufficient income data are available. Direct sales

Table 1. Rank of typical usefulness of the three approaches to value in the mass appraisal of major types of property

	Cost approach	Sales comparison approach	Income approach
Single-family residential	2	1	3
Multifamily residential	3	1,2	1,2
Commercial	3	2	1
Industrial	1,2	3	1,2
Non-agricultural land	—	1	2
Agricultural*	—	2	1
Special-purpose**	1	2,3	2,3

*Includes farm, ranch, and forest properties.

**Includes institutional, governmental, and recreation properties

comparison models can be equally effective in large jurisdictions with sufficient sales. When a sufficient supply of sales data and income data is not available, the cost approach should be applied. However, values generated should be periodically checked against available sales data. Cost factors, land values, and depreciation schedules must be kept current through periodic review.

4.6.4 Non-Agricultural Land

The sales comparison approach is the preferred approach for non-agricultural land. Application of the sales comparison approach to vacant land involves the collection of sales data, the posting of sales data on maps, the calculation of standard unit values (such as value per square foot, per front foot, or per parcel) by area and type of land use, and the development of land valuation maps or computer-generated tables, in which the pattern of values is displayed. When vacant land sales are not available or are few, additional benchmarks can be obtained by subtracting the replacement cost new less depreciation of improvements from the sales prices of improved parcels. The success of this technique requires reliable cost data and tends to work best for relatively new improvements, for which depreciation is minimal.

If neither vacant-parcel nor improved-parcel sales data are available, the assessor will need to apply allocation methods or use valuation methods that provide separate land and building values. Sometimes income approach applications can also be used.

4.6.5 Agricultural Property

If adequate sales data are available and agricultural property is to be appraised at market value, the sales comparison approach would be preferred. However, nearly every state or province provides for use-value assessment (and usually appraisal), which significantly understates the market value for agricultural property, so the sales comparison approach is usually not applicable. Because of this limitation, it is imperative to obtain good income data and to use the income approach for agricultural land. Land rents are often available, sometimes permitting the development and application of overall capitalization rates. This method, of course, also entails the estimation of normal land rents for unrented parcels. When agricultural parcels include improvements, the cost approach or sales comparison models that provide separate building values may be used to determine their value.

4.6.6 Special-Purpose Property

The cost approach tends to be most appropriate in the appraisal of special-purpose properties, due to the distinctive nature of such properties and the general absence of adequate sales or income data.

4.7 Frequency of Reappraisals

Section 4.2.2 of the *Standard on Property Tax Policy* (IAAO 2010) states that current market value implies annual assessment of all property. Annual assessment does not necessarily mean, however, that each valuation must be reviewed or recomputed individually. Instead, trending factors based on criteria such as property type, location, size, and age can be developed and applied to groups of properties. These factors should be derived from ratio studies or other market analyses.

Analysis of ratio study data can suggest groups or strata of properties in need of physical review. In general, trending factors can be highly effective in maintaining equity when appraisals are uniform within strata. However, such factors are not a substitute for physical reviews and individual reappraisals, which are required to correct lack of uniformity within strata.

Although assessment trending can be effective for short periods, properties should be physically reviewed and individually reappraised at least every four to six years. This can be accomplished in at least three ways:

- reappraising all property at periodic intervals (that is, every four to six years)
- reappraising properties on a cyclical basis (for example, one-fourth or one-sixth each year)
- reappraising on a priority basis as indicated by ratio studies or other considerations while still ensuring that all properties are physically reviewed at least every sixth year

5. Managerial Considerations

5.1 Overview

Mass appraisal requires human, computing, and other resources to be well managed and appropriate appraisal and analytical methods need to be employed. In this section certain key managerial considerations are discussed.

5.2 Staffing

A successful in-house appraisal program requires a sufficiently large staff composed of persons skilled in general administration and supervision, appraisal, mapping and drafting, data processing, and secretarial and clerical functions. Typical staffing sizes and patterns for jurisdictions of various sizes are illustrated in *Property Appraisal and Assessment Administration* (IAAO 1990, chapter 16).

Unless efficiency or practical concerns dictate otherwise, persons performing the various mass appraisal functions should be employees of the assessor. When these functions are not performed by assessment staff, it is imperative that they be adequately provided by other departments, an oversight agency, a service bureau, a qualified contractor, or another source. Strong lines of

communication must be established between the assessor's staff and the designated support groups.

5.3 Data Processing Support

Computer-assisted mass appraisals require considerable data processing support. (See the *Standard on Facilities, Equipment, Computers, and Supplies* [IAAO 2003].)

5.3.1 Hardware

The hardware should be powerful enough to permit computerization of appropriate applications of the cost, sales comparison, and income approaches, as well as providing word processing, data inquiry, and activity summaries. The requirements for efficient running of desired software should be established before the acquisition of hardware. Computer equipment can be purchased, leased, rented, or shared with other jurisdictions. If the purchase option is chosen, the equipment should be easy to upgrade so that technological developments can be taken advantage of without purchasing an entirely new system.

5.3.2 Software

Computer software can be developed internally, adapted from software developed by other public agencies, or purchased (in whole or in part) from private vendors. (Inevitably there will be some tailoring needed to adapt externally developed software to the requirements of the user's environment.) Each alternative has advantages and disadvantages. The software should be designed so that it can be easily modified; it should also be well documented, at both the appraiser/user and programmer levels.

Security measures should exist to prevent unauthorized use and to provide backup in the event of accidental loss or destruction of data.

5.4 Contracting for Appraisal Services

5.4.1 Overview

Reappraisal contracts can include mapping, data collection, data processing, and other services, as well as valuation. They offer the potential of acquiring professional skills and resources quickly. Often these skills and resources are not available internally. Contracting for these services can permit the jurisdiction to maintain a modest staff and to budget for reappraisal on a periodic basis, but also makes the assessor less likely to develop in-house expertise. (See the *Standard on Contracting for Assessment Services* [IAAO 2008].)

5.4.2 In-House Staff

The assessor's staff must have confidence in the appraisals and be able to explain and defend them. This confidence begins with application of reliable appraisal techniques, generation of appropriate valuation reports, and review of preliminary values. It may be helpful to

have reports that list each parcel, its characteristics, and its calculated value. Parcels with unusual characteristics, extreme values, or extreme changes in values should be identified for subsequent individual review. Equally important, summary reports should show average values, value changes, and ratio study statistics for various strata of properties. These should be reviewed to ensure the overall consistency of values for various types of property and various locations. (See the *Uniform Standards of Professional Appraisal Practice*, Standards Rule 6-7, for reporting requirements for mass appraisals [The Appraisal Foundation, Appraisal Standards Board 2008–2009].)

The staff should also be prepared to support individual valuations as required, preferably through comparable sales. At a minimum, staff should be able to produce a property record and explain the basic approach (cost, sales comparison, or income) used to estimate the value of the property. A property owner should never merely be told that "the computer" or "the system" produced the appraisal. Generally, the staff should tailor the explanation to the taxpayer's knowledge and expertise. Equations converted to tabular form can be used to explain the basis for valuation. Cost tables can be used to explain values based on the cost approach.

In all cases, the assessor's staff should be able to produce sales or appraisals of similar properties in order to support (or at least explain) the valuation of the property in question. Comparable sales can be obtained from reports that list sales by such features as type of property, area, size, and age. Alternatively, interactive programs can be obtained or developed that identify and display the most comparable properties.

Assessors should notify property owners of their valuations in sufficient time for property owners to discuss their appraisals with the assessor and appeal the value if they choose to do so (*Standard on Public Relations* [IAAO 2011]). Statutes should provide for a formal appeals process beyond the assessor's level (*Standard on Assessment Appeal* [IAAO 2001]).

5.5 Benefit-Cost Considerations

5.5.1 Overview

The object of mass appraisal is to produce equitable valuations at low costs. Improvements in equity generally require increased expenditures.

Benefit-cost analysis in mass appraisal involves two major issues, one of policy and the other of administration.

5.5.2 Policy Issues

An assessment jurisdiction requires a certain expenditure level simply to inventory, list, and value properties. Beyond that point, additional expenditures make possible rapid improvements in equity initially, but marginal improvements in equity diminish as expenditure increases. At a minimum, jurisdictions should budget

to meet statutory standards of equity. Refer to the *Standard on Ratio Studies* (IAAO 2010) for a listing of performance standards.

5.5.3 Administrative Issues

Maximizing equity per dollar of expenditure is the primary responsibility of assessment administration. The assessor must provide leadership, make decisions, and get results by planning, budgeting, organizing, and controlling within all social, economic, and governmental limits (IAAO 1990, chapter 16). The computer-assisted mass appraisal system selected must be designed and used to evaluate appraisal performance and ensure compliance with laws, regulations, and policies.

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Glossary

Abstraction Method—Method of land valuation in the absence of vacant land sales, whereby improvement values obtained from the cost model are subtracted from sales prices of improved parcels to yield residual land value estimates. Also called land residual technique.

Accrued Depreciation—(1) The amount of depreciation, from any and all sources, that affects the value of the property in question on the effective date of the appraisal. (2) In accounting, the amount reserved each year or accumulated to date in the accounting system for replacement of a building or other asset. When depreciation is recorded as a dollar amount, it may be deductible from total plant value or investment to arrive at the rate base for public utilities. See also Depreciation.

Acquisition Value—An assessed value based on the cost of acquiring the property; increases in this value are usually limited until the next qualifying sale.

Adaptive Estimation Procedure (AEP)—A computerized, iterative, self-referential procedure using properties for which sales prices are known to produce a model that can be used to value properties for which sales prices are not known. Also called “feedback.”

Adjusted Sale Price—The sale price that results from adjustments made to the stated sale price to account for the effects of time, personal property, financing, or the like.

Adjustments—Modifications in the reported value of a variable, such as sale price or gross income. For example, adjustments can be used to estimate market value in the sales comparison approach by adjusting the sale price of the comparable for differences between comparable and subject properties.

Ad Valorem Tax—A tax levied in proportion to the value of the thing(s) being taxed.

Aerial Photograph—A photograph of a part of the earth’s surface taken by an aircraft-supported camera.

Agricultural Property—Improved or unimproved land devoted to or available for the production of crops or other agricultural products, livestock, and agricultural support buildings.

Allocation Method—A method used to value land, in the absence of vacant land sales, by using a typical ratio of land to improvement value. Also called land ratio method.

Appraisal Foundation, The—The organization authorized by the United States Congress as the source of appraisal standards and appraiser qualifications.

Appraisal Ratio—(1) The ratio of the appraised value to an indicator of market value. (2) By extension, an estimated fractional relationship between the appraisals and market values of a group of properties. See also Level of Appraisal.

Appraisal Ratio Study—A ratio study using independent expert appraisals as indicators of market value.

Arm’s-Length Sale—A sale between two unrelated parties, both seeking to maximize their positions from the transaction.

Assessment Cycle—A legally sanctioned reappraisal period generally ranging from one to ten years.

Assessment Date—The status date for tax purposes. Appraised values reflect the status of the property and any partially completed construction as of this date.

Assessment Equity—The degree to which assessments bear a consistent relationship to market value.

Assessment Level—The common, or overall, ratio of assessed values to market values.

Assessment Maps—See Cadastral Map.

Assessment Ratio—(1) The fractional relationship an assessed value bears to the market value of the property in question. (2) By extension, the fractional relationship the total of the assessment roll bears to the total market value of all taxable property in a jurisdiction. See Level of Assessment.

Assessment Ratio Study—An investigation intended to determine the assessment ratio and assessment equity.

Assessment Ratio—(1) The fractional relationship an assessed value bears to the market value of the property in question. (2) By extension, the fractional relationship the total of the assessment roll bears to the total market value of all taxable property in a jurisdiction. See Level of Assessment.

Assessment Ratio Study—An investigation intended to determine the assessment ratio and assessment equity.

Audit—A systematic investigation or appraisal of procedures or operations for the purpose of determining conformity with specifically prescribed criteria.

Audit, Performance—An analysis of an organization to determine whether or not the quantity and quality of work performed meets standards. Ratio studies are an important part of performance audits of an assessing organization.

Audit, Procedural—An examination of an organization to determine whether established or recommended procedures are being followed.

Audit Program—The procedures undertaken or particular work done by an accountant in conducting an examination.

Audit Trail—A set of records of the changes made to another set of records.

Automated Valuation Model—A computer program for property valuation that analyzes data using an automated process. See also Computer-assisted Mass Appraisal.

Base Year Value—In a nonmarket-value assessment system, the assessed value established as of a specific year.

Benchmark—(1) A term used in land surveying to mean a known point of reference. (2) In property appraisal, a property of known value and of known effective age and replacement cost. (3) By extension, a model property to be used in determining by comparison the grade or quality class of other properties.

Cadastral Map—A scale map displaying property ownership boundaries and showing the dimensions of each parcel with related information such as parcel identifier, survey lines, and easements.

Calibration—The process of estimating the coefficients in a mass appraisal model.

CAMA—See Computer-assisted Mass Appraisal.

Capitalization Rate—Any rate used to convert an estimate of future income to an estimate of market value; the ratio of net operating income to market value.

Capitalization of Ground Rents—A method of estimating land value in the absence of comparable sales; applicable where there is an income stream; for example, to farmland and commercial land leased on a net basis.

Class—A set of items defined by common characteristics. (1) In property taxation, property classes such as residential, agricultural, and industrial may be defined. (2) In assessment, building classification systems based on type of building design, quality of construction, or structural type are common. (3) In statistics, a predefined category into which data may be put for further analysis. For example, ratios may be grouped into the following classes: less than 0.500, 0.500 to 0.599, 0.600 to 0.699, and so forth.

Coding—(1) The act of reducing a description of a unique object, such as a parcel of real estate, to a set of one or more measures or counts of certain of its characteristics, such as square footage, number of bathrooms, and the like. (2) Encoding, a related term, is usually used to refer to the act of translating coded descriptions useful to human beings into a form that can be processed by computers. (3) Coding is sometimes also used to refer to the writing of instructions that direct the processing done by computers.

Coefficient—(1) In a mathematical expression, a number or letter preceding and multiplying another quantity. For example, in the expression, 5X, 5 is the coefficient of X, and in the expression aY, a is the coefficient of Y. (2) A dimensionless statistic, useful as a measure of change or relationship; for example, correlation coefficient.

Commercial Property—Generally, any nonindustrial, nonresidential realty of a commercial enterprise. Includes realty used as a retail or wholesale establishment, hotel or motel, service station, commercial garage, warehouse, theater, bank, nursing home, and the like.

Comparable Sales; Comparables—(1) Recently sold properties that are similar in important respects to a property being appraised. The sale price and the physical, functional, and locational characteristics of each of the properties are compared to those of the property being appraised in order to arrive at an estimate of value. (2) By extension, the term “comparables” is sometimes used to refer to properties with rent or income patterns comparable to those of a property being appraised.

Comparative Unit Method—(1) A method of appraising land parcels in which an average or typical value is estimated for each stratum of land. (2) A method of estimating replacement cost in which all the direct and indirect costs of a structure (except perhaps architect’s fees) are aggregated and specified with reference to a unit of comparison such as square feet of ground area or floor area, or cubic content. Separate factors are commonly specified for different intervals of the unit of comparison and for different story heights, and separate schedules are commonly used for different building types and quality classes.

Computer-assisted Assessment System—A system for assessing real and personal property with the assistance of a computer. A computer may be used, for example, in the appraisal process, in keeping track of ownership and exemption status, in printing the assessment roll, in coordinating the work load of real property appraisers and personal property appraisers with respect to the assessment of commercial and industrial properties, and in a number of other areas.

Computer-assisted Mass Appraisal (CAMA)—A system of appraising property, usually only certain types of real property, that incorporates computer-supported statistical analyses such as multiple regression analysis and adaptive estimation procedure to assist the appraiser in estimating value.

Cost—The money expended in obtaining an object or attaining an objective; generally used in appraisal to mean the expense, direct and indirect, of constructing an improvement.

Cost Approach—(1) One of the three approaches to value, the cost approach is based on the principle of substitution—that a rational, informed purchaser would pay no more for a property than the cost of building an acceptable substitute with like utility. The cost approach seeks to determine the replacement cost new of an improvement less depreciation plus land value. (2) The method of estimating the value of property by (a) estimating the cost of construction based on replacement or reproduction cost new or trended historic cost

(often adjusted by a local multiplier), (b) subtracting depreciation, and (c) adding the estimated land value. The land value is most frequently determined by the sales comparison approach.

Cost Schedules—Charts, tables, factors, curves, equations, and the like intended to help estimate the cost of replacing a structure from a knowledge of some other factors, such as its quality class and number of square feet.

Data—The general term for masses of numbers, codes, and symbols. “Data” is the plural of datum, one element of data.

Data Edit—The process of examining recorded data to ensure that each element of data is reasonable and is consistent with others recorded for the same object, such as a parcel of real estate. Data editing, which may be done by persons or by computer, is essentially a mechanical process, distinct from verifying the correctness of the recorded information by calling or writing property owners.

Data Management—The human (and sometimes computer) procedures employed to ensure that no information is lost through negligent handling of records from a file, that all information is properly supplemented and up-to-date, and that all information is easily accessible.

Depreciation—Loss in value of an object, relative to its replacement cost new, reproduction cost new, or original cost, whatever the cause of the loss in value. Depreciation is sometimes subdivided into three types: physical deterioration (wear and tear), functional obsolescence (suboptimal design in light of current technologies or tastes), and economic obsolescence (poor location or radically diminished demand for the product). See also Accrued Depreciation.

Depreciation Schedules—Tables used in mass appraisal that show the typical loss in value at various ages or effective ages for different types of properties.

Discount Rate—The rate of return on investment; the rate an investor requires to discount future income to its present worth.

Economic Area—A geographic area, typically encompassing a group of neighborhoods, defined on the basis that the properties within its boundaries are more or less equally subject to a set of one or more economic forces that largely determine the value of the properties in question.

Equity—(1) In assessment, the degree to which assessments bear a consistent relationship to market value. Measures include the coefficient of dispersion, coefficient of variation, and price-related differential. (2) In popular usage, a synonym for tax fairness. (3) In ownership, the net value of property after liens and other charges have been subtracted.

Expense Ratios—The ratio of expenses to gross income.

Factor—(1) An underlying characteristic of something (such as a house) that may contribute to the value of a variable (such as its sale price), but is observable only indirectly. For example, construction quality is a factor defined by workmanship, spacing of joists, and materials used. Factor definition and measurement may be done subjectively or by a computer-assisted statistical algorithm known as factor analysis. (2) Loosely, any characteristic used in adjusting the sales prices of comparables. (3) The reciprocal of a rate. Assessments may be equalized by multiplying them by a factor equal to the reciprocal of the assessment ratio, and value can be estimated using the income approach by multiplying income by a factor equal to the reciprocal of the discount rate.

Feedback—See Adaptive Estimation Procedure.

Front Foot—The unit or standard of linear measure used in measuring frontage.

Geographic Information System (GIS)—(1) A database management system used to store, retrieve, manipulate, analyze, and display spatial information. (2) One type of computerized mapping system capable of integrating spatial data (land information) and attribute data among different layers on a base map.

Gross Income—The payments to an owner that a property can generate before expenses are deducted.

Gross Income Multiplier—A capitalization technique that uses the ratio between the sale price of a property and its potential gross income or its effective gross income.

Improvements—Buildings, other structures, and attachments or annexations to land that are intended to remain so attached or annexed, such as sidewalks or sewers.

Income Approach—One of the three approaches to value, based on the concept that current value is the present worth of future benefits to be derived through income production by an asset over the remainder of its economic life. The income approach uses capitalization to convert the anticipated benefits of the ownership of property into an estimate of present value.

Industrial Property—Generally, any property used in a manufacturing activity, such as a factory, wholesale bakery, food processing plant, mill, mine, or quarry.

Integrity—The quality of a data element or program being what it says it is; usually distinguished from validity, the quality of its being what it should be in terms of some ultimate purpose. After data are edited and encoded and programs are prepared, their integrity is ensured by safeguards that prevent accidental or unauthorized tampering with them.

Land—(1) In economics, the surface of the earth and all the natural resources and natural productive powers over which possession of the earth's surface gives man control. (2) In law, a portion of the earth's surface, together with the earth below it, the space above it, and all things annexed thereto by nature or by man. See also Improvements.

Land Residual Technique—See Abstraction Method.

Legal Description—A delineation of dimensions, boundaries, and relevant attributes of a real property parcel that serve to identify the parcel for all purposes of law. The description may be in words or codes, such as metes and bounds or coordinates. For a subdivided lot, the legal description would probably include lot and block numbers and subdivision name.

Level of Appraisal—The common, or overall, ratio of appraised values to market values. Three concepts are usually of interest: the level required by law, the true or actual level, and the computed level, based on a ratio study.

Level of Assessment; Assessment Ratio—The common or overall ratio of assessed values to market values. Compare Level of Appraisal. Note: The two terms are sometimes distinguished, but there is no convention determining their meanings when they are. Three concepts are commonly of interest: what the assessment ratio is legally required to be, what the assessment ratio actually is, and what the assessment ratio seems to be, on the basis of a sample and the application of inferential statistics. When level of assessment is distinguished from assessment ratio, "level of assessment" usually means either the legal requirement or the true ratio, and "assessment ratio" usually means the true ratio or the sample statistic.

Linear Regression—A kind of statistical analysis used to investigate whether a dependent variable and a set of one or more independent variables share a linear correlation and, if they do, to predict the value of the dependent variable on the basis of the values of the other variables. Regression analysis of one dependent variable and only one independent variable is called simple linear regression, but it is the word simple (not linear) that distinguishes it from multiple regression analysis with its multiple independent variables.

Location—The numerical or other identification of a point (or object) sufficiently precise so the point can be situated. For example, the location of a point on a plane can be specified by a pair of numbers (plane coordinates) and the location of a point in space can be specified by a set of three numbers (space coordinates). However, location may also be specified in other terms than coordinates. A location may be specified as being at the intersection of two specific lines by identifying it with some prominent and known feature (for example, "on top of Pikes Peak" or "at the junction of the Potomac and Anacostia Rivers").

Map—A conventional representation, usually on a plane surface and at an established scale, of the physical features (natural, artificial, or both) of a part or the whole of the earth's surface. Features are identified by means of signs and symbols, and geographical orientation is indicated.

Map, Tax—A map drawn to scale and delineated for lot lines or property lines or both, with dimensions or areas and identifying numbers, letters, or names for all delineated lots or parcels.

Market—(1) The topical area of common interest in which buyers and sellers interact. (2) The collective body of buyers and sellers for a particular product.

Market Adjustment Factors—Market adjustment factors, reflecting supply and demand preferences, are often required to adjust values obtained from the cost approach to the market. These adjustments should be applied by type of property and area and are based on sales ratio studies or other market analyses. Accurate cost schedules, condition ratings, and depreciation schedules will minimize the need for market adjustment factors.

Market Analysis—A study of real estate market conditions for a specific type of property.

Market Area—See Economic Area.

Market Value—Market value is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States is:

The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

The buyer and seller are typically motivated;

Both parties are well informed or well advised, and acting in what they consider their best interests;

A reasonable time is allowed for exposure in the open market;

Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto;

The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Market-Value Standard—A requirement of law or practice that the assessment ratio of all properties be equal to one. Two issues are implicit here: that fractional assessment levels be avoided and that all property be assessed on the basis of its market value and not on the basis of its value in some particular use—for example, agriculture—unless that use is the only use to which the property can legally be put (in which case its use value would be equal to its market value).

Mass Appraisal—The process of valuing a group of properties as of a given date, using standard methods, employing common data, and allowing for statistical testing.

Mass Appraisal Model—A mathematical expression of how supply and demand factors interact in a market.

Model—(1) A representation of how something works. (2) For purposes of appraisal, a representation (in words or an equation) that explains the relationship between value or estimated sale price and variables representing factors of supply and demand.

Model Area—See Economic Area.

Model Calibration—The development of adjustments, or coefficients, based on market analysis, that identifies specific factors with an actual effect on market value.

Model Specification—The formal development of a model in a statement or equation, based on data analysis and appraisal theory.

Multiple Regression, Multiple Regression Analysis (MRA)—A particular statistical technique, similar to correlation, used to analyze data in order to predict the value of one variable (the dependent variable), such as market value, from the known values of other variables (called “independent variables”), such as lot size, number of rooms, and so on. If only one independent variable is used, the procedure is called simple regression analysis and differs from correlation analysis only in that correlation measures the strength of relationship, whereas regression predicts the value of one variable from the value of the other. When two or more variables are used, the procedure is called multiple regression analysis. See Linear Regression.

Neighborhood—(1) The environment of a subject property that has a direct and immediate effect on value. (2) A geographic area (in which there are typically fewer than several thousand properties) defined for some useful purpose, such as to ensure for later multiple regression modeling that the properties are homogeneous and share important locational characteristics.

Net Income—The income expected from a property after deduction of allowable expenses.

Net Income Multiplier—A factor expressing the relationship between value and net operating income; the reciprocal of the overall rate.

Objective—The quality of being definable by specific criteria without the need for judgment.

Open Market—A freely competitive market in which any buyer or seller may trade and in which prices are determined by competition.

Overall Rate (OAR)—A capitalization rate that blends all requirements of discount, recapture, and effective tax rates for both land and improvements; used to convert annual net operating income into an indicated overall property value.

Parcel—A contiguous area of land described in a single legal description or as one of a number of lots on a plat; separately owned, either publicly or privately; and capable of being separately conveyed.

Parcel Identifier—A code, usually numerical, representing a specific land parcel’s legal description. The purpose of parcel identifiers is to permit reference to legal descriptions by using a code of uniform and manageable size, thereby facilitating record-keeping and handling. Also called parcel identification number.

Personal Property—Consists of every type of property that is not real property. Personal property is movable without damage to itself or the real estate and is subdivided into tangible and intangible.

Price, Adjusted Sale—The sale price that results from adjustments made to the stated sale price to account for the effects of time, personal property, atypical financing, and the like.

Price, Market—The value of a unit of goods or service, expressed in terms of money, as established in a free and open market. Note: This term is sometimes distinguished from “market value” on the ground that the latter term assumes that buyers and sellers are informed, but this assumption is also implied by the phrase “free and open market.” Compare Price, Sale.

Price, Sale—(1) The actual amount of money exchanged for a unit of goods or services, whether or not established in a free and open market. An indicator of market value. (2) Loosely used synonymously with “offering” or “asked” price. Note: The sale price is the “selling price” to the vendor and the “cost price” to the vendee.

Property—(1) An aggregate of things or rights to things. These rights are protected by law. There are two basic types of property: real and personal. (2) The legal interest of an owner in a parcel or thing.

Property Record Card (Form)—An assessment document with blanks for the insertion of data for property identification and description, for value estimation, and for property owner satisfaction. The basic objectives of property record forms are, first, to serve as a repository of most of the information deemed necessary for identifying and describing a property, valuing a property, and assuring property owners that the assessor is con-

versant with their properties, and, second, to document property appraisals. Use of properly designed property record forms permits an organized and uniform approach to amassing a property inventory.

Ratio, Assessment—See Assessment Ratio.

Ratio Study—A study of the relationship between appraised or assessed values and market values. Indicators of market values may be either sales (sales ratio study) or independent “expert” appraisals (appraisal ratio study). Of common interest in ratio studies are the level and uniformity of the appraisals or assessments. See also Level of Appraisal and Level of Assessment.

RCN—Replacement cost new or reproduction cost new.

RCNLD—Replacement cost new less depreciation or reproduction cost new less depreciation.

Real Estate—The physical parcel of land and all improvements permanently attached. Compare Real Property.

Real Property—Consists of the interests, benefits, and rights inherent in the ownership of land plus anything permanently attached to the land or legally defined as immovable; the bundle of rights with which ownership of real estate is endowed. To the extent that “real estate” commonly includes land and any permanent improvements, the two terms can be understood to have the same meaning. Also called “realty.”

Reappraisal—The mass appraisal of all property within an assessment jurisdiction accomplished within or at the beginning of a reappraisal cycle (see below, sense 2). Also called revaluation or reassessment.

Reappraisal Cycle—(1) The period of time necessary for a jurisdiction to have a complete reappraisal. For example, a cycle of five years occurs when one-fifth of a jurisdiction is reappraised each year and also when a jurisdiction is reappraised all at once every five years. (2) The maximum interval between reappraisals as stated in laws.

Reassessment—(1) The relisting and revaluation of all property, or all property of a given class, within an assessment district by order of an authorized officer or body after a finding by such an officer or body that the original assessment is too faulty for correction through the usual procedures of review and equalization. (2) The revaluation of all real property by the regularly constituted assessing authorities, as distinguished from assessment on the basis of valuations most or all of which were established in some prior year. See also Revaluation.

Reciprocal—The result obtained when 1 is divided by a given number.

Reconciliation—The final step in the valuation process wherein consideration is given to the relative strengths and weaknesses of the three approaches to value, the nature of the property appraised, and the quantity and quality of available data in formation of an overall opinion of value (either a single point estimate or a range of value). Also termed “correlation” in some texts.

Regression Analysis—See Multiple Regression Analysis.

Reliability—The degree to which measures are free from random error and therefore yield consistent results; the extent to which a procedure yields consistent results on repeated trials.

Replacement Cost; Replacement Cost New—The cost, including material, labor, and overhead, that would be incurred in constructing an improvement having the same utility to its owner as a subject improvement, without necessarily reproducing exactly any particular characteristics of the subject. The replacement cost concept implicitly eliminates all functional obsolescence from the value given; thus, only physical depreciation and economic obsolescence need to be subtracted to obtain replacement cost new less depreciation (RCNLD).

Replacement Cost New Less Depreciation (RCLD)—In the cost approach, replacement cost new less physical incurable depreciation.

Reproduction Cost; Reproduction Cost New—The cost of constructing a new property, reasonably identical (having the same characteristics) with the given property except for the absence of physical depreciation, using the same materials, construction standards, design, and quality of workmanship, computed on the basis of prevailing prices and on the assumption of normal competency and normal conditions.

Residential Property—Property used for housing such as single-family residences, duplexes, or apartment buildings.

Residual—The difference between an observed value and a predicted value for a dependent variable.

Residual Technique—A method of arriving at the unknown value of a property component by subtracting the known values of other components from a known overall value.

Revaluation—A reappraisal of property; especially a complete reappraisal of real property after assessment for one or more years on valuations most (or all) of which were established in some prior year. Compare Reassessment and Reappraisal.

Review—(1) Consideration by a board of appeals, a board of equalization, a board of review, or a court, of

individual, property class, or district assessments, whether for the purpose of adding omitted taxable property, removing exempt property, or equalizing the valuations placed on listed property. (2) The act or process of critically studying a report, such as an appraisal, prepared by another.

Sale, Arm's-Length—A sale in the open market between two unrelated parties, each of whom is reasonably knowledgeable of market conditions and under no undue pressure to buy or sell.

Sale Price—See Price, Sale; Price, Adjusted Sale.

Sales Comparison Approach—One of three approaches to value, the sales comparison approach estimates a property's value (or some other characteristic, such as its depreciation) by reference to comparable sales.

Sales Data—(1) Information about the nature of the transaction, the sale price, and the characteristics of a property as of the date of sale. (2) The elements of information needed from each property for some purpose, such as appraising properties by the direct sales comparison approach.

Sales File—A file of sales data.

Sales Ratio Study—A ratio study that uses sales prices as proxies for market values.

Schedules—Tables, equations, or some other means of presenting the relationship between the values of two or more variables that are functionally related. For example, cost schedules present the relationship between cost per square foot and living area for a number of quality classes, building heights, and other characteristics.

Single-Property Appraisal—Systematic appraisal of properties one at a time.

Site—The location of a person, thing, or event.

Site Characteristics—(1) Characteristics of (and data that describe) a particular property, especially land size, shape, topography, drainage, and so on, as opposed to location and external economic forces.

Software—(1) Computer programs. (2) Those parts of a computer system that are not machinery or circuits; procedures and possibly documentation are included along with programs.

Special-Purpose Property—A property adapted for a single use.

Standard 6—See *Uniform Standards of Professional Appraisal Practice*.

Stratify—To divide, for purposes of analysis, a sample of observations into two or more subsets according to some criterion or set of criteria.

Stratum, Strata (pl.)—A class or subset that results from stratification.

Subclass—A group of properties within a class, smaller than the class, usually (although not necessarily) defined by stratification rather than by sampling.

Subject Property—The property being appraised.

Subjective—Having the quality of requiring judgment in arriving at an appropriate answer of value of a variable (such as the quality class of a structure).

Three Approaches to Value—A convenient way to group the various methods of appraising a property. The cost approach encompasses several methods for estimating replacement cost new of an improvement less depreciation plus land value. The sales comparison approach estimates values by comparison with similar properties for which sales prices are known. The methods included in the income approach are based on the assumption that value equals the present worth of the rights to future income.

Time-adjusted Sale Price—The price at which a property sold, adjusted for the effects of price changes reflected in the market between the date of sale and the date of analysis.

Trending—Adjusting the values of a variable for the effects of time. Usually used to refer to adjustments of assessments intended to reflect the effects of inflation and deflation and sometimes also, but not necessarily, the effects of changes in the demand for microlocation-al goods and services.

Trending Factor—A figure representing the increase in cost or selling price over a period of time. Trending accounts for the relative difference in the value of a dollar between two periods.

Uniformity—The equality of the burden of taxation in the method of assessment.

Uniform Standards of Professional Appraisal Practice—Annual publication of the Appraisal Standards Board of The Appraisal Foundation: "These Standards deal with the procedures to be followed in performing an appraisal, appraisal review, or appraisal consulting service and the manner in which an appraisal, appraisal review, or appraisal consulting service is communicated. ... Standard 6 establishes requirements for the development and reporting of mass appraisals of a universe of properties for ad valorem tax purposes or any other intended use" (The Appraisal Foundation, Appraisal Standards Board 2002, Preamble, p. 6).

Unit of Comparison—A property as a whole or some smaller measure of the size of the property used in the sales comparison approach to estimate a price per unit.

Use Class—(1) A grouping of properties based on their use rather than, for example, their acreage or

construction. (2) One of the following classes of property: single-family residential, multifamily residential, agricultural, commercial, industrial, vacant land, and institutional/exempt. (3) Any subclass refinement of the above—for example, townhouse, detached single-family, condominium, house on farm, and so on.

Use Value—(1) The value of property in a specific use. (2) Property entirely used for a specific purpose or use that may entitle the property to be assessed at a different level than others in the jurisdiction. Examples of properties that may be assessed at use value under the statutes include agricultural land, timberland, and historical sites.

USPAP—See *Uniform Standards of Professional Appraisal Practice*.

Valuation—(1) The process of estimating the value—market, investment, insured, or other properly defined value—of a specific parcel or parcels of real estate or of an item or items of personal property as of a given date. (2) The process or business of appraising, of making estimates of the value of something. The value usually required to be estimated is market value.

Valuation Date—The specific date as of which assessed values are set for purposes of property taxation. This date may also be known as the “date of finality.” See also Assessment Date.

Valuation Model—A representation in words or in an equation that explains the relationship between value or estimated sale price and variables representing factors of supply and demand.

Value—(1) The relationship between an object desired and a potential owner; the characteristics of scarcity, utility, desirability, and transferability must be present for value to exist. (2) Value may also be described as the present worth of future benefits arising from the ownership of real or personal property. (3) The estimate sought in a valuation. (4) Any number between positive infinity and negative infinity. See also Market Value.

Variable—An item of observation that can assume various values, for example, square feet, sales prices, or sales ratios. Variables are commonly described using measures of central tendency and dispersion.

Verify—To check the accuracy of something. For example, sales data may be verified by interviewing the purchaser of the property, and data entries may be verified by check digits.

Assessment Standards of the International Association of Assessing Officers

Guide to Assessment Administration Standards

Standard on Assessment Appeal

Standard on Automated Valuation Models

Standard on Contracting for Assessment Services

Standard on Digital Cadastral Maps and Parcel Identifiers

Standard on Facilities, Computers, Equipment, and Supplies

Standard on Manual Cadastral Maps and Parcel Identifiers

Standard on Mass Appraisal of Real Property

Standard on Oversight Agency Responsibilities

Standard on Professional Development

Standard on Property Tax Policy

Standard on Public Relations

Standard on Ratio Studies

Standard on Valuation of Personal Property

Standard on Valuation of Property Affected by Environmental Contamination

Standard on Verification and Adjustment of Sales

To download the current approved version of any of the standards listed above, go to:

<http://www.iaao.org/publications/standards.html>

Standard on Mass Appraisal of Real Property

Approved July 2017

International Association of Assessing Officers

This standard replaces the January 2012 *Standard on Mass Appraisal of Real Property* and is a complete revision. The 2012 *Standard on Mass Appraisal of Real Property* was a partial revision that replaced the 2002 standard. The 2002 standard combined and replaced the 1983 *Standard on the Application of the Three Approaches to Value in Mass Appraisal*, the 1984 *Standard on Mass Appraisal*, and the 1988 *Standard on Urban Land Valuation*. IAAO assessment standards represent a consensus in the assessing profession and have been adopted by the Executive Board of IAAO. The objective of IAAO standards is to provide a systematic means by which concerned assessing officers can improve and standardize the operation of their offices. IAAO standards are advisory in nature and the use of, or compliance with, such standards is purely voluntary. If any portion of these standards is found to be in conflict with the *Uniform Standards of Professional Appraisal Practice (USPAP)* or state laws, *USPAP* and state laws shall govern.

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STANDARD ON MASS APPRAISAL OF REAL PROPERTY—2017

Standard on Mass Appraisal of Real Property

1. Scope

This standard defines requirements for the mass appraisal of real property. The primary focus is on mass appraisal for ad valorem tax purposes. However, the principles defined here should also be relevant to CAMAs (CAMAs) (or automated valuation models) used for other purposes, such as mortgage portfolio management. The standard primarily addresses the needs of the assessor, assessment oversight agencies, and taxpayers.

This standard addresses mass appraisal procedures by which the fee simple interest in property can be appraised at market value, including mass appraisal application of the three traditional approaches to value (cost, sales comparison, and income). Single-property appraisals, partial interest appraisals, and appraisals made on an other-than-market-value basis are outside the scope of this standard. Nor does this standard provide guidance on determining assessed values that differ from market value because of statutory constraints such as use value, classification, or assessment increase limitations.

Mass appraisal requires complete and accurate data, effective valuation models, and proper management of resources. Section 2 introduces mass appraisal. Section 3 focuses on the collection and maintenance of property data. Section 4 summarizes the primary considerations in valuation methods, including the role of the three approaches to value in the mass appraisal of various types of property. Section 5 addresses model testing and quality assurance. Section 6 discusses certain managerial considerations: staff levels, data processing support, contracting for reappraisals, benefit-cost issues, and space requirements. Section 7 discusses reference materials.

2. Introduction

Market value for assessment purposes is generally determined through the application of mass appraisal techniques. Mass appraisal is the process of valuing a group of properties as of a given date and using common data, standardized methods, and statistical testing. To determine a parcel's value, assessing officers must rely upon valuation equations, tables, and schedules developed through mathematical analysis of market data. Values for individual parcels should not be based solely on the sale price of a property; rather, valuation schedules and models should be consistently applied to property data that are correct, complete, and up-to-date.

Properly administered, the development, construction, and use of a CAMA system results in a valuation system characterized by accuracy, uniformity, equity, reliability, and low per-parcel costs. Except for unique properties, individual analyses and appraisals of properties are not practical for ad valorem tax purposes.

3. Collecting and Maintaining Property Data

The accuracy of values depends first and foremost on the completeness and accuracy of property characteristics and market data. Assessors will want to ensure that their CAMA systems provide for the collection and maintenance of relevant land, improvement, and location features. These data must also be accurately and consistently collected. The CAMA system must also provide for the storage and processing of relevant sales, cost, and income and expense data.

3.1 Overview

Uniform and accurate valuation of property requires correct, complete, and up-to-date property data. Assessing offices must establish effective procedures for collecting and maintaining property data (i.e., property ownership, location, size, use, physical characteristics, sales price, rents, costs, and operating expenses). Such data are also used for performance audits, defense of appeals, public relations, and management information. The following sections recommend procedures for collecting these data.

3.2 Geographic Data

Assessors should maintain accurate, up-to-date cadastral maps (also known as assessment maps, tax maps, parcel boundary maps, and property ownership maps) covering the entire jurisdiction with a unique identification number for each parcel. Such cadastral maps allow assessing officers to identify and locate all parcels, both in the field and in the office. Maps become especially valuable in the mass appraisal process when a geographic information system (GIS) is used. A GIS permits graphic displays of sale prices, assessed values, inspection dates, work assignments, land uses, and much more. In addition, a GIS permits high-level analysis of nearby sales, neighborhoods, and market trends; when linked to a CAMA system, the results can be very useful. For additional information on cadastral maps, parcel identification systems, and GIS, see the *Standard on Manual Cadastral Maps and Parcel Identifiers* (IAAO 2016b), *Standard on Digital Cadastral Maps and Parcel Identifiers* (IAAO 2015), *Procedures and Standards for a Multipurpose Cadastre* (National Research Council 1983), and *GIS Guidelines for Assessors* (URISA and IAAO 1999).

3.3 Property Characteristics Data

The assessor should collect and maintain property characteristics data sufficient for classification, valuation, and other purposes. Accurate valuation of real property by any method requires descriptions of land and building characteristics.

3.3.1 Selection of Property Characteristics Data

Property characteristics to be collected and maintained should be based on the following:

- Factors that influence the market in the locale in question
- Requirements of the valuation methods that will be employed
- Requirements of classification and property tax policy
- Requirements of other governmental and private users
- Marginal benefits and costs of collecting and maintaining each property characteristic

Determining what data on property characteristics to collect and maintain for a CAMA system is a crucial decision with long-term consequences. A pilot program is one means of evaluating the benefits and costs of collecting and maintaining a particular set of property characteristics (see Gloudemans and Almy 2011, 46–49). In addition, much can be learned from studying the data used in successful CAMAs in other jurisdictions. Data collection and maintenance are usually the costliest aspects of a CAMA. Collecting data that are of little

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importance in the assessment process should be avoided unless another governmental or private need is clearly demonstrated.

The quantity and quality of existing data should be reviewed. If the data are sparse and unreliable, a major recanvass will be necessary. Data that have been confirmed to be reliable should be used whenever possible. New valuation programs or enhancements requiring major recanvass activity or conversions to new coding formats should be viewed with suspicion when the existing database already contains most major property characteristics and is of generally good quality.

The following property characteristics are usually important in predicting residential property values:

Improvement Data

- Living area
- Construction quality or key components thereof (foundation, exterior wall type, and the like)
- Effective age or condition
- Building design or style
- Secondary areas including basements, garages, covered porches, and balconies
- Building features such as bathrooms and central air-conditioning
- Significant detached structures including guest houses, boat houses, and barns

Land Data

- Lot size
- Available utilities (sewer, water, electricity)

Location Data

- Market area
- Submarket area or neighborhood
- Site amenities, especially view and golf course or water frontage
- External nuisances, (e.g., heavy traffic, airport noise, or proximity to commercial uses).

For a discussion of property characteristics important for various commercial property types, see *Fundamentals of Mass Appraisal* (Gloude-mans and Almy 2011, chapter 9).

3.3.2 Data Collection

Collecting property characteristics data is a critical and expensive phase of reappraisal. A successful data collection program requires clear and standard coding and careful monitoring through a quality control program. The development and use of a data collection manual is essential to achieving accurate and consistent data collection. The data collection program should result in complete and accurate data.

3.3.2.1 Initial Data Collection

A physical inspection is necessary to obtain initial property characteristics data. This inspection can be performed either by appraisers or by specially trained data collectors. In a joint approach, experienced appraisers make key subjective decisions, such as the assignment of construction quality class or grade, and data collectors gather all other details. Depending on the data required, an interior inspection might be necessary. At a minimum, a comprehensive exterior inspection should be conducted. Measurement is an important part of data collection.

3.3.2.2 Data Collection Format

Data should be collected in a prescribed format designed to facilitate both the collecting of data in the field and the entry of the data into the computer system.

A logical arrangement of the collection format makes data collection easier. For example, all items requiring an interior inspection should be grouped together. The coding of data should be as objective as possible, with measurements, counts, and check-off items used in preference to items requiring subjective evaluations (such as “number of plumbing fixtures” versus “adequacy of plumbing: poor, average, good”). With respect to check-off items, the available codes should be exhaustive and mutually exclusive, so that exactly one code logically pertains to each observable variation of a building feature (such as structure or roof type). The data collection format should promote consistency among data collectors, be clear and easy to use, and be adaptable to virtually all types of construction. Specialized data collection formats may be necessary to collect information on agricultural property, timberland, commercial and industrial parcels, and other property types.

3.3.2.3 Data Collection Manuals

A clear, thorough, and precise data collection manual is essential and should be developed, updated, and maintained. The written manual should explain how to collect and record each data item. Pictures, examples, and illustrations are particularly helpful. The manual should be simple yet complete. Data collection staff should be trained in the use of the manual and related updates to maintain consistency. The manual should include guidelines for personal conduct during field inspections, and if interior data are required, the manual should outline procedures to be followed when the property owner has denied access or when entry might be risky.

3.3.2.4 Data Accuracy Standards

The following standards of accuracy for data collection are recommended.

- Continuous or area measurement data, such as living area and exterior wall height, should be accurate within 1 foot (rounded to the nearest foot) of the true dimensions or within 5 percent of the area. (One foot equates to approximately 30 centimeters in the metric system.) If areas, dimensions, or volumes must be estimated, the property record should note the instances in which quantities are estimated.
- For each objective, categorical, or binary data field to be collected or verified, at least 95 percent of the coded entries should be accurate. Objective, categorical, or binary data characteristics include such attributes as exterior wall material, number of full bathrooms, and waterfront view. As an example, if a data collector captures 10 objective, categorical, or binary data items for 100 properties, at least 950 of the 1,000 total entries should be correct.
- For each subjective categorical data field collected or verified, data should be coded correctly at least 90 percent of the time. Subjective categorical data characteristics include data items such as quality grade, physical condition, and architectural style.
- Regardless of specific accuracy requirements, consistent measurement is important. Standards including national, local and regional practices exist to support consistent measurement. The standard of measurement should be documented as part of the process. (American Institute of Architects 1995; Marshall & Swift Valuation Service 2017; International Property Measurement Standards Coalition n.d.; Building Owners and Managers Association International 2017)

3.3.2.5 Data Collection Quality Control

A quality control program is necessary to ensure that data accuracy standards are achieved and maintained. Independent quality control inspections should occur immediately after the data collection phase begins and may be performed by jurisdiction staff, project consultants,

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auditing firms, or oversight agencies. The inspections should review random samples of finished work for completeness and accuracy and keep tabulations of items coded correctly or incorrectly, so that statistical tests can be used to determine whether accuracy standards have been achieved. Stratification by geographic area, property type, or individual data collector can help detect patterns of data error. Data that fail to meet quality control standards should be recollected.

The accuracy of subjective data should be judged primarily by conformity with written specifications and examples in the data collection manual. The data reviewer should substantiate subjective data corrections with pictures or field notes.

3.3.3 Data Entry

To avoid duplication of effort, the data collection form should be able to serve as the data entry form. Data entry should be routinely audited to ensure accuracy.

Data entry accuracy should be as close to 100 percent as possible and should be supported by a full set of range and consistency edits. These are error or warning messages generated in response to invalid or unusual data items. Examples of data errors include missing data codes and invalid characters. Warning messages should also be generated when data values exceed normal ranges (e.g., more than eight rooms in a 1,200-square-foot residence). The warnings should appear as the data are entered. When feasible, action on the warnings should take place during data entry. Field data entry devices provide the ability to edit data as it is entered and also eliminate data transcription errors.

3.3.4 Maintaining Property Characteristics Data

Property characteristics data should be continually updated in response to changes brought about by new construction, new parcels, remodeling, demolition, and destruction. There are several ways of updating data. The most efficient method involves building permits. Ideally, strictly enforced local ordinances require building permits for all significant construction activity, and the assessor's office receives copies of the permits. This method allows the assessor to identify properties whose characteristics are likely to change, to inspect such parcels on a timely basis (preferably as close to the assessment date as possible), and to update the files accordingly.

Another method is aerial photography, which also can be helpful in identifying new or previously unrecorded construction and land use. Some jurisdictions use self-reporting, in which property owners review the assessor's records and submit additions or corrections. Information derived from multiple listing sources and other third-party vendors can also be used to validate property records.

Periodic field inspections can help ensure that property characteristics data are complete and accurate. Assuming that most new construction activity is identified through building permits or other ongoing procedures, a physical review including an on-site verification of property characteristics should be conducted at least every 4 to 6 years. Reinspections should include partial remeasurement of the two most complex sides of improvements and a walk around the improvement to identify additions and deletions. Photographs taken at previous physical inspections can help identify changes.

3.3.5 Alternative to Periodic On-site Inspections

Provided that initial physical inspections are timely completed and that an effective system of building permits or other methods of routinely identifying physical changes is in place, jurisdictions may employ a set of digital imaging technology tools to supplement field reinspections

with a computer-assisted office review. These imaging tools should include the following:

- Current high-resolution street-view images (at a sub-inch pixel resolution that enables quality grade and physical condition to be verified)
- Orthophoto images (minimum 6-inch pixel resolution in urban/suburban and 12-inch resolution in rural areas, updated every 2 years in rapid-growth areas or 6–10 years in slow-growth areas)
- Low-level oblique images capable of being used for measurement verification (four cardinal directions, minimum 6-inch pixel resolution in urban/suburban and 12-inch pixel resolution in rural areas, updated every 2 years in rapid-growth areas or 6–10 years in slow-growth areas).

These tool sets may incorporate change detection techniques that compare building dimension data (footprints) in the CAMA system to georeferenced imagery or remote sensing data from sources (such as LiDAR [light detection and ranging]) and identify potential CAMA sketch discrepancies for further investigation.

Assessment jurisdictions and oversight agencies must ensure that images meet expected quality standards. Standards required for vendor-supplied images should be spelled out in the Request for Proposal (RFP) and contract for services, and images should be checked for compliance with specified requirements. For general guidance on preparing RFPs and contracting for vendor-supplied services, see the *Standard on Contracting for Assessment Services* [IAAO 2008].

In addition, appraisers should visit assigned areas on an annual basis to observe changes in neighborhood condition, trends, and property characteristics. An on-site physical review is recommended when significant construction changes are detected, a property is sold, or an area is affected by catastrophic damage. Building permits should be regularly monitored and properties that have significant change should be inspected when work is complete.

3.4 Sale Data

States and provinces should seek mandatory disclosure laws to ensure comprehensiveness of sale data files. Regardless of the availability of such statutes, a file of sale data must be maintained, and sales must be properly reviewed and validated. Sale data are required in all applications of the sales comparison approach, in the development of land values and market-based depreciation schedules in the cost approach, and in the derivation of capitalization rates or discount rates in the income approach. Refer to *Mass Appraisal of Real Property* (Gloude-mans 1999, chapter 2) or *Fundamentals of Mass Appraisal* (Gloude-mans and Almy 2011 chapter 2) for guidelines on the acquisition and processing of sale data.

3.5 Income and Expense Data

Income and expense data must be collected for income-producing property and reviewed by qualified appraisers to ensure their accuracy and usability for valuation analysis (see Section 4.4.). Refer to *Mass Appraisal of Real Property* (Gloude-mans 1999, chapter 2) or *Fundamentals of Mass Appraisal* (Gloude-mans and Almy 2011, chapter 2) for guidelines addressing the collection and processing of income and expense data.

3.6 Cost and Depreciation Data

Current cost and depreciation data adjusted to the local market are required for the cost approach (see Section 4.2). Cost and depreciation manuals and schedules can be purchased from commercial services or created in-house. See *Mass Appraisal of Real Property* (Gloude-mans 1999, chapter 4) or *Fundamentals of Mass Appraisal* (Gloude-mans and Almy 2011, 180–193) for guidelines on creating manuals and schedules.

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4. Valuation

Mass appraisal analysis begins with assigning properties to use classes or strata based on highest and best use, which normally equates to current use. Some statutes require that property be valued for ad valorem tax purposes at current use regardless of highest and best use. Zoning and other land use controls normally dictate highest and best use of vacant land. In the absence of such restrictions, the assessor must determine the highest and best use of the land by analyzing the four components—legally permissible, physically possible, appropriately supported, and financially feasible—thereby resulting in the highest value. Special attention may be required for properties in transition, interim or nonconforming uses, multiple uses, and excess land.

4.1 Valuation Models

Any appraisal, whether single-property appraisal or mass appraisal, uses a model, that is, a representation in words or an equation of the relationship between value and variables representing factors of supply and demand. Mass appraisal models attempt to represent the market for a specific type of property in a specified area. Mass appraisers must first specify the model, that is, identify the supply and demand factors and property features that influence value, for example, square feet of living area. Then they must calibrate the model, that is, determine the adjustments or coefficients that best represent the value contribution of the variables chosen, for example, the dollar amount the market places on each square foot of living area. Careful and extensive market analysis is required for both specification and calibration of a model that estimates values accurately. Mass appraisal models apply to all three approaches to value: the cost approach, the sales comparison approach, and the income approach.

Valuation models are developed for defined property groups. For residential properties, geographic stratification is appropriate when the value of property attributes varies significantly among areas and each area is large enough to provide adequate sales. It is particularly effective when housing types and styles are relatively uniform within areas. Separate models are developed for each market area (also known as economic or model areas). Subareas or neighborhoods can serve as variables in the models and can also be used in land value tables and selection of comparable sales. (See *Mass Appraisal of Real Property* [Gloudemans 1999, 118–120] or *Fundamentals of Mass Appraisal* [Gloudemans and Almy 2011, 139–143] for guidelines on stratification.) Smaller jurisdictions may find it sufficient to develop a single residential model.

Commercial and income-producing properties should be stratified by property type. In general, separate models should be developed for apartment, warehouse/industrial, office, and retail properties. Large jurisdictions may be able to stratify apartment properties further by type or area or to develop multiple models for other income properties with adequate data.

4.2 The Cost Approach

The cost approach is applicable to virtually all improved parcels and, if used properly, can produce accurate valuations. The cost approach is more reliable for newer structures of standard materials, design, and workmanship. It produces an estimate of the value of the fee simple interest in a property.

Reliable cost data are imperative in any successful application of the cost approach. The data must be complete, typical, and current. Current construction costs should be based on the cost of replacing a structure with one of equal utility, using current materials, design, and building standards. In addition to specific property types, cost models should

include the cost of individual construction components and building items in order to adjust for features that differ from base specifications. These costs should be incorporated into a construction cost manual and related computer software. The software can perform the valuation function, and the manual, in addition to providing documentation, can be used when nonautomated calculations are required.

Construction cost schedules can be developed in-house, based on a systematic study of local construction costs, obtained from firms specializing in such information, or custom-generated by a contractor. Cost schedules should be verified for accuracy by applying them to recently constructed improvements of known cost. Construction costs also should be updated before each assessment cycle.

The most difficult aspects of the cost approach are estimates of land value and accrued depreciation. These estimates must be based on non-cost data (primarily sales) and can involve considerable subjectivity. Land values used in the cost approach must be current and consistent. Often, they must be extracted from sales of improved property because sales of vacant land are scarce. Section 4.5 provides standards for land valuation in mass appraisal.

Depreciation schedules can be extracted from sales data in several ways. See *Mass Appraisal of Real Property* (Gloudemans 1999, chapter 4) or *Fundamentals of Mass Appraisal* (Gloudemans and Almy 2011, 189–192).

4.3 The Sales Comparison Approach

The sales comparison approach estimates the value of a subject property by statistically analyzing the sale prices of similar properties. This approach is usually the preferred approach for estimating values for residential and other property types with adequate sales.

Applications of the sales comparison approach include direct market models and comparable sales algorithms (see *Mass Appraisal of Real Property* [Gloudemans 1999, chapters 3 and 4], *Fundamentals of Mass Appraisal* [Gloudemans and Almy 2011, chapters 4 and 6], and the *Standard on Automated Valuation Models (AVMs)* [IAAO 2003]). Comparable sales algorithms are most akin to single-property appraisal applications of the sales comparison approach. They have the advantages of being familiar and easily explained and can compensate for less well-specified or calibrated models, because the models are used only to make adjustments to the selected comparables. They can be problematic if the selected comparables are not well validated or representative of market value. Because they predict market value directly, direct market models depend more heavily on careful model specification and calibration. Their advantages include efficiency and consistency, because the same model is directly applied against all properties in the model area.

Users of comparable sales algorithms should be aware that sales ratio statistics will be biased if sales used in the ratio study are used as comparables for themselves in model development. This problem can be avoided by (1) not using sales as comparables for themselves in modeling or (2) using holdout or later sales in ratio studies.

4.4 The Income Approach

In general, for income-producing properties, the income approach is the preferred valuation approach when reliable income and expense data are available, along with well-supported income multipliers, overall rates, and required rates of return on investment. Successful application of the income approach requires the collection, maintenance, and careful analysis of income and expense data.

Mass appraisal applications of the income approach begin with collecting and processing income and expense data. (These data should be expressed on an appropriate per-unit basis, such as per square foot or per apartment unit.) Appraisers should then compute normal or typical gross incomes, vacancy rates, net incomes, and expense ratios for various homogeneous strata of properties. These figures can be used to judge the reasonableness of reported data for individual parcels and to estimate income and expense figures for parcels with unreported data. Actual or

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reported figures can be used as long as they reflect typical figures (or typical figures can be used for all properties).

Alternatively, models for estimating gross or net income and expense ratios can be developed by using actual income and expense data from a sample of properties and calibrated by using multiple regression analysis. For an introduction to income modeling, see *Mass Appraisal of Real Property* (Gloude-mans 1999, chapter 3) or *Fundamentals of Mass Appraisal* (Gloude-mans and Almy 2011, chapter 9). The developed income figures can be capitalized into estimates of value in a number of ways. The most direct method involves the application of gross income multipliers, which express the ratio of market value to gross income. At a more refined level, net income multipliers or their reciprocals, overall capitalization rates, can be developed and applied. Provided there are adequate sales, these multipliers and rates should be extracted from a comparison of actual or estimated incomes with sale prices (older income and sales data should be adjusted to the valuation date as appropriate). Income multipliers and overall rates developed in this manner tend to provide reliable, consistent, and readily supported valuations when good sales and income data are available. When adequate sales are not available, relevant publications and local market participants can be consulted.

4.5 Land Valuation

State or local laws may require the value of an improved parcel to be separated into land and improvement components. When the sales comparison or income approach is used, an independent estimate of land value can be made and subtracted from the total property value to obtain a residual improvement value. Some computerized valuation techniques provide a separation of total value into land and building components.

Land values should be reviewed annually. At least once every 4 to 6 years the properties should be physically inspected and revalued. The sales comparison approach is the primary approach to land valuation and is always preferred when sufficient sales are available. In the absence of adequate sales, other techniques that can be used in land appraisal include allocation, abstraction, anticipated use, capitalization of ground rents, and land residual capitalization. (See *Mass Appraisal of Real Property* [Gloude-mans 1999, chapter 3] or *Fundamentals of Mass Appraisal* [Gloude-mans and Almy 2011, 178–180].)

4.6 Considerations by Property Type

The appropriateness of each valuation approach varies with the type of property under consideration. Table 1 ranks the relative usefulness of the three approaches in the mass appraisal of major types of properties. The table assumes that there are no major statutory barriers to using all three approaches or to obtaining cost, sales, and income data. Although relying only on the single best approach for a given type of property can have advantages in terms of efficiency and consistency, the use of two or more approaches provides helpful cross-checks and flexibility and can thus produce greater accuracy, particularly for less typical properties.

Table 1. Rank of typical usefulness of the three approaches to value in the mass appraisal of major types of property

Type of Property	Cost Approach	Sales Comparison Approach	Income Approach
Single-family residential	2	1	3
Multifamily residential	3	1,2	1,2
Commercial	3	2	1
Industrial	1,2	3	1,2
Nonagricultural land	–	1	2
Agricultural ^a	–	2	1
Special-purpose ^b	1	2,3	2,3

^a Includes farm, ranch, and forest properties.

^b Includes institutional, governmental, and recreation properties.

4.6.1 Single-Family Residential Property

The sales comparison approach is the best approach for single-family residential property, including condominiums. Automated versions of this approach are highly efficient and generally accurate for the majority of these properties. The cost approach is a good supplemental approach and should serve as the primary approach when the sales data available are inadequate. The income approach is usually inappropriate for mass appraisal of single-family residential properties, because most of these properties are not rented.

4.6.2 Manufactured Housing

Manufactured or *mobile* homes can be valued in a number of ways depending on the local market and ownership status. Often mobile homes are purchased separately and situated on a rented space in a mobile home park. In this case the best strategy is to model the mobile homes separately from the land. At other times mobile homes are situated on individual lots and bought and sold similar to stick-built homes. Particularly in rural areas they may be intermixed with stick-built homes. In these cases, they can be modeled in a manner similar to that for other residential properties and included in the same models, as long as the model includes variables to distinguish them and recognize any relevant differences from other homes (e.g., mobile homes may appreciate at a rate different from that for stick-built homes).

4.6.3 Multifamily Residential Property

The sales comparison and income approaches are preferred in valuing multifamily residential property when sufficient sales and income data are available. Multiple regression analysis (MRA) and related techniques have been successfully used in valuing this property type. Where adequate sales are available, direct sales models can be used. MRA also can be used to calibrate different portions of the income approach, including the estimation of market rents and development of income multipliers or capitalization rates. As with other residential property, the cost approach is useful in providing supplemental valuations and can serve as the primary approach when good sales and income data are not available.

4.6.4 Commercial and Industrial Property

The income approach is the most appropriate method in valuing commercial and industrial property if sufficient income data are available. Direct sales comparison models can be equally effective in large jurisdictions with sufficient sales. When a sufficient supply of sales data and income data is not available, the cost approach should be

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applied. However, values generated should be checked against available sales data. Cost factors, land values, and depreciation schedules must be kept current through periodic review.

4.6.5 Nonagricultural Land

The sales comparison approach is preferred for valuing nonagricultural land. Application of the sales comparison approach to vacant land involves the collection of sales data, the posting of sales data on maps, the calculation of standard unit values (such as value per square foot, per front foot, or per parcel) by area and type of land use, and the development of land valuation maps or computer-generated tables in which the pattern of values is displayed. When vacant land sales are not available or are few, additional benchmarks can be obtained by subtracting the replacement cost new less depreciation of improvements from the sale prices of improved parcels. The success of this technique requires reliable cost data and tends to work best for relatively new improvements, for which depreciation is minimal.

Another approach is a *hybrid* model decomposable into land and building values. Although these models can be calibrated from improved sales alone, separation of value between land and buildings is more reliable when both vacant and improved sales are available.

4.6.6 Agricultural Property

If adequate sales data are available and agricultural property is to be appraised at market value, the sales comparison approach is preferred. However, most states and provinces provide for the valuation of agricultural land at use value, making the sales comparison approach inappropriate for land for which market value exceeds use value. Thus, it is often imperative to obtain good income data and to use the income approach for agricultural land. Land rents are often available, sometimes permitting the development and application of overall capitalization rates. Many states and provinces have soil maps that assign land to different productivity classes for which typical rents can be developed. Cost tables can be used to value agricultural buildings.

4.6.7 Special-Purpose Property

The cost approach tends to be most appropriate in the appraisal of special-purpose properties, because of the distinctive nature of such properties and the general absence of adequate sales or income data.

4.7 Value Reconciliation

When more than one approach or model is used for a given property group, the appraiser must determine which to use or emphasize. Often this can be done by comparing ratio study statistics. Although there are advantages to being consistent, sometimes an alternative approach or method is more reliable for special situations and atypical properties. CAMA systems should allow users to document the approach or method being used for each property.

4.8 Frequency of Reappraisals

Section 4.2.2 of the *Standard on Property Tax Policy* (IAAO 2010) states that current market value implies annual assessment of all property. Annual assessment does not necessarily mean, however, that each property must be re-examined each year. Instead, models can be recalibrated, or market adjustment factors derived from ratio studies or other market analyses applied based on criteria such as property type, location, size, and age.

Analysis of ratio study data can suggest groups or strata of properties in greatest need of physical review. In general, market adjustments can be highly effective in maintaining equity when appraisals are uniform within strata and recalibration can provide even greater accuracy. However, only physical reviews can correct data errors and, as stated in

Sections 3.3.4 and 3.3.5, property characteristics data should be reviewed and updated at least every 4 to 6 years. This can be accomplished in at least three ways:

- Reinspecting all property at periodic intervals (i.e., every 4 to 6 years)
- Reinspecting properties on a cyclical basis (e.g., one-fourth or one-sixth each year)
- Reinspecting properties on a priority basis as indicated by ratio studies or other considerations while still ensuring that all properties are examined at least every sixth year

5. Model Testing, Quality Assurance, and Value Defense

Mass appraisal allows for model testing and quality assurance measures that provide feedback on the reliability of valuation models and the overall accuracy of estimated values. Modelers and assessors must be familiar with these diagnostics so they can evaluate valuation performance properly and make improvements where needed.

5.1 Model Diagnostics

Modeling software contains various statistical measures that provide feedback on model performance and accuracy. MRA software contains multiple sets of diagnostic tools, some of which relate to the overall predictive accuracy of the model and some of which relate to the relative importance and statistical reliability of individual variables in the model. Modelers must understand these measures and ensure that final models not only make appraisal sense but also are statistically sound.

5.2 Sales Ratio Analyses

Regardless of how values were generated, sales ratio studies provide objective, bottom-line indicators of assessment performance. The IAAO literature contains extensive discussions of this important topic, and the *Standard on Ratio Studies* (2013) provides guidance for conducting a proper study. It also presents standards for key ratio statistics relating to the two primary aspects of assessment performance: level and uniformity. The following discussion summarizes these standards and describes how the assessor can use sales ratio metrics to help ensure accurate, uniform values.

5.2.1 Assessment Level

Assessment level relates to the overall or general level of assessment of a jurisdiction and various property classes, strata, and groups within the jurisdiction. Each group must be assessed at market value as required by professional standards and applicable statutes, rules, and related requirements. The three common measures of central tendency in ratio studies are the median, mean, and weighted mean. The *Standard on Ratio Studies* (2013) stipulates that the median ratio should be between 0.90 and 1.10 and provides criteria for determining whether it can be concluded that the standard has not been achieved for a property group. Current, up-to-date valuation models, schedules, and tables help ensure that assessment levels meet required standards, and values can be statistically adjusted between full reappraisals or model recalibrations to ensure compliance.

5.2.2 Assessment Uniformity

Assessment uniformity relates to the consistency and equity of values. Uniformity has several aspects, the first of which relates to consistency in assessment levels between property groups. It is important to ensure, for example, that residential and commercial properties are appraised at similar percentages of market value (regardless of the legal assessment ratios that may then be applied) and that residential assessment levels are consistent among neighborhoods, construction classes, age groups, and size groups. Consistency among property groups can be evaluated by comparing measures of central tendency calculated for each group.

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Various graphs can also be used for this purpose. The *Standard on Ratio Studies* (IAAO 2013) stipulates that the level of appraisal for each major group of properties should be within 5 percent of the overall level for the jurisdiction and provides criteria for determining whether it can be concluded from ratio data that the standard has not been met.

Another aspect of uniformity relates to the consistency of assessment levels within property groups. There are several such measures, the preeminent of which is the coefficient of dispersion (COD), which represents the average percentage deviation from the median ratio. The lower the COD, the more uniform the ratios within the property group. In addition, uniformity can be viewed spatially by plotting sales ratios on thematic maps.

The *Standard on Ratio Studies* (IAAO 2013) provides the following standards for the COD:

- Single-family homes and condominiums: CODs of 5 to 10 for newer or fairly similar residences and 5 to 15 for older or more heterogeneous areas
- Income-producing properties: CODs of 5 to 15 in larger, urban areas and 5 to 20 in other areas
- Vacant land: CODs of 5 to 20 in urban areas and 5 to 25 in rural or seasonal recreation areas
- Rural residential, seasonal, and manufactured homes: CODs of 5 to 20.

The entire appraisal staff must be aware of and monitor compliance with these standards and take corrective action where necessary. Poor uniformity within a property group is usually indicative of data problems or deficient valuation procedures or tables and cannot be corrected by application of market adjustment factors.

A final aspect of assessment uniformity relates to equity between low- and high-value properties. Although there are statistical subtleties that can bias evaluation of price-related uniformity, the IAAO literature (see particularly *Fundamentals of Mass Appraisal* [Gloudemans and Almy 2011, 385–392 and Appendix B] and the *Standard on Ratio Studies* [IAAO 2013]) provides guidance and relevant measures, namely, the price-related differential (PRD) and coefficient of price-related bias (PRB).

The PRD provides a simple gauge of price-related bias. The *Standard on Ratio Studies* (IAAO 2013) calls for PRDs of 0.98 to 1.03. PRDs below 0.98 tend to indicate assessment progressivity, the condition in which assessment ratios increase with price. PRDs above 1.03 tend to indicate assessment regressivity, in which assessment ratios decline with price. The PRB indicates the percentage by which assessment ratios change whenever values double or are halved. For example, a PRB of -0.03 would mean that assessment levels fall by 3 percent when value doubles. The *Standard on Ratio Studies* calls for PRBs of -0.05 to $+0.05$ and regards PRBs outside the range of -0.10 to $+0.10$ as unacceptable.

Because price is observable only for sale properties, there is no easy correction for the PRB, which is usually due to problems in valuation models and schedules. Sometimes other ratio study diagnostics will provide clues. For example, high ratios for lower construction classes may indicate that base rates should be reduced for those classes, which should in turn improve assessment ratios for low-value properties.

5.3 Holdout Samples

Holdout samples are validated sales that are not used in valuation but instead are used to test valuation performance. Holdout samples should be randomly selected with a view to obtaining an adequate sample while ensuring that the number of sales available for valuation will provide

reliable results for the range of properties that must be valued (holdout samples of 10 to 20 percent are typical). If too few sales are available, later sales can be validated and used for the same purpose. (For a method of using sales both to develop and test valuation models, see "The Use of Cross-validation in CAMA Modeling to Get the Most Out of Sales" (Jensen 2011).)

Since they were not used in valuation, holdout samples can provide more objective measures of valuation performance. This can be particularly important when values are not based on a common algorithm as cost and MRA models are. Manually assigning land values, for example, might produce sales ratio statistics that appear excellent but are not representative of broader performance for both sold and unsold properties. Comparable sales models that value a sold property using the sale of a property as a comparable for itself can produce quite different results when tested on a holdout group.

When a new valuation approach or technique is used for the first time, holdout sales can be helpful in validating use of the new method. In general, however, holdout samples are unnecessary as long as valuation models are based on common algorithms and schedules and the value assigned to a sale property is not a function of its price. Properly validated later sales can provide follow-up performance indicators without compromising the number of sales available for valuation.

5.4 Documentation

Valuation procedures and models should be documented. Appraisal staff should have at least a general understanding of how the models work and the various rates and adjustments made by the models. Cost manuals should be current and contain the rates and adjustments used to value improvements by the cost approach. Similarly, land values should be supported by tables of rates and adjustments for features such as water frontage, traffic, and other relevant influences. MRA models and other sales comparison algorithms should document final equations and should be reproducible, so that rerunning the model produces the same value. Schedules of rental rates, vacancy rates, expense ratios, income multipliers, and capitalization rates should document how values based on the income approach were derived.

It can be particularly helpful to prepare a manual, booklet, or report for each major property type that provides a narrative summary of the valuation approach and methodology and contains at least the more common rates and adjustments. Examples of how values were computed for sample properties can be particularly helpful. The manuals serve as a resource for current staff and can be helpful in training new staff or explaining the valuation process to other interested parties. Once prepared, the documents should be updated when valuation schedules change or methods and calculation procedures are revised.

5.5 Value Defense

The assessment office staff must have confidence in the appraisals and be able to explain and defend them. This confidence begins with application of reliable appraisal techniques, generation of appropriate valuation reports, and review of preliminary values. It may be helpful to have reports that list each parcel, its characteristics, and its calculated value. Parcels with unusual characteristics, extreme values, or extreme changes in values should be identified for subsequent individual review. Equally important, summary reports should show average values, value changes, and ratio study statistics for various strata of properties. These should be reviewed to ensure the overall consistency of values for various types of property and various locations. (See the *Uniform Standards of Professional Appraisal Practice*, Standards Rule 6-7, for reporting requirements for mass appraisals [The Appraisal Foundation 2012–2013].)

The staff should also be prepared to support individual valuations as required, preferably through comparable sales. At a minimum, staff should be able to produce a property record and explain the basic

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approach (cost, sales comparison, or income) used to estimate the value of the property. A property owner should never be told simply that “the computer” or “the system” produced the appraisal. In general, the staff should tailor the explanation to the taxpayer’s knowledge and expertise. Equations converted to tabular form can be used to explain the basis for valuation. In all cases, the assessment office staff should be able to produce sales or appraisals of similar properties in order to support (or at least explain) the valuation of the property in question. Comparable sales can be obtained from reports that list sales by such features as type of property, area, size, and age. Alternatively, interactive programs can be obtained or developed that identify and display the most comparable properties.

Assessors should notify property owners of their valuations in sufficient time for property owners to discuss their appraisals with the assessor and appeal the value if they choose to do so (see the *Standard on Public Relations* [IAAO 2011]). Statutes should provide for a formal appeals process beyond the assessor’s level (see the *Standard on Assessment Appeal* [IAAO 2016a]).

6. Managerial and Space Considerations

6.1 Overview

Mass appraisal requires staff, technical, and other resources. This section discusses certain key managerial and facilities considerations.

6.2 Staffing and Space

A successful in-house appraisal program requires trained staff and adequate facilities in which to work and meet with the public.

6.2.1 Staffing

Staff should comprise persons skilled in general administration, supervision, appraisal, mapping, data processing, ~~and secretarial~~ and clerical functions. Typical staffing sizes and patterns for jurisdictions of various sizes are illustrated in *Fundamentals of Mass Appraisal* (Gloude-mans and Almy 2011, 22–25). Staffing needs can vary significantly based on factors such as frequency of reassessments.

6.2.2 Space Considerations

The following minimum space standards are suggested for managerial, supervisory, and support staff:

- *Chief assessing officer (e.g., Assessor, director)*—a private office, enclosed by walls or windows extending to the ceiling, of 200 square feet (18 to 19 square meters)
- *Management position (e.g., chief deputy assessor, head of a division in a large jurisdiction, and so on)*—a private office, enclosed by walls or windows extending to the ceiling, of 170 square feet (15 to 16 square meters)
- *Supervisory position (head of a section, unit, or team of appraisers, mappers, analysts, technicians, or clerks)*—a private office or partitioned space of 150 square feet (14 square meters)
- *Appraisers and technical staff*—private offices or at least partitioned, quiet work areas of 50 to 100 square feet (5 to 10 square meters), not including aisle and file space, with a desk and chair
- *Support staff*—adequate workspace, open or partitioned, to promote intended work functions and access.

In addition, there should be adequate space for

- File storage and access
- Training and meetings

- Mapping and drafting
- Public service areas
- Printing and photocopy equipment
- Library facilities.

6.3 Data Processing Support

CAMAs require considerable data processing support.

6.3.1 Hardware

The hardware should be powerful enough to support applications of the cost, sales comparison, and income approaches, as well as data maintenance and other routine operations. Data downloading, mass calculations, GIS applications, and Web support tend to be the most computer-intensive operations. Processing speed and efficiency requirements should be established before hardware acquisition. Computer equipment can be purchased, leased, rented, or shared with other jurisdictions. If the purchase option is chosen, the equipment should be easy to upgrade to take advantage of technological developments without purchasing an entirely new system.

6.3.2 Software

CAMA software can be developed internally, adapted from software developed by other public agencies, or purchased (in whole or in part) from private vendors. (Inevitably there will be some tailoring needed to adapt externally developed software to the requirements of the user’s environment.) Each alternative has advantages and disadvantages. The software should be designed so that it can be easily modified; it should also be well documented, at both the appraiser/user and programmer levels.

CAMA software works in conjunction with various general-purpose software, typically including word processing, spreadsheet, statistical, and GIS programs. These programs and applications must be able to share data and work together cohesively.

Security measures should exist to prevent unauthorized use and to provide backup in the event of accidental loss or destruction of data.

6.3.2.1 Custom Software

Custom software is designed to perform specific tasks, identified by the jurisdiction, and can be specifically tailored to the user’s requirements. The data screens and processing logic can often be customized to reflect actual or desired practices, and the prompts and help information can be tailored to reflect local terminology and convention.

After completing the purchase or license requirements, the jurisdiction should retain access to the program source code, so other programmers are able to modify the program to reflect changing requirements.

The major disadvantages of custom software are the time and expense of writing, testing, and updating. Particular attention must be paid to ensuring that user requirements are clearly conveyed to programmers and reflected in the end product, which should not be accepted until proper testing has been completed. Future modifications to programs, even those of a minor nature, can involve system administrator approval and can be a time-consuming, costly, and rigorous job. (See *Standard on Contracting for Assessment Services* [IAAO 2008].)

6.3.2.2 Generic Software

An alternative to custom software is generic software, of which there are two major types: vertical software, which is written for a specific industry, and horizontal software, which is written for particular applications regardless of industry. Examples of the latter include database, spreadsheet, word processing, and statistical software. Although the actual instruction code within these programs cannot be modified, they typically permit the user to create a variety of customized

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templates, files, and documents that can be processed. These are often referred to as commercial off-the-shelf software (COTS) packages.

Generic vertical software usually requires modification to fit a jurisdiction's specific needs. In considering generic software, the assessor should determine

- System requirements
- The extent to which the software meets the agency's needs
- A timetable for implementation
- How modifications will be accomplished
- The level of vendor support
- Whether the source code can be obtained.

(See Standard on Contracting for Assessment Services [IAAO 2008].)

Horizontal generic software is more flexible, permitting the user to define file structures, relational table layout, input and output procedures, including form or format, and reports. Assessment offices with expertise in such software (which does not imply a knowledge of programming) can adapt it for

- Property (data) file maintenance
- Market research and analysis
- Valuation modeling and processing
- Many other aspects of assessment operations.

Horizontal generic software is inexpensive and flexible. However, it requires considerable customization to adapt it to local requirements. Provisions should be made for a sustainable process that is not overly dependent on a single person or resource.

6.4 Contracting for Appraisal Services

Reappraisal contracts can include mapping, data collection, data processing, and other services, as well as valuation. They offer the potential of acquiring professional skills and resources quickly. These skills and resources often are not available internally. Contracting for these services not only can allow the jurisdiction to maintain a modest staff and to budget for reappraisal on a periodic basis, but also makes the assessor less likely to develop in-house expertise. (See the *Standard on Contracting for Assessment Services* [IAAO 2008].)

6.5 Benefit-Cost Considerations

6.5.1 Overview

The object of mass appraisal is to produce equitable valuations at low costs. Improvements in equity often require increased expenditures.

Benefit-cost analysis in mass appraisal involves two major issues: policy and administration.

6.5.2 Policy Issues

An assessment jurisdiction requires a certain expenditure level simply to inventory, list, and value properties. Beyond that point, additional expenditures make possible rapid improvements in equity initially, but marginal improvements in equity diminish as expenditures increase. At a minimum, jurisdictions should budget to meet statutory requirements and the performance standards contained in the *Standard on Ratio Studies* (IAAO 2013) and summarized in Section 5.2.

6.5.3 Administrative Issues

Maximizing equity per dollar of expenditure is the primary responsibility of assessment administration. To maximize productivity, the assessor and managerial staff must effectively plan, budget, organize, and control operations and provide leadership. This must be accomplished within the

office's legal, fiscal, economic, and social environment and constraints (Eckert, Gloudemans, and Kenyon 1990, chapter 16).

7. Reference Materials

Reference materials are needed in an assessment office to promote compliance with laws and regulations, uniformity in operations and procedures, and adherence to generally accepted assessment principles and practices.

7.1 Standards of Practice

The standards of practice may incorporate or be contained in laws, regulations, policy memoranda, procedural manuals, appraisal manuals and schedules, standard treatises on property appraisal and taxation (see section 6.2). Written standards of practice should address areas such as personal conduct, collection of property data, coding of information for data processing. The amount of detail will vary with the nature of the operation and the size of the office.

7.2 Professional Library

Every assessment office should have access to a comprehensive professional library that contains the information staff needs. A resource library may be digital or physical and should include the following:

- Property tax laws and regulations
- IAAO standards
- Historical resources
- Current periodicals
- Manuals and schedules
- Equipment manuals and software documentation.

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STANDARD ON **Property Tax Policy**

A criterion for measuring fairness,
quality, equity and accuracy

(Approved January 2020)



IAAO

INTERNATIONAL ASSOCIATION
of ASSESSING OFFICERS

Valuing the World

STANDARD ON PROPERTY TAX POLICY

STANDARD ON PROPERTY TAX POLICY

Revised and Approved July 2020

International Association of Assessing Officers

IAAO assessment standards represent a consensus in the assessing profession and have been adopted by the Board of Directors of the International Association of Assessing Officers (IAAO). The objective of the IAAO standards is to provide a systematic means for assessing officers to improve and standardize the operation of their offices. IAAO standards are advisory in nature and the use of, or compliance with, such standards is voluntary. If any portion of these standards is found to be in conflict with national, state, or provincial laws, such laws shall govern. Ethical and/or professional requirements within the jurisdiction^[1] may also take precedence over technical standards.

[1] For example, USPAP, CUSPAP, IVS, EVS.

About IAAO

The International Association of Assessing Officers, formerly the National Association of Assessing Officers, was founded for the purpose of establishing standards for assessment personnel. IAAO is a professional membership organization of government assessment officials and others interested in the administration of the property tax. Over the years IAAO members have developed assessment practice and administration standards and many of these standards have been adopted by state and international oversight agencies, and some have been incorporated into legislation.

IAAO continues at the forefront of assessment in North America and has been expanding its reach to the global community for the last five decades. Because standards form the rules by which North American assessors perform their duties, they may not be directly applicable to an overseas audience. The standards have been updated to also present the broad principles upon which the rules are based. IAAO believes those principles may be adapted to many differing statutory and regulatory scenarios worldwide.

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At the time of the 2010 adoption of the standard by the IAAO Executive Board, the IAAO Technical Standards Committee was composed of Chair Joe Hapgood, CAE; Nancy C. Tomberlin; Bill Marchand; Robert Gloudemans; and Mary Reavey. The majority of revisions were done in 2009. At that time the IAAO Technical Standards Committee was composed of Chair Nancy C. Tomberlin; Joe Hapgood, CAE; Alan S. Dornfest, AAS; Bill Marchand; and Mary Reavey. The standard also benefited from recommendations and thorough review by Wayne Llewellyn, CAE.

Revision notes

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STANDARD ON PROPERTY TAX POLICY

1. SCOPE

This standard focuses on elements of property tax policy and their influence on the equitable distribution of an annual property tax. These elements include the legal responsibility for paying the property tax, the kinds of property subject to the tax, and the basis of assessment— particularly the market value standard. Regarding the kinds of property subject to taxation, the standard deals chiefly with ordinary real (immovable) property. Less attention is paid to the taxation of personal (movable) property, the property of enterprises like railroads and utilities, and subsurface minerals. The standard addresses measures to control the amount of taxation and to provide targeted relief, such as exemptions and abatements, differential (fractional) assessment ratios and tax rates, and limits on taxes and assessed values. The standard discusses how tax policy affects the administration of the tax and vice versa, including the role of administrators in shaping tax policy. Policy issues affecting administration include the division of responsibilities among levels of government, including assessment, valuation, collection, equalization, appeals, and public engagement. The standard includes recommendations on ways to evaluate existing tax structures and proposed reforms.

2. INTRODUCTION

The core principles of property tax policy include the following:

- Assessments based on market value with regular and frequent (preferably annual) updates
- A broad tax base with limited exemptions
- Relief programs that are targeted, easily accessed by those who need assistance, and administratively efficient
- An assessment function that is proficient in mass appraisal techniques, well managed, transparent, and adequately funded.

This standard is intended to guide property tax administrators and tax policy analysts in comprehending the various features and options in annual taxes on property. It is an update of the 2010 edition of the *Standard on Property Tax Policy*. It aims to incorporate greater international relevance, stronger links to underlying principles of taxation and administration, and recognition of newer issues and features of property tax systems.

Reflecting its history, this standard is colored by features of property tax systems found in federal countries like Canada and the United States. Parts of it dealing with intergovernmental arrangements apply chiefly to the highly decentralized administrative structures found in the United States. Some system characteristics are well established, and there is no interest in changing them. Elsewhere, property tax systems are still under development.

Because a property tax system feature may be known by different terms, even within a country, Section 11, the Glossary addresses such issues. Appendix A, “Property Tax System Features Globally,” highlights patterns among key system features for taxing property annually around the world based (Almy 2013). Appendix B, “Categories of Taxes on Property,” addresses how two international organizations classify property taxes.

A property tax system has three functions: it identifies and links taxable subjects (taxpayers) and objects (taxable property); it produces tax assessments; and it collects taxes. If any of these functions is performed poorly, tax equity suffers, revenue generation may also suffer, and public acceptance is eroded. A tax system may be thought of as comprising policies, procedures, data, technology, and people. The time dimension is important as well.

From another perspective, the property tax system consists of an administrative or internal control component, an assessment component, and a collection component. The administrative component controls the other two. The assessment component determines who is to pay a tax and the size of each taxpayer’s share of total taxes. The valuation system and the administration of exemptions and relief measures are parts of the assessment component. The collection component receives tax payments, accounts for them, and deposits receipts in the appropriate treasury.

2.1 EVALUATIVE PRINCIPLES AND ECONOMIC CONCEPTS

Principles of a well-designed property tax system fall into four categories:

- Administrative
- Social justice
- Economic
- Political.

Perhaps the paramount principle is *fairness*. Fairness, however, has several dimensions, including *uniformity*, which can be indicated by uniformity in assessment ratios, nominal tax rates, and effective property tax rates.¹ Other fairness concepts include *ability to pay*, *benefits received*, and *administrative evenhandedness*.

Related administrative principles include *certainty* (in the sense that payments cannot be delayed without risk), *convenience* (of payment), and *cost-effectiveness* (low administrative and compliance costs and high accuracy and compliance). *Openness* and transparency contribute to public acceptance. Policies and practices should be *legitimate*, that is, legally sanctioned and not arbitrary. (*Fundamentals of Tax Policy* contains a further discussion of the qualities of a good tax system [Almy, Dornfest, and Kenyon 2008, 27] .)

The principles can be an expression of, or in conflict with, several economic concepts. These include horizontal equity, which holds that taxpayers who are economically similar should have similar (uniform) tax burdens, and vertical equity, which holds that taxpayers in different economic circumstances and who have differing abilities to pay should bear different tax burdens. This principle underlies progressive income taxes (and progressive property tax rate structures). In contrast, regressive systems are those in which the tax burden imposed on low-income taxpayers is relatively greater than that on high-income taxpayers.

A common criticism of property taxes is that they are inherently regressive. Analysis of this contention has led to debates about the ultimate incidence of a property tax, rather than its initial incidence. There is consensus that *regressive assessments* lead to regressive taxation. Assessments are said to be regressive when ratios of assessed values to sale prices (or tax rates) are higher for low-value properties than for high-value ones. This is an important area of inquiry in sales ratio studies.

There are several accessible discussions of the tax regressivity issue. Chapter 5 in *Fundamentals of Tax Policy* summarizes the schools of thought (views) about ultimate incidence and the elasticity of property taxes (Almy, Dornfest, and Kenyon 2008). A *Good Tax* contains both a strongly argued case for property taxes and a summary of the regressivity issue (Youngman 2016). In general, most economists consider the property tax to be at least somewhat progressive, falling mainly on owners of capital who tend to have greater ability to pay or higher income than renters.

Related to debates about the uniformity of effective property tax rates is the economic concept of a neutral tax—one that does not distort economic decisions about spending and investment. For example, differentials in burdens between one class of property and another may lead taxpayers to invest more heavily in the class with lower taxes than in the class with higher taxes. Differential tax burdens are believed to reduce economic efficiency and to cause an overall welfare loss because assets are suboptimally allocated. Yet policies favoring one class of property or people over others

¹ Effective tax rates are taxes as a percentage of market value.

are common. Nevertheless, a uniform, broad-based property tax is likely to be more neutral than one with many exemptions and relief measures.

In principle, when effective tax rates are uniform, governments can more easily identify a publicly acceptable rate of tax. When effective tax rates are not uniform, which also occurs when valuations are out of date, governments take their rate-setting cues from relatively over-valued taxpayers. As a result, they decide upon a general rate of tax that is lower than the rate the under-valued would accept. Consequently, less revenue can be raised than when valuations are uniform.

Emerging from these general principles are more specific ones. Principles that apply to specific features of a property tax system are listed at the beginning of Sections 3 through 8 or major subsections of this standard.

2.2 THE ROLE OF PROPERTY TAX

As with all major taxes, the main purpose of annual taxes on property is to provide revenue to fund governmental services. The tax has—or can have—several related purposes.

A Balanced Revenue System. The best revenue systems are balanced; that is, the system includes significant taxes on income, consumption, and wealth, as well as on other sources of revenue. A tax on the capital value or current market value of real (immovable) property can be an important part of such a system. Because stocks of wealth fluctuate less dramatically than incomes and consumption, the base for property taxes is comparatively stable, which is attractive during economic swings. The real property portion of the tax base is immobile, which can contribute to stability in a globally interconnected economy. The fact that property taxes generally are assessed administratively, rather than by taxpayers, also contributes to the stability of the base. Moreover, property taxes are generally more progressive than consumption taxes such as sales taxes and most other user charges

Local Government Autonomy and Accountability and the Need for a Dedicated Source of Revenue. Local performance of governmental functions is an expression of the subsidiarity principle. This principle holds that governmental decisions should be made at the level of government closest to where they will have their effect, for example, in a local area rather than in a whole country. The aims are to make government more responsive to citizens' needs and to make it easier for citizens to hold government accountable. This is a fundamental principle in federal governments. It follows that local and intermediate governments (such as provinces and states) need dedicated sources of revenue. The portion of the property tax levied against immovable property is ideal in this regard because of the fixed nature of land and buildings; it is clear which governmental unit is entitled to the revenue from a particular property. Local government services are often provided to properties or their owners and occupants. The tax captures for local government some of the increases in the value of property that are partially created by public expenditures.

Harmony with Social and Economic Policies. Property taxes often are made deliberately non-neutral in order to further some social or economic policy. Common objectives include making housing more affordable (particularly for families with limited income); encouraging good works by nonprofit organizations; encouraging economic development; preserving farmland, forests, open space, wetlands, and historic buildings; protecting the environment; and expressing gratitude for military service in times of war.

An ancillary benefit of a recurrent tax on property is the valuable information that is captured. If up-to-date and publicly available, the information has many governmental and private uses. Satisfying private needs for land and building data can provide a source of revenue to defray part of the costs of administration.

Visibility. Property tax systems are generally more open than administrative systems for self-assessed taxes, such as income taxes. For example, property owners can examine their assessments and those of nearby properties. An appeals system exists to afford taxpayers the opportunity to appeal their assessments. In addition, the taxpayer usually receives a bill that shows the entire liability, thus making the full magnitude of the tax obvious. This is not the case with taxes that are collected in small amounts as part of the purchase cost (sales or consumption taxes) or are withheld from pay throughout the year (income tax). This visibility helps to focus attention on, and thereby improve, the overall accountability of government

2.3 CHALLENGES

Property tax policy makers face difficult challenges, whether in evaluating a specific policy (proposed or enacted) or in undertaking to improve or reform a property tax system. One challenge is the visibility of property taxes in the ways that they traditionally have been assessed and collected; the total amount each taxpayer owes typically is published and collected in a few installments. This visibility is the root of the perceived unpopularity of the property tax. As noted above, however, it has been argued that visibility makes property taxes more manageable—hence more popular in a way, as taxes are nowhere loved (Youngman 2016, 1). However, this salience can divert attention from tractable problems, such as inequities in the distribution of property tax burdens (for a deeper discussion of the salience question, see Cabral and Hoxby [2012]).

A legacy of obsolete technology and work processes, whether voiced in law or custom, can also impede change. Requiring that taxes be paid in one or two payments is but one example. Beliefs that revaluations are too expensive to be done frequently is another.

A related misconception is that the cost of administering a property tax is too expensive in relation to the cost of administering income and consumption taxes. When compliance costs (costs borne by taxpayers, not the tax administration) also are considered, overall costs are about equal. The property tax is difficult to avoid if serious effort is exerted to collect it. Analysis of collection failures in other taxes indicates serious underpayments and compliance administration difficulties.²

Many property tax systems have features that taxpayers and their elected representatives may find difficult to grasp. For example, assessment and taxation processes may ignore the liquidity of certain taxpayers. It matters not that property is a form of wealth if the taxpayer lacks the ready cash to pay the taxes due. As discussed in Section 7, property tax systems abound in relief measures for this problem. In the case of a revaluation, people often wrongly equate the percentage change in their assessments as signaling how their taxes will change, ignoring how rates are actually calculated or patterns of change in assessments. This standard aims to suggest pathways to improve the design of property tax systems.

² Use tax, a companion tax to sales tax, on internet purchases has been fraught with legal and administrative collection difficulties, although a 2018 U.S. Supreme Court decision allows states to develop mechanisms to collect the tax (*South Dakota v. Wayfair, Inc.* 2018).

3. ASSESSING OFFICERS ROLE IN POLICY FORMATION

Assessing officers (and other professional property tax officials) should work continually with the issues and those in property tax administration to increase their knowledge of various property tax systems and then use this knowledge to improve their system. Their role will vary, depending on whether they represent local, state, or national agencies. Assessing officers can:

- Serve as an information resource
- Help shape, debate, and define the administrative requirements of a policy proposal
- Call attention to problems that might be created by a policy and propose legislative remedies
- Participate in the development of laws, rules, and regulations.

Assessing officers are encouraged to develop their policy proposals or legislative action plans by working with their professional associations and other jurisdictions. Assessing officers and their associations should act as an information resource to enable legislators and other policy makers to better understand the effects of proposed policy changes. In fact, many assessing officers are in the best position to provide advice and counsel with skills and access to information that is often overlooked. Supervisory and oversight agencies often compile legal and technical information and provide research that can be shared with local assessing officers. Assessment agencies should be provided with, and assessing officers should seek to have, adequate resources to fulfill this responsibility, and data should be shared with jurisdictions having such resources.

3.1 STEERING AND GUIDANCE

The assessing officer should help shape the debate over property tax policy into the most productive and most administrable avenues. For example, if a legislator wishes to lessen the impact of rapid inflation by imposing a cap on the amount that assessed or market values can increase, the assessing officer can explain the inequities that could result and propose alternatives that may be more equitable, practical, and transparent, such as budget or revenue caps or targeted exemptions. Some affiliate groups employ lobbyists to increase their members' awareness of proposed bills and to facilitate their communication with legislators.

3.2 IDENTIFYING PROBLEMS AND SOLUTIONS

The assessing officer is encouraged to work with legislators and taxpayers alike to find legislative remedies to, or clarification of, proposed laws that may have unintended inequities or other problems. Understanding the problem is key. To be successful at identifying problems and finding solutions, the assessor needs to develop the skills of listening and communicating.³

The assessing officer should suggest practical and feasible alternatives to proposals that are well intentioned but poorly designed, administratively impractical, or fraught with unintended consequences.⁴ Providing specific alternative language to legislators or administrators is often helpful and welcome and can lead to even better solutions. A new perspective may help the administrator or legislator grasp a different side of the issue, and the drafted language is often incorporated as the revised wording.

The assessing officer is charged with administering laws related to property tax assessment and taxation. Under this system, equity is achieved through enforcement of these laws, which also ensure that assessments and taxes are distributed as equitably as possible. Whether this distribution is perceived as fair is a separate issue, more properly decided in the legislative arena. The assessing officer should endeavor to carry out legal requirements but should take note of fairness issues raised by taxpayers, bringing these to legislative attention when appropriate opportunities occur or directing taxpayers to the legislative arena.

3.3 PARTICIPATING IN THE DEVELOPMENT OF RULES AND REGULATIONS

Administrative or oversight agencies often develop rules and regulations to clarify vague statutes. Administrative agencies are encouraged to incorporate clear and concise language into such regulations and to seek participation of local assessing officers and other local officials, taxpayers and other stakeholders in developing this language and to understand the impact of revised policies or rules.

3 For example, assume that to accommodate financial difficulties associated with farming, a proposal is made to exempt all equipment and machinery from property tax. This may help the agricultural sector but may seriously erode the tax base of a jurisdiction that is highly industrial.

4 For example, reprogramming computer systems to track eligibility for a new exemption may require more time or money than is available. The assessing officer can suggest a more administratively feasible type of exemption or can ask for programming or other funding to be included with the proposed legislation without passing judgment on the concept.

3.4 ANALYZING TAX POLICIES

Analysis of tax policy requires understanding many associated issues. Examples of specific tax analyses are presented in Appendix C. Although these examples are based on U.S. products, information for Canada, similar to what is available from the U.S. Census Bureau, can be found at the website of Statistics Canada (<https://www.statcan.gc.ca/eng/start>).

3.4.1 Tax Policy Statements

The assessing officer should be familiar with the specific language that formulates a policy, understand the nature of the policy, and, when appropriate, work with legislative bodies and citizens' groups to explain the effects of various policies and whether these policies achieve the goals of a model property tax system (see Sections 4 and 5).

3.4.2 Assessing Officer Role in Tax Policy Analysis

Assessing officers should consult with their colleagues in other jurisdictions to ensure that all perspectives are considered and provide detailed rationales for or against proposed policies. Policy analysis requires the compilation and interpretation of relevant information. Analysis must be highly objective to maintain credibility. Data maintained by assessment agencies at any level of government can help legislators and other policy makers understand the ramifications of policies. Assessing officers need to be capable of analyzing the data at their disposal to provide insight into the impact of proposed policy changes.

The administrative experience of assessing officers and their understanding of the effects of tax policies on equity can help policy makers examine the implications of new policies. Assessing officers are often in the best position to inform policy debate.

3.4.3 Analytical Resources

Local assessing officers and, more commonly, state/provincial or regional assessment administrative agencies should maintain tax research staff to provide objective information on the property tax system in place and the effects of any proposed system changes. This staff should provide ongoing or annually updated analysis of issues that are of continuing importance. Tax analysis should be included as a task for research staff, who should be supported with adequate analytical tools.

In addition to analytical studies of issues and proposals, resources in this area should be employed to review proposed legislation at an early stage and provide input on effects and unintended consequences of the proposed legislation on the current property tax system. It may also be useful to enlist analytical staff in reviewing legislative language to determine whether a proposal will function as intended and is consistent with other property tax provisions. Assistance from trained legal staff is necessary to accomplish this task properly.

3.4.4 Analyzing Tax Distribution and Benefits

Assessing officers should work to provide the public with accurate information and dispel misconceptions about the property tax. Property tax is often subject to complaints of inequity or unfairness. Although there may be policy (legal) or assessment-related causes for such complaints, often they arise because of misunderstanding about the amount of the tax and the benefits being provided by this revenue. In attempting to promote better understanding of the economic aspects of property tax, assessing officers should refer to analyses of tax incidence and elasticity (see Glossary) because incidence explains how much of the tax is borne by different sectors of the economy, and is important because it can dispel myths about whether any sector is escaping taxation or paying too much. The limited elasticity associated with the property tax often limits rapid reduction in revenue and can be a benefit in ensuring provision of essential services during economic downturns.

4. ADMINISTRATIVE FRAMEWORK

The administrative framework reflects the legal structural environment within which the property tax functions. The framework should

- Assign responsibilities clearly so that accountability can be maintained
- Design a system that is fit for its purpose and considers the principle of subsidiarity
- Provide adequate administrative resources
- Ensure that performance is monitored
- Provide a system of public outreach and notification
- Allow for a system of appeals.

Administration encompasses directions, practices that comply with directions, people whose responsibility is to follow those directions in implementing policy, supporting technology, and appropriate data.

4.1 FUNCTIONAL RESPONSIBILITIES

As previously mentioned, property tax administration encompasses (1) oversight; (2) valuation and assessment; (3) billing, collection, and accounting for revenues; (4) taxpayer notification and (5) appeals. Effective administration often requires timely information from other governmental functions, including title agencies, mapping agencies, and land use and construction regulators. When administrative functions are performed by different tiers of government and organizations, the law should address ways of ensuring good communications, cooperation, and smooth data flows. It should also address taxpayer responsibilities and appropriate roles for private-sector entities.

4.1.1 Oversight

A strong supervisory and oversight role in property tax administration promotes the uniform application of property tax laws and accountability, and can provide services that otherwise would be too costly for many local governments. The *IAAO Standard on Oversight Agency Responsibilities* (IAAO 2010) provides additional recommendations. However, the primary U.S. approach is for a state government to tailor its oversight functions by choosing appropriate activities from a supervision model first advocated by the U.S. Advisory Commission on Intergovernmental Relations (ACIR 1963). The model includes:

- Developing standards
- Assisting and counseling valuers
- Monitoring performance
- Enforcing laws and regulations, including equalization
- Valuing certain properties for which broader uniformity is required or higher level resources are needed.

See *Guidance on International Mass Appraisal and Related Tax Policy* (IAAO 2014).

When responsibility for assessment and valuation is decentralized, supervision and oversight should be effective, and the responsible agencies should have authority to conduct independent reviews. When the property tax is assigned to local governments, disparities in local property tax capacity

in relation to local fiscal needs can arise. Uneven local assessment performance can also affect the funds available to local governments and the equitable distribution of funding from higher tiers of government. Consequently, oversight agencies should have a role in equalization studies and formulas (see Section 5.6).

4.1.2 Valuation

Although the responsibility for valuation can be centralized or decentralized, the subsidiarity principle argues for local valuation offices. Real estate markets are highly localized for many ordinary types of property. When local governments have valuation responsibilities, there is a choice of the type of local government (e.g., counties, municipalities, and other areas). And within a government, there is variation in the types of agencies or their place in the bureaucracy. Regardless of the type of local government that has valuation responsibility, valuation offices should have appropriately qualified analysts and valuers and adequate technological support (see Section 4.2). In the case of properties that extend beyond a single assessment district, the subsidiarity principle holds that such properties should be valued by a higher tier valuation district, such as a state. Hence, network properties, such as railroads and utilities, should be valued centrally, not piece by piece by local governments.

In property tax administration, the valuation process has three main phases: (1) the development of valuation models and (2) the application of those models to assessable properties and (3) valuation reporting. (A model can be in the form of a mathematical model or a manual containing sets of tables of valuation rates.) An administrative issue is whether a single agency should be responsible for all phases or whether models should be developed by a central agency and then applied locally.⁵

Assessment laws should only establish the valuation standards, leaving the agency with discretion on how to meet such standards. This is preferable to assessment laws that require valuers to follow a restrictive valuation procedure.

4.1.3 Assessment

In addition to valuation, *assessment* encompasses all the processes needed to produce an assessment roll, which is a list of properties (or taxpayers) that is linked to the database of factors (such as property use, area, value, eligibility for exemptions, and so forth) that determine property tax liabilities (the *fiscal cadastre*). Assessment implicitly requires identification of taxable properties, and underlying statutes should be clear about which properties are considered taxable (or conversely, which ones are not). The local nature of the factors affecting most real property value and tax assessments argues for local assessment offices.

4.1.4. Collection

The assignment of responsibility for billing and collecting property taxes should provide for taxpayer convenience and consider administrative capacity and fiscal interest. The principle of subsidiarity suggests local collection offices. Not only do local governments provide for convenience, they have a direct interest in the effectiveness of the collection system (in that they benefit from the revenues collected).

4.1.5 Appeals

Systems for hearing and deciding appeals of values and tax assessments are important components of property tax systems. The appeal system should balance the interests of appellants and the assessment and tax administration. Administratively, appeals fall into three categories: appeals relating to valuation, appeals relating to exemptions and classification of property, and jurisdictional or property class appeals relating to equalization (see the *Standard on Ratio Studies* [IAAO

⁵ In some countries, taxpayers apply the models.

2013b)). Taxpayers need accessible and responsive avenues for challenging assessments, denied exemptions, and the classification to which property is assigned. Appeals systems should be designed to facilitate the taxpayer's right to appeal. To do this, the process should be clearly spelled out in a written handbook or other document that can be given to the taxpayer. Taxing bodies need a degree of finality in the assessment and equalization process; taxpayers should not be able to avoid taxes by clogging appeal systems with frivolous appeals.

The laws should establish who has standing to appeal a property tax assessment and the time, place, and manner of filing an appeal. They should specify the allowable grounds for an appeal.

Adequate resources should be provided to defend values and address other appeals-related issues. The need for response to value-related appeals typically increases during reappraisal years or periods with rapid property value inflation. Proper planning and staff allocation ensure sufficient resources to address the anticipated higher-than-normal number of appeals.

4.2 RESOURCES

To accomplish its responsibilities in a fair and professional manner, an assessment or tax office should have a budget that provides for a well-organized and trained staff, sufficient computing resources, and necessary data. Many factors affect funding requirements. However, administrative costs in the range of 2–5 percent of property tax revenues are often achieved in developed western countries (IAAO 2014). Costs in excess of 10 percent may be symptomatic of systemic administrative problems.

With regard to staffing requirements, parcels per employee is a commonly used benchmark. Over the years, the median figure for Canadian and U.S. agencies has grown from about 2,500 to 2,700 parcels per employee (Walters and the IAAO Research Committee 2014, 16).

Computing resource requirements vary with the amount of data to be processed, the imagery to be accessed, and the number of tasks to be performed by the office. In general, any office should house its data in a computer system, and related systems and applications should be well integrated, particularly with a geographic information system (GIS).

Agencies should justify their resource needs in their budget requests (IAAO 2013c). *GIS for Property Tax and Assessment Professionals* (Cusack, Bidanset, and Fasteen 2018) provides justification for investments related to GIS technology.

When higher tier governments, such as provinces and states, delegate important aspects of property tax administration to local governments, they should have mechanisms in place to provide the financial and other assistance necessary to ensure that local offices have adequate and well-trained professional staffs, accurate cadastral maps and records, and the greatest feasible degree of computerization.

Adequate resources have an impact on all aspects of government operations. Budgetary restraints on local governments can cause them to consider outsourcing the assessment function. In these instances, the contract that defines the contract assessor's role may limit the assessor's duties. In particular, the contract assessor does not have the responsibility of trying to improve the assessment function—this type of assessor is required only to meet the requirements of the contract. Government officials charged with oversight of the assessment function should include performance standards in the contract, and the results should be reviewed to ensure compliance (see the *Standard on Contracting for Assessment Services* [IAAO 2019]).

5. COMPONENTS OF A VALUATION SYSTEM

- Valuation systems based on current market value ensure the greatest overall equity in the distribution of the property tax burden and are the most transparent.
- Key components of valuation systems include
 - Adequate data and technological resources
 - A commitment to professionalism through education and ethics
 - An effective underlying legal structure that enables adequate market and property data to be obtained
 - Quality assurance measures using ratio studies and other performance measures.

The assessing officer is most closely involved with aspects of property tax relating to how assessed values are estimated. Legislative bodies establish the system, and certain elements (see Section 5.2) tend to produce systems of higher quality in terms of administrative feasibility, uniformity, and equitable treatment of property.

5.1 FUNDAMENTALS: CURRENT MARKET VALUE THE BASIS FOR TAXATION

To best reflect the changes inherent in a dynamic economy and to maximize fairness and ease of understanding, assessments should be based on the current market value of property. Values in one area may increase, whereas those in another may decrease or stabilize. Property taxes then shift to areas with increasing wealth as measured by property value. Only a system requiring current market value acknowledges these changes in local economies and the distribution of property-related wealth.

Assessing property at current market value maintains a uniform relationship between property-based wealth and property taxes. Also, current market value requires valuations based on objective market evidence. Under a current market value standard, it is easier for the public to understand whether they are being treated fairly.

Current market value implies annual assessment of all property. This does not necessarily mean that every value must be changed each year. In annual assessment, the assessing officer should consciously reevaluate the factors that affect value, express the interactions of those factors mathematically, and use mass appraisal techniques to estimate property values. Thus, it is necessary to observe and evaluate, but not always to change, the assessment of each property each year in order to achieve current market value. It is recommended that assessing officers establish regular reappraisal cycles or at least appraisal level and uniformity (vertical and horizontal equity) thresholds that trigger reappraisal (see the Standard on Ratio Studies [IAAO 2013b]). When assessments are not updated annually, the valuations on properties not reassessed in a given cycle may change dramatically when they are reassessed; this in turn adds to criticisms of current market value-based systems.

5.2 LEGAL FRAMEWORK

Achieving equity requires a legislative framework that supports a current market value standard and that eliminates obstacles to its realization. Laws needed to implement and maintain support for uniform assessments include the following:

- A law expressly requiring that most or all property be valued on the basis of current market value (and stating applicable assumptions, and specifically identifying any departures from the current market value standard).
- A law (or regulation) requiring independent ratio studies measuring the level and uniformity of values within and among classes of property, in accordance with the *Standard on Ratio Studies* (IAAO 2013b). If performance is not measured independently, a market value standard has no meaning.
- A law requiring property inspections on either a specified schedule or when performance standards are not met. Market values change continuously and at different rates. As such, assessment uniformity can be maintained only with frequent revaluations based on accurately described properties.
- A law requiring buyers and sellers to disclose prices and terms of sales to assessing officers. Market values cannot be estimated accurately without access to prices and terms of sales. See Section 5.3.
- A law requiring owners or tenants of rental property to furnish statements of income and expenses to assessing officials. Assessing officers should treat confidentially all individual property operating data. See Section 5.3.
- A law providing safeguards against unapproved and undisclosed increases in property tax levies resulting from overall value increases. See Section 7.3.
- A law requiring that intergovernmental transfer payments such as education aid payments be based on credible estimates of actual taxable wealth. For example, the estimates should be based on equalized market values, rather than on unequalized or poorly equalized local assessed values. See Section 5.6.

Legislative remedies should be sought if the current legal framework is deficient. In a similar vein, laws that are detrimental to current market value should be repealed. *Assessment Practices: Self-Evaluation Guide* (IAAO 2013c), Table 1-2, identifies some examples.

5.3 DATA SYSTEMS

Property taxation requires accurate and accessible data on properties, taxpayers, and value indicators, such as sale prices. As noted in Section 5.2, the underlying legal framework should support and facilitate the acquisition of the data needed in assessment and valuation. Fundamentally, owners, occupants, and other market participants should be required to disclose necessary details. Sales information is critical for all market-based approaches to value. Although sales need to be properly screened and verified regardless of source, legally mandated disclosure of sale prices to officials with valuation and oversight responsibilities is necessary to ensure the quality and availability of this information.⁶

For agricultural land and other properties with limited sales markets or legally restricted valuation requirements, periodic surveys may be used to establish productivity and expenses. Surveys can also be used to establish rental income and expense information for use in valuing income-producing property. As noted in Section 5.3, laws should establish requirements for property owners to provide necessary information and reasonable access. They also should spell out the consequences of failing to supply the required information, such as arbitrary assessments or limitations on appeal rights. The laws, to the extent practicable, should also provide for taxpayer confidentiality to protect taxpayer privacy and encourage compliance.

The assessor should maintain or have access to high-quality land records and an accurate inventory of property. Collection and maintenance of land data are expensive but are critical parts of any property tax valuation system. By establishing multipurpose cadastral systems, many different public officials or agencies can make use of the information that may help to defray the costs of data collection and management. Multipurpose systems can be computerized and can become extremely interactive, providing information on the relationship between location and other property characteristics or influences on value. GIS technology exemplifies this multipurpose principle (see *GIS for Property Tax and Assessment Professionals* [Cusack, Bidanset, and Fasteen 2018], the *Standard on Manual Cadastral Maps and Parcel Identifiers* [IAAO 2016a], and the *Standard on Digital Cadastral Maps and Parcel Identifiers* [IAAO 2015].)

Taxpayer returns, routinely used in the United States only for personal property data acquisition, may also expedite collection of real property attribute information, particularly in the early stages of setting up a property tax system. Initial data collection programs in the Czech Republic and Slovakia have successfully used such self-reporting systems, and they are used on an ongoing basis in Turkey (Almy, Dornfest, and Kenyon 2008, 243).

Ongoing valuation systems require maintenance and updating of property characteristics data. Physical review, including on-site verification, is recommended every 4–6 years. Digital imaging technology tools may be used to supplement field reinspections with a computer-assisted office review (IAAO 2017, Section 3.3.5).

6 Although transfer taxes can be useful in facilitating sale price data acquisition, high transfer taxes discourage accurate reporting; systems with high transfer taxes need alternative verification processes. Deterrents to registering ownership or occupancy changes or disclosing actual prices should be eliminated (Bahl 2009, iv-vi; Norregaard 2013, 35).

5.4 VALUATION METHODS

The valuation system should use recognized methods performed correctly and without significant errors of omission or commission. The principle of cost-effectiveness requires assessors to use automated mass valuation methods, such as those identified in *Assessment Practices: Self-Evaluation Guide* (IAAO 2013c) and the *Standard on Mass Appraisal of Real Property* (IAAO 2017) and detailed in *Fundamentals of Mass Appraisal* (Gloudemans and Almy 2011).

5.5 QUALITY ASSURANCE

Quality assurance is an important aspect of every valuation system. Specific quality assurance procedures should be established, and staff should be strongly encouraged to review all aspects of their work to ensure compliance. Lack of effective quality assurance can result in minor or major gaps, ranging from loss of data to failure to recognize or correct inequities.

5.5.1 Valuer Qualifications

Ensuring a high-quality valuation system requires highly skilled and trained professional staff. Assessors may need legislative direction or administrative rules and regulations to ensure that this objective can be promoted and achieved. Accordingly, states and other governments have implemented legislation requiring practitioners in all branches of property appraisal to demonstrate appropriate qualifications before being allowed to practice, to maintain and improve their skills used in the course of practice, and to conduct themselves in accordance with professional and ethical standards.⁷ Legislation regulating independent appraisers, such as fee or contract appraisers, should be coordinated with legislation affecting assessing officers. When similar qualifications exist, transferability of experience, credentials, and course credits should be permitted. Objective standards should be developed and used to evaluate experience, credentials, and educational requirements. (See the *Standard on Professional Development* [IAAO 2013a].)

5.5.2 Internal Edits and Reviews

Every assessment jurisdiction should establish procedures for internal review of work product. Supervisory review of appraisal and assessment work as well as ratio studies, procedure reviews, performance audits, and peer reviews can be used and should be considered. This is particularly important for appraisals, which may otherwise be criticized as subjective or not well developed. Internal review includes establishment and review of quality and quantity performance criteria (see the *Standard on Mass Appraisal of Real Property* [IAAO 2017]). Numerous computer edits are needed to ensure that all accounts are in balance and to enable data entry errors to be caught and corrected.

5.5.3 Ratio Studies

Ratio studies are effective components of a quality assurance system and should be conducted at least annually. Ratio studies should be used to emphasize horizontal (within property classes or neighborhoods) and vertical (between properties of unequal value) equity of assessments as well as overall assessment level in comparison to legal requirements. When used by a primary assessing jurisdiction, ratio studies can be designed to measure the quality of assessments in neighborhoods or for specific types of property, as well as to provide overall quality indications. Oversight agencies typically use ratio studies as part of technical assistance, oversight, or equalization roles.

Oversight agencies responsible for conducting ratio studies on assessments done by local jurisdictions should publish the results of such studies. Published reports should be readily available to all

⁷ See, for example, the Uniform Standards of Professional Appraisal Practice (USPAP) (TAF 2020).

interested parties and include narrative discussions of the method used as well as statistics that measure level and vertical and horizontal equity. Published ratio studies should clearly define their purpose to maximize their usefulness to prospective users. (See the *Standard on Ratio Studies* [IAAO 2013b].)

5.5.4 Performance and Procedure Audits

Reviews of appraisal and assessment procedures should be done periodically. This is important whether in-house staff or contractors perform these functions. The process should include a review of documentation and procedures, as well as actual appraisal results. If property characteristics are being captured, a sample should be audited to ensure accuracy. Performance and procedure audits can be conducted by specialized internal staff, governmental agencies, or independent contractors who should be separate from those hired for the appraisal or data collection work.

5.5.5 Oversight Agency Role in Local Quality Assurance

Oversight agencies have an important role as reviewer of the work of local assessing jurisdictions. This may be in response to ongoing audit requirements, legislative mandates, local jurisdiction requests, or taxpayer complaints. Often, states have authority to order reappraisals to correct assessment equity problems. If a review- or reappraisal-ordering function exists at the state level, responsible agencies should seek authority to conduct reviews or order reappraisals based on long-standing failure to meet ratio study standards for horizontal and vertical equity. Reviews or reappraisal orders should also be triggered if local jurisdictions fail to meet reappraisal timelines, to maintain adequate property records and maps, or to meet other indices. (See *Assessment Practices: Self Evaluation Guide* [IAAO 2013c].) In any case, the oversight agency should establish clear goals, guidelines, standards, and objectives beforehand to minimize misunderstandings and to achieve desired results. Agencies that investigate taxpayer complaints should develop specific criteria to define the extent of the investigation and procedures to narrow and focus such complaints.

5.6 EQUALIZATION OF PROPERTY VALUES

Equalization of property values is an important step that ensures uniform treatment of groups or classes of property. Equalization functions ensure that aid to local governments is apportioned according to a more consistent estimator of total value. Equalization also can ensure that the effects of exemptions and levy rate limits are equal in different jurisdictions. In equalization, broad adjustments to values, tax rates, or funding distributions may be made to correct for widespread assessment discrepancies that otherwise would create inequity among localities. Equalization, in this context, does not include adjustments to the values of individual properties that result from taxpayer appeals or review of the rolls by assessing officers.

5.6.1 Oversight and Local Equalization Roles

When primary assessment responsibility is vested with local assessors, local boards of review and equalization can provide a valuable check and balance for the assessment process and should be encouraged to take an active role. The authority of such boards can be broad, including the ability to adjust individual or entire class assessments. In the broadest cases, these boards play an equalization role equivalent in their jurisdiction to state or oversight-level equalization. Such equalization may be based on a review of ratio study information provided by the assessing jurisdiction, or independent ratio studies may be conducted.

Oversight agencies often perform equalization as part of their functions. Such equalization can merely serve as a check and balance on local equalization. However, when assessment responsibilities are split and different entities are responsible for assessing different types of property, oversight agency equalization can serve the added function of eliminating inequity between property types assessed by these different entities.⁸ Oversight agencies should also take an active role in equalization when properties subject to taxation by a taxing district are assessed by more than one local assessment agency (see the *Standard on Oversight Agency Responsibilities* [IAAO 2010]).⁹

5.6.2 Methods of Equalization

Whether accomplished at the oversight agency or the local level, equalization generally takes one of two forms: direct, involving adjustments to previously determined property values, and indirect, involving adjustments to tax rates or funding distributions between higher and lower level governments.¹⁰ For guidance and standards for these two types of equalization, see the *Standard on Ratio Studies* (IAAO 2013b). Appendix D provides additional discussion of school finance equalization.

5.6.3 Alternatives to Equalization

As an alternative to direct and indirect equalization, some oversight agencies have authority to approve or disapprove the locally developed assessment roll or to conduct performance or procedure audits. This is done to ensure compliance with state legal standards for completeness, accuracy, uniformity, and reliability (see the *Standard on Oversight Agency Responsibilities* [IAAO 2010]).

⁸ In the United States, for example, many states assess the property of public utilities and railroads, while local assessors value other property.

⁹ For example, if a school district is in three counties and each county has assessment responsibility for only the property within the portion of the school district located in its own county, assessment discrepancies may go uncorrected unless a state administrative agency performs an equalization function.

¹⁰ School districts often receive funding from both property tax and state or provincial revenue sources. Equalization ensures uniformity of per-student school funding regardless of underlying property wealth and ability to raise property taxes.

5.7 VARIATIONS FROM CURRENT MARKET VALUE

In principle, nonmarket value systems should be rejected as a model because they deviate from the basic principle of ad valorem taxation and tend to be less equitable for all property taxpayers. Nonmarket value systems include base year assessments, acquisition value, and area-based systems.

Under a current market value system, each year's assessed value approximates a property's actual value in that year. Alternatives to current market value assessment differ in one or more ways, including value standards that do not embrace market value, valuations from the past, nonuniform valuation dates, excessive limits on year-to-year value changes, and assessed values that are a fraction of the market value estimates.¹¹ The best variants adhere to a firm reinspection program that ensures that new properties, sold properties, and appealed properties are reinspected in the year that the event took place and that all other properties are inspected at least once every six years (inspections can use imagery in lieu of field inspections). The best systems generally meet IAAO ratio study standards (IAAO 2013b). Good systems generally meet less strict ratio study standards, such as those for level, but not uniformity. Inadequate systems meet no objective performance standards.

5.7.1 Value Standards that Do Not Embrace Current Market Value

In Canada and the United States, most ordinary real property assessments are based—at least nominally—on market value. The main exception is current use value, which commonly is used in the taxation of farmland and other nondeveloped land. For such properties, market value based on a property's highest and best use can result in a level of taxation that current owners/users find onerous.¹² Current use-value assessment should be used only when the public's and private interests are aligned (See Section 7.4.2).

5.7.2 Valuations from the Past

Although annual revaluation is often technically and financially feasible, many valuation systems allow longer intervals between revaluations or have no stated revaluation requirements. IAAO considers regular revaluation intervals of two to six years to be acceptable, depending on market conditions (see the *Standard on Mass Appraisal of Real Property* [IAAO 2017]). Longer intervals ignore legal revaluation requirements, and indefinite base-year assessments are unacceptable. Long intervals generally result in regressive assessments, violating the uniformity principle. In rising markets, they can unduly constrain property tax revenues. There is another problem with longer or indefinite intervals: the valuation of properties that did not exist in the base year. The changes in market conditions subsequent to the base year that led to the creation of the property would make the value estimate entirely hypothetical and indefensible. Simply using rates in a valuation manual as of the base year does not make the value estimate as of the base year.

Periodic revaluations are of two types: en masse revaluations and cyclical revaluations (*rolling revaluations*). In the former, all properties are revalued in mass at the end of the interval. In the latter, a subset of properties is revalued each year, so that all are revalued by the end of the interval. Under either option, in-place values may be indexed based on ratio study analyses annually or at longer intervals; this helps ensure that all classes of property or areas have the same general level of value. Rolling revaluations smooth year-to-year workloads and resource requirements.

¹¹ There are also property taxes that are not based on value, including area-based property tax and flat per-property taxes (see Appendix A).

¹² In the troughs of some real estate cycles, current-use values can be higher than market values.

5.7.3 Nonuniform Valuation Dates

In 1978, California enacted an *acquisition value* system to replace the existing annual revaluation system. The main rationale was greater certainty about future property values and, hence, taxes. In effect, since, ostensibly, this system requires sold properties to be assessed at current market value, every day subsequent to 1975–1976 becomes a base valuation period, virtually destroying any meaningful uniformity in effective tax rates.¹³ Other states have uncoupled taxable values from current market values by adopting elements of an acquisition value system. Success in constraining taxable value increases while a taxpayer holds a property comes at the expense of understandability as well as uniformity. Systems become more complex because they need to track indexed base-year values as well as current market values.

Acquisition value systems also decrease mobility because the most recent movers to or in any area pay the largest tax share. Although research has shown that systems based on acquisition value can protect senior citizens who tend to sell property and move infrequently, this same protection can be afforded directly by programs such as circuit breakers, which are designed specifically to aid target groups. Thus, with a circuit breaker program, property tax relief goes to the defined group designated by policy makers as needing assistance. Any tax reduction provided to this same group under an acquisition value system is coincidental. Acquisition value makes even less economic sense for businesses because new businesses are presented with a competitive disadvantage because of substantially higher property taxes.

Furthermore, once such a system becomes entrenched through long-term application, it becomes virtually impossible to eliminate disparities that can only grow worse over time. A return to a system based on market value inevitably causes major intra-category tax shifts; therefore, the prospect of such reform ceases to be available after a few years of high inflation.

5.7.4 Assessed Values that Are a Fraction of Market Value

It is common for assessed values to be either a fixed fraction of estimated market value or variable fractions depending on how property is classified (a classified property tax system). There are two main reasons for such systems: (1) a belief that taxpayers will complain less if assessed values are less than market values and (2) a need to make a de facto situation legal following a legal challenge. Such systems tend to preserve assessment inequities and lessen uniformity (see Section 7.2.4).

¹³ Studies in California have determined that 15 years after implementation of an acquisition-value-based system, it would not be unusual, for example, for two identical, side-by-side properties to have legally correct values that differ by 500 percent (O’Sullivan, Sexton, and Sheffrin 1995). Because of these defects, public understanding of who actually benefits and to whom taxes are shifted is extremely limited.

6. COMPONENTS OF A MODEL PROPERTY TAX SYSTEM: TAXATION

The taxation portion of the model property tax system encompasses the processes of rate setting, notice of tax obligation, and billing, collection, and delinquency management. A model property tax system should:

- Include visibility of the workings of the property tax system with taxes levied closely and transparently tied to the units of government they are funding
- Be budget (levy)-driven rather than rate-driven
- Assign responsibilities clearly between the assessor and the tax collector
- Provide reliable notice of the tax obligation and bill with convenient payment
- Provide methods for addressing nonpayment and late payment, which should be clearly defined by the legislative body and uniformly applied by the tax collector.

6.1 VISIBILITY OF PROPERTY TAX SYSTEM

The workings of a property tax system should be visible to taxpayers (see Section 8). This means that the taxes being generated by the system are clearly tied to the taxing units of government that use this funding source. Overall increases or decreases in property taxes thereby become a function of the changing needs of these units of government, while the assessing officer's role, which is only to determine the proper distribution of the tax burden, is emphasized.

6.2 BUDGET (LEVY)-DRIVEN VIS-À-VIS RATE-DRIVEN PROPERTY TAX SYSTEMS

Taxing districts operate with funds generated from property tax (although other revenue sources often are available, they are not the subject of this discussion). The formula used to calculate these tax amounts takes one of two forms:

A. Budget (levy)-driven

$$\text{Rate} = \text{amounts budgeted from property tax} \div \text{taxable or assessed value}$$

B. Rate-driven

$$\text{Amounts budgeted from property tax} = \text{rate} \times \text{taxable or assessed value}$$

Formula A assumes that the taxing unit starts with a budget that it sets (sometimes known as a levy) and has subtracted all nonproperty tax sources of funding. In this case, given a fixed budget, the rate is merely a mathematical result and floats upward or downward, depending on both the current assessed value and changes to that value in the unit of government. Rates computed in this manner may be expressed using decimals, percentages, or mills. Formula B assumes that the taxing unit needs as much money from property tax as a certain fixed or maximum rate will generate. In this case, increases or decreases in assessed value directly affect the amount of money the unit of government can budget from property tax.

Assessing officers should discourage or offer alternatives to rate-driven property tax systems. Taxing units that generate revenue as described in Formula B justify taxpayer fears that reappraisal will probably raise their taxes and give credence to the idea that the assessing officer is controller of the magnitude, not just the distribution, of the property tax. Such taxing units are also able to hide windfalls they may reap by arguing that they did not increase their rate of taxation. Rate-driven property tax systems fail to meet the test of open and visible property taxation, but they do provide increased predictability, with assessment notices providing an early warning sign of tax increases.

6.3 PROPERTY VALUES VIS-À-VIS PROPERTY TAXES

A common misunderstanding about the property tax is the supposition that the tax is strictly value-driven and, therefore, that a 10 percent increase in appraised or assessed value must translate into a 10 percent increase in tax. Failure to understand and explain the fallacy of this perspective leads to placement of blame for all property tax increases squarely (and unfairly) on the assessing officer.

The legislative body establishes the framework for the distribution of property taxes by providing for classification, exemption, and valuation. Laws may also control the magnitude of the property tax. By appraising property equitably and uniformly and in accordance with legal guidelines, the assessing officer ultimately is responsible for the distribution of the property tax burden, not the magnitude of the tax.¹⁴ In principle, in a budget-driven system high values force rates downward and offset rising assessments.

6.4 TAX COLLECTION

While tax collection is not usually assessing officers' responsibility, they should work closely with tax collection officials to ensure efficient and accurate transfer of ownership, location, taxability, and value of property information to the tax collector. This relationship is critical to fair and equitable taxation. It is important that the legislature or governing body clearly define and delineate the responsibilities of assessing officers and tax collectors. Tax collection officials are typically obligated to provide reliable notice of the tax obligation and bill. This is commonly done through mail service; however, electronic notification is becoming more widely used. Making the tax obligation public promotes transparency and can incentivize compliance, as well as horizontal equity, but should be balanced with the public's right to privacy.

Many property owners and financial institutions choose to pay property taxes through mortgage escrow accounts, which divide the annual tax burden into multiple payments that can ease the financial stress on the taxpayer and increase taxes paid voluntarily. Additional discussion of the benefits of monthly payments is presented in a paper "Improving the Property Tax by Expanding Options for Monthly Payments" (Langley 2018). Ease of payment is also a key factor in voluntary compliance. Payments should be accepted at local government offices, by mail, or electronically. Offering discounts for early or prepayments may also be considered to improve cash flow for the jurisdiction.

¹⁴ If the market value of lakefront lots doubles but the value of all other property in the jurisdiction remains constant, these lots will bear a higher proportional share of the total property tax for the jurisdiction—that is the principle of ad valorem taxation at work. It is possible, if the system is rate-driven, that the increase in value translates directly into higher taxes, raising the total tax charged, not just the share levied against the lakefront lots. In contrast, in a budget-driven system, higher values force rates downward and offset rising assessments. In this type of system, increases in the total amount of property tax result only from increases in budgets submitted and approved by taxing jurisdictions; this is the preferred model.

The methods for addressing nonpayment and late payment should be clearly defined by the legislative body and may include several enforcement mechanisms to resolve the delinquency. These mechanisms can range from installment plans, garnishment of wages, seizure and sale of assets including real and personal property, and placing of tax liens. It is imperative that the tax collector use these powers consistently with all taxpayers and avoid discrimination in enforcement.

7. RESPONSE TO PROPERTY TAX PROBLEMS

While market-based assessment systems are superior in terms of fairness and equity, they are not perfect. In particular, market-based systems can be stressed when assessments increase rapidly, either from market appreciation or infrequent revaluations. To address these issues, legislative bodies often enact measures, such as exemptions and abatements, to shift the property tax from certain groups of taxpayers. Such measures nearly always increase the property tax on nonfavored groups or limit services by reducing revenue to taxing districts, and generally should be discouraged and limited. Without adequate controls, tax-shifting measures may result in a hodgepodge of cross subsidies, resulting in a lack of clarity of their true effect and unintended consequences.

7.1 EXEMPTION PRINCIPLES, TYPES, AND EFFECTS

In principle, exemptions and other tax-shifting mechanisms should incorporate the following principles:

- Be narrow in scope and construction.
- Require periodic review and include sunset provisions to ensure objectives remain relevant.
- Require adequate documentation to evaluate eligibility and enable periodic audits.
- Include an analysis of their effects on other taxpayers, taxing districts, revenue, and so on.

Legislative bodies should exercise caution in enacting exemptions, and they should be used sparingly as they represent a departure from ad valorem principles. In general, an exemption should not be granted unless it will be beneficial to a substantial, identified segment of the affected population and will apply to all similar properties or similarly situated taxpayers. As a corollary, exemption qualification should be narrowly construed.

Proposed exemptions should be analyzed to determine which groups may be assisted or hurt (intentionally or inadvertently) and whether the benefits of the exemption are significantly greater than any revenue lost (including increased administrative costs) or taxes are shifted onto other taxpayers. Excessive use of exemptions typically requires higher tax rates to compensate, potentially leading to additional stress and complaints from the remaining taxpayers. Extensive use of exemptions also increases the administrative and enforcement cost of the property tax.

7.1.1 Exemptions Based upon Ownership and Use

Government property commonly is exempt. Religious and educational institutions and charitable or benevolent societies also commonly receive full exemption. Aside from these common exemptions, innumerable broad or narrow special-purpose exemptions are available. The most common of these are for various personal property components, ranging from full exemptions for all personal property, business inventory exemptions, and exemptions that apply only to equipment used in farming or other specific tasks. Some exemptions require highly specialized statutory definitions to prevent unintended over-broadening.¹⁵

Since conflicts and confusion may arise from having numerous exemptions, taxpayers and public policy officials should understand the effect of the exemptions. Exemptions should be reviewed

¹⁵ For example, the specific activities expected of a qualifying charitable organization or a nonprofit corporation to enjoy the charitable exemption must be made clear.

at regular and frequent intervals to ensure that the owner or user qualifies for the exemption and that the property is used for a bona fide exempt purpose. When practicable, each owner of exempt property should be required to apply for the exemption annually. Each taxing or assessment jurisdiction should prepare a list of exempt properties each year showing the name of the owner, the location of the property, the size and market value of the property, and, when possible, the tax revenue forgone or shifted (see Section 7.1.4).

7.1.2 De Facto Exemptions

Property tax systems inevitably include some property that is difficult administratively or politically to assess properly. Personal property, for example, is generally difficult for tax officials to inventory and is often underreported by taxpayers. Residential property, on the other hand, is highly visible and represents a politically active sector. Jurisdictions that lack statutorily allowed exemptions to aid residential property owners often provide undesirable de facto exemptions in the form of systematic underassessment as a substitute. Assessing officers and oversight agencies should analyze assessments to discover problems of this nature and work with public policy officials to develop corrective procedures, guidelines, and legislatively authorized mechanisms to achieve the desired tax incidence environment. Often an exemption may be the only solution and may provide the advantage of making visible an otherwise hidden tax shift.

7.1.3 Managing Exemptions

Once granted as a result of legislative action, exemptions tend to become entrenched and thought of as rights related to property ownership. Assessing officers should encourage public policy officials to enact sunset provisions when exemptions are passed. Sunset provisions specify a date in the future after which the exemption ceases to exist unless it is renewed.

Although there may still be a need for the exemption, the expiration provision makes the exemption more visible and presents an opportunity for future public policy officials to review and recertify each exemption. Sunset provisions should not apply to constitutionally mandated exemptions (e.g., a prohibition on taxation of federal property).

Regardless of the existence of sunset provisions, the assessing officer should conduct ongoing analyses of the effect of each exemption so that information is available in the event of legislative review.

7.1.4 Possessory Interest

Often a portion of a property owned by entity that is exempt from the property tax is leased or used by a private, for-profit enterprise. Examples include a restaurant in a public airport or a gift shop in a hospital. In these cases, assessment laws and regulations should provide for the capacity to determine the portion of a property dedicated to these private uses so that a property tax can be assessed. This serves to broaden the tax base and ensure that similarly situated businesses pay their equitable share of property taxes. In cases in which the primary property owner is a governmental entity, collection remedies may need to be limited to exclude the taking of the property by foreclosure.

7.1.5 Tax Expenditures Related to Exemptions

A tax expenditure budget displays the estimated revenue losses from special exclusions, exemptions, deductions, credits, deferrals, and preferential tax rates. This is an important tool with regard to the costs associated with providing property tax exemptions. It promotes transparency, provides specific details for policy makers, and allows for other measures that can aid in analyzing exemption benefits to provide transparency around the costs of providing property tax exemptions and other measures that can be evaluated against their benefits. Tax expenditure budgets can be particularly helpful for jurisdictions in the consideration of payments in lieu of taxes (PILOTs).

7.1.6 Payment in Lieu of Taxes

Communities with high concentrations of nonprofit institutions such as hospitals, colleges, and museums have struggled with the reduced tax base associated with these tax-exempt properties. Some jurisdictions have sought compensation for the tax revenue lost due to exemptions for nonprofit institutions by seeking PILOTs. PILOTs can offer critical revenue to communities and provide a mechanism to recapture a portion of both the forgone tax revenue and the costs of providing municipal services to nonprofit institutions (Rakow 2013).

A vibrant nonprofit sector can be a vital asset to a community, as these institutions provide many needed services and experiences and can be important contributors to the local economy. A well-designed PILOT program features communities and their nonprofit institutions working collaboratively to balance the costs of the exemptions with the services and other benefits provided by the nonprofit institutions.

The assessor's role in the PILOT process is an important one. By maintaining accurate and up-to-date valuations for exempt properties, assessors can accurately portray the revenue forgone due to property tax exemptions. While assessing officials should be active participants in PILOT discussions, care must be taken to separate PILOT negotiations from the process for reviewing exemption requests to avoid the perception that an exemption is contingent on a PILOT commitment.

7.2 MEASURES TO REDUCE BURDENS ON RESIDENTIAL TAXPAYERS

- Many property tax systems include mechanisms that seek to reduce the tax burden on owners of residential property.
- These measures can be broad and include entire classes of property, or they can be targeted to focus benefits on specific categories of property or taxpayers.
- Targeted mechanisms are preferred because they are more likely to achieve the desired relief outcomes with minimum impact on the tax base.

7.2.1 Homestead Exemptions

Homestead exemptions remove a fixed amount or a percentage of value from the otherwise taxable value of a property. The exemption is usually restricted to the primary residence of the taxpayer. Many governments grant such exemptions, sometimes restricting eligibility to individuals meeting certain age or income criteria. Residential homestead exemptions often are supplemented by circuit breaker programs to target additional relief to taxpayers with limited incomes and higher relative tax burdens (see Section 7.2.3).

Fixed-amount exemptions grant proportionately more relief to low-value property, where the fixed amount may make up a significant percentage of the total taxable value.¹⁶ To prevent the erosion of the exemption amount due to inflation and appreciation in property values, an indexing mechanism for the exemption amount is recommended. Percentage exemptions do not require indexing but give proportional tax relief to properties, regardless of whether they are low- or high-valued and are therefore less progressive. Occasionally hybrid exemptions, combining a fixed-amount exemption and percentage limits, may be used to focus the exemption where policy makers deem the relief is most appropriate.

¹⁶ For example, a \$10,000 exemption reduces the assessment of a \$100,000 home by 10 percent. The same \$10,000 exemption for a \$500,000 home represents just a 2 percent reduction for this high-value property.

Homestead exemptions can be an effective tool for reducing tax burdens; however, they do increase administrative complexity and costs to verify that the taxpayer meets the exemption residency requirements.

7.2.2 Property Tax Deferrals

Property tax deferrals are used by some governments to relieve the tax burden on low-income seniors or, in some cases, all households. Deferrals delay, but do not excuse, taxes, which accrue as an increasing lien until the property is sold or the estate settled. Deferred taxes are usually subject to interest charges but no penalties, and the property is not subject to forfeiture.

Deferrals directly address the liquidity problem faced by homeowners who are *housing rich* but *income poor*. They allow homeowners to use an otherwise illiquid asset—their home equity—to pay current property taxes. Since the tax is repaid out of the proceeds when the property is transferred, deferrals have no long-term cost to other taxpayers.

Providing a deferral option to taxpayers is important because it essentially precludes the possibility of long-time homeowners being forced out of their home due to rising taxes. However, most deferral programs suffer from very low participation rates. Part of the reason for low participation is that seniors are reluctant to place a lien on their home because they want to leave the home to their heirs free of encumbrances. While such sentiment is laudable, it is not necessarily an argument for providing an exemption or other subsidy to a taxpayer holding a valuable asset. Participation rates can be increased by raising public awareness of deferral programs through outreach and advertising, by streamlining application processes, and by offering low interest rates.

7.2.3 Circuit Breakers

Circuit breaker programs provide targeted property tax relief to households with the heaviest property tax burdens relative to their incomes. Circuit breakers are widely used in the United States. The following is an analysis of the main policy options. Most states restrict circuit breakers to low-income elderly homeowners and renters, although 40 percent of states with such programs also cover nonelderly households. Besides deferrals, circuit breakers are the most cost-effective approach to property tax relief because they target assistance to households with the least ability to pay, rather than providing more expensive across-the-board relief to all taxpayers regardless of whether the relief is needed.

The most effective circuit breaker programs set a threshold percentage of income that property taxes must exceed before tax relief is available, with a circuit breaker benefit offsetting property taxes above that level. For example, with a 5 percent threshold circuit breaker, taxpayers would receive a credit equal to the amount by which their property tax bill exceeds 5 percent of their income. In that case, a household with a \$10,000 income and \$800 property tax bill (8 percent of the income) would receive a \$300 tax credit. Some states set multiple threshold percentages, with the thresholds applied incrementally like a graduated income tax.

Other states use *sliding scale circuit breakers*, which provide all households within an income bracket the same percentage reduction in property taxes, with the percentage decreasing from low- to high-income brackets. Finally, some states use *quasi circuit breakers*, which provide fixed-dollar property tax credits to all households within an income bracket, with the size of the tax credits decreasing from low- to high-income brackets. While these two approaches are less targeted than threshold circuit breakers, they are still more cost-effective than across-the-board homestead exemptions or credits.

Circuit breakers are almost always funded by a high-level government, like a state or province. In contrast, other types of property tax relief are often locally funded, in which case local governments must absorb the tax loss themselves and/or raise property tax rates to pay for relief. Thus,

state-funded circuit breakers help mitigate fiscal disparities across local jurisdictions and provide tax relief without undermining local fiscal health. Some states directly fund circuit breaker programs by providing credits on the income tax. Alternatively, states may reimburse local taxing jurisdictions for their potential revenue loss due to circuit breakers.

State administrative agencies and local assessors should promote awareness of circuit breaker programs and provide outreach and assistance to those wishing to apply for the benefits.

7.2.4 Classification of Property

Classification (or differential) systems provide favored treatment to certain types of property. The tax benefit is provided by assessing the property at a fraction of its full market value. Property classes with lower ratios receive greater benefit.

As an alternative, some classification systems alter the tax rate, setting a lower rate for the favored classes of property. The rate paid by these taxpayers therefore is lower, although their assessments (values) are unchanged. Although variable tax rates also can add to complexity and confusion, they maintain the independence of the appraisal and taxation processes and may therefore have an advantage over assessment classification schemes for jurisdictions that do not have overall or rate uniformity requirements.

Classification differs from exemption in that an application generally is not required. It is instead based on broad categorization assigned by the assessor rather than individual circumstances. Classification does afford some protection from reappraisal effects for protected classes. However, classification violates the economic principles of ad valorem taxation because properties tend to be taxed at more or less favored percentages of value based on political, not economic, conditions. Classification may also violate constitutionally mandated protection from discrimination.¹⁷

Classification adds a layer of complexity to the understanding of the property tax. This effect worsens as the number of classifications and variance in the percentages to be assessed grows.¹⁸ Classification violates the visibility standard providing instead a less open system in which assessment equity errors are easier to hide and more difficult to discover.

Numerous studies indicate that appraisal equity, as measured by such indicators as the coefficient of dispersion (COD), improves significantly when governments eschew fractional assessments and classification schemes for full market value.¹⁹ Finally, classification obscures the effective tax rate. In a classification system, the assessment fraction (ratio) for the class must be multiplied by the nominal tax rate to determine the effective tax rate. This step increases confusion and reduces understandability.

¹⁷ For example, judicial decisions related to the federal Railroad Revitalization and Regulatory Reform (4-Rs) Act of 1976 prohibit classification that would produce a lower assessment ratio for commercial and industrial property in comparison to the property of railroads, motor carriers, and airlines.

¹⁸ A system with three classes of property and assessment fractions ranging from 15 percent to 30 percent of market value may not be too difficult to understand. Some systems, however, have 15 or more classes and fractions ranging from 3 percent to 50 percent of market value. Systems of this type should be avoided, and steps should be taken to simplify whenever possible.

¹⁹ See, for example, "Analyzing Assessment Equity: Techniques for Measuring and Improving the Quality of Property Tax Administration" (IAAO 1977, 156–157).

7.2.5 Tax Credits

Tax credits can be an effective way of reducing the financial impact of property taxes on selected types of taxpayers without affecting the assessment process or the ability of local units of government to receive funding generated from the property tax. Tax credits typically are allowed in the form of reduced income tax liability resulting from a property-tax-related expense. For example, low-income renters may be permitted to impute a property tax amount that is embedded within rent paid. This amount or some percentage of this amount may then be refundable or deductible through an income tax credit.

Property tax credits generally are most efficient and feasible when they are administered through a state or local income tax program. Refundable credits are more cumbersome to administer because they require money to be sent to individuals. However, refundable credits have the advantage of providing the full amount of the intended credit, whereas deductions or nonrefundable credits work only to the extent that offsetting income or tax liability exists.

7.3 MEASURES TO CONTROL THE OVERALL PROPERTY TAX SYSTEM

- Controls that limit increases in budgets, levies, and tax rates may be appropriate.
- Limits on the increase in market value are problematic and are to be avoided for reasons explained in Section 7.3.3.
- Truth-in-taxation programs promote transparency.

7.3.1 Budget Increase Limits

Regardless of whether a property tax system is budget (levy)- or rate-driven (see Section 6.2), it may be prudent to provide an upper limit, or cap, to the amount any local unit of government can increase the revenue it derives from property tax in any year. Such a system typically imposes a maximum percentage increase and typically provides exceptions to the limitation. Elective override provisions may be available, and there is usually some allowance to enable additional amounts to provide services for new construction or growth (Paquin 2015, 10).

Budget increase limits can prevent reappraisal windfalls. However, truth-in-taxation provisions (see Section 7.3.4) can do the same without necessitating a one-shoe-fits-all approach. Budget increase limits have the following weaknesses:

- The cap may be generous for some units of government but may prevent others from adequately providing expected services.
- The ceilings often become floors; taxing units of government may be concerned about unanticipated future expenses and may feel obliged to set the maximum possible budget, even though it may not be needed.
- Because assessed values may change at different rates, budget increase limits do not usually constrain individual property tax changes.

7.3.2 Rate Limits

Rate limits constrain the maximum rate that can be levied. When assessments are stable or increase slowly over time, rate limits provide an effective brake on significant increases in property taxes, but they can strangle governments when there are long intervals between revaluations. Rate limits are less effective in controlling property tax growth when appraised values increase rapidly because of reappraisal or inflation. Under these conditions, such limits often produce revenue windfalls and fuel taxpayer discontent. Rate limits therefore have a place as part of a control system but should be coupled with budget (levy) or truth-in-taxation constraints.

7.3.3 Valuation Increase Limits

Limits that constrain changes in assessed or appraised value of property may appear to provide control. In fact, they actually

- Compromise property tax equity
- Distort the distribution of the property tax burden
- Tend to confuse taxpayers
- Add to administrative complexity.

Owners with properties that appreciate beyond the assessment cap limit receive a subsidy at the expense of those whose properties are decreasing in value or are increasing at lower rates. In addition, value increase limits typically focus their tax reductions on a relatively small number of properties with the largest increases. As a result, the majority of properties, some of which may still have had their assessments lowered by the cap, still pay higher taxes than they would if there were no cap at all. This effect is invisible to the taxpayer and therefore especially deceptive.

In effect, valuation increase limits result in lower effective property tax rates for owners of desirable property and higher effective property tax rates for owners of less desirable property. Similarly, when funds are distributed to school districts or other taxing jurisdictions based on taxable property value (indirect equalization), funding tends to shift from poorer areas to wealthier areas with rapid appreciation—an illogical and undesirable result. Legislators as well as the public should be made aware of the inequities resulting from valuation increase limits and be actively discouraged from pursuing such limitations. Any other control is preferable. A failure to keep valuations current has similar effects.

Valuation increase limits create the most distortion in horizontal equity because similarly situated properties no longer pay proportionately equal taxes. Vertical equity issues are less certain, especially if return to market value occurs only on condition of sale and if owners of low-value properties have lower income and are less mobile.

7.3.4 Truth in Taxation

Truth-in-taxation systems should be promoted whenever possible. Also known as truth-in-millage, truth-in-taxation systems place a notification burden on taxing units of government that are planning to increase rates or levies. Such procedures reduce the likelihood of reappraisal-related revenue windfalls because the additional revenue becomes highly visible.

In a truth-in-taxation system, clear, large newspaper advertisements or mailed individual notices are used to inform taxpayers of an impending increase in the rate of taxation or dollar amount to be charged. Usually, the effect of the increase on typical taxpayers must also be shown. Occasionally, such systems incorporate rollback elections or override (approval) elections.

A rollback election permits voters to negate seemingly excessive increases, while an override (approval) election permits voters to approve increases over a base allowance. Truth-in-taxation systems increase the openness and visibility of the property tax and place the burden of explaining increases on units of government seeking additional revenue.

In developing and adopting a truth-in-taxation system, it is important to recognize that the more successful systems include clear individualized notices of the effect of proposed budget changes on each taxpayer's property. Systems requiring only generic notices in newspapers tend to be confusing and often do not succeed in involving taxpayers in the budget process, promoting accountability, or effectively explaining budget increases.

7.3.5 Controls on Individual Property Tax Changes

Despite rate limits, budget (levy) limits, and truth-in-taxation provisions, the dynamics of market value may shift the tax burden between properties, raising some individual taxes more than any nominal limit. For this reason, the property tax system should include safety nets, such as circuit breakers, tax deferral programs, and credits, as discussed in Section 7.2.

7.4 TAX INCENTIVES

- Property tax abatements and tax increment financing (TIF) systems often are used to attract businesses to economically depressed areas.
- Careful cost-benefit analysis should be encouraged before abatements or TIF areas are allowed.
- Tax incentives have the potential to achieve a variety of economic development goals, but overused and poorly designed programs can leave localities with smaller tax bases and no improvement in their local economies.
- Assessors have an important role in the negotiation, implementation, and administration of tax incentives.

7.4.1 Abatements and Tax Increment Financing

Tax abatements for economic development typically forgive all or a portion of property taxes for a specific period of time. TIFs use a different structure by pledging future property tax increases to fund expenses associated with infrastructure and improvements to support the development. TIFs may also involve bonds that will be paid off by revenue diverted in this manner.

Abatements require detailed analysis to prevent unanticipated negative effects. For example, the property receiving the tax incentive will not be added to the tax rolls for several years. As a result, the cost of public services like schools and infrastructure required to support the increased activity generated by the new business may go unmet or fall inordinately on existing property owners. Also, if the new business closes unexpectedly, there may be additional negative impacts, especially if many new homes and satellite businesses were built to support the new business. This problem can be especially acute with abatements given to cyclical industries prone to rapid boom-and-bust operation cycles.

Both abatements and TIFs can create areas of competitive advantage that can further damage the tax base by imposing a less favorable economic environment on existing businesses.²⁰ Abatements

²⁰ For example, if advantageous tax treatment were given to develop a regional shopping center on the outskirts of a depressed city, downtown retail establishments that received no favored treatment might close or move to this center. If the shopping center were not required to pay property taxes and the downtown businesses no longer paid any, the net loss of revenue might be greater than anticipated.

and TIFs also tend to pit cities, counties, and even states against each other in a competition to determine which area can offer the most lucrative package of tax incentives (Kenyon, Langley, and Paquin 2012). In this situation, an objective cost-benefit analysis is even more important to ensure that the outcome is a benefit to the community.

In addition to these concerns, abatement and TIF programs add to the administrative complexity of the property tax. Assessors may be required to track property values in abatement or TIF areas differently than in other areas, resulting in the potential need for additional computer or staffing resources to meet these demands.

7.4.2 Other Incentives

Policy makers have also implemented laws and regulations that eliminate or reduce tax burdens to encourage various activities, such as the following:

- **Historic Preservation.** Renovation and rehabilitation of buildings with historic designations may have a portion of the value of the property or the improvements exempt from the property tax to make the preservation of the historic property economically feasible.
- **Green Energy Development.** Solar panels, wind turbines, and other sources of renewable energy are often provided preferred treatment under the property tax to encourage their development. These incentives can take the form of partial exemptions or full exemptions from the property tax completely in favor of an alternative tax mechanism, based on their output, that provides a lower and more predictable tax amount.
- **Affordable Housing.** The creation and preservation of affordable housing is necessary in many areas (typically urban) where the cost of housing is beyond reach of those with limited, and in some cases moderate, incomes. This can be accomplished by providing specific exemptions to a portion of the value of the property to make its development economically feasible. Reduced assessments are also accomplished by placing deed restrictions on the property that limit its rental income or resale value. Since these restrictions remain on the property at sale, they establish limits on the market value that should be reflected in market-based assessments.
- **Current Use Assessments.** A unique form of these types of incentives is use value assessment. This encompasses the practice of open land used for farming or open space based on its current use, rather than on its market value (which is often significantly higher) for property tax purposes. Valuation of farmland or open space on the basis of use or productivity value generally has the effect of providing a partial exemption, but often no percentage or dollar adjustment can be clearly determined. As a result, the cost of the exemption is somewhat hidden. Preferential treatment for farmland and open land may be abused if the land is held for speculative purposes and is only incidentally used for farming. Assessing officers should make legislative bodies aware of this issue and should seek greenbelt or rollback legislation under which land that is changed from farming to development use within a certain period must pay a penalty related to the value that was not assessed under the farm use categorization (Anderson and England 2015).

While the preferred property tax treatment of these activities may be deemed to be desirable, they do serve to reduce the tax base and result in a loss of revenue or an increased burden on the remaining tax base. Accordingly, as with other forms of preferential tax treatment, they should be used sparingly and only when the outcomes they seek to produce significantly outweigh their negative impact on the tax base.

7.4.3 Role of Assessing Officers in Tax Incentives

Assessing officers possess knowledge in the disciplines of finance, real estate valuation, and development. As a result, they are important assets to their communities in the implementation and administration of tax abatements. Often when a jurisdiction is considering a tax abatement incentive, most of the focus is on attracting a new business and jobs as well as the new real estate development that will result. The assessing officer needs to be the voice in the room that considers the impact of a potential abatement on the tax base and that seeks the evidence that the economic activity will not occur without the incentive.

An accurate accounting of the benefits and costs is necessary to determine whether a tax abatement or TIF program is effective. The Government Accounting Standards Board (GASB) has implemented GASB Statement No. 77, “Tax Abatement Disclosures,” to improve transparency around tax abatements (Government Accounting Standards Board 2015). GASB No. 77 requires governments that enter into tax abatement agreements to disclose information about the agreements in their financial statements and represents a significant change in how the costs of tax abatements are reported.

Assessors are uniquely positioned with the data and analytical tools for calculating these costs and are therefore essential to achieving compliance with the standard and meeting the larger goal of transparency.

Assessors should also note the following issues when tax incentives are considered:

- Many studies have shown that business locational decisions are only marginally related to property tax issues. The costs of labor, availability of trained workforce, transportation, and quality-of-life issues often take precedence. Assessing officers should make public policy officials considering abatements and TIFs aware of all these issues (Kenyon, Langley, and Paquin 2012).
- Communities should require full financial disclosure from firms seeking tax incentives to provide for informed decisions on whether the incentive is necessary and warranted.
- There should be some sort of means test by which the benefactor of an exemption or abatement can clearly demonstrate a need.
- Calculating the amount a development would pay if it were fully taxable provides an important baseline that can be used to calculate the benefit a firm or development will receive from a tax abatement.
- Clawback provisions, which provide for the return of all or a portion of a tax incentive, are an important tool to prevent unwarranted tax advantages from accruing to firms that fail to produce the economic benefits they promise.
- Assessors and stakeholders, including taxing districts and other taxpayers, should be involved to ensure administrative feasibility, cost-effectiveness, and overall transparency.
- Specialized exemptions may include mandatory PILOTs to prevent tax shifting and encourage participation in cost of public services.

8. PUBLIC ENGAGEMENT AND TRANSPARENCY

An active and visible public engagement program is a critical component of an effective property tax system. Effective public engagement includes active communications, open access to records (to the extent allowed by law), prompt attention to inquiries, a program to inform local journalists and media, an active web and social media presence, the public disclosure of values prior to their finalization, and participation in community meetings and programs. A program designed to enhance public understanding of assessments and property taxes alleviates taxpayer misgivings regarding reappraisal and other assessment activities.

Applications for participation in a program, such as an exemption, should be carefully designed with the affected taxpayers in mind. Such an application should not be overly complicated, should focus on required information, and should be easily obtainable.

Managing public expectations with today's changing technology environment can be challenging. Assessors should adhere to current technology and data standards to help fulfil the commitment of delivering useful data. Using current standards supports the cross-jurisdictional use of data and supports aggregating local data to regional and state levels (see *Standard on Public Relations* [IAAO 2011]).

State/provincial and local assessing officers are stewards of public data. These data include property characteristics, assessments, sales data, and tax parcel maps, among other key data used by government, citizens, taxpayers, and private industry. Public access to these data is vital to open and transparent operations. Modern access to these public records should meet the public's expectations and conform to laws and regulations governing privacy, open records, and public disclosure. Delivering these data in an accessible way increases the public trust and confidence in valuation and property tax operations.

The data delivered to the public should be current, correct, and usable. Today, assessment jurisdictions are expected to have updated sales and ownership data in just a few days. With the majority of these data having a spatial component, data should be presented in maps and easy-to-use apps.

Highly integrated GIS-based property tax portals providing information on ownership, enrolled tax programs, property tax due, as well as TIF districts can provide a high degree of transparency and taxpayer engagement. These portals may also be combined with budgetary information to give a complete picture of taxes collected and their budgetary allocation.

With the public's expectation of access to government services and data with mobile devices, state and local assessing jurisdictions should support technology that the public uses such as smartphones and tablets. These data should be delivered in standard formats, in web services, and with responsive applications, relieving the public from complicated data manipulation to be able to get answers to simple questions.

Engaging the public helps improve data accuracies particularly with property characteristics. With simple web and mobile apps, state and local assessing officers should implement capabilities for property owners and taxpayers to suggest improvements to data to augment field verification.

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GLOSSARY

Abatement. (1) An official reduction or elimination of one's assessed valuation after completion of the original assessment. (2) An official reduction or elimination of one's tax liability after completion of the assessment roll. (3) The temporary exemption of property from all or a portion of taxes that would otherwise be paid.

Ad Valorem. In proportion to value.

Acquisition Value. The market value of property at the time it was acquired by the present owner or of the last major physical change.

Appeal. A process in which a property owner contests an assessment either informally or formally.

Assessing Officer. In this standard, the general term used to describe any property tax official with professional responsibilities.

Assessment Acquisition-Value-Based. A system of valuing property at its market value as of the last transfer of ownership or of the last major physical change. A property is placed on the tax roll at its acquisition value. Annual increases are usually limited but may be updated when major physical changes occur or when the property is sold. The system established by California Proposition 13 is an example.

Assessment Level. The common or overall ratio of assessed values to market values.

Assessment Progressivity (Regressivity). An appraisal bias such that high-value properties are appraised higher (or lower) than low-value properties in relation to market values.

Assessment Ratio. (1) The fractional relationship an assessed value bears to the market value of the property in question. (2) By extension, the fractional relationship the total of the assessment roll bears to the total market value of all taxable property in a jurisdiction.

Audit. A systematic investigation or appraisal of procedures or operations for the purpose of determining conformity with specifically prescribed criteria.

Audit, Performance. An analysis of an organization to determine whether the quantity and quality of work performed meets standards. Ratio studies are an important part of performance audits of an assessing organization.

Audit, Procedural. An examination of an organization to determine whether established or recommended procedures are being followed.

Circuit Breaker. For qualifying property owners, a credit or rebate of specific amounts of property taxes incurred, whenever such taxes exceed specific percentages or amounts of household income. In instances in which renters are included, rent or rent equivalents substitute for property taxes.

Classification. The act of segregating property into two or more classes for the application of different effective tax rates by means of one or more special property taxes or a classification property tax system.

Clawback. A provision in a property tax relief measure designed to recover some or all of the taxes forgone when it is found that the property or the taxpayer is (or never was) qualified for the relief.

Coefficient of Dispersion. The average deviation of a group of numbers from the median expressed as a percentage of the median; in ratio studies, the average percentage deviation from the median ratio.

Credit, Property Tax. An offset against the property tax payment or another tax payment for taxpayers who meet certain criteria (e.g., renters) or whose properties have certain characteristics or are used for specific purposes (e.g., pollution abatement); a direct reduction in a tax payment rather than in a tax base.

Effective Tax Rate. (1) The tax rate expressed as a percentage of market value; will be different from the nominal (or stated) tax rate when the assessment ratio is not equal to 1. (2) The relationship between dollars of tax and dollars of market value of a property. The rate may be calculated either by dividing tax by value or by multiplying a property's assessment level by its nominal tax rate.

Elasticity (Tax). A measure of the responsiveness of tax yields to changes in economic conditions. The yield of an elastic tax increases rapidly in a growing economy. The yield of an inelastic tax increases slowly. Often measured by the formula:

$$\text{Percentage change in tax} \div \text{percentage change in personal income}$$

Equalization. The process by which an appropriate governmental body attempts to ensure that all property under its jurisdiction is assessed at the same assessment ratio or at the ratio or ratios required by law. Equalization may be undertaken at many different levels. Equalization among use types (such as agricultural and industrial property) may be undertaken at the local level, as may equalization among properties in a school district and a transportation district. Equalization among counties is usually undertaken by the state to ensure that its aid payments are distributed fairly.

Equity. (1) In assessment, the degree to which assessments bear a consistent relationship to market value. Measures include the coefficient of dispersion, coefficient of variation, and price-related differential. (2) In popular usage, a synonym for tax fairness. (3) In ownership, the net value of property after liens and other charges have been subtracted.

Exemption, Homestead. Freedom from property taxation of all or part of the value of a home-
 stead; a reduction in the property tax base.

Fairness. See Equity.

Fractional Assessments. Assessments that by law or by practice have assessment ratios different from 1. Usually the assessment ratio is less than 1, and if assessment biases are present, different classes of property may have different fractional ratios. Fractional assessments are often condemned as offering a way to obscure assessment biases.

Homestead. A home; as usually used in this standard, a primary residence.

Immovable Property. Real property (land, buildings, and other improvements to land).

In Rem. A legal term derived from Latin that means "against the thing" and is used when property itself, rather than a person, is formally liable for the property tax.

Levy, Property Tax. (1) The total amount of money to be raised from the property tax as set forth in the budget of a taxing jurisdiction. (2) Loosely, by extension, the millage rate or the property tax bill sent to an individual or property owner.

Market Value. Market value is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States is as follows:

The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue influence. Implicit in this definition is the consummation of a sale as of a specific date and the passing of title from seller to buyer under conditions whereby

- The buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash in United States dollars or in terms of official arrangements comparable thereto; and
- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Millage, Mill Rate. A tax rate expressed as mills per dollar. For example, a 2 percent tax rate is \$2 per \$100, \$20 per \$1,000, or 20 mills per dollar. One mill is one-thousandth of one dollar or one-tenth of one cent.

Nominal Tax Rate. The property tax rate expressed as mills per dollar of assessed value or as a percentage of assessed value.

Object (of a Tax). The thing that is taxed (e.g., land only, buildings only, immovable [real] property, and movable [personal] property).

Own-Source Revenue. Government funding that comes from only within the jurisdiction under consideration. For local governments, this means that it excludes revenue received from federal and state intergovernmental grants; it may include taxes, current charges, and miscellaneous revenue collected by the jurisdiction. Alternatively, general revenue minus intergovernmental revenue.

Progressive Tax System. A method of taxation in which those with more resources pay a greater percentage of their resources than those with fewer resources. Income progressivity occurs in a tax system under which a taxpayer's average tax rate increases with income. This is often the case with income taxation based on multiple rates. Assessment progressivity occurs when effective property tax rates on high-value properties are greater than effective property tax rates on low-value properties.

Rate-Driven Levy. The property tax rate to be applied is specified in the budget or tax levy ordinance of a taxing jurisdiction, rather than the situation in which the total revenue to be raised is specified and the rate is calculated.

Ratio Study. A study of the relationship between appraised or assessed values and market values. Indicators of market values may be either sales or independent expert appraisals. Of common interest in ratio studies are the level and uniformity of the appraisals or assessments.

Regressive Tax System. A method of taxation in which those with fewer resources pay a higher percentage of their resources than those with more resources. Income regressivity occurs when people with low incomes pay a higher percentage of their incomes in taxes than people with high incomes. This often occurs in sales tax systems in which the tax is applied to groceries and other necessities. Assessment regressivity occurs when assessment levels or effective property tax rates on low-value properties are greater than assessment levels or effective property tax rates on high-value properties.

Salience. In the economics of taxation, salience refers to the visibility of the tax in question and how this visibility affects behavior.

Subject (of a Tax). The person responsible for paying a tax.

Subsidiarity. A principle of government organization that holds that decisions should be made at the level of government closest to where they will have their effect, such as by a local government instead of a state or central government. The aim is to make government more responsive to citizens' needs and to make it easier for citizens to hold government accountable.

Sunset Provision. A provision within a statute creating a law or agency that provides for its automatic termination at a fixed date in the future.

Tax Burden. Economic costs or losses resulting from the imposition of a tax. Burden can be determined only by detailed economic analysis of all economic changes resulting from the tax. In popular usage, the term often refers to the initial incidence rather than ultimate economic costs.

Tax Incidence. The distribution of a tax on natural persons who bear the tax after the completion of the process of tax shifting, to be distinguished in particular from the distribution of the tax on the persons, natural or legal, who pay it in the first instance.

Tax Incidence Analysis. Economic analysis that compares the way different taxes affect the distribution of income. It requires analysis of the impact of taxes on the market for the taxed item and the market for all factors (land, labor, and capital) used in producing the taxed item.

Tax Increment Financing (TIF). A system that earmarks future increases in tax revenue in a designated area to fund investments in that area. Funds may be invested in various programs, such as public infrastructure improvements or land write-down subsidies to private investors.

Tax Policy Analysis. The process of gathering and interpreting economic data to provide information that can be used by policy makers to formulate tax policy.

Truth-in-Taxation (Full Disclosure) Requirements. Legal obligations for property tax districts to make taxpayers aware of assessment increases, levy increase proposals, and the like and to give taxpayers an opportunity to participate in public hearings on the changes.

APPENDIX

APPENDIX A. FEATURES OF GLOBAL PROPERTY TAX SYSTEM

A study of 187 countries that have a recurrent tax on immovable property (Almy 2013) reveals many differences from the highly decentralized U.S. system. Factors that affect these differences include history, culture, and the economy. Although the data for many countries were incomplete, this appendix attempts to summarize major differences in fiscal arrangements, administrative arrangements, main characteristics, and other system features among the countries studied.

The number of systems for taxing immovable property annually is greater than the number of countries represented for two reasons. Some countries have more than one type of property tax (such as a land tax and a real estate tax). In several (chiefly, federal) countries, subnational governments, such as provinces and states, have the power to design their property tax systems.²¹

FISCAL ARRANGEMENTS

Some unitary governments and most federal governments have devolved some of the power to tax property to subnational and local governments. Even when the central government controls the property tax system, a portion of property tax revenues usually is assigned to local or regional governments. In more than half the countries studied, local governments receive all property tax revenues. They typically have some discretion in setting tax rates and frequently have some discretion over granting exemptions. Sometimes they have discretion over whether to impose the property tax. In contrast, some federal governments (notably Austria and Germany) have centralized property tax systems.

ADMINISTRATIVE ARRANGEMENTS

Arrangements for administering taxes on property vary widely among tiers of government and agencies. Areas of difference include supervision and control, fiscal cadastre maintenance, assessment, valuation (if applicable), billing, collection, enforcement, taxpayer responsibilities, and private-sector roles.

- When local governments have substantial administrative responsibilities, supervision by a higher -tier government generally is weak. Aside from Canada and the United States, exceptions include Netherlands and New Zealand.
- A country's land tenure system (the nature of rights to property, the extent to which they are formally transferred, and how rights are documented and protected are all important) and title system (registration or deed recordation) influence administrative frameworks, as well as the features of the property tax (as discussed below). Title registration is much more common than deed recordation, which is the predominant U.S. system. Central governments usually are responsible for title registration.
- Responsibility for valuation can be assigned to cadastral agencies, tax agencies, and separate valuation agencies (like assessor's offices). Central governments are most often responsible for valuation, although it can be a responsibility of local governments, which they sometimes share with regional and central governments. Modern mass valuation systems are rare.

21 The sample contained 147 unitary governments and 24 federal governments. A few subnational governments (usually former colonies) were included in the sample when information was available.

- Billing can be separated from collection. Local governments are most often responsible for both functions, although the functions can be a responsibility of central governments. A few countries still have primitive collection methods, but most make collection more convenient by allowing payments to be made in a variety of ways.
- Taxpayers often are required to file a return declaring their ownership and providing details about their properties. In about half the cases, they value or compute the value of their properties from government-supplied schedules.
- Often governments have the authority to contract with private-sector valuers.

MAIN CHARACTERISTICS

Aside from fiscal and administrative arrangements, differences in property tax systems are found chiefly in who is responsible for paying the tax (the *subject* of the tax), what is taxed (the *object* of the tax), the basis of assessment, and how different categories of property and property owners (or users) actually are taxed. This section covers the first three areas of difference.

THE SUBJECT OF TAXATION

Globally, there are two main ways of defining liability for paying the property tax: (1) the thing that is taxed (the object) is itself liable (*in rem* taxation) and (2) a person is, or persons are, designated as liable (*in personam* taxation). The distinctions are most important when past-due property liabilities are enforced. Factors affecting the choice include the unit and basis of assessment (discussed below) and the nature of the land tenure system.

In rem liability appears to be confined chiefly to Canada, Chile, and the United States. Under this system, the principle of certainty is served, because tax liabilities sometimes can be transferred to third parties, who then have a lien against the property. The property is security for the lien and can be confiscated if the lien is not satisfied. The owner is only nominally the taxpayer. In rem liability can be harsh in that an owner can be stripped of a valuable property because of a small tax liability, sometimes due to administrative mistakes or incompetence, and sometimes due to criminal conspiracies. (Legally designating non-owners as taxpayers is incompatible with in rem enforcement.)

Under in personam liability, a taxpayer must be identified and physically located before a liability can be established and any arrears (delinquencies) can be enforced. Two considerations can affect liability: (1) the relationship of the person to the property (object) that is taxable and (2) the nature of the person. Regarding the relationship, property owners, occupants (tenants), and either or both can be deemed to be responsible for paying the property tax. Designating owners (or properties) as taxpayers can simplify administration, because there are fewer assessments to be made and because property ownership usually is more stable than occupancy. This is a sensible choice when the owners of most properties can be readily determined and ownership is widespread (and markets are active). Countries in which ownership often is concealed or is unsettled usually adopt a hybrid system: The owner is the taxpayer when known, and the occupant (user) is the taxpayer when (a) ownership has not been determined or (b) when the person has a right to use government-owned (state-owned) property. When more than one person is potentially liable for paying property taxes, the principle of certainty requires that rules for making the liability determination be clear. The main options are (1) to designate only one person as the taxpayer or (2) to assess each person in proportion to her or his interest in the property. The first option simplifies administration and transfers to the property owners or occupants any problems with raising the money needed to pay the taxes. Advocates of the second approach stress its fairness to the part owners

or occupiers who pay their share; they have no responsibility for the amounts unpaid by others. (Some laws allow persons who pay property taxes on behalf of another to establish a lien.) A policy argument for designating the occupant as the taxpayer, especially when many people live in rented housing, is that more people have a picture of the costs of government, arguably strengthening local government accountability. Some countries (including France and Netherlands) designate both the owner and the user as taxpayer with each paying a stipulated share.

Normally, no distinction is made between legal persons (enterprises, also known as juridical persons) and physical persons (living human beings, also known as natural persons). However, several countries do make a distinction, which can greatly affect the nature of the tax base and influence how property is held.

Especially when occupants are generally liable for paying property taxes, there also need to be rules governing the treatment of unoccupied (vacant) properties. Otherwise, vacant property can escape taxation, which can encourage inefficient land use.

THE OBJECT OF TAXATION AND THE UNIT OF ASSESSMENT

The objects (or coverage) of a property tax are the types of property that are potentially taxable. The possibilities are some or all categories of real (immovable) property (specifically, land separately, buildings separately, or both as a unit) and of personal (movable) property (also known as chattels). Along with defining the types of property that are taxable, it is necessary to define the unit of assessment. When the owner is responsible for paying the tax, the property (parcel) typically constitutes the unit of assessment. The premises occupied (e.g., an apartment) typically is the unit of assessment when a non-owner occupier is responsible for the tax.

As previously noted, a country may have more than one type of property tax. However, the most common choice (98 countries in the sample) is a real property tax under which both land and buildings (and other improvements) are valued and taxed under a single law. The next most common (43 countries) is such a tax combined with another property tax, such as a separate land tax, building tax, or both. Twenty-five countries have a land tax and a building tax. Nine countries have only a land tax, and seven have only a building tax.

Only 28 countries tax movable (personal) property. Usually only a few specified categories are taxable. The categories may be based on physical or functional characteristics (such as machinery and equipment, vehicles, and watercraft). The categories can be based on ownership type (such as business property). When a precise categorization of taxability is difficult, narrow rules (or lists of taxable types) are used.

Some countries employ additional factors to define the scope of a property tax. These include taxing only properties within municipal boundaries (formerly the case in Egypt), properties considered “urban” or “rural,” and only legally recognized properties (those that are officially registered in a cadastre and those with authorized construction). The latter policies can create incentives for persons who have customarily used land or buildings or have received property rights under a restitution or privatization program to avoid taking steps to protect their rights, because doing so makes them liable for taxation. Such policies can also create incentives to construct buildings without authorization and conceal inheritances and other ownership changes. High property transfer taxes have a similar effect.

Some countries tax only land not covered by a building or structure (Czech Republic and Hungary are examples).

Some types of property, such as public rights-of-way and routes of transportation (waterways, railroads, and streets and roads), can be excluded from cadastres and the property tax base on grounds of administrative convenience. This is a common practice, because there is no market evidence of the value of long-established public routes of transportation. Mines and mineral rights can also be excluded from the property tax base.

In Ecuador, Guatemala, Nicaragua, and Peru, the base is the sum of the taxpayer's holdings, not each individual property (De Cesare 2010).

BASIS OF ASSESSMENT

The basis of a property tax is the quantity that is measured or estimated to determine each property's relative share of the total property tax burden. A value basis is most common, with 115 countries choosing between an annual (rental) value basis (38 countries) and a capital value basis (77 countries). Twelve countries base their property taxes solely on a measurement of surface area (of land, buildings, or both). Fifty-four countries employ more than one basis, including four with a flat per-property tax.

Each basis has advantages and disadvantages. This standard, however, argues that meaningful uniformity in property taxation is best achieved when current market value is the basis of the property tax, whether expressed in annual or capital value terms.

Under an area-based property tax system, individual tax assessments are determined simply by multiplying a measurement of area by a rate and any applicable modifying coefficients. Such systems are usually simpler to administer than value-based systems. There is no need to collect and analyze market data. There is no need for revaluations. Area-based property tax systems also are more objective than value-based systems, in that area measurements are less contestable than value determinations. On the other hand, area-based property tax systems are often perceived to be less fair. Highly desirable properties can pay the same taxes as undesirable properties. Assessments bear little relationship to either ability to pay or benefits received, which can reduce public acceptance. Although taxpayers might see this as an advantage, area-based property taxes are less buoyant than value-based systems.

Some of the disadvantages of area as a basis can be counteracted by introducing adjustment coefficients or rate differentials that reflect market factors. However, doing so reduces simplicity and objectivity. Many urban area-based systems involve adjustment coefficients for the size of a municipality, the area (zone) within the municipality, the story of a building in which an apartment is located, and the like. Commonly, rates or coefficients reflect differences in soil productivity in rural systems. Arguably, a well-designed area-based system can meet tests of equity as well as a poorly designed or long-neglected value-based system. Simple price per unit of area models in effect are a blend of a value basis and an area basis.

There are many differences among value-based property tax systems, based on the value concept, valuation standards, and valuation practices. One value concept is annual value, under which only a single year's rental income serves as the basis. Under capital value, another concept, the present value of future rents and other benefits serves as the basis for the tax. Open-market, arm's-length sales provide the evidence of capital market values. Thus, the two value concepts normally are not

mathematically equivalent ways to apportion property taxes (although they can be, depending on valuation practices).

A standard of value other than market value can be employed. Such a standard can be current-use value (common for agricultural properties), insurance value, or acquisition price. In practice, when market value is not the basis, tax values usually are described as being notional or normative, and they only accidentally reflect market value patterns. That is, they simply result from the application of rules, base rates, and adjustment coefficients.

Many factors can affect valuation practices, including the importance of the property tax, the administrative framework, the skills and aspirations of the valuers responsible for valuation, available resources and technology, market activity, and so on. To distinguish values produced for property tax purposes from values produced for other purposes, terms such as cadastral value, tax value, and assessed value are used.

Another important characteristic of a value-based property tax system is the frequency of revaluations. In principle, revaluations should be frequent enough to maintain an acceptable degree of uniformity in effective tax rates. That is, valuations should be adjusted upward or downward to keep pace with market developments and changes in price levels. Ideally, valuations would be updated annually if necessary, but this frequency is not common (in addition to areas in Canada and the United States, Iceland and Netherlands revalue property annually). More commonly, a cycle is stipulated, typically between two and five years. When properties are revalued cyclically, one option is to stagger the revaluation by property type or area so that the entire jurisdiction is revalued during the cycle (so-called “rolling revaluations”). The other approach is to revalue the entire jurisdiction in one large project. Especially when the cycle is long (say, five years), legal revaluation requirements often are ignored. When the interval between revaluations is long, indexing outdated values can maintain some buoyancy in revenues (France and Germany follow this approach). If separate factors are developed for different property types and areas, overall valuation accuracy can be improved slightly, thereby increasing property tax equity. Indexing also can reduce shocks caused by reappraisals.

RATE STRUCTURES AND CONTROLS, EXEMPTIONS AND OTHER RELIEF MEASURES, AND OTHER SPECIAL PROVISIONS

No country taxes all immovable property uniformly. Most use familiar ways to vary property tax burdens among different types of property and taxpayers. As discussed in this standard, these include full and partial exemptions, temporary exemptions and incentives, differentials in rates (or assessment ratios) among classes of property or owners (at least 75 countries have classified property tax systems), and broader controls on taxes. Primary residences and agricultural property most often receive favorable treatment. Except for efforts to attract new business or retain existing business, business property rarely receives favorable treatment. Second homes may be subject to higher taxation. A few countries impose higher taxes on un- or underdeveloped land as a development incentive. Small or low-value properties (including residences) can be exempted from property taxes on grounds of compassion or “efficiency.” In contrast, a few countries impose a minimum tax, partly to strengthen the social contract between taxpayers and government. A few countries allow central government property to be taxed. Many countries have long lists of properties or owners eligible for full or partial exemption.

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APPENDIX B. CATEGORIES OF TAXES ON PROPERTY

The term *property tax* can cover many types of taxes. The subject of this standard—and the most important category—is a recurrent (annual) tax on immovable property, that is, a tax on land, buildings or both. Annual taxes on movable (personal) property also are covered.

The International Monetary Fund (IMF) and the Organization for Economic Co-operation and Development (OECD) have developed largely complementary schemes for classifying taxes, which they use in presenting property tax statistics. Taxes related to land and buildings include those listed in Table B-1.

TABLE B-1. Classification codes used by IMF and OCED

Tax Category	Classification Code	
	IMF	OECD
Taxes on property	113	4000
Recurrent taxes on immovable property	1131	4100
Recurrent taxes on net wealth	1132	4200
Estate, inheritance, and gift taxes	1133	4300
Taxes on financial and capital transfers (including notary fees, stamp duty, and transfer taxes)	1134	4400
Other non-recurrent taxes on property	1135	
Other recurrent taxes on property	1136	
Capital gains taxes	Included in 111	1120 and 1220
Income tax on imputed rental income of owner-occupied homes		Part of 1110

APPENDIX C. TAX ANALYSIS APPROACHES

As noted in Section 3, assessing officers can and should play a significant role in informing policy makers regarding equity, as well as administrative aspects of property tax policy options. Any analysis of equity issues should be rooted in property tax and valuation data that generally are available from one of two sources: (1) assessment and tax records that are developed locally or compiled by state or regional entities and (2) nationally compiled databases that include local or regional demographic information. Examples of analyses that fit either of these criteria include the following:

- The amount or proportion of property tax paid by different sectors of the economy of a local area or region, such as a state. Sectors analyzed should be those with significant presence, typically residential, commercial, industrial, agricultural, and others that may be significant in a particular area.
- The amount or proportion of taxable value represented by different types of property significant in a local area or region. These could be similar to those noted in the previous bullet, but may also include such information as numbers or arrays of very high-value properties, thus enabling further analysis of the potential effects of exemptions that may be under consideration for such large properties.
- The effect of exemptions and tax relief programs, such as circuit breaker and tax deferral, in terms of numbers of households or business units affected, money saved by typical affected taxpayers, and effect of taxing districts or noneligible taxpayers.
- Depending on the rate or levy basis of the underlying tax system, potential tax revenue losses or shifts to other sectors related to proposed new or expanded exemptions. An example would be the potential effect of exempting all business personal property in a state that currently taxes such property. Another example would be the potential effect of increasing a partial exemption for primary residential property with or without replacement funds from a higher level of government.
- A comparison of property and other major tax types in terms of typical amounts paid by homeowners earning various amounts of income or with different value properties. This type of analysis is currently available from a long-standing study conducted and annually updated by the District of Columbia in the United States (Government of the District of Columbia 2015).
- Tax effort, tax capacity, and tax burden studies showing how states compare in terms of per-capita taxes or taxes in comparison to typical income in that state. These studies should be based on independent and reliable data sources that have a history of consistency and have no underlying normative biases. An example is *Comparative Tax Potential: Tax Burden in Idaho and the United States*, annually updated by the Idaho State Tax Commission using data obtained from the U.S. Census Bureau and the Bureau of Economic Analysis (Dornfest 2019). The methodology used in compiling this report is demonstrated in Tables C-1 and C-2.
- Tax Incidence studies, showing the comparative amount or proportion of various taxes paid by various sectors of the economy. An example is the Minnesota Tax Incidence Study, annually updated by the Minnesota Department of Revenue using tax record data reported to the Department of Revenue and showing taxes on businesses and on households by income and population decile (Minnesota Department of Revenue 2019).

To the extent practical, agencies compiling information and preparing tax analysis studies should

- Prepare studies on a regular basis the exact nature of which depends on the data being analyzed and the frequency of any updates
- Prepare studies using consistent, proven, and long-standing methodologies
- Maintain databases including current and previous studies, and make studies readily available on agency websites
- Publicize the existence of and major features in current updates.

TABLE C-1. Tax burden methodology–Income-based comparison^a

Step Description	Calculation or Source	Explanation
Total personal income, each state and nationally	U.S. Bureau of Economic Analysis	Enables comparison of states with disparate income levels.
State and local property tax revenue	U.S. Census Bureau	Needed to determine percentage of income spent on property tax.
Tax capacity, potential	U.S. state and local property tax divided by U.S. total personal income to find U.S. average actual tax rate as percentage of income. This percentage is then multiplied by each state's total personal income.	Provides amount of tax revenue a state would raise if its effective tax rate matched the U.S. average rate.
Underutilized potential	Potential tax capacity minus actual state and local property tax revenue for each state.	Provides indication of the amount by which a state's actual tax revenue exceeds or is below that state's tax capacity.
Average actual tax rate	U.S. state and local property tax divided by U.S. total personal income. Repeated for each state.	Used in calculation of tax capacity.
Tax effort	Percentage of tax capacity used. State and local tax in dollars divided by tax capacity.	Standardized around 100, which equals U.S. average. States scoring over 100 having higher comparative taxes than the U.S. average state.
Rank	Position out of potential of 51 states including the District of Columbia	1 = highest tax effort

^a The District of Columbia is included in this analysis as if it were a state. Data used in these tables generally are updated once per year.

TABLE C-2. Tax burden methodology—Population-based comparison^a

Step Description	Calculation or Source	Explanation
Population	U.S. Census Bureau estimates	Estimates are updated annually and correspond to July 1 of a given year.
State and local property tax revenue	U. S. Census Bureau	Needed to determine amount of property tax per person (per capita).
Per-capita property tax revenue	State and local property tax revenue divided by population	
Per-capita tax capacity	U.S. average per-capita property tax multiplied by each state's population	Amount that would be raised given per-capita property taxes that match the U.S. average
Per-capita tax effort	Each state's per-capita property tax divided by that state's per-capita property tax capacity	Enables comparison of each state taking population differences into account. Standardized around 100 with greater numbers indicating per-capita property taxes exceeding the U.S. average.
Rank	Position out of potential of 51 states including the District of Columbia	1 = highest tax effort

^a The District of Columbia is included in this analysis as if it were a state. Data used in these tables generally are updated once per year.

APPENDIX D. EDUCATION FINANCE

An important property tax issue is education finance in the United States. In most states, property taxes are the primary source of funding for local schools. Courts have consistently ruled that inequalities in property tax bases lead to unconstitutional differences in education funding violating students' rights to an "adequate and equal" education. Property-rich districts can provide more and better programs than those with low property values even when these districts impose heavier tax burdens.

States have responded by using "minimum foundation" programs. While the programs vary in the details, each program requires a school district to have funding sufficient to provide a minimum amount of support for each student. The minimum amount consists of the local property tax effort and state aid. A required level of spending is established by the state to provide at least minimum resources for each pupil. If the local property tax (base times an established minimum rate) does not produce the necessary minimum, the state funds the difference.

A district would receive more state aid if the assessment authority maintains valuations below an established percentage. States have responded by increasing the level of local assessment to a required or uniform percentage (direct equalization).

Indirect equalization may be used where local assessments are not changed but state aid is distributed assuming the assessment level complies with the requirement. Both processes involve the use of ratio studies to estimate the departure, and state aid is distributed based on what assessments would have been at the required level.

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Standard on Ratio Studies

Approved April 2013

INTERNATIONAL ASSOCIATION OF ASSESSING OFFICERS

IAAO assessment standards represent a consensus in the assessing profession and have been adopted by the Executive Board of the International Association of Assessing Officers (IAAO). The objective of the IAAO standards is to provide a systematic means for assessing officers to improve and standardize the operation of their offices. IAAO standards are advisory in nature and the use of, or compliance with, such standards is voluntary. If any portion of these standards is found to be in conflict with national, state, or provincial laws, such laws shall govern. Requirements found in the *Uniform Standards of Professional Appraisal Practice (USPAP)* also have precedence over technical standards.

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Standard on Ratio Studies

Part 1. Guidance for Local Jurisdictions

This standard comprises two major parts. Part 1 focuses on the needs of local assessors. Part 2 presents guidelines for oversight agencies that use ratio studies for equalization and appraisal performance monitoring. The Definitions section explains the terms used in this standard. The appendixes present many technical issues in greater detail. More information on many topics addressed in this standard can be found in Property Appraisal and Assessment Administration (IAAO 1990, chapter 20) and in Gloude-mans (1999, chapter 5).

1. Scope

This part of the standard provides recommendations on the design, preparation, interpretation, and use of ratio studies for the real property quality assurance operations of an assessor's office. Quality assurance/control measures include data integrity review, assessment level and uniformity analysis, and computer-assisted mass appraisal (CAMA) system performance testing, among others.

Assessors may have the opportunity to utilize ratio study information at a greater depth than oversight agencies. These internal studies can help improve appraisal methods or identify areas within the jurisdiction that need attention. External ratio studies conducted by oversight agencies (Part 2) focus more upon testing the assessor's past performance in a few broad property categories.

2. Overview

For local jurisdictions, *ratio study* is used as a generic term for sales-based studies designed to evaluate appraisal performance. The term is used in preference to the term *assessment ratio study* because use of assessments can mask the true level of appraisal and confuse the measurement of appraisal uniformity when the legal assessment level is other than 100 percent of fair market value.

2.1 The Concepts of Market Value and Appraisal Accuracy

Market value is the major focus of most mass appraisal assignments. The major responsibility of assessing officers is estimating the market value of properties based on legal requirements or accepted appraisal definitions. The viability of the property tax depends largely on the accuracy of such value estimates. The accuracy of appraisals made for assessment purposes is therefore of concern, not only to assessors but also to taxing authorities, property taxpayers, and elected representatives. Appraisal accuracy refers to the degree to which properties are appraised at

market value, as defined by professional standards (see *Glossary for Property Appraisal and Assessment* [IAAO 1997]) and legal requirements. While a single sale may provide an indication of the market value of the property in question, it cannot form the basis for a ratio study, which provides information about the market values of groups of properties. Dividing the appraised value by the sale price forms the ratios. The ratio can be multiplied by 100 and expressed as a percentage.

Market value is a concept in economic theory and cannot be observed directly. However, market values can be represented in ratio studies by sales prices (market prices) that have been confirmed, screened, and adjusted as necessary (see Appendix A, "Sales Validation Guidelines"). Sales prices provide the most objective estimates of market values and under normal circumstances should provide good indicators of market value.

2.2 Aspects of Appraisal Performance

There are two major aspects of appraisal accuracy: level and uniformity. Appraisal level refers to the overall ratio of appraised values to market values. Level measurements provide information about the degree to which goals or certain legal requirements are met. Uniformity refers to the degree to which properties are appraised at equal percentages of market value.

2.3 Uses of Ratio Studies

Key uses of ratio studies are as follows:

- measurement and evaluation of the level and uniformity of mass appraisal models
- internal quality assurance and identification of appraisal priorities
- determination of whether administrative or statutory standards have been met
- determination of time trends
- adjustment of appraised values between reappraisals

Assessors, appeal boards, taxpayers, and taxing authorities can use ratio studies to evaluate the fairness of funding distributions, the merits of class action claims, or the degree of discrimination (see Appendix G). However, ratio study statistics cannot be used to judge the level of appraisal of an *individual* parcel. Such statistics can be used to adjust assessed values on appealed properties to the common level.

2.4 Applicability

Local jurisdictions should use ratio studies as a primary mass appraisal testing procedure and their most important performance analysis tool. The ratio study can assist such jurisdictions in providing fair and equitable assessment of all property. Ratio studies provide a means for testing and evaluating mass appraisal valuation models to ensure that value estimates meet attainable standards of accuracy; see *Uniform Standards of Professional Appraisal Practice* (USPAP) *Standard Rule 6-6* (Appraisal Foundation 2010-2011). Ratio study reports are typically included as part of the written documentation used to communicate results of a mass appraisal and to comply with *Standard Rule 6-7(b)*. Ratio studies also play an important role in judging whether constitutional uniformity requirements are met. Compliance with state or provincial performance standards should be verified by the local jurisdiction before value notices are sent to property owners.

3. Steps in Ratio Studies

Ratio studies generally involve the seven basic steps listed below.

1. define the purpose, scope and objectives
2. design
3. stratification
4. collection and preparation of market data
5. matching of appraisal and market data
6. statistical analysis
7. evaluation and use of results

3.1 Definition of the Purpose, Scope, and Objectives

The first step in any ratio study is to determine and state clearly the reasons for the study. This crucial step of identifying the purpose of the study determines the specific goals, scope, content, depth, and required flexibility.

3.2 Design

In the design of the study the assessor must consider the quantity of sale data and the resources available for conducting the ratio study. Although absolute accuracy cannot be ensured, all reasonable, cost-effective steps should be taken to maximize reliability.

The assessor should identify the following factors:

- the groups or classes of properties to be included in the study
- important legal, physical, and economic characteristics of the properties selected for study
- the quantity and quality of data available

- the values being tested and sales period being used
- available resources, such as the number and expertise of staff, computer hardware and software applications, and additional limiting conditions

3.2.1 Level of Sophistication and Detail

A basic design principle is to keep the study as simple as possible while consistent with its purpose. Ratio studies are not all alike and should be tailored to an intended use.

Data analysis has been made easier through computerization. Although every study does not require the same level of statistical detail, each ratio study should include measures of appraisal level, appraisal uniformity, and statistical reliability. Graphs, charts, or other pictorial representations can be useful tools for showing distributions and patterns in the data. There is no model ratio study design that can serve all jurisdictions or all situations equally well. Informed, reasoned judgment and common sense are required in the design of ratio studies.

3.2.2 Sampling

A ratio study is a form of applied statistics, because the analyst draws conclusions about the appraisal of the population (the entire jurisdiction) of properties based only on those that have sold during a given time period. The sales ratios constitute the sample that will be used to draw conclusions or inferences about the population.

To determine the accuracy of appraisals with absolute certainty, it would be necessary for all properties in the population to have been sold in arm's-length, open-market transfers near the appraisal date. Since this is not possible, ratio studies must use samples and draw inferences or conclusions about the population from these samples.

The number of parcels in the population (the jurisdiction or stratum) is not an important determinant of a statistically valid and reliable sample.

3.2.2.1 Limitations of Sale Samples

Users of sales ratio studies should be aware of the following cautions associated with use of sale samples:

- Depending on the circumstances, sales prices can provide either useful or poor indications of market values. Sales must be screened to eliminate those that don't meet the requirements of arm's-length, open-market sales (see *Standard on Verification and Adjustment of Sales* [IAAO 2010]).
- Sales are not "randomly selected" from the population, in the strict technical sense (see section 4.5, Sample Representativeness).
- Value-related characteristics of a sale sample may not represent all the value-related characteristics of the population.

- Adjustments to sale prices may be difficult to support or may be subjective.

3.2.2.2 Data Accuracy and Integrity

The findings of a ratio study can only be as accurate as the data used in the study. Personnel involved in collecting, screening, and adjusting sales data or making appraisals should be familiar with real estate conveyance practices in their region. They also should be proficient in the principles and practices of real estate appraisal and understand local market conditions.

Accuracy and integrity of data entered into or transferred through computer systems must be ensured. Design of computer programs should make it easy to verify data accuracy. Query tools should be accessible to users, so that data can be verified easily. Methods for checking the accuracy of assigned strata (such as school district, city, neighborhood, and category) as well as of assessed or appraised value, sale price, parcel identifier, and other fields must be established to reduce these and other nonsampling errors.

3.3 Stratification

Stratification divides all the properties within the scope of the study into two or more groups or strata. Stratification facilitates a more complete and detailed picture of appraisal performance and can enhance sample representativeness.

Each type of property subject to a distinct level of assessment could constitute a stratum. Other property groups, such as neighborhoods and age and size ranges, could constitute additional strata.

When the purpose of the study is to evaluate appraisal quality, flexibility in stratification is essential. The general goal is to identify areas in which the assessment levels are too low or lack uniformity and property groups for which additional reappraisal work may be required. In such cases, it also is highly desirable to stratify on the basis of more than one characteristic simultaneously.

Stratification can help identify differences in level of appraisal between property groups. In large jurisdictions, stratification by geographic areas is generally more appropriate for residential properties, while stratification of commercial properties by either geographic area or property subtypes (e.g., office, retail, and warehouse/industrial) can be more effective.

3.4 Collection and Preparation of Market Data

The reliability of a ratio study depends in part on how well the sales used in the study reflect market values. The underlying principle for review of sales data is to optimize the sample size, but at the same time to exclude sales that provide invalid indicators of market value. A ratio study

sample with fewer than five sales tends to have exceptionally poor reliability and is not very useful.

3.5 Matching of Appraisal and Market Data

The physical and legal characteristics of each property used in the ratio study must be the same as when sold. This implies two essential steps. First, the appraiser must ascertain whether the property descriptions match. If a parcel is split between the appraisal date and the sale date, a sale of any of its parts should not be used in the ratio study.

Second, the appraiser must ascertain whether the property rights transferred, the permitted use, and the physical characteristics of the property on the date of assessment are the same as those on the date of sale. If the physical characteristics of the property have changed since the last appraisal, adjustments may be necessary before including the property in a ratio study. Properties with significant differences in these factors should be excluded from the ratio study.

When statutory constraints are imposed on appraisal methods, the resulting assessment may be less than market value. In such cases a sales ratio study may not provide useful performance information. Constraints typically apply to land that qualifies for agricultural use value, subsidized housing, mineral land, and timberland.

Sales may include property of a type other than the type for which the ratio study analysis is intended. However, sales including more than minimal values of secondary categories are unlikely to be representative, even with adjustment.

For example, a property that is predominantly commercial may include residential components. This sale can be included as representative of the commercial category. In this case, the numerator in the ratio calculation would be the total appraised value including the value of both the commercial and residential components.

In a second example, for a ratio study of vacant land, the numerator in the ratio should reflect only the appraised value of the land. The sale price should be adjusted for the contributory value of the improvements or the sample should be excluded from further analysis.

3.6 Statistical Analysis

After sales have been screened and matched against assessed values, ratios computed, and outliers identified and removed if appropriate, measures of appraisal level, uniformity, and reliability for the entire jurisdiction and each group or stratum should be computed. The sample also could undergo exploratory data analysis to reveal patterns or features of the data (Hoaglin, Mosteller, and Tukey 1983).

3.7 Evaluation and Use of Results

A properly designed ratio study is a powerful tool for analyzing appraisal performance, evaluating CAMA system models, and suggesting strategies for improvement. A ratio study also can identify weaknesses in appraisal system performance. Unexpected study results may indicate a need to respecify or recalibrate an appraisal model or to reevaluate the data elements used in the valuation process. However, users of ratio studies should recognize the inherent limitations of this tool, as follows:

1. A ratio study cannot provide perfect information about appraisal performance. Lack of sufficient sales, outliers, or overrepresentation of one geographic area or type of property can distort results.
2. Ratio study validity requires that sold and unsold parcels be appraised at the same level and in the same manner. Violation of this condition seriously undermines the validity of the study.
3. Findings should be used only in ways that are consistent with the intended use(s) for which the study was designed.
4. Ratio study data are subject to statistical sampling errors and other processing (nonsampling) errors (see Lessler and Kalsbeek), but these limitations do not invalidate their use for informed decision-making.

4. Timing and Sample Selection

4.1 Data Requirements and Availability

The availability of data influences the design of the study and can call for revisions in the objectives of the study, limit the usefulness of the calculated statistics, or both.

4.1.1 Nature of the Population

The type of properties, market conditions, and composition of the population in terms of age, size, and value range are essential to the proper design of the study and interpretation of the results. Very large properties that rarely sell (e.g., a large power plant) can be ignored in a ratio study designed to evaluate local appraisal performance.

4.1.2 Assessment Information

Appraised values are the numerators in the ratios used in a ratio study. Information about appraisal dates, legal requirements concerning reappraisals, the dates on which the appraisals were originally set, and the period they remained in effect is required for establishing the date of analysis.

4.1.3 Indicators of Market Value

Sale price, as an indicator of market value, is the denominator in the calculation of the ratio. Specific information

about the date, amount, terms, and conditions of a sale is required for proper analysis.

4.1.4 Property Characteristics

Information on property characteristics is crucial for determining whether property that was assessed is essentially the same as what was sold. Data for both sold and unsold properties should be current, relevant, and collected in a consistent manner.

4.2 Frequency of Ratio Studies

The purpose of a ratio study dictates how often it should be conducted. Regardless of the reappraisal cycle, ratio studies made by assessors should be conducted at least annually. This frequency enables potential problems to be recognized and corrected before they become serious.

When there is a revaluation, assessors should conduct at least four ratio studies to establish the following:

1. a baseline of current appraisal performance
2. preliminary values so that any major deficiency can be corrected
3. values used in assessment notices sent to taxpayers
4. final values after completion of the first, informal phase of the appeals process

The final study can be used in planning for the following year. In addition, ratio studies can be conducted as needed to evaluate appraisal procedures, investigate a discrimination complaint, or answer a specific question.

4.3 Date of Analysis

The date of analysis depends on the purpose of the study, but generally is the assessment date of the tax year being studied, which can be the current, the next, or a past year. The assessment date of the next tax year should be used when the purpose of the study is to evaluate preliminary values in a reappraisal.

4.4 Period from Which Sales Are Drawn

This period depends on the purpose of the study and on sales activity. In general, the period should be as short as possible and, ideally, no more than one year. A longer period may be required to produce a representative sample for some strata within a jurisdiction.

To develop an adequate sample size, the sales used in ratio studies can span a period of as long as five years provided there have been no significant economic shifts or changes to property characteristics and sales prices have been adjusted for time as necessary.

4.5 Sample Representativeness

In general, a ratio study is valid to the extent that the sample is sufficiently *representative* of the population.

The distribution of ratios in the population cannot be ascertained directly and appraisal accuracy can vary from property to property. By definition, a ratio study sample would be representative when the distribution of ratios of properties in the sample reflects the distribution of ratios of properties in the population. Representativeness is improved when the sample proportionately reflects major property characteristics present in the population of sold and unsold properties. As long as sold and unsold parcels are appraised in the same manner and the sample is otherwise representative, statistics calculated in a sales ratio study can be used to infer appraisal performance for unsold parcels.

However, if parcels that sell are selectively reappraised based on their sale prices and if such parcels are in the ratio study, uniformity inferences will not be accurate (appraisals appear more uniform than they are). In this situation, measures of appraisal level also will not be supportable unless similar unsold parcels are appraised by a model that produces the same overall percentage of market value (appraisal level) as on the parcels that sold (see Appendix E, "Sales Chasing Detection Techniques"). Assessing officials must incorporate a quality control program; including checks and audits of the data, to ensure that sold and unsold parcels are appraised at the same level.

Operationally, representativeness is improved when the following occur:

1. Appraisal procedures used to value the sample parcels are similar to procedures used to value the corresponding population
2. Accuracy of recorded property characteristics data for sold property does not differ substantially from that of unsold property,
3. Sample properties are not unduly concentrated in certain areas or types of property whose appraisal levels differ from the general level of appraisal in the population
4. Sales have been appropriately screened and validated (see Appendix A).

The first requirement generally is met unless sampled parcels are valued or updated differently from nonsampled parcels, or unless appraisals of sample parcels were done at a different time than appraisals of nonsampled parcels. For example, it is unlikely that the sample is representative of unsold parcels when the sample consists mostly of new construction, first-time sales of improved properties, condominium conversions, or newly platted lots.

The second requirement is met only if value-related property characteristics are updated uniformly for all property in a class as opposed to being updated only upon sale.

The third requirement relates to the extent to which appraisal performance for the sample reflects appraisal performance for the population.

The fourth requirement generally is met when the sales to be used in the sample are properly screened, adjusted if necessary, and validated.

4.6 Acquisition and Validation of Sales Data

Sales data are important in ratio studies and play a crucial role in any credible and efficient mass appraisal system. In some instances, it may be necessary to make adjustments to sales prices so they are more representative of the market. When there is more than one sale of the same property during a study period, only one of the transactions should be used in the ratio study. For guidelines on sales validation see Appendix A.

5. Ratio Study Statistics and Analyses

Once data have been properly collected, reviewed, assembled, and adjusted, outlier handling and statistical analysis can begin. This process involves the following steps.

1. A ratio should be calculated for each observation in the sample by dividing the appraised (or assessed) value by the sale price.
2. Graphs and exhibits can be developed that show the distribution of the ratios.
3. Exploratory data analysis, including outlier identification and screening, and tests of the hypotheses of normality may be conducted.
4. Ratio study statistics of both appraisal level and uniformity should be calculated.
5. Reliability measures should be calculated.

An example of a ratio study statistical analysis report is given in table 1-1.

5.1 Data Displays

Displays or exhibits that provide a profile or picture of ratio study data are useful for illustrating general patterns and trends, particularly to nonstatisticians. The particular form of the displays, as well as the data used (e.g., sales prices, sales ratios, and property characteristics) depends on the purposes of the particular display. Types of displays useful in ratio studies are arrays, frequency distributions, histograms, plots, and maps (Gloudemans 1999).

Graphic displays can be used to

- indicate whether a sample is sufficiently representative of the properties in a stratum
- indicate the degree of nonnormality in the distribution of ratios
- depict the overall level of appraisal

Table 1-1. Example of Ratio Study Statistical Analysis Data Analyzed

Rank of ratio of observation	Appraised value (\$)	Sale Price (\$)	Ratio (AV/SP)
1	48,000	138,000	0.348
2	28,800	59,250	0.486
3	78,400	157,500	0.498
4	39,840	74,400	0.535
5	68,160	114,900	0.593
6	94,400	159,000	0.594
7	67,200	111,900	0.601
8	56,960	93,000	0.612
9	87,200	138,720	0.629
10	38,240	59,700	0.641
11	96,320	146,400	0.658
12	67,680	99,000	0.684
13	32,960	47,400	0.695
14	50,560	70,500	0.717
15	61,360	78,000	0.787
16	47,360	60,000	0.789
17	58,080	69,000	0.842
18	47,040	55,500	0.848
19	136,000	154,500	0.880
20	103,200	109,500	0.942
21	59,040	60,000	0.984
22	168,000	168,000	1.000
23	128,000	124,500	1.028
24	132,000	127,500	1.035
25	160,000	150,000	1.067
26	160,000	141,000	1.135
27	200,000	171,900	1.163
28	184,000	157,500	1.168
29	160,000	129,600	1.235
30	157,200	126,000	1.248
31	99,200	77,700	1.277
32	200,000	153,000	1.307
33	64,000	48,750	1.313
34	192,000	144,000	1.333
35	190,400	141,000	1.350
36	65,440	48,000	1.363

Note: Due to rounding, totals may not add to match those on following table, which reports results of statistical analysis of above data.

Results of statistical analysis

Statistic	Result
Number of observations in sample	36
Total appraised value	\$3,627,040
Total sale price	\$3,964,620
Average appraised value	\$100,751
Average sale price	\$110,128
Mean ratio	0.900
Median ratio	0.864
Weighted mean ratio	0.915
Coefficient of dispersion (COD)	29.8%
Price-related differential (PRD)	0.98
Price-related bias (PRB) coefficient (t-value)	.232 (3.01)
95% median two-tailed confidence interval	(0.684, 1.067)
95% weighted mean two-tailed confidence interval	(0.806, 1.024)
Normal distribution of ratios (0.05 level of significance)	Reject— D'Agostino, Pearson K^2 , and Shapiro-Wilk W
Date of analysis	9/99/9999
Category or class being analyzed	Residential

- depict the degree of uniformity
- depict the degree of value bias (regressivity or progressivity)
- compare the level of appraisal or degree of uniformity among strata
- detect outlier ratios
- identify specific opportunities to improve mass appraisal performance
- track performance measures over time

5.2 Outlier Ratios

Outlier ratios are very low or high ratios as compared with other ratios in the sample. The validity of ratio study statistics used to make inferences about population parameters could be compromised by the presence of outliers that distort the statistics computed from the sample. One extreme outlier can have a controlling influence over some statistical measures. However, some statistical measures, such as the median ratio, are resistant to the influence of outliers and trimming would not be required. Although the coefficient of dispersion (COD) is affected by extreme ratios, it is affected to a lesser extent than the coefficient of variation (COV) and the mean. The weighted mean and price-related differential (PRD) are sensitive to sales with high prices even if the ratios on higher priced sales do not appear unusual relative to other sales. Regression analysis, sometimes used in assessment ratio analyses (e.g., when ratios are regressed on sales prices or property characteristics, such as lot size or living area), is also affected by outliers: both ratio outliers and outliers based on the comparison characteristics (an excellent treatment of the assumptions made in regression and deviations from can be found in Cook, R.D. and Weisberg, S. 1982).

Outlier ratios can result from any of the following:

1. an erroneous sale price
2. a nonmarket sale
3. unusual market variability
4. a mismatch between the property sold and the property appraised
5. an error in the appraisal of an individual parcel
6. an error in the appraisal of a subgroup of parcels
7. any of a variety of transcription or data handling errors

In preparing any ratio study, outliers should be

1. identified
2. scrutinized to validate the information and correct errors
3. trimmed if necessary to improve sample representativeness

For guidelines on outlier identification and trimming, see Appendix B, “Outlier Trimming Guidelines.”

5.3 Measures of Appraisal Level

Estimates of appraisal level are based on measures of central tendency. They should be calculated for each stratum and for such aggregations of strata as may be appropriate. Several common measures of appraisal level (central tendency) should be calculated in ratio studies, including the median ratio, mean ratio, and weighted mean ratio. When one of these measures is calculated on the data in a sample, the result is a point estimate, which is accurate for the sample but is only one indicator of the level of appraisal in the population. Confidence intervals around the measures of level provide indicators of the reliability of the sample statistics as predictors of the overall level of appraisal of the population. Note that noncompliance with appraisal level standards cannot be determined without the use of confidence intervals or hypothesis tests.

5.3.1 Median

The median ratio is the middle ratio when the ratios are arrayed in order of magnitude. If there is an even number of ratios, the median is the average of the two middle ratios.

The median always divides the data into two equal parts and is less affected by extreme ratios than the other measures of central tendency. Because of these properties, the median is the generally preferred measure of central tendency for evaluating overall appraisal level, determining reappraisal priorities, or evaluating the need for a reappraisal.

5.3.2 Arithmetic Mean

The arithmetic mean (aka mean or average) ratio is the average of the ratios. It is calculated by summing the ratios and dividing by the number of ratios. In a normal distribution the mean equals the median. In a distribution skewed to the right (typical of ratio study data), the mean is greater than the median. The mean is affected more by extreme ratios than the median.

5.3.3 Weighted Mean

The weighted mean ratio is the value-weighted average of the ratios in which the weights are proportional to the sales prices. The weighted mean also is the ratio of the average assessed value to the average sales price value. The weighted mean gives equal weight to each dollar of value in the sample, whereas the median and mean give equal weight to each parcel. The weighted mean is an important statistic in its own right and also is used in computing the PRD, a measure of uniformity between high- and low-value properties

The weighted mean also can be calculated by (1) summing the appraised values, (2) summing the sales prices, and

(3) dividing the first result by the second. The weighted mean also is called the *aggregate ratio*.

5.3.4 Contrasting Measures of Appraisal Level

Because it gives equal weight to each ratio and is unaffected by extreme ratios, the median is the preferred measure of central tendency for evaluating appraisal performance. Although the mean ratio is also a parcel-based measure, it can be affected appreciably by extreme ratios and can be relied upon only if the sample is of adequate size and contains few outliers.

5.4 Measures of Variability

Measures of dispersion or variability relate to the uniformity of the ratios and should be calculated for each stratum in the study. In general, the smaller the measure, the better the uniformity, but extremely low measures can signal one of the following:

acceptable causes

- extremely homogeneous properties
- very stable markets

unacceptable causes

- lack of quality control
- calculation errors
- poor sample representativeness
- sales chasing

Note that as market activity changes or as the complexity of properties increases, the measures of variability usually increase, even though appraisal procedures may be equally valid.

5.4.1 Coefficient of Dispersion

The most generally useful measure of variability or uniformity is the COD. The COD measures the average percentage deviation of the ratios from the median ratio and is calculated by the following steps:

1. subtract the median from each ratio
2. take the absolute value of the calculated differences
3. sum the absolute differences
4. divide by the number of ratios to obtain *the average absolute deviation*
5. divide by the median
6. multiply by 100

The COD has the desirable feature that its interpretation does *not* depend on the assumption that the ratios are normally distributed. In general, more than half the ratios

fall within one COD of the median. The COD should not be calculated about the mean ratio.

5.4.2 Other Measures of Variability

Other useful measures of variability or the distribution of ratio study data are as follows:

- range
- percentiles
- quartiles
- interquartile range
- median absolute deviation (MAD)
- median percent deviation
- coefficient of concentration
- standard deviation
- coefficient of variation (COV)
- weighted coefficient of dispersion
- weighted coefficient of variation

See *Property Appraisal and Assessment Administration* (IAAO 1990, chapter 20) and Gloudemans (1999, chapter 5) for further discussion on these statistical measures.

Note that the typical percentage error is not the COD, but is expressed by the median percentage deviation statistic. Also, it is the interquartile range, not the COD, that brackets the middle 50 percent of the assessment ratios.

5.5 Measures of Reliability

Reliability, in a statistical sense, concerns the degree of confidence that can be placed in a calculated statistic for a sample. (For example, how precisely does the sample median ratio approximate the population median appraisal ratio?) The primary measure of importance to the local assessor is the confidence interval. A confidence interval consists of two numbers (upper and lower limits) that bracket a calculated measure of central tendency for the sample; there is a specified degree of confidence that the calculated upper and lower limits bracket the true measure of central tendency for the population. See Appendix 20-4 in *Property Appraisal and Assessment Administration* (IAAO 1990) and Appendix C for guidelines on calculating small-sample confidence intervals.

New computer-intensive statistical methods, such as the “bootstrap” (Efron and Tibshirani 1993), now enable the development of confidence interval estimates for any statistic of interest, including measures of level and uniformity.

Measures of reliability explicitly take into account the errors inherent in a sampling process. In general, these measures are tighter (better) when samples are relatively large and the uniformity of ratios is relatively good.

Measures of reliability indicate whether there is a desired degree of confidence that a given level of appraisal has *not* been achieved. This does not mean that an appraiser should tolerate measures of central tendency that fail to meet goals whenever measures of reliability are wide due to small samples, poor uniformity, or both. Such cases require either additional data for proper analysis or alternative action, such as a reappraisal, if poor uniformity is the cause. Such correction might include reappraisal, trending of strata, and respecifying or recalibrating mass appraisal models (see section 9 in this part for a discussion of ratio study standards).

5.6 Vertical Inequities

The measures of variability discussed in section 5.4 relate to “horizontal,” or random, dispersion among the ratios in a stratum, regardless of the value of individual parcels. Another form of inequity can be systematic differences in the appraisal of low- and high-value properties, termed “vertical” inequities. When low-value properties are appraised at greater percentages of market value than high-value properties, assessment *regressivity* is indicated. When low-value properties are appraised at smaller percentages of market value than high-value properties, assessment *progressivity* is the result. Appraisals made for tax purposes of course should be neither regressive nor progressive.

An index statistic for measuring vertical equity is the PRD, which is calculated by dividing the mean ratio by the weighted mean ratio. This statistic should be close to 1.00. Measures considerably above 1.00 tend to indicate assessment regressivity; measures below 1.00 suggest assessment progressivity. When samples are small or the weighted mean is heavily influenced by several extreme sales prices, the PRD may not be a sufficiently reliable measure of vertical inequities. A scatter plot of ratios versus appraised values or sale prices is a useful diagnostic tool. A downward (or upward) trend to the data indicates systematic regressivity (or progressivity). Assuming representativeness, high PRDs generally indicate low appraisals on high-priced properties. If not sufficiently representative, extreme sales prices can be excluded in calculation of the PRD. Similarly, when samples are very large, the PRD may be too insensitive to show small pockets in which there is significant vertical inequity. Standards for evaluating the PRD are given in section 9.2.7 in this part. In addition, more powerful statistical tests for vertical inequities are available and should be employed to determine the significance of the indication provided by the PRD (see section 5.7 in this part and Twark, Everly and Downing [1989]).

The coefficient of price-related bias (PRB) provides a more meaningful and easily interpreted index of price-related bias than the PRD. It is obtained by regressing percentage difference from the median ratio on percentage differences in value (see Appendix D). A PRB of $-.045$

indicates, for example, that assessment ratios fall by 4.5% when values double and increase by 4.5% when values are halved. Like all regression coefficients, the statistical reliability of the PRB can be gauged by noting its *t*-value and related significance level, and by computing confidence intervals. In table 1-4 the PRB is -0.035 and is not statistically significant.

Unacceptable vertical inequities should be addressed through reappraisal or other corrective actions. In some cases, additional stratification can help isolate the problem. Measures of level computed for value strata should not be compared as a way of determining vertical inequity because of a boundary effect that is most pronounced in the highest and lowest strata (Schultz 1996).

5.7 Tests of Hypotheses

An appropriate test should be used whenever the purpose of a ratio study is implicitly or explicitly to test a hypothesis. A hypothesis is essentially a tentative answer to a question, such as, Are residential and commercial properties appraised at equal percentages of market value? A test is a statistical means of deciding whether the answer “yes” to such a question can be rejected at a given level of confidence. In this case, if the test leads to the conclusion that residential and commercial properties are not appraised at equal percentages of market value, some sort of corrective action on the part of assessing officials is clearly indicated.

Tests are available to determine whether the

- level of appraisal of a stratum fails to meet an established standard
- meaningful differences exist in the level of appraisal between two or more strata
- high-value properties are appraised at a different percentage of market value than low-value properties

Appropriate tests are listed in table 1-2 and discussed in Gloudemans (1999), *Property Appraisal and Assessment Administration* (IAAO 1990), and *Improving Real Property Assessment* (IAAO 1978, 137–54).

5.8 The Normal Distribution

Many conventional statistical methods assume the sample data conform to the shape of a bell curve, known as the normal (or Gaussian) distribution. Performance measures based on the mean or standard deviation can be misleading if the study sample does not meet the assumption of normality. As a first step in the analysis, the distribution of sample ratios should be examined to reveal the shape of the data and uncover any unusual features. Although ratio study samples typically do not conform to the normal distribution, graphical techniques and numerical tests can be used to explore the data thoroughly. Traditional choices are the binomial, chi-square, and Lilliefors tests. Newer and more powerful procedures are the Shapiro-Wilk *W*, the D’Agostino-Pearson *K*², and the Anderson-Darling *A*² tests (D’Agostino and Stephens 1986).

5.9 Parametric and Distribution-Free (Non-parametric) Statistics

For every problem that might be solved by using statistics, there is usually more than one measure or test. These measures and tests can be divided into two broad categories: parametric and distribution-free (nonparametric). Parametric statistics assume the population data conform to a known family of probability distributions (such as the normal distribution). When the mean, weighted mean, and standard deviation are used in this context, they tend to be more meaningful. Distribution-free statistics make less restrictive assumptions and do not require knowledge about the shape of the underlying population distribution. Given similar distribution of ratios in the underlying populations, distribution free tests, such as the Mann-Whitney test, can determine the likelihood that the level of assessment

Table 1-2. Tests of Hypotheses

Null Hypothesis	Nonparametric Test	Parametric Test
1. Ratios are normally distributed.	Shapiro-Wilk <i>W</i> test D’Agostino-Pearson <i>K</i> ² test Anderson-Darling <i>A</i> ² test Lilliefors Test	N/A
2. The level of appraisal meets legal requirements.	Binomial test	<i>t</i> -test
3. Two property groups are appraised at equal percentages of market value.	Mann-Whitney test	<i>t</i> -test
4. Three or more property groups are appraised at equal percentages of market value.	Kruskal-Wallis test	Analysis of Variance
5. Low- or high-value properties are appraised at equal percentages of market value.	Spearman Rank test	PRB, correlation or regression analysis
6. Sold and unsold parcels are treated equally.	Mann-Whitney test	<i>t</i> -test

of property groups differ (Hart 2001). Distribution-free statistics are the median and the COD.

6. Sample Size

6.1 Importance of Sample Size

There is a general relationship between statistical reliability and the number of observations in a sample. The larger the sample size, the greater the reliability.

6.2 Adequacy of a Given Sample Size

The adequacy of a given sample size can be evaluated by computing measures of reliability. If the confidence interval is sufficiently narrow, the sample is large enough. If the confidence interval is too wide, the assessor must either accept less precision or enlarge the sample, if possible.

6.3 Required Sample Size

Formulas are available to compute the minimum sample size necessary to produce selected margins of error at a specified level of confidence. Such formulas depend crucially on the estimated variability of the ratios (Cochran 1977).

6.4 Remedies for Inadequate Samples

Small samples should be enlarged if the assessor desires to increase the reliability of statistical measures. Inadequate sample sizes are typically indicated by unacceptably wide confidence intervals. The following alternatives should be considered:

1. **Restrification.** If levels of appraisal are similar or properties are homogenous, broader strata containing larger samples can be created by combining existing strata or by stratifying on a different basis.
2. **Extending the period from which sales are drawn.** This is often the most practical and effective approach. Sales from prior years can be used; however, adjusting the sale price for time may be necessary and significant property characteristics must not change.
3. **Enlarging the sample by validating previously rejected sales.** Sales previously excluded from the analysis, because it was not administratively expedient to confirm them or to make adjustments, can be reevaluated.
4. **Imputing appraisal performance.** Ratio study statistics for strata with no or few sales can sometimes be imputed from the results obtained for other strata. These strata should be as similar as possible. Procedures and techniques used to appraise properties in the strata also should be similar.

6.5 Other Sample Size-Related Representativeness Problems

Sales from areas or substrata in which the number of sales is disproportionately large can distort ratio study results by weighting level and uniformity indicators toward whatever conditions exist in the overrepresented area. To alleviate this problem and create better representativeness, large samples can be further stratified by

- randomly selecting sales to be removed
- isolating the overrepresented groups into substrata
- redefining the time period for the overrepresented groups
- weighting the data

7. Reconciliation of Ratio Study Performance Measures

An important objective of a ratio study conducted by a local jurisdiction is the evaluation of model performance. This is a USPAP requirement in the reconciliation of a mass appraisal. Assessing officials must incorporate a quality control program, including checks and audits of the data, to ensure that sold and unsold parcels are appraised at the same level. This also requires characteristic data for both sold and unsold properties to be current, appropriate, relevant, and collected in a consistent manner.

8. Presentation of Findings, Documentation, and Training

The findings of a ratio study should be sufficiently detailed and documented to meet the needs of the users of the study. Documentation for internal ratio studies can be less detailed than for reports prepared for external uses. The following documentation should be provided in conjunction with any published ratio study.

8.1 Text

A brief text describing the purpose and the methods used should accompany a ratio study. This information can be incorporated in the report of the findings or be contained in a separate memorandum. The text should contain the statistics presented and outline the major procedural steps in completing the study. The text also should describe any rules for eliminating sales or extreme ratios and acknowledge any significant limitations in the data.

8.2 Exhibits

The body of the ratio study report should include for each stratum the statistical results intended to be used for decision-making purposes. All reports should contain the following information:

- date and tax year of the appraisals being evaluated
- number of parcels in each stratum
- number of sales
- number of sales trimmed from the study
- measures of central tendency (appraisal level)
- measures of uniformity (variability) and price-related biases
- confidence interval (measures of reliability) about the measures of central tendency
- summary of adjustments made to sales prices

In addition, there should be a description of the steps taken to ensure that sold and unsold properties were valued and described consistently. If the sold and unsold properties were not treated identically, the documentation should characterize the differences discovered between them.

8.3 Analyses and Conclusions

An objective statement of the results of the ratio study should be prepared. If the study is one in a series, a comparison of the results with those of previous studies can be helpful.

8.4 Documentation

Ratio study procedures should be documented thoroughly. This documentation should take three forms. First, a general guideline should explain the design of the study. This guideline should be updated whenever procedures are changed. Second, all software applications should be documented so that the program logic can be reviewed and modified as needed. Third, a user's manual should explain how to execute the study or run the software.

8.5 Training and Education

The effectiveness of ratio studies can be improved through education and training. Assessment supervisors should conduct seminars or workshops for the appraisal staff to explain how to interpret reports, how ratio studies can be used to improve appraisal performance, and how the results will be used in-house.

9. Ratio Study Standards

Each local jurisdiction should have ratio study performance standards. Local standards should be consistent with state or provincial standards. The standards summarized in table 1-3 are suggested for jurisdictions in which current market value is the legal basis for assessment. In general, when these standards or other local standards are not met, reappraisal or other corrective measures should be taken.

All standards recommended in this section are predicated on the assumption that steps have been taken to maximize representativeness and validity in the underlying ratio study.

9.1 Level of Appraisal

In analyzing appraisal level, ratio studies attempt to measure statistically how close appraisals are to market value (or to a required statutory constraint that can be expressed as a percentage of market value) on an overall basis. While the theoretically desired level of appraisal is 1.00, an appraisal level between 0.90 and 1.10 is considered acceptable for any class of property. However, each class of property must be within 5 percent of the overall level of appraisal of the jurisdiction (see Section 9.2.1 in this part). Both criteria must be met. By themselves, the calculated measures of central tendency provide only an indication, not proof, of whether the level meets the appropriate goal. Confidence intervals and statistical tests should be used

Table 1-3. Ratio Study Uniformity Standards indicating acceptable general quality*

Type of property—General	Type of property—Specific	COD Range**
Single-family residential (including residential condominiums)	Newer or more homogeneous areas	5.0 to 10.0
Single-family residential	Older or more heterogeneous areas	5.0 to 15.0
Other residential	Rural, seasonal, recreational, manufactured housing, 2–4 unit family housing	5.0 to 20.0
Income-producing properties	Larger areas represented by large samples	5.0 to 15.0
Income-producing properties	Smaller areas represented by smaller samples	5.0 to 20.0
Vacant land		5.0 to 25.0
Other real and personal property		Varies with local conditions

These types of property are provided for guidance only and may not represent jurisdictional requirements.

** Appraisal level for each type of property shown should be between 0.90 and 1.10, unless stricter local standards are required.*

PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity.

PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted (see table 1-2).

*** CODs lower than 5.0 may indicate sales chasing or non-representative samples.*

to determine whether it can be reasonably concluded that appraisal level differs from the established goal in a particular instance. Additionally, when uniformity measures show considerable variation between ratios, level measurements may be less meaningful.

9.1.1 Purpose of Level-of-Appraisal Standard

Jurisdictions that follow the IAAO recommendation of annual revaluations (*Standard on Property Tax Policy* [IAAO 2010] and *Standard on Mass Appraisal of Real Property* [IAAO 2013]) and comply with USPAP standard rules should be able to develop mass appraisal models that maintain an overall ratio level of 100 percent (or very near thereto). However, the local assessor may be compelled to follow reappraisal cycles defined by a legal authority or public policy that can extend beyond one year. During extended cycles the influence of inflation or deflation can shift the overall ratio.

The purpose of a performance standard that allows reasonable variation from 100 percent of market value is to recognize uncontrollable sampling error and the limiting conditions that may constrain the degree of accuracy that is possible and cost-effective within an assessment jurisdiction. Further, the effect of performance standards on local assessors must be considered in light of public policy and resources available.

9.1.2 Confidence Intervals in Conjunction with Performance Standards

The purpose of confidence intervals and similar statistical tests is to determine whether it can be reasonably concluded that the appraisal level differs from the estab-

lished performance standard in a particular instance. A conclusion of noncompliance requires a high degree of confidence; thus, a 90 percent (two-tailed) or 95 percent (one-tailed) confidence level should be used, except for small or highly variable samples. The demonstration ratio study report in table 1-4 presents 95% two-tailed confidence interval estimates for the mean, median, and weighted mean ratio.

9.2 Appraisal Uniformity

Assuming the existence of an adequate and sufficiently representative sample, if the uniformity of appraisal is unacceptable, model recalibration and/or reappraisal should be undertaken. It is important to recognize that the COD is a point estimate and, especially for small samples, should not be accepted as proof of assessment uniformity problems. Proof can be provided by recognized statistical tests, including bootstrap confidence intervals.

In unusually homogeneous strata, low CODs can be anticipated. In all other cases, CODs less than 5 percent should be considered suspect and possibly indicative of nonrepresentative samples or selective reappraisal of selling parcels.

9.2.1 Uniformity among Strata

Although the goal is to achieve an overall level of appraisal equal to 100 percent of the legal requirement, ensuring uniformity in appraisal levels among strata also is important. The level of appraisal of each stratum (class, neighborhood, age group, market areas, and the like) should be within 5 percent of the overall level of appraisal of the jurisdiction. For example, if the overall level of appraisal of the jurisdiction is 1.00, but the appraisal

Table 1-4. Demonstration Ratio Study Report

Rank	Parcel #	Appraised value	Sale price*	Ratio	Statistic	Result
1	9	\$87,200	138,720	0.629	Number (n)	17
2	10	38,240	59,700	0.641	Total appraised value	\$1,455,330
3	11	96,320	146,400	0.658	Total sale price	\$1,718,220
4	12	68,610	99,000	0.693	Avg appraised value	\$85,608
5	13	32,960	47,400	0.695	Avg sale price	\$101,072
6	14	50,560	70,500	0.717		
7	15	61,360	78,000	0.787	Mean ratio	0.827
8	16	47,360	60,000	0.789	Median ratio	0.820
9	17	56,580	69,000	0.820	Weighted mean ratio	0.847
10	18	47,040	55,500	0.848		
11	19	136,000	154,500	0.880	Coefficient of dispersion	14.5
12	20	98,000	109,500	0.895	Price-related differential	0.98
13	21	56,000	60,000	0.933	PRB	-0.035
14	22	159,100	168,000	0.947	PRB coefficient (t-value)	0.135 (2.4)
15	23	128,000	124,500	1.028		
16	24	132,000	127,500	1.035	95% conf. int. mean (two-tailed)	0.754 to 0.901
17	25	160,000	150,000	1.067	95% conf. int. median (two-tailed)	0.695 to 0.933
					95% conf. int. wtd. mean (two-tailed)	0.759 to 0.935

Date: 0/0/00. No outlier trimming

* or adjusted sale price

level for residential property is 0.93 and the appraisal level for commercial property is 1.06, the jurisdiction is not in compliance with this requirement. This test should be applied only to strata subject to compliance testing. It can be concluded that this standard has been met if 95 percent (two-tailed) confidence intervals about the chosen measures of central tendency for each of the strata fall within 5 percent of the overall level of appraisal calculated for the jurisdiction. Using the above example, if the upper confidence limit for the level of residential property is 0.97 and the lower confidence limit for commercial property is 1.01, the two strata are within the acceptable range.

9.2.2 Uniformity among Single-Family Residential Properties

The COD for single-family homes and condominiums in older or more heterogeneous areas should be between 5.0 and 15.0. In areas of newer or fairly similar residences, it should be between 5.0 and 10.0.

9.2.3 Uniformity among Income-Producing Properties

The COD should be between 5.0 and 20.0. In larger, urban market areas, it should be between 5.0 and 15.0.

9.2.4 Uniformity among Unimproved Properties

The COD for vacant land should be between 5.0 and 20.0. The upper limit for an acceptable COD for vacant rural residential or seasonal land may be 25.0.

9.2.5 Uniformity among Rural Residential and Seasonal Properties, Manufactured Housing, and Multifamily Dwellings

The COD for heterogeneous rural residential property, recreational or seasonal homes, manufactured housing, and multifamily dwellings (2-4 units) should be between 5.0 and 20.0.

9.2.6 Uniformity among Other Properties

Target CODs for special-purpose real property and personal property should reflect the nature of the properties involved, market conditions, and the availability of reliable market indicators.

9.2.7 Vertical Equity

PRDs should be between 0.98 and 1.03. The reason this range is not centered on 1.00 relates to an inherent upward bias in the arithmetic mean (numerator in the PRD) that does not equally affect the weighted mean (denominator in the PRD). When samples are small, have high disper-

sion, or include properties with extreme values, the PRD may not provide an accurate indication of assessment regressivity or progressivity. When relying on the PRD to measure vertical equity, it is good practice to perform an appropriate statistical test for price-related biases before concluding that they exist (see table 1-2).

The PRB provides a measure of price-related bias that is more meaningful and less sensitive to extreme prices or ratios. As a general matter, the PRB coefficient should fall between -0.05 and 0.05. PRBs for which 95% confidence intervals fall outside of this range indicate that one can reasonably conclude that assessment levels change by more than 5% when values are halved or doubled. PRBs for which 95% confidence intervals fall outside the range of -0.10 to 0.10 indicate unacceptable vertical inequities.

As an illustration of the above, assume that the PRB is -.115 with a standard error of 0.02 and corresponding 95% confidence interval of -0.075 to -0.155 (-0.115 $\pm$ 0.04 approximately). One can conclude with 95% confidence that assessment levels change by at least 7.5% when values double or are halved but not that assessment levels change by at least 10%. This result would not be out of compliance with the $\pm$ 0.10 standard.

9.2.8 Alternative Uniformity Standards

The above standards may not be applicable to properties in unique, depressed, or rapidly changing markets. In such cases, assessment administrators may be able to develop target standards based on an analysis of past performance or results in similar markets elsewhere. Such an analysis can be based on ratio study results for the past five years or more.

9.3 Natural Disasters and Ratio Study Standards

Natural disasters such as earthquakes, floods, and hurricanes can have a substantial impact on the interpretation and use of ratio studies. In particular, they

- increase the difficulty of accurately identifying the physical and economic characteristics of property on the dates of sale and appraisal
- increase the difficulty of producing sufficiently reliable appraised values
- decrease the availability of usable sales and other market data
- disrupt the supply and demand equilibrium in the neighborhood community or region

As a result of these potential problems, a number of unreliable sample properties may need to be excluded and sample sizes may be unavoidably reduced. All these factors should be considered when ratio study standards are being

applied to study results from areas substantially affected by disasters. Such consideration must not result in unwarranted relaxation of applicable standards. When faced with such situations, assessors must use informed, reasoned judgment and common sense to produce a sufficiently reliable ratio study, based upon the best information available.

10. Personal Property Ratio Studies

Studies can be done by local assessors to determine the quality of assessments of personal property in their jurisdictions. For guidelines on conducting personal property ratio studies, see section 12 in Part 2.

Standard on Ratio Studies

Part 2. Equalization and Performance Monitoring

1. Scope

This part of the standard provides guidance and supplementary information to oversight agencies that perform ratio studies. Oversight or equalization ratio studies are designed to examine the overall degree of accuracy of assessments within or among categories of property, market areas, assessment jurisdictions or political subdivisions, such as school districts, municipalities, counties, states or provinces.

2. Oversight Ratio Studies

Oversight agencies are often required to monitor appraisal performance and take corrective actions when necessary. Equalization is a common tool used by oversight agencies to address problems associated with appraisal level. Reappraisal orders can be used to correct uniformity problems.

2.1 Monitoring of Appraisal Performance

Oversight agencies usually perform sales ratio studies, which can include independent appraisals, to monitor local assessment performance. The findings can serve as the basis for enforcement actions, such as reappraisal or equalization orders. State/provincial agencies also often perform ratio studies to advise assessors and the public about local appraisal conditions. Many state or provincial oversight agencies have a dual role. One role is to advise and assist local appraisal offices, and the other role is to measure local appraisal performance. These two roles can create a conflict of interest, which should be minimized.

2.2 Equalization

Oversight agencies can use the results of ratio studies to equalize, directly or indirectly, appraisals or assessments in taxing jurisdictions. Direct equalization is accomplished by an oversight agency which alters locally determined assessments by ordering appraisals within jurisdictions or property classes to be adjusted to market value or to the legally required level of assessment. Direct equalization can also involve adjusting appraisals of centrally assessed properties. When indirect equalization is used, appraisals are not adjusted. Instead, indirect equalization involves an oversight agency estimating total taxable value, given the legally required level of assessment or market value. Indirect equalization allows proper distribution of intergovernmental transfer payments between state or provincial and local governments despite different levels of appraisal among

jurisdictions or property classes. Equalization is not an appraisal or a substitute for reappraisal.

When equalization is based on ratio study samples, sampling error must be taken into account. When confidence intervals include an acceptable range, equalization cannot be supported statistically. When confidence intervals *fail* to bracket official requirements, equalization actions are supported (see section 6.5, “Measures of Reliability,” and section 11.1, “Level of Appraisal”).

Legal aspects of ratio studies, many of which relate to equalization, are discussed in Appendix G.

2.2.1 Direct Equalization

Many states and provinces have authority and specific procedures for direct equalization. The advantage of direct equalization is that it can be applied to specified strata, such as property classes, geographic areas, and political subdivisions that fail to meet appraisal level performance standards (Dornfest [Journal of Property Tax Assessment and Administration, 2004]). Direct equalization also produces results that are generally more visible to the taxpayer and more clearly reduces perceived inequities between classes (*Standard on Property Tax Policy* [IAAO 2010]). For example, direct equalization allows proper and equal application of debt and tax rate limits and equitable partial exemptions.

Direct equalization involves use of adjustment factors, which produce effects mathematically identical to those derived through the application of “trending” or “index” factors, which are commonly used for value updating by local assessing jurisdictions. The most significant differences typically are the level of the jurisdiction originating the adjustments and the stratification of property to which the factors are applied. Local jurisdictions with primary assessment responsibility can develop value adjustment factors as an interim step between complete reappraisals. Such factors commonly are applied to properties by property type, location, size, age and other characteristics (see *Property Appraisal and Assessment Administration* [IAAO 1990, p. 310]). It is rare for equalization factors developed by oversight agencies to be applied to strata more specific than property class or broad geographic area. Often such factors are applied jurisdiction-wide.

States and provinces that employ direct equalization techniques should understand that such equalization is not a substitute for appraisal or reappraisal. Direct equalization

applied at the stratum level improves equality in effective tax rates between strata and lessens the effect of assessment practices that improperly favor one stratum over another. For example, assuming that all classes of property are to be assessed at 100% of market value, without such equalization, in a case where residential property is assessed at a median of 80% of market value, while commercial property is assessed at a median of 90% of market value, residential property will pay 80% of its proper tax share and commercial property will pay 90% of its proper tax share. Other classes that may be assessed at 100% will pay more than their proper tax shares. Direct equalization mitigates this problem. However, such equalization cannot improve uniformity between properties within a given stratum. So, in the previous example, the median level of assessment for residential property can be adjusted from 80% to 100% of market value, assessment disparities between individual residential properties will not be addressed. For this reason, reappraisal orders should be considered as the primary corrective tool for uniformity problems, and direct equalization should be considered appropriate only if time or other constraints preclude such an approach.

2.2.2 Indirect Equalization

The most common use of indirect equalization is to enable proper funding distribution, particularly for school districts. Such equalization provides an estimation of the proper tax base (acknowledging statutory constraints such as agricultural use value) despite appraisals that are higher or lower than legally required levels in certain jurisdictions. For example, if the assessed value of residential property in a jurisdiction is \$750 million, but a residential ratio study shows an assessment level of 75 percent, while the legally required level of assessment is 100 percent, an equalized value of \$1,000 million could be computed ($\$750 \text{ million} / 0.75$). This adjusted or equalized value would then be used to apportion payments or requisitions between the state or province and associated local governments.

Indirect equalization results in fairer funding apportionment because the overall appraisal levels of the taxing jurisdictions tend to vary. If there were no equalization, the extent that a jurisdiction under- or overestimated its total tax base would result in over- or under-apportionment of funds. Indirect equalization does not correct under- or overvaluation between classes of property within a jurisdiction. It adjusts only a portion of the tax or sometimes only intergovernmental payments, is less visible to taxpayers, and often lacks checks and balances associated with direct equalization (see *Standard on Property Tax Policy* [IAAO 2010]). By adjusting governmental payments, tax rates, or partial exemptions, indirect equalization encourages taxing jurisdictions to keep their overall tax bases close to the required level.

Whether used to equalize shared funding or tax rates, the degree of equalization of the property tax is more limited than with direct equalization. Indirect equalization generally is applied to or affects only a portion of the funding or property tax levy (perhaps the school general levy or city levy). Indirect equalization usually is applied to the jurisdiction, rather than to a stratum, and therefore resolves interjurisdictional discrepancies in assessment level. In addition, properties in strata with poor uniformity are affected disproportionately. For this reason, indirect equalization also is not a substitute for reappraisal.

3. Steps in Ratio Studies

Ratio studies conducted by oversight agencies generally follow the basic steps described for the assessor's office in Part 1, except that it is more important to adopt uniform procedures and be consistent in their application.

3.1 Definition of the Purpose, Scope, and Objectives

The first step in any ratio study is to determine and state clearly the reasons for the study. This crucial step of identifying the purpose of the study determines the specific goals, scope, content, depth, and required flexibility.

3.2 Design of Study

The most important design consideration is that the study sample be sufficiently representative of the population of properties or the distribution of values in the jurisdiction under review. For direct equalization the level of appraisal for property classes or strata subject to such equalization is the primary area of interest and the sample must be designed accordingly. Indirect equalization seeks to estimate the overall dollar value of the population, so the sample must be representative of that overall value and must reflect the disproportionate influences of high value properties. Performance monitoring is concerned with both level and uniformity, but typically involves sample design similar to that required in direct equalization.

3.2.1 Level of Sophistication and Detail

A basic design principle is to keep the study as simple as possible consistent with its purpose. Ratio studies are not all alike and should be tailored to an intended use.

Data analysis has been made easier through computerization. Although every study does not require the same level of statistical detail, each ratio study should include measures of appraisal level, appraisal uniformity, and statistical reliability. Graphs, charts, or other pictorial representations can be useful tools for showing distributions and patterns in the data. There is no model ratio study design that can serve all jurisdictions or all situations equally well. Informed, reasoned judgment and common sense are required in the design of ratio studies.

3.2.2 Sampling

A ratio study is a form of applied statistics, because the analyst draws conclusions about the appraisal of the universe (the entire jurisdiction) of properties based only on those that have sold during a given time period or appraisals selected for a random sample. The ratios constitute the sample that will be used to draw conclusions or inferences about the population.

To determine the accuracy of appraisals within a jurisdiction with absolute certainty, it would be necessary for all properties in the population to have been sold in arm's-length, open-market transfers near the appraisal date or all properties would need to be appraised independently by the oversight agency. Since this is not possible, ratio studies must use samples and draw inferences or conclusions about the population from these samples.

The number of parcels in the population (the jurisdiction or stratum) is not an important determinant of a statistically valid and reliable sample.

3.2.3 Determining the Composition of Samples

In the design stage, the oversight agency must decide whether the ratio study sample should comprise sales (or asking prices when appropriate), independent appraisals, or a combination of the two. Each sample type has its advantages and disadvantages, as described below.

3.2.3.1 Sale Samples

The advantages of using sale samples include the following:

- Properly validated sales provide more objective indicators of market value than independent appraisals.
- Using sales is much less expensive than producing independent appraisals.

The disadvantages include the following:

- Difficulty in collecting sales data in jurisdictions without disclosure documents
- The oversight authority may not have control over the sales data collection and validation process
- Influence of sales chasing can be difficult to detect or prevent
- Samples of sales may not adequately represent the population of properties
- An adequate sample size may not be achieved if sales data are scarce
- Time adjustments are more critical when supplemental sales are included

3.2.3.2 Independent Appraisal Samples

Independent appraisals also can be used instead of or in addition to sales for ratio study samples. (See section 8, "Appraisal Ratio Studies," in this part.)

3.2.3.3 Samples Combining Sales and Independent Appraisals

The oversight agency can design and conduct ratio studies using samples comprised of sales and independent appraisals. In this approach, the combined advantages of sale samples and appraisal samples are realized. However, the disadvantage of combining sales and independent appraisals is the possible existence of some of the disadvantages of sale samples and/or appraisal samples (see Section 8.7).

3.3 Collection and Preparation of Market Data

The reliability of a ratio study depends in part on how accurately the sales or independent appraisals used in the study reflect market values. For sales-based studies, oversight agencies should conduct an independent sales verification and screening program if resources permit. Alternatively, oversight agencies should develop audit criteria to review data submitted to qualify sales, corroborate representativeness and confirm adequate sample size. Audit decisions should accommodate needs of the agency and resources available. Independent appraisals used in ratio studies must comply with the appropriate sections of the *Uniform Standards of Professional Appraisal Practice* (USPAP; Appraisal Foundation 2010–2011), and reflect market values as of the date being studied. Most oversight agencies use property data collected by the local jurisdiction to develop their independent appraisals. In order to produce credible appraisals, the oversight agency must be certain that the local jurisdiction accurately recorded the appropriate value-related property characteristics for each property it is independently appraising. Steps must be taken to ensure that errors in the database made by the local jurisdiction do not materially or significantly affect the conclusions or opinions of value developed by the oversight agency.

3.4 Stratification

Stratification divides all the properties within the scope of the study into two or more groups or strata. Stratification facilitates a more complete and detailed picture of appraisal performance and can enhance sample representativeness.

Each type of property subject to a distinct level of assessment could constitute a stratum. Other property groups, such as market areas, school districts and tax units, could constitute additional strata.

Strata should be chosen to be consistent with factors in the mass appraisal model. When the purpose of the study is to evaluate appraisal quality, flexibility in stratification

is essential. The general goal is to identify areas in which the assessment levels are too low or lack uniformity and property groups for which additional reappraisal work may be required. In such cases, it also is highly desirable to stratify on the basis of more than one characteristic simultaneously.

Stratification can help identify differences in level of appraisal between property groups. In large jurisdictions, stratification by market areas is generally more appropriate for residential properties, while stratification of commercial properties by either geographic area or property subtypes (e.g., office, retail, and warehouse/industrial) can be more effective.

3.5 Matching Appraisal Data and Market Data

The physical and legal characteristics of each property used in the ratio study must be the same when appraised for tax purposes and when sold. This implies two essential steps. First, the property description for the sold parcel must match the appraised parcel. If a parcel is split between the appraisal date and the sale date, a sale of any of its parts should not be used in the ratio study.

Second, the property rights transferred, permitted use, and physical characteristics of the property on the date of assessment must be the same as those on the date of sale. Properties with significant differences in these factors should be excluded from the ratio study.

When statutory constraints are imposed on appraisal methods, the resulting assessment may be less than market value. In such cases a sales ratio study may not provide useful performance information. Constraints typically apply to land that qualifies for agricultural-use value, subsidized housing, mineral land, and timberland.

Sales may include property of a type other than the type for which the ratio study analyses is intended. However, sales including more than minimal values of secondary categories are unlikely to be representative, even with adjustment.

For example, a property that is predominantly commercial may include residential components. This sale can be included as representative of the commercial category. In this case, the numerator in the ratio calculation would be the total appraised value including the value of both the commercial and residential components.

In a second example, for a ratio study of vacant land, the numerator in the ratio should reflect only the appraised value of the land. The sale price should be adjusted for the contributory value of the improvements or the sample should be excluded from further analysis.

3.5.1 Stratification for Equalization Studies

Oversight agencies generally should define the strata prior to acquiring and compiling data for the ratio study.

Predefined stratification is more transparent and enhances cooperation between the oversight agency and the jurisdiction appraising the property subject to equalization. In general, oversight agencies should not redefine the strata once they have been defined for equalization purposes, especially in the case of direct equalization. It is appropriate, however, to collapse strata to compensate for otherwise inadequate samples sizes. In addition, a reappraisal or equalization order can be targeted for specific problem areas that cause noncompliance at a broader level of aggregation. If value stratification is necessary, predefined strata may not be practical.

3.5.2 Stratification for Direct Equalization

Strata should be chosen consistent with operational requirements for the required level of equalization. Statistical issues in the determination of strata include the size of the population and resulting strata and the likely variability of the ratios in each stratum. Care must be taken not to over-stratify, that is, to create strata that are too small to achieve statistical reliability (see section 6, Sample Size” in part 1 and Sherrill and Whorton [1991]). No conclusion about stratum level or uniformity should be made from stratum samples that are unreliably small (resulting in unacceptably large margins of error). Ultimately, the degree of stratification is determined largely by available sales data, unless it is cost-effective and practical to add sufficient independent appraisals. If sufficient sales or appraisals are not available for a given stratum, it should be combined with similar strata. When strata are combined, provided there is no reason to suspect dissimilar ratios as evidenced by different level or uniformity measures, such combinations permit broader applicability of ratio study results and prevent ratio study analysis from becoming too focused on substrata with few sales or appraisals. When jurisdiction or category wide equalization actions are required, reliability of component strata is not an issue.

3.5.3 Stratification for Indirect Equalization

Indirect equalization develops an estimate of full market value, but assessed values of individual properties are not altered. Such studies can use a substantially different approach to stratification than ratio studies intended for performance evaluation or direct equalization. The purpose of stratification in this case is to minimize distortions due to different assessment levels, which can vary by property type, value range, geographic area, and other factors. If stratification creates a more representative sample, equalization decisions may be based on results from individual stratum. . If the overall sample is representative of the population then equalization decisions should be based on overall sample results. A reasonable number of strata with small samples and larger margins of error can increase overall representativeness and may reduce the margin of error for the overall jurisdiction-wide sample.

The primary level of stratification should ordinarily be by major property type (e.g., residential, commercial, and vacant land). If circumstances permit, a secondary level of stratification also is recommended. When relying on the weighted mean, the secondary level of stratification (substrata) should normally be value range. Higher-value properties can sell with a different frequency than low-value properties, and appraisal levels can vary between high and low-value properties. As a result, high-value properties can be oversampled (or undersampled) and, because of their high value, can exert a disproportionate influence on the weighted mean and resulting estimated value. Value stratification reduces distortion of the weighted mean caused by over or under-representation of value strata with different levels of appraisal. To properly develop and use value strata, the oversight agency needs each individual assessment in the study universe. If detailed value information is not available, the oversight agency should work with local taxing jurisdictions to obtain sufficient information. At a minimum, a questionnaire can be used to request the total value and number of parcels in predetermined value categories or quantiles (each range contains the same amount of value).

In situations in which value stratification information is not available, or where property ratios are not significantly value-influenced, substrata can be created based on property subtype, geographic area, or other appropriate criteria. Stratification by these criteria corrects for differences in level of appraisal between substrata. In large jurisdictions, substratification by geographic areas generally is more appropriate for residential properties while sub-stratification by either geographic area or property subtypes (e.g., office, retail, and warehouse/industrial) can be appropriate for income-producing properties.

When relying on the median and when sample sizes permit, it is appropriate to stratify within property class by whichever property characteristic is most likely to capture differences in appraisal levels. This characteristic can be geographic area, property subtype, or value range. Substratification by value range helps capture value-related differences in assessment levels, which (unlike the weighted mean) are not reflected in the median.

3.6 Statistical Analysis

When ratio studies are conducted for equalization purposes, confidence intervals and statistical tests can be used to determine whether it should be concluded at a given confidence level that appraisal performance or level requirements in a stratum (or jurisdiction) being tested meets or falls outside of mandated standards. Statistical tests can be used for comparisons among strata, provided the sample sizes are large enough that meaningful differences are not missed (see section 6, “Ratio Study Statistics and Analyses”).

3.7 Evaluation and Use of Results

Lack of independence between locally determined values and sale prices (sales chasing) or independent appraisals can subvert attempts to improve equity (direct equalization) and result in incorrect distribution of funds between states or provinces and local jurisdictions (indirect equalization). To guard against these possibilities, oversight agencies should ensure that sold and unsold properties are appraised similarly. Also, appraisals used as substitutes for sales must reflect market value, and the oversight agency must take remedial measures in instances in which they do not (see section 9, “Estimating Performance of Unsold Properties”, and Appendix E, “Sales Chasing Detection Techniques”).

4. Timing and Sample Selection

Ratio studies made by oversight and equalization agencies should be conducted at least annually. Where possible, ratio studies conducted by equalization agencies should use final values established at the local level, inclusive of changes made by local appeal boards up to that time. However, if local appraisers or boards “chase sales” or set values in a manner that is dissimilar to the way other property values have been set, the sample may not be sufficiently representative and should not be used without careful investigation and necessary adjustment.

4.1 Date of Analysis

The date of analysis is a past year when appraisals from past years are being evaluated to avoid the effects of sales chasing. When prior-year assessments are used to gauge current performance (to avoid sales chasing), the results should be adjusted for any reappraisal activity or assessment changes that occurred in the population (net of new construction) between the prior and current years. Sale prices also should be adjusted to the assessment date to account for time trending.

If the purpose of the study is equalization, using sales after the appraisal date (adjusted for time as necessary) helps ensure the independence of appraisals and sales prices. A sales period spanning the appraisal date can be used if measures are taken to ensure the independence of appraisals made after the earlier sales. This approach has the advantage of reducing the importance of time adjustments.

4.2 Representativeness of Samples

The design and conduct of ratio studies requires decisions that maximize representativeness within the constraints of available resources.

In many kinds of statistical studies, samples are selected randomly from the population and from within each stratum to maximize representativeness. Ratio study samples based on independent appraisals can be randomly selected. Because sales are convenience samples and do not repre-

sent true random samples, care must be taken to maximize the representativeness of sales samples.

A ratio study sample is considered sufficiently representative for direct equalization and mass appraisal performance evaluation when the distribution of ratios of properties in the sample reflects the distribution of ratios of properties in the population. A ratio study is considered sufficiently representative for indirect equalization when the distribution of ratios of dollars of property value in the samples reflects the distribution of ratios of dollars of property value in the population.

Sales from areas or substrata in which the number of sales is disproportionately large can distort ratio study results by weighting level and uniformity indicators toward whatever conditions exist in the overrepresented area. To alleviate this problem and create better representativeness, large samples can be further stratified by

- randomly selecting sales to be removed
- isolating the overrepresented groups into substrata
- redefining the time period for the overrepresented groups
- weighting the data

4.2.1 Maximizing Representativeness with Independent Appraisals

For independent appraisal-based ratio studies, the application of random sampling techniques can help ensure that appraisal procedures used for the sampled properties are similar to the corresponding population. A well-designed random sampling plan also can help ensure that properties selected for independent appraisals are not concentrated in areas of high sales activity or associated with property types with higher turnover rates in the market.

The USPAP competency rule requires appraisers to have both knowledge and experience required to perform specific appraisals. Independent single-property appraisals must be developed in compliance with Standard 1, must be reported in compliance with Standard 2, and must be reviewed in compliance with Standard 3 of USPAP. Most importantly, care must be taken to ensure that independent appraisals reflect market value as of the appraisal date. Independent mass appraisals must be developed and reported in compliance with Standard 6 of *USPAP*.

4.2.2 Very High-Value Properties

Assessment jurisdictions often contain unique, very-high-value properties (for example, properties that constitute more than 10 percent of the value of a property class) that cannot reasonably be combined with other properties for purposes of the ratio study. For indirect equalization, high-value parcels are especially important to maximize representativeness. For instance, consider a population

consisting of 1,000 properties, 999 of which range in value from \$20,000 to \$750,000, and one that is valued at \$1 billion (e.g., a power plant). If the intended use of the ratio study is to estimate the general level and uniformity of appraisal in regard to the typical property, the stratified population of parcels need not include the \$1 billion property. If the intended use of the ratio study is to estimate the total market value in the jurisdiction, however, exclusion of the power plant can distort the study.

Very high-value properties should not be ignored or assumed to be appraised at the legal or general level for indirect equalization studies. An equalization agency should place very high-value property in a separate stratum to prevent distortion of the overall weighted mean or total estimated value. To value the property for ratio study purposes the equalization agency should use a recent properly adjusted sales price if available. If a recent sale is not available the agency should conduct an appraisal of such properties (this is the preferred option) or audit and adjust as necessary the values developed by the local jurisdiction.

5. Acquisition and Analysis of Sales Data

The highest level of independence and objectivity in an equalization or performance monitoring ratio study requires independent sales validation. If resources are not available to achieve this level of sophistication, then a comprehensive audit program should be developed to review the validation and screening work of the local jurisdiction (see Appendix A, “Sales validation Guidelines”).

5.1 Sale Adjustments for Statutorily Imposed Value Constraints

Most states and provinces require appraisal of certain classes of property using statutorily prescribed methods of appraisal that are intended to produce a constrained value that is less than market value. The most common class of property to which such constraints apply is farmland and rangeland that qualifies for agricultural-use valuation. However, constraints may also apply to subsidized housing, mineral land, and other classes. When the purpose of the ratio study is direct or indirect equalization, sales prices must be adjusted as if the selling parcel were subject to the same constraints. If this cannot be done, independent appraisals, which employ the required constraints, should be used to determine the level of appraisal in a manner consistent with the statutory constraints. For example, assume that statutory restrictions require a fixed or artificially high capitalization rate to be used in determining farmland value. If unadjusted farmland sales were to be used, the resulting ratios would be low and could lead to improper equalization decisions. Instead, independent appraisals using the required capitalization rate should be done. These appraisals would lead to ratios that would correctly allow for the statutory constraint.

Use of constrained values produces ratio study results that do not provide information on the true level of appraisal in relation to market value. Use of constrained values is appropriate for equalization. However, when the purpose of the ratio study is to determine the overall quality of assessments or the amount of benefit being awarded by a given statutory constraint on appraised value, the unadjusted sale price or independent market value appraisal must be used. Often, procedural audits can be used as adjuncts to more traditional ratio studies. These audits can be particularly effective when the purpose is to judge overall appraisal quality and when precise, quantitative statistical measures are not obtainable.

5.2 Outlier Ratios

Oversight agencies should consider the extent of sales verification when developing guidelines for trimming limits. In practice, this means that if an oversight agency derives sales data from assessing jurisdictions that may have already removed outliers from the sample, additional trimming may not be necessary (see Appendix B, “Outlier Trimming Guidelines”).

5.2.1 Value Outliers

When the weighted mean is used for indirect equalization, a method that identifies high-value *influential* sales is recommended. Since an influential sale may not have an unusually low or high ratio relative to the rest of the sample, the definition of distortion is based on the principle that the point estimate calculated from the sample should not be statistically significantly different whether the suspect observation is in the sample or not.

To test for an influential sale, one approach is to remove it from the sample and compute the weighted mean and associated confidence interval. If the weighted mean of the sample lies outside the confidence interval calculated without the influential sale, then the sale is truly influential and is a candidate for further scrutiny, isolation in a separate stratum, or possible trimming.

This procedure is intended to test the presence of individual influential sales and is not intended to be used successively after deletion of a sale, but can be applied to more than one apparent outlier at a time by leaving all other sales in the comparison group. Note, however, that the presence of multiple influential sales can indicate the start of a trend. Presence of influential sales is often associated with high price-related differential (PRD) values, which could be the result of systematic regressivity or progressivity. In contrast, the coefficient of price-related bias (PRB) is much less influenced by value outliers and should not be relied on to help identify these outliers.

5.2.2 Outlier Trimming

Statistics calculated from trimmed distributions, obviously, cannot be compared to those from untrimmed distributions or interpreted in the same way. This is especially problematic when making interjurisdictional comparisons. For this reason, oversight agencies may wish to promulgate uniform trimming procedures, based on sound statistical principles. Regardless of the chosen procedure, trimming of outliers must not occur more than once for any sample.

6. Ratio Study Statistics and Analyses

Ratio study measures covered in Part 1 are equally applicable to equalization ratio studies based upon sales or independent appraisals. See section 5.3, “Measures of Appraisal Level,” and section 5.4, “Measures of Variability,” in Part 1.

6.1 Measures of Appraisal Level

The median is the generally preferred measure of central tendency for direct equalization, monitoring of appraisal performance, or evaluation of the need for a reappraisal. The mean should not be used for indirect equalization if there are measurable differences in appraisal level of high- and low-value properties (see table 2-2). In data commonly containing outliers, the trimmed mean can be substituted for the mean (Gloude-mans 1999, chapter 3). See Appendix B for outlier-trimming procedures. Because of its dollar-weighting feature, the weighted mean is most appropriately used in indirect equalization, when estimating the total dollar value of the jurisdiction. When relying on the measure, however, outliers should be carefully reviewed (and deleted if appropriate), since they can strongly affect the weighted mean, particularly when they occur for high-value properties and in small samples.

6.2 Overall Ratio for Combined Strata

For purposes of oversight monitoring of overall appraisal performance and direct equalization, the generally preferred approach is to weight the median ratio of each stratum on the basis of the relative number of properties in the stratum. For indirect equalization, the weight assigned to a measure of central tendency of a stratum should be proportional to the share of that stratum’s total estimated market value. Because the number of parcels bears only a loose relationship to dollar value, weighting by number of parcels is not appropriate for indirect equalization.

For indirect equalization, the preferred method of calculating the overall market value of a jurisdiction is as follows:

1. Divide the total appraised (or assessed) value of each stratum by the stratum sample’s measure of

Table 2-1. Illustration of Combining Measures of Central Tendency (Example shown is for indirect equalization)

Data for properties in the study					
Stratum (1)	Total sample assessed value (2)	Total sample sale price (3)	Weighted mean (2)/(3) (4)	Total assessed value of stratum (5)	Indicated market value of stratum (6)
Residential	\$3,000,000	\$4,000,000	0.750	\$600,000,000	\$800,000,000
All other	950,000	1,000,000	0.950	400,000,000	421,000,000
Total				\$1,000,000,000	\$1,221,000,000

Overall ratio = \$1,000,000,000/\$1,221,000,000 = 0.819

Table 2-2. Preferred Estimators

	Indirect Equalization	Direct Equalization	Monitoring Performance
Median	—	X	X
Mean	—	—	—
Weighted Mean	X*	—	—

* Caution should be exercised when the sample contains value outliers or indicates value bias based on the PRD

central tendency (see section 6.3, “Contrasting Measures of Appraisal Level,” in this part) to obtain an estimate of the total market value of taxable property in the stratum.

- Sum the estimates of total stratum market value to obtain an estimate of the total market value of taxable property in the jurisdiction or class of property.
- To obtain an overall weighted level of assessment (or ratio), divide the total appraised (or assessed) value of the jurisdiction or class of property by the estimated total market value (table 2-1 contains a simplified example).

6.3 Contrasting Measures of Appraisal Level

Table 2-2 summarizes the preferred measures of central tendency for the three broad purposes of indirect equalization, direct equalization, and the general monitoring of appraisal performance.

For indirect equalization, the preferred measure is the weighted mean (the measure used in table 2-1), because it gives equal weight to each dollar. This helps achieve an accurate estimate of total dollar value, the goal of indirect equalization. However, there are implicit difficulties in obtaining sales samples that are representative of all significant groups of properties with different ratios. The weighted mean can be disproportionately influenced by high-value properties, particularly in a small sales sample. A disproportionate influence of high-value properties can be reduced through value stratification within the property class. Such value stratification helps capture value-related ratio differences, as well as improve representativeness, regardless of which measure of central tendency is used. If there are provable value-related ratio differences within strata, the weighted mean must be used since the median is incapable of capturing value-related differences. In cases

in which value stratification is not practicable, equalization agencies may stratify by some proxy for value, such as neighborhood or property sub-class. If results appear distorted by non-representative high-value sales, outlier identification methods described in Appendix B should be employed.

While not conceptually preferred, the median can be used to prevent the disproportionate influence of high-value properties with outlier ratios. To be clear, although the median is not the conceptually appropriate measure, it nonetheless has the desirable property of smaller sampling variance and, in cases in which assessment regressivity/progressivity has not been found to be a significant concern, can provide an acceptable substitute for the weighted mean.

If samples are known to be reasonably representative through outlier trimming, the use of stratification or selection of random appraisals, the weighted mean would be the (only) correct measure. In cases which sample representativeness is a concern due to small samples or outliers, the median can reasonably be used as long as the equalization agency has checked to ensure that there are no significant price-related biases within the strata used in the study.

6.4 Measures of Variability

Measures of dispersion or variability relate to the uniformity of the ratios and should be calculated for each stratum in the study. In general, the smaller the measure, the better the uniformity, but extremely low measures can signal one of the following:

acceptable causes

- extremely homogeneous properties
- very stable markets

unacceptable causes

- lack of quality control
- calculation errors
- poor sample representativeness
- sales chasing

Note that as market activity changes or as the complexity of properties increases, the measures of variability usually increase, even though appraisal procedures may be equally valid.

6.5 Measures of Reliability

It is good practice to calculate measures of reliability whenever the results of a ratio study are used for equalization. Measures of reliability will indicate whether there is a desired degree of confidence that a given level of appraisal has not been achieved. The most commonly used measure of ratio study sample reliability is the confidence interval. This interval brackets the unknown population parameter for any sample statistic with a specified (chosen) degree of confidence. When the interval includes a desired assessment level or a performance standard range around the desired level (see section 11 and Table 2-4), equalization adjustments are not warranted. Similarly, when the interval includes a maximum allowable COD (see Table 2-3), reappraisal or other action to correct poor uniformity is not warranted.

6.6 Vertical Inequities

The measures of variability discussed in section 6.4 relate to “horizontal,” or random, dispersion among the ratios in a stratum, regardless of the value of individual parcels. Another form of inequity can be systematic differences in the appraisal of low- and high-value properties, termed “vertical” inequities. When low-value properties are appraised at greater percentages of market value than high-value properties, assessment *regressivity* is indicated. When low-value properties are appraised at smaller percentages of market value than high-value properties, assessment *progressivity* is the result. Appraisals made for tax purposes should be neither regressive nor progressive.

An index statistic for measuring vertical equity is the PRD, which is calculated by dividing the mean ratio by the weighted mean ratio. This statistic should be close to 1.00. Measures considerably above 1.00 tend to indicate assessment regressivity; measures below 1.00 suggest assessment progressivity. When samples are small or the weighted mean is heavily influenced by several extreme sales prices, however, the PRD may not be a sufficiently reliable measure of vertical inequities. A scatter plot of ratios versus appraised values or sale prices is a useful diagnostic tool. A downward (or upward) trend to the data indicates systematic regressivity (or progressivity). If not sufficiently representative, extreme sales prices can be excluded in calculation of the PRD. Similarly, when samples are very large, the PRD may be too insensitive to show small pockets in which there is significant vertical inequity. Standards for evaluating the PRD are given in section 9.2.7 in this part. In addition, more powerful statistical tests for vertical inequities are available and should be employed to determine the significance of the indication provided by the PRD (see section 5.7 in this part and Twark, Everly and Downing [1989]).

The coefficient of price-related bias (PRB) provides a more meaningful measure of price-related bias. It is obtained by regressing percentage difference from the median ratio on percentage differences in value (see Appendix D). A PRB of $-.045$ indicates, for example, that assessment ratios fall by 4.5% when values double and increase by 4.5% when values are halved. Like all regression coefficients, the statistical reliability of the PRB can be gauged by noting its *t*-value and related significance level. Like all regression coefficients, the statistical reliability of the PRB can be gauged by noting its *t*-value and related significance level, and by computing confidence intervals. In table 1-4 the PRB is 0.035 and is not statistically significant.

Unacceptable vertical inequities should be addressed through reappraisal or other corrective actions. In some cases, additional stratification can help isolate the problem. Measures of level computed for value strata should not be compared as a way of determining vertical inequity because of a boundary effect that is most pronounced in the highest and lowest strata (Schultz 1996).

6.7 Tests of Hypotheses

An appropriate test should be used whenever the purpose of a ratio study is implicitly or explicitly to test a hypothesis. A hypothesis is essentially a tentative answer to a question, such as, Are residential and commercial properties appraised at equal percentages of market value? A test is a statistical means of deciding whether the answer “yes” to such a question can be rejected at a given level of confidence. In this case, if the test leads to the conclusion that residential and commercial properties are not appraised at equal percentages of market value, some sort of corrective action on the part of assessing officials is clearly indicated. Appropriate tests are listed in table 1-2 and discussed in Gloudemans (1999), *Property Appraisal and Assessment Administration* (IAAO 1990), and *Improving Real Property Assessment* (IAAO 1978, 137–54).

6.8 The Normal Distribution

Many conventional statistical methods assume the sample data conform to the shape of a bell curve, known as the normal (or Gaussian) distribution. Performance measures based on the mean or standard deviation can be misleading if the study sample does not meet the assumption of normality. As a first step in the analysis, the distribution of sample ratios should be examined to reveal the shape of the data and uncover any unusual features. Although ratio study samples typically do not conform to the normal distribution, graphical techniques and numerical tests can be used to explore the data thoroughly. Traditional choices are the binomial, chi-square, and Lilliefors tests. Newer and more powerful procedures are the Shapiro-Wilk *W*, the D’Agostino-Pearson K^2 , and the Anderson-Darling A^2 tests (D’Agostino and Stephens 1986).

7. Sample Size

7.1 Importance of Sample Size

If it is desirable to create narrow, uniform margins of error in jurisdictions without sufficient sales, independent appraisals may be added.

7.2 Adequacy of a Given Sample Size

The adequacy of a given sample size can be evaluated by computing measures of reliability. If the confidence interval is sufficiently narrow, the sample is large enough. If the confidence interval is too wide, the oversight authority must either accept less precision or enlarge the sample, if possible.

7.3 Required Sample Size

Because designing for sampling objectives and planning for resource allocation in ratio studies must occur well before final ratio data sets are available and ratio study statistics are calculated, decisions on critical input variables must be made well before their true values are known. For example, the sample size formulas (Cochran 1977; Sherrill and Whorton 1991; and Gloudemans 1999) used to plan for specific margins of error and/or specific levels of confidence theoretically require, as input variables, the actual variation within the final ratio data sets (usually measured by the coefficient of variation). However, the actual variation in final ratio data sets is not known during the design and planning stage and, thus, the desired sample size must be projected based upon the best information available at the time of design and planning. This projection results in unavoidable forecast error and can result in the production of a higher or lower sample size than needed to reach sampling objectives. This issue is an accepted part of conducting ratio studies when it is necessary and important to attain a predetermined or uniform degree of precision. In other cases, it may be acceptable to use all available qualified sales. When predetermination of sample size is important, the variation in the ratio data set from the most recent time period available can provide a reasonable estimate for the time period under analysis.

7.4 Remedies for Inadequate Samples

In addition to recommendations discussed in section 6.4, “Remedies for Inadequate Samples,” in Part 1, supplemental independent appraisals can be combined with sales (also see section 8.7, “Combining of Sales and Appraisals,” in this part).

7.5 History of Sales Reporting

Oversight agencies that develop ratio studies from sales provided by local assessment jurisdictions should track the number of transfers obtained in different study periods. Quality control techniques can be used to measure market activity or to determine whether an assessor is fully reporting sales information.

8. Appraisal Ratio Studies

Appraisal ratio studies are conducted by using appraised values for a random sample of parcels. Such sampling plans can be designed to be more representative of the population in terms of property characteristics than a sales sample of the same size but require adequately trained appraisers and are comparatively expensive. Few ratio studies are based solely on independently conducted appraisals, which then are compared to values determined by assessing officials. Many equalization or oversight agencies, however, do ratio studies in which both sales and appraisals are combined. Furthermore, it may be possible to develop sales driven models for use in appraising a particular population of properties (excluding those not adequately represented in the underlying model) or randomly selected parcels for ratio study purposes (see *Standard on Automated Valuation Models*, [IAAO 2003]). Estimates of value developed for use in appraisal ratio studies are considered appraisal services and must comply with *USPAP* Standards 1 and 2 or Standard 6.

8.1 Rationale

Independent appraisals can be used as indicators of market value. Independent appraisals are appraisals performed by appraisers who are not employees of the appraisal agency that is the subject of the study. Such appraisal ratio studies are particularly useful for property classes with limited sale data, such as commercial and industrial real property and personal property (see *Property Appraisal and Assessment Administration* IAAO 1990, Appendix 1-1] and Gloudemans [1999, chapter 6]). In addition, appraisal ratio studies can be used for agricultural or other properties not appraised on an ad valorem basis. In this case, the appraisals should reflect the use value or other statutory basis on which the properties are appraised.

8.2 Advantages and Disadvantages

Appraisal ratio studies have both advantages and disadvantages. The advantages of appraisal ratio studies are

- the ability to sample from areas or property types with insufficient sales information
- a high degree of control in sample size that enables the analyst to treat jurisdictions equally, regardless of the availability of market information
- the avoidance of nonrepresentativeness stemming from the use of sales samples that may not represent the property population.
- the size of the sample can be specified and
- the initial sample can be randomly drawn, thus helping to maximize representativeness.

If objectivity can be maintained, the appraisal ratio study avoids potential distortions due to systematic differences

between appraisals of sampled and unsampled properties. In addition, independent appraisals can be used to test for systematic differences between appraisals of sold and unsold properties.

A disadvantage of appraisal ratio studies is the extra time and cost involved with the independent appraisal process. The subject and any comparables should be physically inspected and the appraisals documented according to appropriate standards. Applicable USPAP guidelines should be followed. Independent single-property appraisals should be developed in compliance with *Standard 1*, should be reported in compliance with *Standard 2*, and should be reviewed in compliance with *Standard 3* of USPAP. Independent appraisals done with a mass appraisal model should be developed and reported in compliance with *Standard 6* of USPAP. Another disadvantage is that appraisals are an opinion of value. Accordingly, they should be documented and tested against the market. However, this becomes difficult when sales data are scarce. To reduce this disadvantage, appraisal ratio study analysts should ensure that appraisals are carefully reviewed and allow local appraisers to submit appraisal information that may affect the value conclusion (see *Standard on Oversight Agency Responsibilities* [IAAO 2010]). Where adequate sales are available, independent appraisals should be checked for consistency with sales.

8.3 Sample Selection and Resource Requirements

Sample selection and resource planning in appraisal ratio studies require knowledge of statistical sampling, estimation principles, and available resources. Judgment must be used, because the determination of an adequate sample can require more information than is available during the design and planning phase, such as the actual variation within the final ratio data sets (see section 6.2, “Adequacy of a Given Sample Size,” in Part 1). Moreover, the cost of the study increases with the size of the sample. Therefore, the value of more reliable information must be balanced against the costs of obtaining that information.

In determining the size of the sample for each stratum, the following should be taken into consideration:

1. the required precision (typically measured by the margin of error) of the estimate of the appraisal level, for example, ± 0.05
2. the required confidence level, for example, 95 percent
3. the amount of dispersion expected in the final ratio data set
4. the wastage associated with properties that cannot be efficiently appraised or appraisals that cannot be used for one reason or another (see Gloudemans [1999, chapter 6] for sample size

formulas and required input variables; also see Sherrill and Whorton [1991]).

Once the desired size of an appraisal sample has been determined, the individual properties that will constitute the sample should be selected using a statistically valid sampling plan. Stratified random sampling is preferred.

If value stratification is used, sample properties selected from value groups during resource planning can shift into other value groups before completion of the study, thus reducing the ultimate representativeness of the sample. Some appraisal parcels may need to be removed from the sample when anomalous conditions are discovered such as environmental contamination (sufficiently reliable valuations may be prohibitively difficult or resource intensive) or when the independent appraiser is not allowed access to the property. Any sample parcels that are voided or that shift from a stratum because of value changes should be replaced if possible.

Appraisal ratio studies, as with sales ratio studies, require informed, reasoned judgment to maximize sample representativeness and statistical reliability.

8.4 Data Requirements and Appraisal Techniques

The appraisal techniques selected for an appraisal ratio study should be consistent with accepted appraisal principles and practices. The appraisals should reflect the appraisal date in question and should be well documented. Statistical software should be used as much as possible to expand analytical capabilities and perform calculations.

The appraisals used in appraisal ratio studies can be based on CAMA and automated valuation model (AVM) techniques (see *Standard on Automated Valuation Models*, [IAAO 2003]). The models used must be developed independently from those used for assessment purposes. Adequate market data and property characteristic data are required to develop reliable and defensible model estimates. If available, sales from a later period can be used to expand sample size. However, as in sales-based ratio studies, sales derived from primary assessing jurisdictions should be reviewed to ensure accuracy and validity. CAMA and AVM models have the advantage of reducing costs, permitting the use of larger, more representative samples. CAMA and AVM models developed for equalization must focus on the adequacy of overall, not individual, value or level of assessment estimates.

Because the purpose of the appraisal is to make an *independent* value estimate, not audit the assessor’s work, the appraisals should be made without knowledge of the assessor’s value. Appraisers should *not* be supplied with copies of the assessor’s appraisal work sheets or model information. Supervisors should spot-check and review the work of staff appraisers to ensure that the required independence is maintained. When the purpose of the ratio study is equal-

ization or performance measurement, rather than internal quality assurance, the appraisals should not be revealed to the assessor until the assessor's values are final.

8.5 Appraisal Chasing

Appraisal chasing can take two forms, either of which reduces or destroys the validity of the ratio study. The first occurs when an independent appraiser knows the local appraised value and either consciously or unconsciously biases the independent appraised value towards the local appraised value. Independent appraisers should not have access to the local appraiser's values or appraisal work papers prior to completing their appraisals. Also, independent appraisals should be reviewed and tested against the market.

The second form of appraisal chasing occurs when the local appraisal jurisdiction knows which properties are in the ratio study appraisal sample and adjusts local appraised values on some or all of these properties to achieve better ratios without making similar adjustments to unsampled properties. This form of appraisal chasing is similar to sales chasing and has similar consequences (see Appendix E, "Sales Chasing Detection Techniques"). Ratio study analysts should guard against this form of appraisal chasing by withholding the release of sample information until the local appraisal office's values are final. If this form of appraisal chasing occurs, the oversight agency can use local values prior to adjustment to provide a more accurate representation of the population ratios.

8.6 Reviewing of Appraisals

Appraisal supervisors should review appraisal models or individual single-property appraisals to ensure that USPAP and the agency's standards are met. It also is good practice to include some recently sold properties in the sample being appraised as a check on the validity of the methods being applied. In addition, the assessor must be afforded an opportunity to review the appraisals along with supporting documentation and to submit information supporting different value conclusions. If different value conclusions or factual information would materially affect the outcome of the study, a procedure for resolving conflicts, for example, by an independent review body, should be established.

8.7 Combining of Sales and Appraisals

Appraisals can be combined with valid sales in a ratio study. Using available sales adds objectivity to the study and reduces the required number of appraisals. On the other hand, combining sales and appraisals mixes two market indicators. If sales and appraisals are combined, an analysis should be performed to test the consistency of measures of central tendency derived from the sales ratios compared to the same measures derived from the appraisal ratios. A Mann-Whitney test comparing values per unit or comparing ratios based on sales with those based on appraisals is

appropriate for this purpose. Significant differences can result from several of the following conditions:

1. Sales have been chased.
2. Sales and appraisals came from different geographic areas with different markets and different levels of appraisal (maximize representativeness by stratifying).
3. Sales and appraisals have different property characteristics that cause different levels of appraisal.
4. All or some of the sales are invalid.
5. Outlier ratios are causing sale/appraisal ratio differences.
6. All or some of the appraisals are inaccurate.

If none of the first five conditions listed above apply, the appraisals should be tested against the market and revised as necessary (see Wooten, 2003).

Variability measures computed on sales used in the sample should not be expected to be similar to variability measures computed on appraisals. Sales ratios reflect the vagaries of the marketplace. Appraisal ratios, on the other hand, come from comparing the results of one appraisal model (the oversight agency's) to the results of another (the assessing office's). If both parties use mass appraisal procedures, differences in appraisals between the two models should be less than when compared with sales; thus, variability measures based on appraisal ratios can be expected to be lower than those based on sales ratios as long as they represent properties with similar characteristics and similar degrees of appraisal difficulty.

8.8 Average Unit Value Comparisons

In addition to a traditional ratio study, "expert" appraisals can take the form of average unit values and be compared against the assessor's average unit value for the same parcels. In this technique, parcels are stratified into homogeneous groups, as they would be for appraisal purposes. Appropriate units of comparison are identified for each group, and average unit values are determined through an analysis of available sales, cost, and income data. The assessor's average unit values for the same strata are then calculated and the two averages are compared. Average unit value comparisons is well-rooted in mass appraisal theory and offers an alternative to the time and expense associated with the selection and appraisal of individual parcels.

9. Estimating Performance for Unsold Properties

The objective of a ratio study is to determine appraisal performance for the population of properties. As long as sold and unsold parcels are appraised in the same man-

ner and the data describing them are coded consistently, statistics calculated in a sales ratio study can be used to infer appraisal performance for unsold parcels. However, if parcels that sell are selectively reappraised or recoded, based on their sale prices or some other criterion (such as listing price) and if such parcels are in the ratio study, sales ratio study uniformity inferences will not be accurate (appraisals will appear more uniform than they are). In this situation, measures of appraisal level will also be unsupported unless similar unsold parcels were appraised by a model that produces the same overall percentage of market value (appraisal level) as the parcels that sold.

Oversight agencies must ensure that sold and unsold parcels are appraised at the same level. Several techniques are available for determining whether assessors are selectively appraising sold parcels (see Appendix E, “Sales Chasing Detection Techniques,” or *Property Appraisal and Assessment Administration* [IAAO 1990, Appendix 20-2] and Gloudemans [1999, chapter 6] for a more detailed discussion).

If unsold properties within a properly specified group are not appraised consistently with sold properties within the same group and according to applicable guidelines, unadjusted sales ratio results cannot be used. The oversight agency will have to adjust calculated results or conduct an alternative study.

Once it is determined that *sales chasing* probably has occurred and probably is reducing the validity of ratio study statistical measures of level or uniformity, it is necessary to redo the ratio study to establish valid measures before any other recommendations, such as reappraisal or equalization action, can be made. If feasible, probably the best approach is to select a sample period that effectively precludes sales chasing. For example, when the lien or appraisal date is January 1, many jurisdictions use sales occurring before that date to make valuation decisions. To test the resulting valuations, it would be appropriate to use sales occurring after January 1 (or after the last date for changing assessments for the year in question), provided such data are time-adjusted (when necessary) backward to match the appraisal date. As a slight variation on this principle, earlier sales could be used, except when sales chasing is detected, in which case it is appropriate to switch to a later, post-appraisal-date sales period.

Legal or practical constraints can prevent use of optimal sample periods in many cases. In these situations, it is important to determine the exact cause of the sales chasing. For example, if a large proportion of selling properties are appealed and if appeal boards typically adjust to sale price, the result is the same as sales chasing by the assessor. One solution is to use appraised values prior to the action of the appeal board, provided that the appeal adjustment is not merely the result of an atypical clerical or other error. Another approach is to use current sales prices and prior-year values, adjusted for reappraisal

activity or assessment value changes in the population. The percentage increase or decrease in the prior-year’s appraised values for the population (net of new construction) should be used to adjust the prior-year’s values for the sample (Gloudemans 1999).

10. Presentation of Findings, Documentation, and Training

Oversight agencies should produce ratio studies in a manner that is transparent in all stages to all stakeholders.

(See section 8, Part 1.)

11. Ratio Study Standards

Each state and province should have ratio study performance standards. These standards, summarized in table 2-3, are suggested for jurisdictions in which current market value is the legal basis for assessment. In general, when state and provincial standards are not met, reappraisal or other corrective measures should be taken or equalization procedures can be imposed. When an oversight agency orders such actions, the burden of proof should be on the agency to show that the standards have not been achieved.

All standards recommended in this section are predicated on the assumption that all practicable steps necessary to maximize representativeness and validity in the underlying ratio studies have been conducted.

11.1 Level of Appraisal

The calculated measures of central tendency are point estimates and provide only an indication, not proof, of whether the level meets the appropriate goal. Confidence intervals and statistical tests should be used to determine whether the appraisal level differs from the established goal in a particular instance.

A decision by an oversight agency to take some action (direct equalization, indirect equalization, reappraisal) can have profound consequences for taxpayers, taxing jurisdictions, and other affected parties. This decision should not be made without a high degree of certainty that the action is warranted. Conversely, a decision not to take action when action is needed can have equally profound consequences. Oversight agencies should weigh all the options and consider the issues discussed below when developing or revising a level-of-appraisal standard, and when developing equalization or other appraisal oversight procedures.

11.1.1 Purpose of Level-of-Appraisal Standard

Jurisdictions that follow the IAAO recommendation of annual reassessments and comply with USPAP standards should be able to develop mass appraisal models that maintain an overall ratio level of 100 percent (or very near thereto). The local assessor may be required to observe reap-

Table 2-3. Ratio study uniformity standards indicating acceptable general quality*

General Property Class	Jurisdiction Size/Profile/Market Activity	COD Range
Residential improved (single family dwellings, condominiums, manuf. housing, 2-4 family units)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 10.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 15.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 20.0
Income-producing properties (commercial, industrial, apartments,)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 20.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 25.0
Residential vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/slower development/less active markets	5.0 to 20.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 25.0
Other (non-agricultural) vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 20.0
	Large to mid-sized jurisdictions/slower development/less active markets	5.0 to 25.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 30.0

These types of property are provided for general guidance only and may not represent jurisdictional requirements.

**The COD performance recommendations are based upon representative and adequate sample sizes, with outliers trimmed and a 95% level of confidence.*

**Appraisal level recommendation for each type of property shown should be between 0.90 and 1.10.*

**PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity. However, PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted.*

**Alternatively, assessing officials can rely on the PRB, which is less sensitive to atypical prices and ratios. PRB coefficients should generally fall between $-.05$ and $.05$. PRBs that are statistically significant and less than -0.10 or greater than 0.10 indicate unacceptable vertical inequities.*

**CODs lower than 5.0 may indicate sales chasing or non-representative samples.*

praisal cycles defined by a legal authority or public policy that can extend beyond one year. During extended cycles inflation or deflation can influence the overall ratio.

The purpose of a performance standard that allows reasonable variation from 100 percent of market value is to recognize uncontrollable sampling error and the limiting conditions that may constrain the degree of accuracy that is possible and cost-effective within an assessment jurisdiction. Further, the effect of performance standards on local assessors must be considered in light of expectations of public policy and resources available. For these reasons, states or oversight agencies may adopt performance standards for appraisal level that allow some variance from the 100 percent goal of market value.

11.1.2 Recommended Appraisal Level Standards for Direct and Indirect Equalization

The performance standard adopted by an oversight agency should be a range around the legally required level of appraisal in a property class or an overall jurisdiction. This range should be 90 to 110 percent of the legally required level of appraisal for direct equalization or reappraisal, or 95 to 105 percent for indirect equalization. A smaller maximum range for indirect equalization is justified because taxpayers are not as comprehensively affected. Oversight agencies should adopt performance standards that are as close to the legally required level as can be justified given the local situation and taking into account

the factors discussed herein.

In addition to the above appraisal level standards, each class of property for which appraisal level standards have been defined must be within 5 percent of the overall level of appraisal of the jurisdiction (see section 11.2.3, “Uniformity among Strata,” in this part). Both criteria must be met.

11.1.3 Confidence Intervals in Conjunction with Performance Standards

By themselves, the calculated measures of central tendency provide only an indication, not proof, of whether the appraisal level meets the performance standard. So, the purpose of confidence intervals and similar statistical tests is to determine whether the appraisal level differs from the established performance standard in a particular instance. A conclusion of noncompliance requires a high degree of confidence, thus a 90 percent (two-tailed) or 95 percent (one-tailed) confidence interval should be used, except for small or highly variable samples as described in section 11.1.5, “Adjustment for High Variability and Small Samples,” in this part.

11.1.4 Decision Model

The oversight agency should determine whether the estimate is outside the acceptable range around the legal level of appraisal with a specified degree of statistical significance. The chosen interval should overlap the performance standard range of 90 percent to 110 percent

in the case of direct equalization or measuring appraisal performance. For indirect equalization the chosen interval should overlap the performance standard range of 95 percent to 105 percent. If the confidence interval does not overlap any portion of the appropriate range, equalization is performed or reappraisal orders are issued. See table 2-4 for an example of the direct equalization or appraisal performance decision making process.

11.1.5 Adjustments for High Variability and Small Samples

High variability, small sample size, or a combination of these factors often causes confidence intervals to become quite wide. Wide confidence intervals reflect the imprecision of the underlying statistic and can decrease the usefulness of performance measures. Also, wide confidence intervals can cause an inequitable situation in which jurisdictions with small samples and large variability are never subject to equalization or reappraisal orders, while jurisdictions with larger samples and much less variability are more likely to be subject to such orders even though their appraisal performance may be arguably better.

For these reasons, oversight agencies should consider expanding sample sizes by taking steps to increase the number of sales or by making independent appraisals (see section 7.4 part 2). If the sample size cannot be increased, two options may be considered when the point estimate fails to achieve compliance but the confidence interval overlaps the range of compliance:

- If a particular point estimate does not meet the standard for the current study cycle the oversight agency may reduce the level of confidence by 5% the following year. This may be followed by an annual stepwise reduction of 5%. Such a reduction may continue to a 70 percent level of confidence if the point estimate fails to meet the compliance threshold over this period of time. Corrective action would be imposed when a given year's confidence interval fails to include the performance standard range.
- The oversight agency may examine statistical point estimates over several study cycles. A jurisdiction that fails to meet a particular point standard for 5 consecutive years has a probability of less than 5% that compliance has been achieved, even if

the confidence interval overlaps the compliance threshold every year. In such cases the oversight agency would impose corrective decisions based upon the point estimate.

11.1.6 Calculating Equalization Adjustments

If noncompliance with either direct or indirect equalization standards is indicated, the appropriate point estimate (statistic) measuring appraisal level should be used to calculate adjustment factors, by dividing it into 100 percent.

11.2 Appraisal Uniformity

Assuming the existence of an adequate and sufficiently representative sample, if the uniformity of appraisal is unacceptable, reappraisal should be undertaken regardless of the level of appraisal. The oversight agency should recognize that the COD is a point estimate and cannot be accepted as proof of assessment uniformity problems without an appropriate degree of statistical confidence. Such proof can be provided by recognized statistical tests, including bootstrap confidence intervals. If the data are normally distributed, the COV and confidence intervals around this measure also can be determined. Then the COV can be mathematically converted into an equivalent COD.

11.2.1 Oversight Uniformity Standards

Oversight agencies should establish uniformity standards for local assessment jurisdictions. Any COD performance standards applied to strata within a particular jurisdiction should be related to the overall size, profile of property characteristics (type, age, condition, and obsolescence) and market activity. In general, tighter uniformity standards can be applied to larger jurisdictions with newer construction and active markets. And generally, less stringent uniformity standards should be applied to older, economically depressed or less densely developed areas with less efficient markets. Standards should also be relaxed in jurisdictions that experience economic instability due to sudden changes in supply or demand factors. In developing uniformity standards, oversight agencies should consider reasonable tolerance ranges in making compliance decisions.

11.2.2 Multi-level Uniformity Standards

The uniformity standards presented in table 2-3 are defined in terms of the COD (point estimate) measure and are

Table 2-4. Ratio Study Standards and Decision Making—Direct Equalization or Appraisal Performance Using Median 90%–110% Standard

Example demonstrating application of standard at a 95% level of confidence

Case	Point Estimate	Confidence Interval (CI) Width (95%)	CI Overlaps Performance Standard Range	Point Estimate in Performance Standard Range	Equalization Action or Reappraisal Order
1	92%	86% to 101%	yes	yes	no
2	88%	81% to 95%	yes	no	no
3	84%	79% to 88%	no	no	yes

intended to apply to ratio studies based on sales, not those based on independent appraisals in which lower CODs often are typically observed. If reliability measures are not employed, sample size will play a critical role in setting the maximum acceptable COD. In addition, in unusually homogeneous or restrictive markets or for properties subject to use-value or similar constrained value assessment, low CODs also can be anticipated. In all other cases, CODs less than 5 percent should be considered unusual and possibly indicative of nonrepresentative samples or the selective reappraisal of sold parcels. The COD standards in table 2-3 may not be applicable to property strata in unique, depressed, or rapidly changing markets. In such cases, assessment administrators may be able to develop target standards based on an analysis of past performance or results in similar markets elsewhere. Such an analysis can be based on ratio study results for the past five years or more.

11.2.3 Uniformity among Strata

Although the goal is to achieve an overall level of appraisal equal to 100 percent of the legal requirement, ensuring uniformity in appraisal levels among strata is also important. The level of appraisal of each stratum (class, neighborhood, age group, market areas, and the like) should be within 5 percent of the overall level of appraisal of the jurisdiction. For example, if the overall level of appraisal of the jurisdiction is 1.00, but the appraisal level for residential property is 0.93 and the appraisal level for commercial property is 1.06 the jurisdiction is not in compliance with this requirement. This test should be applied only to strata subject to compliance testing. The oversight agency can conclude that this standard has been met if 95 percent (two-tailed) confidence intervals about the chosen measures of central tendency for each of the stratum fall within 5 percent of the overall level of appraisal calculated for the jurisdiction. Using the above example, if the upper confidence limit for the level of residential property is 0.97 and the lower confidence limit for commercial property is 1.01, the two strata are within the acceptable range.

11.2.4 Vertical Equity

PRDs should be between 0.98 and 1.03. The reason this range is not centered on 1.00 relates to an inherent upward bias in the arithmetic mean (numerator in the PRD) that does not equally affect the weighted mean (denominator in the PRD). When samples are small, have high dispersion, or include properties with extreme values, the PRD may not provide an accurate indication of assessment regressivity or progressivity. When relying on the PRD to measure vertical equity, it is good practice to perform an appropriate statistical test for price-related biases before concluding that they exist (see table 1-2 in Part 1).

The PRB provides a measure of price-related bias that is more meaningful and less sensitive to extreme prices or ratios. As a general matter, the PRB coefficient should fall between -0.05 and 0.05 . PRBs for which 95% confidence intervals fall outside of this range indicate that one can reasonably conclude that assessment levels change by more than 5% when values are halved or doubled. PRBs for which 95% confidence intervals fall outside the range of -0.10 to 0.10 indicate unacceptable vertical inequities.

As an illustration of the above, assume that the PRB is -0.115 with a standard error of 0.02 and corresponding 95% confidence interval of -0.075 to -0.155 (-0.115 ± 0.04 approximately). One can conclude with 95% confidence that assessment levels change by at least 7.5% when values double or are halved but not that assessment levels change by at least 10%. This result would not be out of compliance with the ± 0.10 standard.

11.3 Natural Disasters and Ratio Study Standards

Natural disasters such as earthquakes, floods, and hurricanes can have a substantial impact on the conduct of ratio studies and the interpretation and use of the results, and in general, they:

- increase the difficulty of accurately identifying the physical and economic characteristics of property on the dates of sale/lease and the date of appraisal
- increase the difficulty of producing sufficiently reliable appraised values (numerators)
- decrease the availability of usable sales and other market data
- increase the difficulty of identifying and obtaining such usable data
- increase the difficulty of producing sufficiently reliable independent appraisals
- increase the difficulty of accurately matching the characteristics of numerators with those of denominators

These potential problems can result from extraordinary changes in market conditions and in the physical and economic characteristics of property between the dates of sale/lease and the date of appraisal. As a result of these potential problems, a number of unreliable sample properties may need to be voided and usable sample sizes can be reduced significantly. All of these factors should be considered when ratio study standards are applied to ratio study results from areas substantially affected by natural disasters, but such consideration must not result in unwarranted relaxation of applicable standards. When faced with such situations, oversight agencies must use informed, reasoned judgment and common sense to pro-

duce a sufficiently reliable ratio study, based upon the best information available.

12. Personal Property Studies

Most personal property ratio studies performed by oversight agencies are performed for equalization purposes. Because indirect equalization in particular requires overall estimation of value, it is imperative for these ratio studies to focus on large accounts.

Horizontal equity requires similar levels of appraisal between real and personal property. Sales data for personal property are difficult to obtain and analyze because markets for personal property are generally less visible and more difficult to follow than real property markets. Therefore, performance reviews and appraisal ratio studies should be used in place of sales ratio studies to determine the quality of appraisal of personal property. The performance review does not quantify assessment conditions but can determine general assessment quality. The appraisal ratio study can be used to determine the level and uniformity of assessment for personal property.

12.1. The Performance Review

The performance review is an empirical study that evaluates the assessment method used and the ability of the jurisdiction to meet its legal requirement in the assessment of personal property. This type of study can be used to allocate tax dollars in multijurisdictional funding calculations or equalization by assuming that jurisdictions passing the performance review are assessing personal property at the general level of other classes of property analyzed with ratio studies.

12.1.1. Discovery

The jurisdiction must have the ability to discover the owners or users of taxable personal property within the jurisdiction. This is accomplished using phone books, business/occupational licenses, listings, sales tax rolls, and field reviews (see IAAO Course 500, “The Assessment of Personal Property,” and *Standard on Valuation of Personal Property* [IAAO 2005] for a complete list).

12.1.2. Valuation

Personal property is valued by using acceptable schedules and methods including depreciation schedules published by nationally recognized valuation firms, market data from published valuation guides, and other generally accepted valuation methods and acceptable adjustments (see *Standard on Valuation of Personal Property*).

12.1.3. Verification

Inclusiveness of personal property returns and reports should be verified by an audit program. The audit program should focus on larger and complex accounts; however, it also should include randomly selected accounts. The audit program should provide coverage of the entire tax base regardless of the jurisdiction’s reappraisal cycle.

12.1.4 Forms and Renditions

Comprehensive forms supplied by the assessment authority should allow the taxpayer to disclose fully all assessable personal property. The tax laws should require mandatory compliance, with meaningful penalties for noncompliance.

12.2. Appraisal Ratio Studies for Personal Property

The appraisal ratio study produces an estimate of the level of assessment of personal property by developing a ratio for property that is on the tax roll through the use of appraisals. The level of assessment determined in this way can be adjusted downward to account for property that has not been assessed.

12.2.1 Assessment Ratio for Personal Property

Personal property market values are usually derived from appraisals using a replacement cost new less depreciation (RCNLD) approach (see IAAO Course 500). A comparison of the depreciation schedules in use to nationally accepted schedules would enable the calculation of a ratio for property on the roll. A statistically sound process should be used to select a sample that is representative of personal property on the tax rolls. Such a sample can be parcel- or value-based depending on the intended use of the ratio study in indirect or direct equalization.

12.2.2 Stratification

Proper stratification of personal property accounts should be done for greater statistical accuracy. Strata should be based on the type and value of personal property accounts.

Stratification by type of account should occur first. Personal property accounts can be divided into residential (motor vehicles, boats, aircraft, and the like), agriculture, and business accounts. Further stratification can occur in residential and agricultural accounts but is necessary in business or commercial accounts. Business accounts are usually stratified by size into a minimum of four groups. Value ranges for these groups should be derived from the value ranges in the local market. One example would be small (less than \$250,000), medium (\$250,000 to \$1 million), moderate (\$1–\$5 million), and large (greater than

\$5 million). Individual size of account can be determined by value on the prior-year personal property roll.

12.2.3 Property Escaping Assessment

Personal property is particularly prone to escaping assessment. Some determination should be made about the portion of taxable personal property not on the assessment roll. However, estimates based on national averages are less meaningful at the local jurisdictional level.

12.2.3.1 Identifying Personal Property Owners and Users Not on the Roll

Discovery tools can be used to determine accounts not on the roll for a sample area or group. Once the extent of the problem is identified, a projection can be made of the percentage of personal property not identified on the assessment roll.

12.2.3.2 Identifying Personal Property Not Included in Taxpayer Returns/Reports

The accepted method of determining the property omitted in taxpayer returns/reports is to audit the account

(see IAAO workshops on auditing). The audit results are applied back to the account value. The resulting fraction is property that is escaping taxation within that particular personal property account. If appropriate sampling techniques are used in selecting the accounts for audit, the resulting ratio is applied to the total roll to help determine the percentage of personal property escaping assessment within the jurisdiction.

12.2.4 Computing the Level of Appraisal

The overall ratio is then determined by reducing the valuation ratio by the percent of property wholly or partially escaping taxation. For example, if the appraisal level is found to be 90 percent and it is determined that 5 percent of personal property is escaping assessment, then the corrected level of assessment is the appraisal level times the percentage of personal property assessed: $0.90 \times (1 - 0.05) = 0.855$. For indirect equalization, this calculation would result in a higher equalized value.

Standard on Ratio Studies

Definitions

Absolute value. The value of a number (or variable) regardless of its sign. For example, 3 and -3 (minus 3) both have an absolute value of 3. The mathematical symbol for absolute value is one vertical bar on each side of the number in question, for example, $|3|$.

Accuracy. The closeness of a measurement, computation, or estimate to the true, exact, or accepted value. Accuracy also can be expressed as a range about the true value. *See also precision and statistical accuracy.*

Adjusted sale price. The sale price that results from adjustments made to the stated sale price to account for the effects of time, personal property, financing, or the like.

Appraisal. “The act or process of developing an opinion of value; an opinion of value” (USPAP 1999). The act of estimating the money value of property. The money value of property as estimated by an appraiser.

Appraisal date. The date as of which a property’s value is estimated. *See also assessment date.*

Appraisal ratio. (1) The ratio of the appraised value to an indicator of market value. (2) By extension, an estimated fractional relationship between the appraisals and market values of a group of properties. *See also level of appraisal.*

Appraisal ratio study. A ratio study using independent expert appraisals as indicators of market value.

Appraisal-sale price ratio. The ratio of the appraised value to the sale price (or adjusted sale price) of a property; a simple indication of appraisal accuracy.

Appraised value. The estimate of the value of a property before application of any fractional assessment ratio, partial exemption, or other adjustments.

Arithmetic mean. A measure of central tendency. The result of adding all the values of a variable and dividing by the number of values. For example, the arithmetic mean of 3, 5, and 10 is 18 divided by 3 or 6.

Array. An ordered arrangement of data, such as a listing of sales ratios, in order of magnitude.

Assessed value. (1) A value set on real estate and personal property by a government as a basis for levying taxes. (2) The monetary amount at which a property is put on the assessment roll for purposes of computing the tax levy. Assessed values differ from the assessor’s estimate of actual (market) value for four major reasons: fractional assessment ratios, partial exemptions, preferential assessments, and decisions by assessing officials to override market value.

Assessment. (1) In general, the official acts of determining the amount of the tax base. (2) As applied to property taxes, the official act of discovering, listing, and appraising property, whether performed by an assessor, a board of review, or a court. (3) The value placed on property in the course of such act.

Assessment-appraisal ratio. The ratio of the assessed value of a property to an independent appraisal.

Assessment date. The status date for tax purposes. Appraised values reflect the status of the property and any partially completed construction as of this date.

Assessment progressivity (regressivity). An appraisal bias such that high-value properties are appraised higher (or lower) than low-value properties in relation to market values. *See also price-related differential (PRD) and coefficient of price-related bias (PRB).*

Assessment ratio. (1) The fractional relationship of an assessed value to the market value of the property in question. (2) By extension, the fractional relationship of the total of the assessment roll to the total market value of all taxable property in a jurisdiction. *See also level of assessment.*

Assessment-sale price ratio. The ratio of the assessed value to the sale price (or adjusted sale price) of a property.

Assessor. (1) The head of an assessment jurisdiction. Assessors can be either elected or appointed. In this standard the term is sometimes used collectively to refer to all assessment officials charged with administering the assessment function. (2) The public officer or member of a public body whose duty it is to make the original assessment.

Average deviation. The arithmetic mean of the absolute deviations of a set of numbers from a measure of central tendency such as the median. Taking absolute values is generally understood without being stated. The average deviation of the numbers 4, 6, and 10 about their median (6) is $(2 + 0 + 4) \div 3 = 2$. The average deviation is used in computing the coefficient of dispersion (COD).

Bias. A type of nonsampling error in which a calculated statistic differs systematically from the population parameter. A process is biased if it produces results that vary systematically with some factor that should be irrelevant. In assessment administration, assessment progressivity (regressivity) is one kind of possible bias.

Bootstrap. A computer-intensive method of statistical inference that is based on a repeated resampling of data to provide more information about the population charac-

teristics. The bootstrap is a data-driven procedure that is particularly useful for confidence interval approximation when no traditional formulas are available or the sample has been drawn from a population that does not conform to the normal distribution.

CAMA. *See* **computer-assisted mass appraisal**

Central tendency. (1) The tendency of most kinds of data to cluster around some typical or central value, such as the mean or median. (2) By extension, any or all such statistics. Some kinds of data, however, such as the weights of cars and trucks, may cluster about two or more values, and in such circumstances the meaning of central tendency becomes unclear. This may happen in ratio studies in which two or more classes of property are combined.

Class. A set of items defined by common characteristics. (1) In property taxation, property classes such as residential, agricultural, and industrial may be defined. (2) In assessment, building classification systems based on type of building design, quality of construction, or structural type are common. (3) In statistics, a predefined category into which data may be put for further analysis. For example, ratios may be grouped into the following classes: less than 0.500, 0.500 to 0.599, 0.600 to 0.699, and so forth.

COD. *See* **coefficient of dispersion.**

Coefficient of concentration. The percentage of observations falling within a specified percentage (say, 15 percent) of a measure of central tendency.

Coefficient of dispersion (COD). The average deviation of a group of numbers from the median expressed as a percentage of the median. In ratio studies, the average percentage deviation from the median ratio.

Coefficient of price-related bias (PRB). An index of price-related bias obtained by regressing percentage deviations from the median ratio on percentage changes in a value proxy, which is obtained by giving equal weight to assessments and sales prices so as to minimize measurement biases.

Coefficient of variation (COV). A standard statistical measure of the relative dispersion of the sample data about the mean of the data; the standard deviation expressed as a percentage of the mean.

Computer-assisted mass appraisal (CAMA). A process that uses a system of integrated components and software tools necessary to support the appraisal of a universe of properties through the use of mathematical models that represent the relationship between property values and supply/demand factors.

Confidence interval. A range of values, calculated from the sample observations, that are believed, with a particular probability, to contain the true population parameter (mean, median, COD). The confidence interval is not

a measure of precision for the sample statistic or point estimate, but a measure of the precision of the sampling process (see **reliability**).

Confidence level. The degree of probability associated with a statistical test or confidence interval, commonly 90, 95, or 99 percent. For example, a 95 percent confidence interval implies that were the estimation process repeated again and again, then 95 percent of the calculated intervals would be expected to contain the true population measure (such as the median, mean, or COD).

Contributory value. The amount a component of a property contributes to the total market value. For improvements, contributory value must be distinguished from costs.

COV. *See* **coefficient of variation.**

Date of sale (date of transfer). The date on which the sale was consummated. This is considered to be the date the deed, or other instrument of transfer, is signed. The date of recording can be used as a proxy if it is not unduly delayed as it would be in a land contract.

Direct equalization. The process of converting ratio study results into adjustment factors (trends) and changing locally determined appraised or assessed values to more nearly reflect market value or the legally required level of assessment. *See also* **equalization** and **indirect equalization**.

Dispersion. The degree to which data are distributed either tightly or loosely around a measure of central tendency. Measures of dispersion include the range, average deviation, standard deviation, coefficient of dispersion, and coefficient of variation.

Distribution-free statistics. A set of robust nonparametric methods whose interpretation or reliability does not depend on stringent assumptions about the distribution of the underlying population from which the sample has been drawn. *See also* **parametric statistics**.

Equalization. The process by which an appropriate governmental body attempts to ensure that property under its jurisdiction is assessed at the same assessment ratio or at the ratio or ratios required by law. Equalization can be undertaken at many different levels. Equalization among use classes (such as agricultural and industrial property) can be undertaken at the local level, among properties in a school district and a transportation district; equalization among counties is usually undertaken by the state to ensure that its aid payments are distributed fairly. *See also* **direct equalization** and **indirect equalization**.

Exploratory data analysis. That part of statistical practice concerned with reviewing the data set to isolate structures, uncover patterns, or reveal features that may improve the confirmatory analysis.

Fixture. An asset that has become part of real estate through attachment in such a manner that its removal

would result in a loss in value to either the asset or the real estate to which the asset is affixed.

Fractional assessments. Assessments that by law or by practice have assessment ratios different from 1. Usually the assessment ratio is less than 1, and if assessment biases are present, different classes of property may have different fractional ratios.

Frequency distribution. A table or chart showing the number or percentage of observations falling in the boundaries of a given set of classes. Used in ratio studies to summarize the distribution of the individual ratios. *See also class and histogram.*

Histogram. A bar chart or graph of a frequency distribution in which the frequencies of the various classes are indicated by horizontal or vertical bars whose lengths are proportional to the number or percentage of observations in each class.

Hypothesis. A statement in inferential statistics, the truth of which the analyst is interested in determining.

Independent appraisal. An estimate of value using a model different from that used for assessment purposes. Independent appraisals are used to supplement sales in sales ratio studies or in appraisal ratio studies.

Indirect equalization. The process of computing hypothetical values that represent the oversight agency's best estimate of taxable value, given the legally required level of assessment or market value. Indirect equalization allows proper distribution of intergovernmental transfer payments between state or provincial and local governments despite different levels of appraisal between jurisdictions or property classes. *See also equalization and direct equalization.*

Interquartile range (IQR). The result obtained by subtracting the first quartile from the third quartile. By definition 50 percent of the observations fall within the IQR.

Land contract. An executor's contract for the purchase of real property under the terms of which legal title to the property is retained by the vendor until such time as all conditions stated in the contract have been fulfilled; commonly used for installment purchase of real property.

Level of appraisal. The common, or overall, ratio of appraised values to market values. Three concepts are usually of interest: the level required by law, the true or actual level, and the computed level based on a ratio study.

Level of assessment. The common or overall ratio of assessed values to market values. *See also level of appraisal.*
Note: The two terms are sometimes distinguished, but there is no convention determining their meanings when they are. Three concepts are commonly of interest: what the assessment ratio is legally required to be, what the assessment ratio for the population actually is, and what

the assessment ratio for the population seems to be, on the basis of a sample and application of inferential statistics. When level of assessment is distinguished from assessment ratio, *level of assessment* usually means either the legal requirement or the true ratio, and *assessment ratio* usually means the true ratio or the sample statistic.

Margin of error. A measure of the uncertainty associated with statistical estimates of a parameter. It is typically linked to consumer surveys or political poll questions. A margin of error is a key component of a confidence interval. It reports a "plus or minus" percentage or proportion quantity in a confidence interval at a specified level of probability (typically 95 percent). *See also confidence interval.*

Market value. The major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States is: The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: The buyer and seller are typically motivated; Both parties are well informed or well advised, and acting in what they consider their best interests; A reasonable time is allowed for exposure in the open market; Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. (See USPAP for additional comments.)

Mass appraisal. The process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing (see *USPAP*)

Mean. *See arithmetic mean.*

Median. A measure of central tendency. The value of the middle item in an uneven number of items arranged or arrayed according to size; the arithmetic average of the two central items in an even number of items similarly arranged.

Median absolute deviation. The median of the absolute deviations from the median. In a symmetrical distribution, the measure approximates one-half the IQR.

Median percent deviation. The median of the absolute percent deviations from the median; calculated by dividing the median absolute deviation by one-hundredth of the median.

Nonparametric statistics. *See* **distribution-free statistics.**

Nonsampling error. The error reflected in ratio study statistics from all sources other than sampling error. While nonsampling error is unavoidable due to the inefficiencies inherent in real property markets, the imperfections of the appraisal process, and the imperfections of conducting ratio studies, all practicable steps must be taken to minimize nonsampling error in ratio studies.

Normal distribution. A theoretical distribution often approximated in real world situations. It is symmetrical and bell-shaped; 68 percent of the observations occur within one standard deviation of the mean and 95 percent within two standard deviations of the mean.

Observation. One recording or occurrence of the value of a variable, for example, one sale ratio among a sample of sales ratios.

Outliers. Observations that have unusual values, that is, differ markedly from a measure of central tendency. Some outliers occur naturally; others are due to data errors.

Parameter. Numerical descriptive measure of the population, for example, the arithmetic mean or standard deviation. Parameters are generally unknown and estimated from statistics calculated from a sample of the population.

Parametric statistics. Statistics whose interpretation or reliability depends on the distribution of the underlying data. *See also* **distribution-free statistics.**

Percentile. The values that divide a set of data into specified percentages when the data are arrayed in ascending order. The tenth percentile includes the lowest 10 percent of the values, the twentieth percentile includes the lowest 20 percent of the values, and so forth.

Personal property. *See* **property.**

Plottage value. The excess of the value of a large parcel of land formed by assemblage over the sum of the values of the unassembled parcels.

Point estimate. A single numerical value that can be used to estimate a population parameter. It is calculated on the basis of information collected from a sample. Point estimates are generally constructed to provide the best unbiased estimate of the population parameter consistent with the sample data. However, the point estimate is only an estimate, and is unlikely to have the same value as the population parameter. (See **Confidence interval** and **Reliability** for discussion of precision of the sampling process.)

Points. Prepaid interest on a loan; one point is equal to 1 percent of the amount of the loan. It is common to deduct points in advance of the loan, so that an individual pays interest on 100 percent of the loan but gets cash on, say, only 99 percent.

Population. All the items of interest, for example, all the properties in a jurisdiction or neighborhood; all the observations in a data set from which a sample may be drawn.

Precision. The level of detail in which a quantity or value is expressed or represented. It can be characterized as the number of digits used to record a measurement. A high level of represented precision may be used to imply a greater level of accuracy; however, this relationship may not be true. Precision also relates to the quality of an operation or degree of refinement by which results are obtained. A method of measurement is considered precise if repeated measurements yield the same or nearly the same numeric value. *See also* **accuracy and statistical precision.**

PRB. *See* **coefficient of price-related bias.**

PRD. *See* **price-related differential.**

Price. The amount asked, offered, or paid for a property. (See USPAP [2004] for additional comments.)

Price-related differential. The mean divided by the weighted mean. The statistic has a slight bias upward. Price-related differentials above 1.03 tend to indicate assessment regressivity; price-related differentials below 0.98 tend to indicate assessment progressivity.

Progressivity. *See* **assessment progressivity (regressivity).**

Property. An aggregate of things or rights to things. These rights are protected by law. There are two basic types of property: real and personal. Real property consists of the interests, benefits, and rights inherent in the ownership of land plus anything permanently attached to the land or legally defined as immovable; the bundle of rights with which ownership of real estate is endowed. To the extent that “real estate” commonly includes land and any permanent improvements, the two terms can be understood to have the same meaning. Also called *realty*. Personal property is defined as those items that generally are movable or all items not specifically defined as real property. Many states include as personal property the costs associated with placing personal property in service, such as sales tax, freight, and installation. Installation items include, but are not limited to, wiring, foundations, hookups, and attachments. Two commonly used tests for distinguishing real and personal property are (1) the intent of the parties and (2) whether the item may be removed from the real estate without damage to either.

Qualified sale. A property transfer that satisfies the conditions of a valid sale and meets all other technical criteria for inclusion in a ratio study sample. If a property has undergone significant changes in physical characteristics, use, or condition in the period between the assessment date and sale date, it would not technically qualify for use in ratio study.

Quartiles. The values that divide a set of data into four equal parts when the data are arrayed in ascending order. The first quartile includes the lowest quarter of the data, the second quartile, the second lowest quarter, and so forth.

Random sample. A sample of n items selected from a population in such a way that each sample of the same size is equally likely. This also includes the case in which each element in the sample has an equal chance of being selected.

Range. (1) The maximum value of a sample minus the minimum value. (2) The difference between the maximum and minimum values that a variable may assume.

Ratio study. A study of the relationship between appraised or assessed values and market values. Indicators of market values may be either sales (sales ratio study) or independent “expert” appraisals (appraisal ratio study). Of common interest in ratio studies are the level and uniformity of the appraisals or assessments. *See also level of appraisal and level of assessment.*

Real property. *See property.*

Regressivity. *See assessment progressivity (regressivity).*

Regressivity index. *See price-related differential.*

Reliability. In a sampling process, the extent to which the process yields consistent population estimates. Ratio studies typically are based on samples. Statistics derived from these samples may be more or less likely to reflect the true condition in the population depending on the reliability of the sample. Representativeness, sample size, and sample uniformity all contribute to reliability. Formally, reliability is measured by sampling error or the width of the confidence interval at a specific confidence level relative to the central tendency measure.

Representative sample. A sample of observations from a larger population of observations, such that statistics calculated from the sample can be expected to represent the characteristics of the population being studied.

Sale price. (1) The actual amount of money exchanged for a unit of goods or services, whether or not established in a free and open market. An indicator of market value. (2) Loosely used synonymously with “offering” or “asking price.”

Sale ratio. The ratio of an appraisal (or assessed) value to the sale price or adjusted sale price of a property.

Sales chasing. Sales chasing is the practice of using the sale of a property to trigger a reappraisal of that property at or near the selling price. If sales with such appraisal adjustments are used in a ratio study, the practice causes invalid uniformity results and causes invalid appraisal level results, unless similar unsold parcels are reappraised by a method that produces an appraisal level for unsold properties equal

to the appraisal level of sold properties. (2) By extension, any practice that causes the analyzed sample to misrepresent the assessment performance for the entire population as a result of acts by the assessor’s office. A subtle, possibly inadvertent, variety of sales chasing occurs when the recorded property characteristics of sold properties are differentially changed relative to unsold properties. Then the application of a uniform valuation model to all properties results in the recently sold properties being more accurately appraised than the unsold ones.

Sales ratio study. A ratio study that uses sales prices as proxies for market values.

Sample. A set of observations selected from a population. If the sample was randomly selected, basic concepts of probability may be applied.

Sampling error. The error reflected in ratio study statistics that results solely from the fact that a sample of the population is used rather than a census of the population.

Scatter diagram or scatter plot. A graphic means of depicting the relationship or correlation between two variables by plotting one variable on the horizontal axis and one variable on the vertical axis. Often in ratio studies it is informative to determine how ratios are related to other variables. A variable of interest is plotted on the horizontal axis and ratios are plotted on the vertical axis.

Significance. A measure of the probability that an event is attributable to a relationship rather than merely the result of chance.

Skewed. The quality of a frequency distribution that makes it asymmetrical. Distributions with longer tails on the right than on the left are said to be skewed to the right or to be positively skewed. Distributions with longer tails to the left are said to be skewed to the left or to be negatively skewed.

Standard deviation. The statistic calculated from a set of numbers by subtracting the mean from each value and squaring the remainders, adding together all the squares, dividing by the size of the sample less one, and taking the square root of the result. When the data are normally distributed, the percentage of observations can be calculated within any number of standard deviations of the mean from normal probability tables. When the data are not normally distributed, the standard deviation is less meaningful and the analyst should proceed cautiously.

Standard error. A measure of the precision of a measure of central tendency; the smaller the standard error, the more reliable the measure of central tendency. Standard errors are used in calculating a confidence interval about the arithmetic mean and the weighted mean. The standard error of the sample mean is the standard deviation divided by the square root of the sample size.

Statistical accuracy. The closeness between the statistical estimate and the true (but unknown) population parameter value it was designed to measure. It is usually characterized in terms of error or the potential significance of error and can be decomposed into sampling error and nonsampling error components. Accuracy can be specified by the level of confidence selected for a statistical test. *See also* **accuracy**.

Statistical precision. A reference to how closely the survey results from a sample can reproduce the results that would be obtained from the entire population (a complete census). The amount by which a sample statistic can vary from the true population parameter is due to error. Even if all the sample data are perfectly accurate, random (sampling) error affects statistical precision (measured by the standard error or standard deviation). The dispersion of ratios in the population and the sample size have a controlling influence over the precision of any statistical estimate. When the reliability of a statistical measure is being evaluated, narrower confidence intervals have greater precision. *See also* **precision**.

Statistics. Numerical descriptive data calculated from a sample, for example, the median, mean, or COD. Statistics are used to estimate corresponding measures, termed parameters, for the population.

Stratify. To divide, for purposes of analysis, a sample of observations into two or more subsets according to some criterion or set of criteria.

Stratum, strata (pl.). A class or subset that results from stratification.

Time-adjusted sale price. The price at which a property sold adjusted for the effects of price changes reflected in the market between the date of sale and the date of analysis.

Trimmed mean. The arithmetic mean of a data set identified by the proportion of the sample that is trimmed from each end of the ordered array. For example, a 10 percent trimmed mean of a sample of size ten is the average of the eight observations remaining after the largest and smallest observations have been removed.

Value. (1) The relationship between an object desired and a potential owner; the characteristics of scarcity, utility, desirability, and transferability must be present for value to exist. (2) Value may also be described as the present worth of future benefits arising from the ownership of real or personal property. (3) The estimate sought in a valuation. (4) Any number between positive infinity and negative infinity.

Variable. An item of observation that can assume various values, for example, square feet, sales prices, or sales ratios. Variables are commonly described by using measures of central tendency and dispersion.

Weighted mean; weighted average. An average in which each value is adjusted by a factor reflecting its relative importance in the whole before the values are summed and divided by their number.

Weighted mean ratio. Sum of the appraised values divided by the sum of the sales prices (or independent estimates of market value), which weights each ratio in proportion to the sale price (or independent estimate of market value).

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- Additional readings on ratio studies can be found at LibraryLink, IAAO’s online catalog of resources, and <http://www.iaao.org>. Many Web sites offer good information on statistics. Because Web site addresses change frequently, they are not listed here.

Appendix A. Sales Validation Guidelines

A.1 Sources of Sales Data

The best sources of sales data are copies of deeds or real estate transfer affidavits containing the full consideration and other particulars of the sale. Assessing officers in jurisdictions without laws mandating full disclosure of sales data to assessing officials work under a severe handicap and should seek legislation that provides for such disclosure.

1. *Real estate transfer documents.* These documents are (1) copies of deeds and land contracts, (2) copies of real estate transfer affidavits, and (3) closing statements.
2. *Buyers and sellers.* Buyers and sellers of real property can be contacted directly to secure or confirm sales data. Means of contact include sales questionnaires, telephone interviews, and personal interviews.
3. *Third-party sources.* Third-party sources include multiple listing agencies, real estate brokers and agencies, government and private fee appraisers, attorneys, appraisal organizations, and others. Of particular value are those individuals or agencies that publish lists of sales or provide sales in an electronic format.

A.2 Information Required

The following data are needed to make any necessary adjustments to sales prices, compute sales ratios, and update ownership information.

1. *Full consideration involved.* This is the total amount paid for the property, including the cash down payment and amounts financed. The sale price is the most essential item of information concerning the sale, and its accuracy must be carefully scrutinized. In many jurisdictions it is common practice in deeds of conveyance to state considerations in such terms as "one dollar plus other due and just consideration." These amounts are rarely the actual selling price and should be ignored in favor of information from the buyer and seller or other reliable source.
2. *Names of buyer and seller.* This information permits the assessor to maintain a current record of the owners of all property in the jurisdiction. Transfer documents often refer to the buyer as the grantee or transferee and to the seller as the grantor or transferor.

3. *Addresses, phone numbers, and other contact information of buyer and seller or their legal designee.* This information helps to identify more positively the parties to the sale. If the buyer will not reside at the property, the buyer's address may be needed for future correspondence. If the seller has established a new address, this information will aid the assessor in contacting the seller regarding the sale.
4. *Relationship of buyer and seller.* It is important to know whether the buyer and seller are related individuals or corporate affiliates because such sales often do not reflect market value.
5. *Legal description, address, and parcel identifier.* If each parcel is assigned a unique parcel identifier and if this number is noted on the document at the time it is recorded, then the assessor can locate the parcel in the files directly. If not, the legal description or street address is essential to locate the parcel.
6. *Type of transfer.* It is crucial to identify whether or not a sale is an "arm's-length" transfer. Therefore, if the sources of sales data do not include copies of deeds, the type of deed should be specifically required.
7. *Time on the market.* Sales that have been exposed to the open market too long, not long enough, or not at all may not represent market value.
8. *Interest transferred.* The appraiser must identify whether or not the entire bundle of rights (fee simple) to the property has transferred. For example, in some transactions, only a life tenancy ("life estate") may be conveyed, or the seller may retain mineral or other rights to the property. Similarly, the sale price of a property encumbered by a long-term lease may not reflect the market value of the fee simple estate in the property.
9. *Type of financing.* In analyzing the sale, it is helpful to know the amount of down payment; the type, remaining amount, and interest rates of notes secured by mortgages or deeds of trust assumed by the buyer; and the value of any stocks, bonds, notes, or other property passed to the seller. It is also important to know whether the sale conveys title to the property or that it is a land contract, in which title is not conveyed until some time in the future, typically several years.
10. *Personal property.* A sales ratio study requires knowledge of the amount paid for the real

property. The sale document ideally would note the type and value of any significant personal property items included in the transaction.

11. *Date of transfer.* This is the date on which the sale was closed or completed. The date the deed or other transfer document was recorded can be used as a surrogate, provided there was no undue delay in the recording. If there has been a delay in recording, the date of the deed or transfer instrument should be used.
12. *Instrument number.* This number, as well as the record or deed book and page, indicates where the deed is located in the official records and thus can be important in researching sales or leases and identifying duplication.

The data noted above should be maintained in a separate data file or the sale history file component of a CAMA system. In addition, the file should include additional information useful for stratification and other analytical purposes. Sales data files should reflect the physical characteristics of the property when sold. If significant legal, physical, or economic changes have occurred between the sale date and the assessment date, the sale should not be used for ratio studies. (The sale may still be valid for mass appraisal modeling by matching the sale price against the characteristics that existed on the date of sale.)

A.3 Confirmation of Sales

A.3.1 Importance of Confirmation

The usefulness of sales data is directly related to the completeness and accuracy of the data. Sales data should be routinely confirmed or verified by contacting buyers, sellers, or other knowledgeable participants in the transaction. In general, the fewer the sales in a stratum, the less common or more complex the type of property, and the more atypical the sale price, the greater the effort should be to confirm the particulars of the sale. With larger sample sizes, it may be sufficient to confirm single-family residential sales by audit or exception.

A.3.2 Methods of Confirmation

In general, the completeness and accuracy of sales data are best confirmed by requesting the particulars of a sale from parties to the sale. If a transfer document is not required, questionnaires after the sale can be used. A sales questionnaire, which requests the type of information listed in Section A.2, is one practical means of confirming sales. Telephone or personal interviews can be more comprehensive than mailed questionnaires. Forms with space to record the same types of information should be used for such interviews. Appendix H contains a model sale confirmation questionnaire (additional sample sales questionnaires and interview forms can be found in *Improving Real Property Assessment* [IAAO 1978, 95–104]).

Mailed sales questionnaires should be as concise as possible and should include

- a postage-paid return envelope
- official stationery
- purpose of the questionnaire
- contact person
- authorized signature

Forms designed for telephone interviews should include the name and phone number of the contact person. Such forms also should include the date and name of the person conducting the interview along with the number of attempts made to contact a party to the sale.

A.4 Screening Sales

Sales used in a ratio study must be screened to determine whether they reflect the market value of the real property transferred. Specific objectives of sales screening are as follows:

- to ensure that sales prices reflect to the maximum extent possible only the market value of the real property transferred and not the value of personal property, financing, or leases
- to ensure that sales that occurred only during the period of analysis are used
- to ensure that sales are excluded from the ratio study only with good cause (e.g., when they compromise the validity of the study)

Every arm's-length, open-market sale that appears to meet the conditions of a market value transaction should be included in the ratio study unless one of the following occurs:

- Data for the sale are incomplete, unverifiable, or suspect.
- The sale fails to pass one or more specific tests of acceptability.
- A sufficiently representative sample of sales that occurred during the study period can be randomly selected to provide sufficiently reliable statistical measures.

The sales reviewer should take the position that all sales are candidates as valid sales for the ratio study unless sufficient and compelling information can be documented to show otherwise. If sales are excluded without substantiation, the study may appear to be subjective. Reason codes can be established for invalid sales.

No single set of sales screening rules or recommendations can be universally applicable for all uses of sales data or under all conditions. Sales screening guidelines and procedures should be consistent with the provisions of the

value definition applicable to the jurisdiction. Appraisers must use their judgment, but should not be arbitrary. To help analysts make wise and uniform judgments, screening procedures should be in writing. Each sales analyst should be thoroughly familiar with these procedures as well as with underlying real estate principles (Tomberlin 2001).

A.4.1 Sales Generally Invalid for Ratio Studies

The following types of sales are often found to be invalid for ratio studies and can be automatically excluded unless a larger sample size is needed and further research is conducted to determine that sales are open-market transactions.

1. *Sales involving government agencies and public utilities.* Such sales can involve an element of compulsion and often occur at prices higher than would otherwise be expected.
2. *Sales involving charitable, religious, or educational institutions.* A sale to such an organization can involve an element of philanthropy, and a sale by such an organization can involve a nominal consideration or restrictive covenants.
3. *Sales involving financial institutions.* A sale in which the lienholder is the buyer can be in lieu of a foreclosure or a judgment and the sale price can equal the loan balance only.
4. *Sales between relatives or corporate affiliates.* Sales between relatives are usually non-open-market transactions and tend to occur at prices lower than would otherwise be expected.
5. *Sales settling an estate.* A conveyance by an executor or trustee under powers granted in a will may not represent fair market value, particularly if the sale takes place soon after the will has been filed and admitted to probate in order to satisfy the decedent's debts or the wishes of an heir.
6. *Forced sales.* Such sales include those resulting from a judicial order. The seller in such cases is usually a sheriff, receiver, or other court officer.
7. *Sales of doubtful title.* Sales in which title is in doubt tend to be below market value. When a sale is made on other than a warranty deed, there is a question of whether the title is merchantable. Quit claim deeds and trustees' deeds are examples.

A.4.2 Sales with Special Conditions

Sales with special conditions can be open-market sales but must be verified thoroughly and used with caution in ratio studies.

1. *Trades.* In a trade, the buyer gives the seller one or more items of real or personal property as all or part of the full consideration. If the sale is a pure trade with the seller receiving no money or securities, the sale should be excluded from analysis. If the sale involves both money and traded property, it may be possible to include the sale in the analysis if the value of the traded property is stipulated, can be estimated with accuracy, or is small in comparison to the total consideration. However, transactions involving trades should be excluded from the analysis whenever possible, particularly when the value of the traded property appears substantial.
2. *Partial interests.* A sale involving the conveyance of less than the full interest in a property should be excluded from the analysis unless several sales of partial interests in a single property take place at the same time and the sum of the partial interests equals the fee-simple interest. Then the sum of the sales prices of the partial interests can sometimes be assumed to indicate the sale price of the total property. At other times, however, the purchase of such partial interests is analogous to plottage value in which a premium may have been paid.
3. *Land contracts.* Land contracts and other installment purchase arrangements in which title is not transferred until the contract is fulfilled require careful analysis. Deeds in fulfillment of a land contract often reflect market conditions several years in the past, and such dated information should be excluded from analysis. Sales data from land contracts also can reflect the value of the financing arrangements. In such instances, if the transaction is recent, the sale price should be adjusted for financing (see section A.5.2).
4. *Incomplete or unbuilt common property.* Sales of condominium units and of units in planned unit developments or vacation resorts often include an interest in common elements (for example, golf courses, clubhouses, or swimming pools) that may not exist or be usable on the date of sale or on the assessment date. Sales of such properties should be examined to determine whether prices might be influenced by promises to add or complete common elements at some later date. Sales whose prices are influenced by such promises should be excluded from the analysis, or the sales prices should be adjusted to reflect only the value of the improvements or amenities in existence on the assessment date.

5. *Auctions*. In general, auction sales of real property tend to be at the lower end of the price spectrum. Auction sales that have been well-advertised and well-attended may be valid for consideration in ratio studies. The seller also must have the option to set a minimum bid on the property or the right of refusal on all bids (*with reserve*) in order for the sale to be considered valid.

A.4.3 Multiple-Parcel Sales

A multiple-parcel sale is a transaction involving more than one parcel of real property. These transactions present special considerations and should be researched and analyzed before being used in ratio studies.

If the appraiser needs to include multiple-parcel sales, he or she should first determine whether the parcels are contiguous and whether the sale comprises a single economic unit or multiple economic units. Regardless of whether the parcels are contiguous, any multiple-parcel sale that also involves multiple economic units generally should not be used in ratio studies because of the likelihood that these sales include some plottage value or some discount for economies of scale, unless adequate adjustments for these factors can be made to the sale price.

A.4.4 Acquisitions or Divestments by Large Property Owners

Acquisitions or divestments by large corporations, pension funds, or real estate investment trusts (REITs) that involve multiple parcels typically should be rejected for ratio study purposes.

A.4.5 IRS 1031 Exchanges

Internal Revenue Service (IRS) Regulation 1031 stipulates that investment properties can be sold on a tax-deferred basis if certain requirements are met. Sale transactions that represent Section 1031 exchanges should be analyzed like any other commercial transaction and, absent conditions that would make the sale price unrepresentative of market value, should be regarded as valid.

A.4.6 Internet Marketing

Property that sells on the Internet and meets the criteria of being an open-market, arm's-length transaction should be included as a valid transaction in a ratio study. Brokerage and realty firms are using the Internet as an additional method to advertise and market their inventory of property.

A.4.7 Inaccurate Sale Data

Sale information should never be considered absolutely trustworthy. Jurisdictions can reduce the problem by requiring a sale verification questionnaire (see Appendix

H). There should be statutory penalties for persons who falsify information.

A.5 Adjustments to Sale Prices

Sale prices used in ratio studies may need to be adjusted for financing, assumed long-term leases, personal property, gift programs, and date of sale. This is especially true for nonresidential properties. The real property tax is based on the market value of real property alone as of a specific date. This value may not be the same as investment value (that is, the monetary value of a property to a particular investor) and does not include the value of personal property or financing arrangements.

If adjustments for more than one purpose are to be made, they should be made in the following order:

1. adjustments that convert the price to a better representation of the market value as of the date of sale (These include adjustments for financing and assumed long-term leases.)
2. adjustments that develop or isolate the price paid for taxable real property (These include adjustments for personal property received by the buyer, property taken in trade by the seller, the combination of partial interest sales, and incomplete or unbuilt common property.)
3. adjustments for differences in market value levels between the date of sale and the date of analysis

Procedures for adjusting sales prices should be documented and the adjustment factors supported by market data. These requirements imply an ongoing study of local real estate prices, interest rates, and financing practices. Unsubstantiated or blanket adjustments can jeopardize the acceptance accorded a ratio study by making it appear subjective.

A.5.1 Adjustments for Financing

When financing reflects prevailing market practices and interest rates, sales prices require no adjustment for financing. Adjustments should be considered in the following instances:

1. The seller and lender are the same party and financing is not at prevailing market rates.
2. The buyer assumes an existing mortgage at a non-market interest rate. As with personal property, the preferred means of adjusting for financing is by individual parcel. In this instance and no. 1 above, downward adjustments are warranted when (1) the loan appears to be well secured and the contract interest rate is less than the market interest rate, or (2) the loan appears not to be well secured and the contract interest

rate is lower than that required by the market for a loan of equal risk. The amount of adjustment can be computed by capitalizing the difference between monthly payments based on the required market interest rate and those based on the actual interest rate. Market analysis using paired sales (sales of similar properties, some with and some without conventional financing) or statistical techniques can correct for such factors.

3. The seller pays “points” (a percentage of the loan amount). (*Points paid by the borrower are part of the down payment and do not require adjustment.*) When the seller pays points, the sale price should be adjusted downward by the value of the points.
4. The property is sold under a gift program. Gift programs are a type of creative financing for qualified buyers by certain lending institutions that provide the buyer with additional monies to use as part of a down payment or for property improvements. This program is typically associated with low-value properties and can be difficult to discover without a validation questionnaire and/or telephone interview. The gift amount is added to the actual sale price of the property; however, the seller is never in receipt of the gift amount. This gift amount must be deducted from the actual sale price of the real estate prior to statistical analysis.

Adjustments for financing require data on actual and market interest rates, the amount of the loan, and the term and amortization provisions of the loan. Obtaining and properly analyzing such data, as well as estimating the extent to which the market actually capitalizes non-market financing, are difficult and time-consuming and require specialized skills.

A.5.2 Adjustments for Assumed Leases

The sale price of a property encumbered by a long-term lease of at least three years should be adjusted as follows:

- If the contract rent differs significantly from market rent, then the sales price should be adjusted by the difference between the present worth of the two income streams.
- If the contract rent exceeds market rent, the present worth of the difference in the two income streams should be subtracted from the sale price.
- If the contract rent is less than current market rent, the present worth of the difference in the two income streams should be added to the sale price.

A.5.3 Adjustments for Personal Property

Sales screening includes determining the contributory value of any significant personal property included in the sale. Personal property includes such tangibles as machinery, furniture, and inventories and such intangibles as franchises, licenses, and non-compete agreements. Ordinarily, it is not necessary to consider goodwill, going-concern value, business enterprise value, or the like, unless the value of these intangible assets has been itemized in a sales contract or a formal appraisal has been prepared by either party.

It is necessary to decide whether each item included in the sale should be classified as real or personal property. (See *Standard on Valuation of Personal Property* [IAAO 2005], which provides guidance on classification of property as real or personal.)

Sale prices should be adjusted by subtracting the contributory value of personal property received by the buyer. Ordinary window treatments, outdated models of free-standing appliances, and common-grade used furniture included with residential property do not usually influence the sale price of real property and do not require an adjustment unless the items were specifically broken out in the contract as personal property included in the sale price.

If the value of personal property appears to be substantial (10 percent for residential, 25 percent for commercial), the sale should be excluded as a valid sale in statistical analysis unless the sample size is small.

A.5.4 Adjustments for Time

There should be a program to track changes in price levels over time and adjust sale prices for time as required. This step is an important component of a ratio study. Time adjustments must be based on market analysis and supported with appropriate documentation.

Valid time-adjustment techniques are as follows:

- tracking sales and appraisal ratios over time
- including date-of-sale as a variable in regression or feedback models
- analyzing re-sales
- comparing per-unit values over time in homogeneous strata, such as a subdivision or condominium complex
- isolating the effect of time through paired sales analysis
- statistically supported time trend analysis studies

These techniques are discussed in Gloudemans (1990; 1999), *Property Appraisal and Assessment Administration* (IAAO 1990, Appendix 5-3), and *Improving Real Property Assessment* (IAAO 1978, section 4.6). If sales

prices have generally been rising, ratios for sales that occurred after the assessment date tend to understate the overall level of appraisal. Similarly, sales ratios for sales that occurred before the assessment date tend to overstate the level of appraisal. If prices are generally declining, an opposite pattern results. When tracking ratios over time (using the inverse ratio technique) for determining time adjustments, it is important that ratios for chased sales be excluded, since there is no correlation of such sales ratios with the date of sale.

Changes in price levels should be monitored and time adjustments made by geographic area and type of property, because different segments of the market tend to change in value at different rates.

Oversight agencies can make any appropriate time adjustments after making all other adjustments.

A.5.5 Other Adjustments

Adjustments to sales prices should not be made for real estate sales and brokerage commissions; closing costs, such as attorney's fees, transfer taxes, and title insurance; and current or delinquent property taxes. Exceptions to this general rule occur when the buyer agrees to pay real estate commissions and delinquent property taxes, in which case the amounts of the payments should be added to the sale

price if not already included in the sale amount. Other exceptions occur when the seller agrees to pay expenses normally paid by the buyer. Such expenses include loan origination fees and repair allowances. Loan origination fees paid by the seller should be deducted from the sale price. Repair allowances should be deducted from the sales price only if the property was in an unrepaired state on the appraisal date, but sold at a higher price reflecting the value of the repairs. If the sale occurred before the appraisal date and the repairs were made prior to that date, no adjustment should be made (Knight, Miceli, and Sirmans 2000).

A.5.6 Special Assessments

Special assessments are used to finance capital improvements or provide services adjacent to the properties they directly benefit. Typically, the property owner is obligated to make annual payments of principal and interest to a local unit of government over a specified number of years. The sale price of a property encumbered by a special assessment can require adjustment if the current balance of the defrayed amount is significant. The sale price can be adjusted upward to account for this lien. If the effect on market value is significant and can be ascertained, an adjustment should be made.

Appendix B. Outlier Trimming Guidelines

B.1 Identification of Ratio Outliers

It is first necessary to determine a procedure to identify outliers. Outlier identification based on the interquartile range (IQR) uses order statistics (see table B-1) and has been shown to be robust for a wide variety of distributions (Iglewicz and Hoaglin 1993; Barnett and Lewis 1994). The term outlier is often associated with ratios that fall outside 1.5 multiplied by the IQR. A factor of 3.0 X IQR often is chosen to identify extreme outliers. Other outlier identification procedures are found in statistical literature and can be used. Outlier identification and trimming should follow the sales validation process and precede the calculation of ratio statistics and related tests or analyses.

The example in table B-1 demonstrates the use of the 1.5 X IQR procedure to identify outlier ratios. The distribution of ratios often is skewed to the right; therefore, it may be preferable to apply appropriate transformations to the ratios prior to applying the IQR method. For example, the use of logarithmic transformations tends to identify fewer high and more low ratios as outliers.

B.2 Scrutiny of Identified Outliers

The preferred method of handling an outlier ratio is to subject it to additional scrutiny to determine whether the sale is a non-market transaction or contains an error in fact. If an error can be corrected (for example, data entry), the property should be left in the sample. If the error cannot be corrected or inclusion of the identified outlier would reduce sample representativeness, the sale should be excluded.

B.3 Outlier Trimming

Once outliers have been identified and scrutinized and any errors resolved, the next step is to exclude those that may unduly influence calculated statistical measures. For this reason, it is acceptable to trim outliers identified by recognized procedures (for cautionary notes on trimming small samples, see Tomberlin [2001] and Hoaglin, Mosteller, and Tukey [1983]. An example of such trimming is found in Table B-2. However, trimming of outliers using arbitrary limits, for example, eliminating all ratios less than 50 percent or greater than 150 percent, tends to distort results and should not be employed.

Detected outliers should be reported and can be treated in a variety of ways, including trimming (D'Agostino and Stephens 1986). If outliers are to be considered for removal, the analyst can select a procedure to trim all or just the extreme or influential outliers (see table B-2). If a trimming method has been used to reject ratios from the sample, this fact must be stated in the resulting statistical

Table B-1. A Distribution-Free Method for Locating Outliers
(The following procedure identifies outlier ratios that fall more than 1.5 times beyond the range of the middle 50 percent of the arrayed sample.)

Locating trim boundaries

Data set before trimming

Rank	Ratio (A/S)
1	0.611
2	0.756
3	0.762
4	0.853
5	0.867
6	0.909
7	0.925
8	0.944
9	1.014
10	1.052
11	1.178
12	1.367
13	1.850
14	2.500
Median ratio	0.935
COD	32.271

Table B-2. Effects of Outlier Trimming
Outliers identified in Table B-1 trimmed

After 1.5x trimming	
Rank	Ratio (A/S)
1	0.611
2	0.756
3	0.762
4	0.853
5	0.867
6	0.909
7	0.925
8	0.944
9	1.014
10	1.052
11	1.178
12	1.367
Median ratio	0.917
COD	15.649

analysis. Outlier trimming is not mandatory; however, if outlier-trimming procedures are not used, sales with extreme or influential ratios must be thoroughly validated and determined to be highly trustworthy observations because they can play a pivotal role in the ratio study outcome.

B.4 Trimming Limitations

For some distributions, such as when the sample exhibits a high clustering around a specific ratio, the IQR outlier identification method is not appropriate. In such cases the IQR could be quite narrow, leading to the calculation of lower and upper boundaries for outliers and extremes that are quite close to the middle of the data. In such cases, ratios beyond those boundaries should not be automatically excluded, but instead reasonable judgment should be applied to exclude only true outliers or extremes. As one safeguard, analysts can refrain from automatically

deleting any “outliers” or “extremes” inside the boundaries where 95 percent (two standard deviations) of the observations would be expected to lie, assuming a normal distribution of data.

It is also appropriate to set maximum trimming limits. For small samples, no more than 10 percent (20 percent in the most extreme cases) of the ratios should be removed. For larger samples, this threshold can be lowered to 5 to 10 percent depending on the distribution of the ratios and the degree to which sales have been screened or validated. Trim limits should be developed in consideration of the extent of sales verification.

In general, IQR-based outlier identification should be undertaken in instances in which sample sizes are sufficient to preclude the aberrant results that can be expected when this procedure is applied to small, highly variable samples.

B.5 Analytical Use of Identified Outliers

After identification, scrutiny, and correction of errors associated with outliers, the procedure can be run again to identify any remaining apparent outliers. If outlier ratios tend to be concentrated in certain areas or other subsets of the sample, they can point directly to systematic errors in the appraisal process and should be stratified and reanalyzed if they are sufficiently representative.

B.6 Reporting Trimmed Outliers and Results

Ratio study reports or accompanying documentation should clearly state the basis for excluding outlier ratios. Statistics calculated from trimmed distributions, obviously, cannot be compared to those from untrimmed distributions or interpreted in the same way.

Appendix C.

Median Confidence Interval Tables for Small Samples

For small samples, tables C-1 and C-2 demonstrate use of a formula based upon the binomial distribution (Clapp 1989) to develop the lower and upper median confidence interval estimates. R_i is the ratio in an array ranked from the lowest ($i = 1$) to the highest (sorted in ascending order). Each confidence interval boundary typically falls between two ratios in the array. The interpolation factor is multiplied by the ratio value and the two are added together to obtain a weighted average. This method should be used for small samples with up to 30 observations (see tables C-1 and C-2). For larger samples the method found in *Property Appraisal and Assessment Administration* (IAAO 1990, p 609) may be used.

Example

Using data from table 1-4 ($n = 17$ ratios) and a 95 percent confidence interval in table C-2:

Lower bound:

$$[0.695 (\text{Ratio}_5) \times 0.9899] + [0.717 (\text{Ratio}_6) \times 0.0101] = \mathbf{0.695}$$

Upper bound:

$$[0.933 (\text{Ratio}_{13}) \times 0.9899] + [0.895 (\text{Ratio}_{12}) \times 0.0101] = \mathbf{0.933}$$

Therefore, the 95% median ratio confidence interval in table 1-4 is from .695 to .933.

Table C-1. 90% Confidence Interval Table

n	Lower Bound	Upper Bound
5	$.8800 \times R^1 + .1200 \times R^2$	$.8800 \times R^5 + .1200 \times R^4$
6	$.6333 \times R^1 + .3667 \times R^2$	$.6333 \times R^6 + .3667 \times R^5$
7	$.2286 \times R^1 + .7714 \times R^2$	$.2286 \times R^7 + .7714 \times R^6$
8	$.8643 \times R^2 + .1357 \times R^3$	$.8643 \times R^7 + .1357 \times R^6$
9	$.5667 \times R^2 + .4333 \times R^3$	$.5667 \times R^8 + .4333 \times R^7$
10	$.1067 \times R^2 + .8933 \times R^3$	$.1067 \times R^9 + .8933 \times R^8$
11	$.7855 \times R^3 + .2145 \times R^4$	$.7855 \times R^9 + .2145 \times R^8$
12	$.4282 \times R^3 + .5718 \times R^4$	$.4282 \times R^{10} + .5718 \times R^9$
13	$.9558 \times R^4 + .0442 \times R^5$	$.9558 \times R^{10} + .0442 \times R^9$
14	$.6511 \times R^4 + .3489 \times R^5$	$.6511 \times R^{11} + .3489 \times R^{10}$
15	$.2217 \times R^4 + .7783 \times R^5$	$.2217 \times R^{12} + .7783 \times R^{11}$
16	$.8261 \times R^5 + .1739 \times R^6$	$.8261 \times R^{12} + .1739 \times R^{11}$
17	$.4603 \times R^5 + .5397 \times R^6$	$.4603 \times R^{13} + .5397 \times R^{12}$
18	$.9735 \times R^6 + .0265 \times R^7$	$.9735 \times R^{13} + .0265 \times R^{12}$
19	$.6480 \times R^6 + .3520 \times R^7$	$.6480 \times R^{14} + .3520 \times R^{13}$
20	$.2072 \times R^6 + .7928 \times R^7$	$.2072 \times R^{15} + .7928 \times R^{14}$
21	$.8084 \times R^7 + .1952 \times R^8$	$.8084 \times R^{15} + .1952 \times R^{14}$
22	$.4156 \times R^7 + .5844 \times R^8$	$.4156 \times R^{16} + .5844 \times R^{15}$
23	$.9413 \times R^8 + .0587 \times R^9$	$.9413 \times R^{16} + .0587 \times R^{15}$
24	$.5884 \times R^8 + .4116 \times R^9$	$.5884 \times R^{17} + .4116 \times R^{16}$
25	$.1203 \times R^8 + .8797 \times R^9$	$.1203 \times R^{18} + .8797 \times R^{17}$
26	$.7371 \times R^9 + .2629 \times R^{10}$	$.7371 \times R^{18} + .2629 \times R^{17}$
27	$.3161 \times R^9 + .6839 \times R^{10}$	$.3161 \times R^{19} + .6839 \times R^{18}$
28	$.8687 \times R^{10} + .1313 \times R^{11}$	$.8687 \times R^{19} + .1313 \times R^{18}$
29	$.4831 \times R^{10} + .5169 \times R^{11}$	$.4831 \times R^{20} + .5169 \times R^{19}$
30	$.9876 \times R^{11} + .0124 \times R^{12}$	$.9876 \times R^{20} + .0124 \times R^{19}$

Table C-2. 95% Confidence Interval Table

n	Lower Bound	Upper Bound
6	$.9000 \times R^1 + .1000 \times R^2$	$.9000 \times R^6 + .1000 \times R^5$
7	$.6857 \times R^1 + .3143 \times R^2$	$.6857 \times R^7 + .3143 \times R^6$
8	$.3250 \times R^1 + .6750 \times R^2$	$.3250 \times R^8 + .6750 \times R^7$
9	$.9222 \times R^2 + .0778 \times R^3$	$.9222 \times R^8 + .0778 \times R^7$
10	$.6756 \times R^2 + .3244 \times R^3$	$.6756 \times R^9 + .3244 \times R^8$
11	$.2873 \times R^2 + .7127 \times R^3$	$.2873 \times R^{10} + .7127 \times R^9$
12	$.8936 \times R^3 + .1064 \times R^4$	$.8936 \times R^{10} + .1064 \times R^9$
13	$.6056 \times R^3 + .3944 \times R^4$	$.6056 \times R^{11} + .3944 \times R^{10}$
14	$.1659 \times R^3 + .8341 \times R^4$	$.1659 \times R^{12} + .8341 \times R^{11}$
15	$.8218 \times R^4 + .1782 \times R^5$	$.8218 \times R^{12} + .1782 \times R^{11}$
16	$.4827 \times R^4 + .5173 \times R^5$	$.4827 \times R^{13} + .5173 \times R^{12}$
17	$.9899 \times R^5 + .0101 \times R^6$	$.9899 \times R^{13} + .0101 \times R^{12}$
18	$.7076 \times R^5 + .2924 \times R^6$	$.7076 \times R^{14} + .2924 \times R^{13}$
19	$.3059 \times R^5 + .6941 \times R^6$	$.3059 \times R^{15} + .6941 \times R^{14}$
20	$.8835 \times R^6 + .1165 \times R^7$	$.8835 \times R^{15} + .1165 \times R^{14}$
21	$.5479 \times R^6 + .4521 \times R^7$	$.5479 \times R^{16} + .4521 \times R^{15}$
22	$.0697 \times R^6 + .9303 \times R^7$	$.0697 \times R^{17} + .9303 \times R^{16}$
23	$.7381 \times R^7 + .2619 \times R^8$	$.7381 \times R^{17} + .2619 \times R^{16}$
24	$.3373 \times R^7 + .6627 \times R^8$	$.3373 \times R^{18} + .6627 \times R^{17}$
25	$.8958 \times R^8 + .1042 \times R^9$	$.8958 \times R^{18} + .1042 \times R^{17}$
26	$.5481 \times R^8 + .4519 \times R^9$	$.5481 \times R^{19} + .4519 \times R^{18}$
27	$.0677 \times R^8 + .9323 \times R^9$	$.0677 \times R^{20} + .9323 \times R^{19}$
28	$.7221 \times R^9 + .2779 \times R^{10}$	$.7221 \times R^{20} + .2779 \times R^{19}$
29	$.3063 \times R^9 + .6937 \times R^{10}$	$.3063 \times R^{21} + .6937 \times R^{20}$
30	$.8709 \times R^{10} + .1291 \times R^{11}$	$.8709 \times R^{21} + .1291 \times R^{20}$

From Table 1-4. Demonstration Ratio Study Report

Rank	Parcel #	Appraised value	Sale price*	Ratio
1	9	\$87,200	138,720	0.629
2	10	38,240	59,700	0.641
3	11	96,320	146,400	0.658
4	12	68,610	99,000	0.693
5	13	32,960	47,400	0.695
6	14	50,560	70,500	0.717
7	15	61,360	78,000	0.787
8	16	47,360	60,000	0.789
9	17	56,580	69,000	0.820
10	18	47,040	55,500	0.848
11	19	136,000	154,500	0.880
12	20	98,000	109,500	0.895
13	21	56,000	60,000	0.933
14	22	159,100	168,000	0.947
15	23	128,000	124,500	1.028
16	24	132,000	127,500	1.035
17	25	160,000	150,000	1.067

Date: 0/0/00. No outlier trimming

* or adjusted sale price

Appendix D. Coefficient of Price-Related Bias

The coefficient of price-related bias (PRB) is an index of vertical equity that quantifies the relationship between assessment-sales ratios (ASR) and value in percentage terms. A PRB of 0.043 indicates that, on average, assessment ratios increase by 4.3 percent whenever values increase by 100 percent (e.g., double or double again). The PRB has several technical advantages, including being less sensitive to outliers than the PRD, and also quantifies the statistical significance of observed relationships. Using table D-1 as an example, the measure is found as follows:

1. Compute a value proxy, “value,” as 50 percent of sale price + 50 percent of assessed value. To ensure that assessed values and sales prices receive equal weight, assessed values can be divided by the median ratio before summing:

$$\text{Value} = 0.50 \times (\text{AV}/\text{Median}) + 0.50 \times \text{SP}$$

Where:

AV= Assessed Value

SP = Sale Price

Columns (5) and (6) illustrate the calculation. Computing a value proxy based on both assessed values and sales prices minimizes bias inherent in comparing ratios against either assessed values or sales prices alone (see, for example, Gloudemans and Almy 2010, pp 219, 229, 389–391).

2. Take the natural logarithm of the value proxy and divide by 0.693:

$$\text{Ln_Value} = \ln(\text{value})/0.693$$

This is shown in column (7) of table D-1.

Taking logarithms converts the value proxy to a percentage basis, which substantially minimizes the impact of atypically high values (outliers) in the analysis. Dividing by 0.693 allows each increment of 1 to be interpreted as a change of 100 percent. (For example, $\ln(100,000)/0.693 = 16.613$ and $\ln(200,000)/0.693 = 17.613$).

3. Compute percentage differences from the median assessment ratio (column 8 of table D-1):

Table D-1. Illustration of PRB

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sale	AV	SP	ASR	AV/Med	.5(3) + .5(5) "Value"	Indep Var Ln(Value)/.693	Dep Variable (ASR – Med)/Med
1	116,700	114,500	1.019	128,267	121,383	16.893	0.120
2	130,300	121,000	1.077	143,215	132,107	17.015	0.184
3	130,200	133,900	0.972	143,105	138,503	17.083	0.069
4	145,500	139,000	1.047	159,921	149,461	17.193	0.151
5	134,100	145,000	0.925	147,392	146,196	17.161	0.016
6	153,900	156,500	0.983	169,154	162,827	17.317	0.081
7	143,400	161,100	0.890	157,613	159,357	17.286	–0.022
8	156,900	169,500	0.926	172,451	170,976	17.387	0.017
9	169,000	175,000	0.966	185,751	180,375	17.464	0.061
10	149,200	181,000	0.824	163,988	172,494	17.400	–0.094
11	160,100	188,900	0.848	175,969	182,434	17.481	–0.068
12	191,400	205,000	0.934	210,371	207,685	17.668	0.026
13	177,200	216,150	0.820	194,763	205,457	17.652	–0.099
14	205,500	219,000	0.938	225,868	222,434	17.767	0.031
15	206,500	235,000	0.879	226,968	230,984	17.821	–0.034
16	243,800	249,000	0.979	267,965	258,482	17.984	0.076
17	211,600	258,900	0.817	232,573	245,737	17.911	–0.102
18	242,500	263,000	0.922	266,536	264,768	18.018	0.013
19	258,400	305,900	0.845	284,012	294,956	18.174	–0.072
20	265,900	312,500	0.851	292,255	302,378	18.210	–0.065
21	305,700	336,000	0.910	336,000	336,000	18.362	0.000
22	291,600	360,000	0.810	320,502	340,251	18.380	–0.110
23	312,800	399,900	0.782	343,804	371,852	18.508	–0.140
24	352,200	418,500	0.842	387,109	402,805	18.624	–0.075
25	354,900	459,000	0.773	390,077	424,538	18.700	–0.150
Sum	5,209,300	5,923,250	22.578			PRB	–0.120
						Std Error	0.025
	Median	0.910		COD	0.075	t-value	–4.721
	Mean	0.903		PRD	1.027	d.f.	23
	WtdMean	0.879		Sales	25	Sig	0.000

$$\text{Pct_Diff} = (\text{ASR} - \text{Median}) / \text{Median}$$

Where:

PCT_Diff = Percentage Difference

ASR = Assessment-Sales Ratio

4. Regress (3) on (2):

$$\text{Pct_Diff} = b_0 + b_1 \times \text{Ln_Value}$$

Because each increment of 1 in the independent variable represents a 100 percent change in value, the regression coefficient, b_1 , represents the corresponding percentage change in assessment ratios.

Figures D-1 and D-2 below contain plots of assessment ratios with assessed values and sales prices, respectively. Similarly, Figure D-3 is a plot of ratios against the value proxy and Figure D-4 plots percentage differences from the median ratio on logarithms of the value proxy divided by 0.693. In this case, all four plots show a regressive relationship. The PRB quantifies the relationship. As shown toward the bottom of table D-1, $\text{PRB} = -0.120$, meaning that ratios

decline by 12.0 percent when values double (and increase by 12.0 percent when values are halved). The relationship is significant at the 99.9 percent confidence level. The 95 percent confidence interval is -0.172 to -0.067 .

To illustrate the relative insensitivity of the PRB to outliers, consider table D-2. Sales prices for the first 15 sales increase by increments of \$50,000: from \$50,000 for sale 1 to \$750,000 for sale 15. The ratios alternate from 0.90, to 1.00, to 1.10. Since the first (lowest sale) has a ratio of 0.90 and the highest sale has a ratio of 1.10, there is minor progressivity. As shown in the upper half of table D-3, the COD is 6.7, the PRD is 0.992, and the PRB is 0.02, all good performance measures.

Now consider sale 16 in table D-2, which is a relative outlier with a sale price of \$2,500,000 and ratio of 0.75. As shown in the lower half of table D-3, the PRD falls well outside of 0.98 to 1.03 and indicates regressivity. The PRB (as denoted in Table D-3 in the column entitled "Coefficients" and "B"), with a benign value of -0.011 , is little affected by the outlier and is not statistically significant.

Figure D-1. Plot of Ratios with Assessed Value

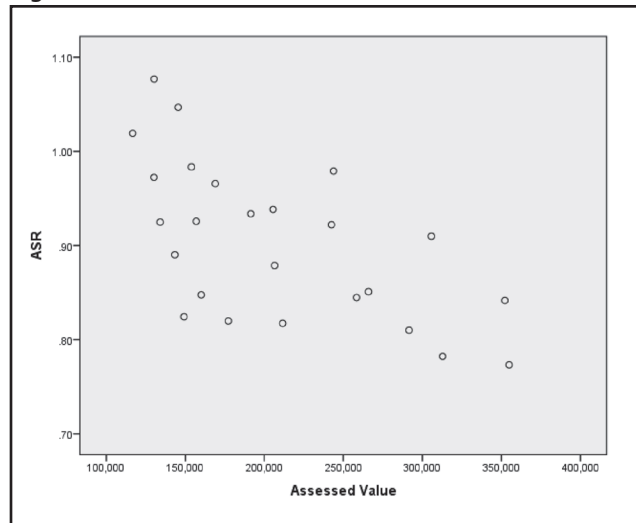


Figure D-3. Plot of Ratios with Value Proxy

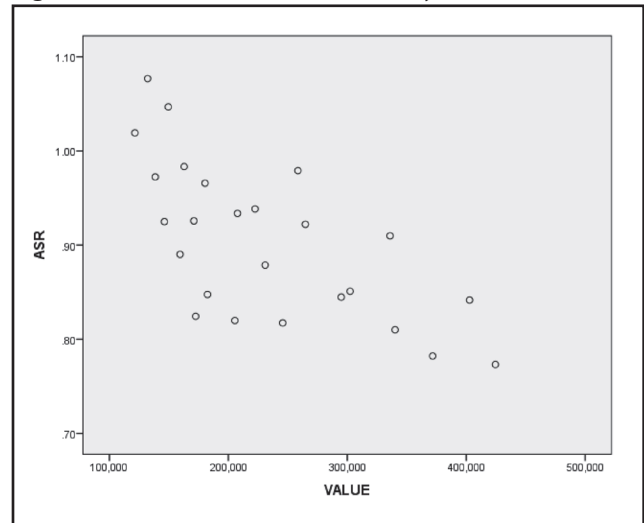


Figure D-2. Plot of Ratios with Sale Price

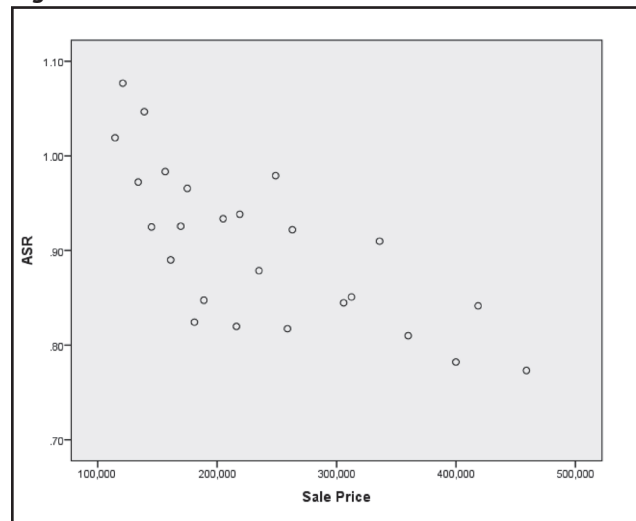


Figure D-4. PRB Plot

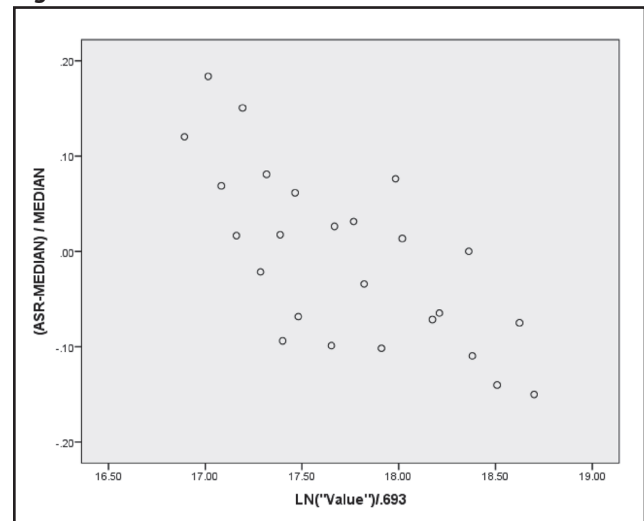


Table D-2. Ratio data with outlier

SALE	PRICE	ASMT	ASR
1	50,000	45,000	0.900
2	100,000	100,000	1.000
3	150,000	165,000	1.100
4	200,000	180,000	0.900
5	250,000	250,000	1.000
6	300,000	330,000	1.100
7	350,000	315,000	0.900
8	400,000	400,000	1.000
9	450,000	495,000	1.100
10	500,000	450,000	0.900
11	550,000	550,000	1.000
12	600,000	660,000	1.100
13	650,000	585,000	0.900
14	700,000	700,000	1.000
15	750,000	825,000	1.100
16	2,500,000	1,875,000	0.750

Table D-3. Ratio statistics with and without outlier

Ratio Statistics for 15 Sales (No Outliers)							
Ratio Statistics for ASMT / PRICE							
Sales	Mean	Median	Weighted Mean	Minimum	Maximum	PRD	COD
15	1.000	1.000	1.008	.900	1.100	.992	.067

Model	Coefficients		<i>t</i>	Sig.	95.0% Confidence Interval for <i>B</i>	
	<i>B</i>	Std. Error			Lower Bound	Upper Bound
1	PRB	.020	.020	1.032	.321	— .022 .063

Ratio Statistics for 16 Sales (1 Outlier)							
Ratio Statistics for ASMT / PRICE							
Sales	Mean	Median	Weighted Mean	Minimum	Maximum	PRD	COD
16	.984	1.000	.932	.750	1.100	1.056	.078

Model	Coefficients		<i>t</i>	Sig.	95.0% Confidence Interval for <i>B</i>	
	<i>B</i>	Std. Error			Lower Bound	Upper Bound
1	PRB	— .011	.021	— .520	.611	— .056 .034

Appendix E. Sales Chasing Detection Techniques

As long as sold and unsold parcels are appraised in the same manner and the data describing them are coded consistently, statistics calculated in a sales ratio study can be used to infer appraisal performance for unsold parcels. However, if parcels that sell are selectively reappraised or recoded based on their sale prices or some other criterion (such as listing price) and if such parcels are in the ratio study, sales ratio study uniformity inferences will not be accurate (appraisals will appear more uniform than they are). In this situation, measures of appraisal level also will be unsupportable unless similar unsold parcels were appraised by a model that produces the same overall percentage of market value (appraisal level) as on the parcels that sold based on consistently coded descriptive and locational data.

Assessors and oversight agencies do not need to employ all the detection techniques described in this appendix, but should consider implementing at least one procedure. In some cases, access to assessment information for all properties is necessary to perform the suggested techniques. Agencies that do not have access to these data are at a disadvantage, but should still implement detection techniques, such as those described in sections E.3 and E.4, which do not require such comprehensive assessment information.

E.1 Comparison of Average Value Changes

If sold and unsold properties within a specified group are appraised in the same way, their appraised values should reflect similar average percentage changes from year to year. Accordingly, changes in appraised values for sold and unsold parcels can be compared to determine whether sold parcels have been selectively appraised. Alternatively, the average percent change in value for sample parcels can be compared to that for the population of properties within a specified group or stratum for an indication of selective reappraisal.

For example, if sold parcels are considered representative of a stratum and appraised values increased an average of 10 percent while appraised values for unsold parcels in the same stratum increased an average of only 2 percent, “sales chasing” is a likely conclusion. At a more sophisticated level, the distribution of value changes for sold and unsold parcels can be compared, or statistical tests can be used to determine whether the distributions are different at a given level of confidence.

Statistical significance in the absence of practical significance may be moot. In large samples, small differences

in the magnitude of assessed value changes on sold and unsold parcels can be proven to be statistically significant, yet the actual differences may be slight. Therefore, it is prudent to establish some reasonable tolerance, such as 3 percentage points (e.g., a change of 6 percent for sold properties and 3 percent for unsold properties), before concluding that a meaningful problem exists. Such tolerance applies to other detection techniques discussed below.

E.2 Comparison of Average Unit Values

If sold and unsold parcels are appraised equally, average unit values (for example, value per square foot) should be similar. An appropriate test (Mann Whitney or *t*-test) can be conducted to determine whether differences are significant.

E.3 Split Sample Technique

In this technique, two ratio studies are performed, one using sales that occurred before the appraisal date and one using sales after the appraisal date, both adjusted for date of sale as appropriate. Except for random sampling error and any error in time adjustments, results of the two studies should be similar. Sales chasing is indicated if the results of the first study are consistently better than those from the second. In such a case, the second study is still valid; the first study should be rejected.

E.4 Comparison of Observed versus Expected Distribution of Ratios

Assuming the ratio studies are based on sales that have been properly adjusted for time and other factors, a strong indication of the likelihood of “sales chasing” can be obtained by computing the proportion of ratios that would be expected to fall within a particular narrow range of the mean given the lowest likely standard deviation (although this depends somewhat on the assumption of a normal distribution). For example, with a standard deviation of 5 percent given a normal distribution, about 32 percent of the ratios would be expected to fall within ± 2 percent of the mean (for example, between 98 and 102 percent, given a mean of 100 percent). Except in highly constrained or well-behaved real estate markets, many appraisers consider such a low standard deviation, corresponding approximately to a COD of 4 percent, to be unachievable. Regardless of the distribution of the ratios, the likelihood is extremely low that there would be a sufficiently representative sample with more than this proportion of ratios in such a narrow range. If such is the case, “sales chasing” is a likely conclusion. Sometimes other processes through

which adjustments to assessments on selling parcels are more pronounced than on the population as a whole mimic the effect of sales chasing, such as more intensive reviews of sales than non-sales. Regardless of the practice, the representativeness of the ratio study is called into question and additional tests should be instituted.

Although samples may not be normally distributed, in which case equivalently precise proportions of expected ratios around the median cannot be determined, the 32 percent concentration is very conservative. Finding such a high concentration of ratios around any measure of central tendency is a strong indicator of sales chasing or of a non-representative ratio study. In addition, when the distribution of ratios is bimodal or multimodal, similar significant concentrations of ratios around these modes can indicate selective reappraisal or sales chasing.

Table E-1 demonstrates the conservative nature of the 32 percent concentration. If the minimum achievable COD is, in fact, higher than 4 percent for the strata or property class being analyzed, then even lower concentrations could indicate sales chasing, and previously discussed investigative procedures should be instituted. One disadvantage to this procedure is that it can be misleading when applied to small samples. Therefore the method should not be employed for sample sizes less than 30.

Even when critical proportions of ratios shown in table E-1 are exceeded, further investigation should be conducted before concluding that sales chasing has occurred.

E.5 Mass Appraisal Techniques

Provided sales are sufficient in number, oversight agencies can develop mass appraisal models to apply to a random sample of unsold properties or to the population of properties that are represented by the sold properties. An independent multiple regression or other automated calibration techniques can be used to develop the models. An appraisal ratio study is then conducted for the unsold parcels by using values predicted by the independent models as indicators of market values. This approach has the following advantages:

- It is objective and rooted in the market.
- The models can be reviewed for sufficient reliability before being applied to the unsold parcels.
- The technique yields measures of central tendency, which can be compared against those produced by the sales ratio study and tested for compliance with standards for the level of appraisal.
- The technique takes the form of an appraisal ratio study but avoids the time and expense of single-property appraisals.

Reliability of this method depends on the accuracy and independence of the mass appraisal models used to generate the value estimates. The models must be consistent with appraisal theory and reviewed for sufficient reliability by examining goodness-of-fit statistics. The models should be independent of those used for assessment purposes.

Table E-1. Example of critical ratio concentrations indicative of sales chasing or similar practices

Minimum achievable COD	Standard deviation assuming normal distribution and mean ratio of 100%	Critical proportion of ratios*	z score based on $\pm 2\%$ range (Absolute value)	Expected proportion of ratios below 0.98	Expected proportion of ratios below 1.02	Expected proportion between 0.98 and 1.02 (within $\pm 2\%$ of central tendency)
1.6%	2.00%	69	1.0000	0.1587	0.8413	0.6826
4.0%	5.00%	32	0.4000	0.3446	0.6554	0.3108
5.0%	6.25%	26	0.3200	0.3745	0.6255	0.2510
6.0%	7.50%	22	0.2667	0.3949	0.6051	0.2102
7.0%	8.75%	19	0.2286	0.4110	0.5896	0.1801
8.0%	10.00%	16	0.2000	0.4207	0.5793	0.1586
10.0%	12.50%	13	0.1600	0.4364	0.5636	0.1272
12.0%	15.00%	11	0.1333	0.4467	0.5530	0.1063
14.0%	17.50%	10	0.1143	0.4545	0.5455	0.0910
16.0%	20.00%	8	0.1000	0.4602	0.5398	0.0796

* Given the assumption that the COD shown represents the minimum achievable COD for the property type, class, or strata being analyzed with the ratio study, sales chasing (or a similar distortive procedure) is very likely if the concentration of ratios with $\pm 2\%$ of a measure of central tendency, such as the median or a mode, or 100%, equals or exceeds this value. This proportion is based on values of the standard normal distribution function and assumption that sample size is greater than 30. The critical number equals the integer immediately exceeding the expected proportion.

Appendix F. Alternative Uses for Ratio Study Statistics

In addition to the use of statistical measures to determine underlying assessment level and uniformity, comparisons between measures can provide useful information about sample representativeness, the distribution of the ratios, and the influence of outliers. For example, by comparing the mean and weighted mean, even without determining the PRD, the analyst should be aware that a large difference between these two measures indicates probable influence of atypical ratios on high-priced properties. This in turn could mean that outliers are still present in the sample and that the sample is not representative. Alternatively, it could indicate systematic appraisal error in the appraisal of properties within a particular price range. The geometric mean-to-mean relationship can provide similar information, especially about the presence of very low ratios, which have a greater influence on the geometric

mean. The relationship between the COD and COV can provide similar additional guidance. This standard chooses the COD as the primary recommended measure of uniformity. This choice reflects the expectation of non-normal distributions of ratios. Despite this consideration, it is useful to recognize that, in a normal distribution, the COV is approximately 1.25 times the COD. When the COV/COD ratio exceeds 1.25, the likely cause is a small number of very high ratios, which may again be non-representative.

It is incumbent on the analyst to review the ratio study sample to attempt to provide a representative sample. Comparisons of statistics, such as those given in this appendix, provide an additional tool to help the analyst in this regard.

Appendix G. Legal Aspects of Ratio Studies

Property taxation is governed by federal, state, and provincial constitutions, statutes, and administrative rules or regulations, many of which require uniform treatment of property taxpayers. Ratio studies play an important role in judging whether uniformity requirements are met. Relevant Canadian Federal statutes based on the Constitution Acts of 1867–1975 provide that municipal councils cannot discriminate between taxpayers of the same class within municipalities.

Relevant United States federal provisions include the Bill of Rights, the commerce clause of the United States Constitution, the Fourteenth Amendment, and the Tax Injunction Act (28 U.S.C. § 1341). Together they guarantee basic protections and due process while still granting states the authority to classify property and grant reasonable exemptions. Many constitutions have clauses that require uniformity in the assessment and taxation of property, although some jurisdictions, either by constitution or statute, permit certain differences between classes. Ratio studies provide a gauge of whether uniformity requirements are being met.

A key U.S. federal statute relating to ratio studies is the U.S. Railroad Revitalization and Regulatory Reform Act (“4-R Act”) of 1976 (49 U.S.C. § 11501). The 4-R Act requires that rail transportation property be assessed for tax purposes at no more than 105 percent of the assessment level of other commercial and industrial property in the same taxing jurisdiction. Similar federal statutes relate to air transportation property, motor carriers, and bus lines (49 U.S.C. §§14502 and 40116).

The 4-R Act provides that ratio studies be used to measure alleged discrimination. In such cases, as in any ratio study, the purpose of the study must be clearly defined and the study must be conducted so that it accurately evaluates the issues at hand. Important issues in ratio studies conducted pursuant to the 4-R Act include the proper definition of “other” commercial and industrial property, screening and adjustments to sales data, proper measures of the level of appraisal, and the combining and weighting of centrally valued and locally assessed properties.

Appendix H. Sales Validation Questionnaire

Parcel Identification Number _____	Instrument Number _____
Instrument Type _____	☐ Multi Parcel Sale ☐ Split Sale Recording Date _____

Seller (Grantor) Name _____ Mailing _____ City/ST/ZIP _____ Phone _____ E-mail address _____	Buyer (Grantee) Name _____ Mailing _____ City/ST/ZIP _____ Phone _____ E-mail address _____
Brief Legal Description _____ _____ _____	Property/Situs Address _____ Name and Mailing Address for Tax Statements _____ _____

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. Special factors:
 - ☐ Sale between immediate family members:
SPECIFY THE RELATIONSHIP _____
 - ☐ Sale involved corporate affiliates belonging to the same parent company
 - ☐ Sale of convenience (correct defects in title; create a joint or common tenancy, etc.)
 - ☐ Auction Sale
 - ☐ Deed transfer in lieu of foreclosure or repossession
 - ☐ Forced sale or sheriff's sale
 - ☐ Sale by judicial order (guardian, executor, conservator)
 - ☐ Sale involved a government agency or public utility
 - ☐ Buyer (new owner) is a religious, charitable, or benevolent organization, school or educational association
 - ☐ Land contract or contract for deed
 - ☐ Sale of only a partial interest in the real estate
 - ☐ Sale involved a trade or exchange of properties
 - ☐ **NONE OF THE ABOVE**
2. Check use of property at the time of sale:

☐ Single Family Residence	☐ Agricultural Land
☐ Farm/Ranch with Residence	☐ Vacant Lot
☐ Condominium Unit	☐ Commercial/Industrial
☐ Other: (Specify) _____	
3. Was the property rented or leased at the time of sale? ☐ Yes ☐ No
4. Did the sale price include an existing business? ☐ Yes ☐ No
5. Was any personal property (such as furniture, equipment, machinery, livestock, crops, business franchise or inventory, etc.) included in the sale price? ☐ Yes ☐ No
If yes, please describe _____

Estimated value of all personal property items included in the sale price \$ _____
6. Any recent changes to the property? ☐ Yes ☐ No

☐ New Construction	☐ Demolition
☐ Remodeling	☐ Additions

 Was the work performed by a professional? ☐ Yes ☐ No
 Date Completed _____/_____/_____
 Estimated cost of labor and materials? \$ _____
7. Was there a change in use? ☐ Yes ☐ No
If yes, please explain: _____

8. Does the buyer hold title to any adjoining property? ☐ Yes ☐ No
9. Was there an appraisal made on the property? ☐ Yes ☐ No
10. Were any **delinquent** taxes assumed by the purchaser?
☐ Yes—Amount \$ _____ ☐ No
11. Were the **delinquent** taxes included in the sale price?
☐ Yes ☐ No ☐ NA
12. How property was marketed (check all that apply):

☐ Listed with real estate agent	☐ Displayed a "For Sale" sign
☐ Advertised in the newspaper	☐ Offered by word of mouth
13. Was the property made available to other potential purchasers?
☐ Yes ☐ No
If not, explain _____

14. How long was the property on the market? _____
15. What was the asking price? _____
16. Date sales price was agreed upon _____/_____/_____
17. Method of financing (check all that apply):
 - ☐ New loan(s) from a Financial Institution
Name of lending institution: _____
Cash down payment \$ _____
Amount \$ _____ Interest rate _____ % Term _____
 - ☐ Assumption of Existing Loan(s)
Amount \$ _____ Interest rate _____ % Term _____
 - ☐ Seller Financing
Amount \$ _____ Interest rate _____ % Term _____
 - ☐ Trade of Property: Estimated Value \$ _____
 Describe Traded Property _____
☐ All Cash ☐ Not Applicable
18. **Total Sale Price** \$ _____
19. Was the sale influenced by any unusual circumstances?
☐ Yes ☐ No
If yes, please explain _____

20. Is the total sale price a fair reflection of the market value for the real estate on the sale date? ☐ Yes ☐ No If no, please explain _____

PRINT NAME - _____

SIGNATURE _____	
☐ GRANTOR (SELLER)	Daytime Phone No. (____) _____
☐ GRANTEE (BUYER)	Daytime Phone No. (____) _____
☐ AGENT	Daytime Phone No. (____) _____

Assessment Standards of the International Association of Assessing Officers

Guide to Assessment Standards

Standard on Assessment Appeal

Standard on Automated Valuation Models

Standard on Contracting for Assessment Services

Standard on Digital Cadastral Maps and Parcel Identifiers

Standard on Manual Cadastral Maps and Parcel Identifiers

Standard on Mass Appraisal of Real Property

Standard on Oversight Agency Responsibilities

Standard on Professional Development

Standard on Property Tax Policy

Standard on Public Relations

Standard on Ratio Studies

Standard on Valuation of Personal Property

Standard on Valuation of Property Affected by Environmental Contamination

Standard on Verification and Adjustment of Sales

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Book

Overshot, D., and R. Pray. 2010. *2011 National Construction Estimator*, 59th ed. Carlsbad, CA: Craftsman Book Company.

Chapter in a Book

Englebert, E.A. 1969. "Political Aspects of Real Estate Taxation in Relation to Metropolitan Growth and Planning." In *Land and Building Taxes: Their Effect on Economic Development*, edited by A.P. Becker. Madison: University of Wisconsin Press.

Dissertation

Choi, M. 2008. "Contesting Imaginaires in Death Rituals during the Northern Song Dynasty," PhD diss., University of Chicago.

Government Report

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State and Provincial Ratio Study Practices: Results of 2008 Survey

**BY THE TECHNICAL STANDARDS COMMITTEE,
INTERNATIONAL ASSOCIATION OF ASSESSING OFFICERS**

Periodically over the last 20 years, prevalent practices and issues in ratio studies have been explored by comparing U.S. states, Canadian provinces and territories, and a few local jurisdictions in terms of frequency of studies, standards used to evaluate results, and final use of results. Surveys were conducted in 1989, 1992, 1994, 1997, and 2003, and the results reported by Dornfest (1993, 1995, 1997) and Dornfest and Thompson (2004). The latest survey was conducted by the IAAO Technical Standards Committee in 2008. This article discusses responses and some trends since 1989, focusing on the most recent changes, and presents tables showing key findings, tabulated responses and the individual responses from each jurisdiction, questions

altered for the 2008 survey, and methods used for detecting sales chasing.

Note that the 1999 version of the IAAO Standard on Ratio Studies was used as the basis for comparison, because when the survey was conducted in the spring of 2008, the 2007 version of the standard had not been sufficiently exposed for broad adoption by jurisdictions.

Introduction

Historically, little written material was available to provide a basis for standardization of ratio studies. By the late 1970s, IAAO was providing guidance through materials, including the *Improving Real Property Assessment* textbook. Shortly thereafter, the first IAAO Standard on

The International Association of Assessing Officers (IAAO) Technical Standards Committee develops and maintains technical standards of professional practice in assessment administration, tax policy, and mass appraisal. The committee also provides input into technical assistance programs and projects regarding property tax administration, policy, and valuation of property. Among the committee's recent work was revision of the Standard on Digital Cadastral Maps and Parcel Identifiers (approved April 2009), the Standard on Mass Appraisal of Real Property (approved January 2008), and the Standard on Ratio Studies (adopted July 2007).

Coauthors of this report were committee chair Nancy C. Tomberlin, Ratio Study Coordinator, Property Valuation Division, Kansas Department of Revenue, and committee members Alan S. Dornfest, AAS, Property Tax Policy Supervisor, Idaho State Tax Commission; Bill Marchand, Chief Deputy Assessor, City of Norfolk, Virginia; Joe Hapgood, CAE, Revenue Administrator, Ad Valorem Division, Oklahoma Tax Commission; Peter Davis, Ratio Study/GIS Supervisor, Division of Property Valuation, Kansas Department of Revenue; and Sheldon Bluestein, former Land Records Supervisor, Ada County (ID) Assessor's Office. Director of Publications and Marketing Christopher Bennett participated as IAAO staff liaison. Rick Anderson, tax policy specialist for the Idaho State Tax Commission, performed the data compilation and verification.

Ratio Studies was published in 1980. By 1990, the IAAO *Property Appraisal and Assessment Administration* text and an updated *Standard on Ratio Studies* were available and in wide circulation. These materials have been updated, and there is now a 2007 version of the *Standard on Ratio Studies* and a 1999 textbook, *Mass Appraisal of Real Property*.

Although these materials present many unified themes for ratio study practices, disparities in use and terminology still exist, thus making interpretation of survey responses somewhat subjective. Reports on previous ratio study survey results (Dornfest 1993, 1995, and 1997; Dornfest and Thompson 2004) noted a great deal of confusion about ratio study terminology, techniques, standards, and use. A certain amount of this is probably unavoidable, resulting from longstanding practices and local statutory guidelines, both of which are difficult to change. The committee attempted to address this problem by personal follow-up contacts with many of the participants in the survey.

In addition to exploring U.S. state and Canadian provincial and territorial practices, this survey, because of its continuing nature, makes it possible to report on the incorporation of professionally accepted best practices. Results from this latest survey show a continuation of trends noted in 2003. However, while prior ratio study surveys indicated an increasing number of jurisdictions were adopting major points addressed in the IAAO *Standard on Ratio Studies*, this trend was not apparent when results were compared with those from 2003.

The intent of this analysis is to continue to search for clarification of technical issues by exploring and reviewing state, provincial, and territorial level ratio study practices throughout the United States and Canada. Responses are interpreted in an attempt to provide meaningful comparisons with previous surveys.

Hawaii and Delaware are unique in that they do not provide state oversight

for local assessments. Responses for these states were from local jurisdictions and were either compiled into composite views that incorporate the prevailing practices or reported separately.

Survey Development and Organization

The 2008 survey is the first to be conducted by the Technical Standards Committee. Prior surveys in the series were conducted by Alan Dornfest, AAS, of the Idaho State Tax Commission, along with staff from his office. Prior to 1989, surveys on ratio studies were conducted by Robert Gloudemans when he was employed by the Arizona Department of Revenue. It is expected that Web tools, which were used for the first time in 2008, will enable the committee to conduct this survey more frequently in the future.

The committee reviewed the format and verbiage used in the 2003 survey. Some of the questions were reordered to better reflect real and personal property distinctions, but the majority of questions were rewritten. The committee attempted to retain the theme of each topic while adding clarity. Although many prior questions were retained to permit longitudinal comparisons, a few areas needed clarification or are of greater importance today and therefore were updated or expanded. After initial development, the draft survey was reviewed by Tim Wooten of the Texas Comptroller's Office.

The current survey was conducted as an online survey over the Web by using the Zoomerang[®] survey tool. Although this greatly facilitated completion, shortened turnaround time, and broadened participation, design limitations in some instances restricted answers for a few questions, which then required additional follow-up for clarification.

An invitation to participate in the survey, along with a printable PDF version of the 104-question survey, was sent via e-mail to designated contacts in the states, provinces, and territories. Respondents were asked to pre-answer

the survey questions on a printed version and then go to a link to the IAAO Web site to complete it in one sitting. A text version of the online survey, showing the original questions in their entirety, is provided in Appendix A.

Responses were received from every Canadian province; the Northwest Territory of Canada (the territories of Nunavut and Yukon do not conduct ratio studies); all U.S. states; the of Columbia; and two counties within Hawaii (the counties of Hawaii and Honolulu). Some of the responses did not fit neatly into a particular category and may be shown more than once in the tabulation of responses. This is particularly true when responses for different categories of property are expected to vary, as in coefficient of dispersion (COD) standards for residential, commercial, vacant land, and other types of property. For this reason, the tabulations do not always add to the total number of responses.

Survey Limitations

After reviewing responses and clarifying feedback, the committee noted the following limitations that can affect interpretation of trends among surveys.

- In many cases, the theme of the questions was the same or similar; however, the entire survey was rewritten, and therefore the answers may not exactly correspond. Questions that have been

substantively altered for the 2008 survey are shown in table 1.

- Because the survey did not provide a definition of the terms *base year* and *reliability*, there were various interpretations. Therefore, for consistency in interpreting responses, the following definitions were used:
 - *Base year* means assessments are uniform as of any year or date prior to the current year (2008). Cyclic assessment systems (e.g., all property reassessed once every five years with no interim adjustment) that tend to be uniform statewide or those in which some jurisdictions make interim adjustments were not considered to be base year assessments.
 - *Reliability* means use of confidence intervals and similar statistics for testing appraisal level and compliance with standards. States and provinces indicating they judge reliability by use of frequency distributions, coefficient of dispersion (COD), coefficient of variation (COV), and similar statistics were not included as using reliability statistics.

Table 1. Questions from the 2003 survey substantively altered for the 2008 survey

2003 Question Number	2008 Question Number	Summary of Change
7, 7b	11–13	Q11 is new in 2008. In 2003, Q7 asked if audits of appraisal procedures were done for any class or category of property. In 2008, Q12 asked about such audits with respect to local assessment practices in general. Q13 was more vague in 2003.
16	63	In 2003, the question asked whether any nonagricultural properties were appraised at current market value. In 2008, the question was whether local jurisdictions annually valued categories of property other than agricultural or timberland at current market value. The issue is whether respondents interpret the terms <i>appraised</i> and <i>valued</i> as synonymous.

- Responses have been categorized to indicate state-mandated or state-wide-implemented procedures to the extent possible. In some cases it is possible to differentiate between these two possibilities. For example, if a state's laws permit ordering adjustments to locally determined assessments but the state has not utilized this provision, that can be discerned from the answers. However, in the case of reassessment and reappraisal cycles, states have been categorized based on statutory requirements when there are multiple local systems in use (i.e., current market value, base years, regular cycles, and the like).
 - The survey questions were re-ordered in 2008 to better group questions related to real versus personal property. This re-ordering may have resulted in respondents assuming that certain questions related only to real property, when the questions could relate to real or personal property. (See, for example, question 12 [Appendix A] regarding procedural audits.)
 - Questions about reliability and confidence intervals were not divided into direct and indirect equalization uses. This diminishes the accuracy of responses to this set of questions when states or provinces used point estimates for one type of equalization but not for another.
 - Some questions were expanded to allow additional choices. This shifted the tabulated numeric responses so they may not be directly comparable with previous survey results. (e.g., Appendix B, 2008 question number 8)
 - Use of adjustments to sale prices distinguished between authority and actual use
 - Authority to order reappraisals or to order adjustments to locally determined assessments indicated how often such actions had been taken in the past three years
 - Measures of level used for direct equalization distinguished from measures of level used for indirect equalization
 - Use of lower limit of COD as indicator of possible sales chasing
 - Use of specific outlier trimming procedures identified
 - Specific actions taken if level standards are based on confidence intervals, but point estimates continue to be out of compliance for several years
 - Existence of nonstatutory requirements to test for sales chasing
 - Use of specific techniques to detect sales chasing
 - Use of expanded procedural audits.
- In addition, the following questions were deleted because the topics were considered to be of limited interest or importance:
- Whether a 90% or a 95% level of confidence was used
 - Sample stratification issues
 - Legal penalties for failure to disclose correct sales information.

Table 2 is a summary of key findings for U.S. and Canadian responses to major survey issues. Major ratio study practices and trends in states since 1989 can be compared in this table. Trends in Canadian provinces and territories are discernable beginning in 1994. Because of the larger number of Canadian respondents since 1997, comparison with previous provincial surveys may be misleading.

Appendix B presents more detailed tabulations of U.S. and Canadian responses. This

Responses from U.S. States and Canadian Provinces and Territories

New or expanded areas explored with the 2008 survey were as follows:

Table 2. Key findings

			UNITED STATES						CANADA				
			Numbers of Responses						Numbers of Responses				
2003	2008	Survey Year >	1989	1992	1994	1997	2003	2008	1994	1997	2003	2008	Note
Q#	Q#	Topic	Total Responses >										
2	3	Annual ratio study	48	47	46	51	51	51	7	11	12	11	(a)
3	4	Conducted by state/province/territory	35	37	35	41	41	44	1	6	8	8	(b)
4	5	Only sales used in ratio studies	29	24	26	29	38	44	6	3	7	10	(c)
5a	94	Personal property ratio study	19	15	20	23	25	31	5	8	8	10	
6a	100	Intangible personal property exemption	6	10	9	8	7	6	0	0	0	0	
7	12	Procedural audits in lieu of ratio study		32	25	32	37	40	3	4	6	3	
n/a	11	Procedural audits used		11	19	17	22	2	2	3	3	1	
8a	16	Full disclosure of sale prices						32				6	
		<i>Sales Price Adjustments:</i>	24	33	30	35	37	36	6	9	11	11	(d)
9	26	Time											
9	26	Financing	11	13	14	15	18	21	4	9	4	6	
9	26	Personal property	13	10	16	16	15	11	3	8	5	4	
		<i>Equalization Adjustments (Authority):</i>	28	26	31	32	26	30	6	9	4	7	
11c	30	Order reappraisal											
12	34	Trend by category	12	20	22	31	30	28	2	1	1	0	
12c	34	Give local officials a grace period to comply	18	16	11	14	13	16	1	2	1	0	
12d	34	Other			2	12	3	12	0	2	1	0	
13a	48	<i>Uniformity Standards for COD/COV:</i>			11	4	10	12	6	3	0	0	
13a	48	More stringent than the IAAO 1999 standard	24	26	32	34	38	40	2	8	9	8	(e)
13a	48	Less stringent than the IAAO 1999 standard	3	1	6	1	5	6	1	1	4	2	
13a	48	No standard	18	9	21	23	21	11	3	6	3	0	
13a	48	IAAO 1999 standard for one or more types	23	20	18	17	13	13	2	3	3	3	
13b	55	<i>Vertical Equity Standards for PRD:</i>					23	23			5	6	
13b	57	IAAO standard: PRD = 0.98 to 1.03			11	18	22	27	2	4	6	6	
13b	57	PRD standard of ranges different from IAAO		2	8	12	17	23	2	2	5	5	
13b	57	No standard			3	4	5	4	1	1	1	1	
14a	35	<i>Testing Assessment Level:</i>			35	34	28	25	4	7	6	5	
14a	35	Statutory $\pm 10\%$											
14a	35	Statutory $\pm 5\%$	17	10	11	15	16	16	1	4	1	3	
16	70	Assessment (Residential) 100% of MV:	6	5	5	6	6	4	2	2	2	2	
			14	27	17	22	23	26	6	6	8	9	

Notes

- (a) 1994 Canadian survey response rate was 7/12 or 58%.
1997 Canadian survey response rate was 11/12 or 92%.
2003 Canadian survey response rate was 12/13 or 92%.
2008 Canadian survey response rate was 11/13 or 85%.
1989 U.S. survey response rate was 48/51 or 94%.
1992 U.S. survey response rate was 47/51 or 92%.
1994 U.S. survey response rate was 46/51 or 90%.
1997 U.S. survey response rate was 51/51 or 100%, includes District of Columbia plus a composite of 2 of 4 Hawaiian counties.
2003 U.S. survey response rate was 51/51 or 100%, includes District of Columbia plus a composite of all 4 Hawaiian counties.
2008 U.S. survey response rate was 51/51 or 100%, includes District of Columbia plus a composite of 2 of 4 Hawaiian counties.
- (b) Two Hawaiian respondents were counted once in some instances and twice in others where applicable.
- (c) Includes Colorado and Mississippi which contract out study
- (d) The 2008 total reflects addition of Delaware, loss of disclosure in South Carolina, and proper classification of Nevada.
- (e) Results correspond to questions 48–52 in 2008 survey.

table allows comparison among responses from the 1994, 1997, and 2003 surveys.

From these tables, it appears that the *typical* ratio study program includes the following features:

- An annual ratio study of real property is conducted by the state, province, or territory.
- Sales or a mix of sales and appraisals of real property is used to develop the ratio study.
- There is statutory authority requiring disclosure of sale prices to administrative jurisdictions by means of mandatory disclosure and transfer fees.
- Adjustments to sale prices are made primarily for personal property included in the sale price and, secondarily, for financing and time.
- U.S. ratio study results are used primarily to equalize funding, advise local officials of assessment conditions, and determine the need for reappraisal
 - Secondary uses are adjusting locally determined values, equalizing assessments of centrally assessed properties, and approving tax rolls.

Canadian results are used primarily in an advisory capacity.

- Level and uniformity standards are used for gauging performance or compliance; these are often similar to IAAO ratio study standards.
- Results are calculated on the basis of samples for which there is generally no predetermined minimum size.
- Reliability is tested frequently, and, in some cases, confidence intervals are used to determine compliance with standards or other requirements.

Detailed responses received from each U.S. state are found in appendix C and from each Canadian province or territory in appendix D. These tables provide a complete rendition of the responses, except where it became evident from the responses that the wording of a few questions may have caused confusion. In these few instances, the responses are judged as not meaningful and are not reported in the tables.

Detailed counts from the newly expanded questions about methods used to detect sales chasing are provided in appendix E.

Recent Trends—United States

Within the limitations already noted, the questions in the 2008 survey and the respondents are similar to those in previous ratio study surveys. While respecting the constraints and other concerns noted, it is often possible to compare changes in U.S. ratio study practices over time.

General Trends

The number of states performing annual ratio studies increased from 41 in 2003 to 44 in 2008. Although many states combine sales and appraisals, there appears to be a continuing tendency toward the use of sales only. This tendency may be related to resources needed for high-quality appraisals that are USPAP-compliant, a requirement that had not been specified in IAAO standards prior to 1999. Only California still bases its ratio study exclusively on appraisals. In this state, the close ties between sale price and assessed value reduce the applicability of traditional sales-based studies.

While the number of states performing personal property ratio studies increased from six to ten from 1989 to 1992, this indicator has been steadily decreasing. Only six states are performing ratio studies on personal property in 2008, and these studies are based solely on appraisals.

A large number of states are now conducting procedure audits. Because of the rewording of this series of questions, it appears that very few states conduct such audits in lieu of ratio studies, but more states are using procedural audits of local assessment practices.

Such studies typically are performed to provide information about selected property categories for which there is little market activity or when use value and other constraints not directly related to the market are in place. The results of procedural audits can be used to determine compliance.

Disclosure of Sale Price

There are three means of disclosure: full mandatory sale price disclosure, transfer fees, and mandatory recordation of any transfer instrument. Seven states do not have any means of disclosure as state-wide policy: Alaska, Idaho, Louisiana, Mississippi, Missouri, Texas, and Utah. However, the limitation is not as severe in Missouri because several major local jurisdictions have full disclosure, so only parts of the state are without sale price disclosure requirements.

Many states have transfer taxes based on sale price; some of these states also have full disclosure. Since 2003, Delaware has gained disclosure requirements and has been added to this list. Nevada and South Carolina lost disclosure requirements but retained transfer taxes related to sale price.

Disclosure typically occurs when a sale price statement is filed as deeds are processed. More states indicated that disclosed sale prices are confidential; this number increased from five in 2003 to nine in 2008.

Intangible Property

The number of states reporting intangibles as exempt continued to increase. There were 25 states reporting such a statutory exemption in 1994, 32 in 1997, 37 in 2003, and 40 in 2008. Appendix B

delineates the number of states exempting various specific intangibles.

Adjustments to Sales Prices

An increasing number of states are adjusting sale prices, particularly for time, personal property, and intangibles.

As in 1997 and 2003, three states still use overall adjustments. Of these, only two, Florida and Arizona, make significant overall adjustments and the substance of these has not changed for many years. Washington makes a nominal 1% adjustment for personal property presumed to be included in each sale price.

Use of Ratio Studies

The ratio study has traditionally been used in an *advise and assist* role. In 2008, there was a small reduction in the number of states using ratio studies for advisory purposes and a significant reduction in the number using ratio studies to assist mass appraisal programs. The number of states indicating other major uses tended to decrease slightly.

Twenty states can order adjustments to locally determined assessed values. There was some increase in the number of these that can order adjustments by class or category of property. However, only 16 actually issued any adjustment orders during the last three years. Previous surveys showed the number of states that would apply trends to individual categories of property has varied considerably over time.

The pattern of states indicating use of a grace period before ordering adjustments has fluctuated since 1994.

Of the 28 states that have authority to use ratio studies to order reappraisal, only 20 actually did so in the last three years.

Uniformity Standards

The number of states adopting uniformity standards has leveled since 2003. All but 12 states now have such standards. As in 2003, 23 states have established stan-

dards similar to those recommended by the 1999 IAAO *Standard on Ratio Studies*. General uniformity standards are based predominantly on COD.

The number of states that have developed price-related differential (PRD) standards has continued to increase, with 27 states using these standards in 2008. It is noteworthy that the number of states using the specific guidelines in the IAAO *Standard on Ratio Studies* has continued to increase, with 23 states using this standard in 2008.

Thirty states can initiate action on the basis of poor uniformity. The most typical action is ordering reappraisal, which can be done in 23 of these states.

Twenty-one states test the reliability of the COD. Fourteen test the reliability of the PRD. Eleven states take reliability into account when making decisions or determining compliance with uniformity standards.

Level Standards

A level standard is defined as some range of acceptability around the statutorily required assessment ratio. Such ranges can be provided by statute but more frequently are established by administrative or oversight agency authority. Many states have established ranges of this type, but the number of states with *no allowable variance* standard for assessment level has decreased slightly, to 15 in 2008. The IAAO *Standard on Ratio Studies* recommends $\pm 10\%$ for direct equalization of locally determined values and $\pm 5\%$ for indirect equalization of funding distributions. The number of states using the $\pm 10\%$ parameter remained at 16, while the number using $\pm 5\%$ decreased to 4 in 2008.

Reliability

Employing the principles of statistical sampling error, ratio studies tend to be more reliable when large, uniform samples are used and less reliable when these conditions are not met. The number of states testing reliability and using this

information for compliance purposes appears to have decreased in 2008. However, there was considerable confusion about this concept, and it is not clear whether long-term comparisons are valid.

The 2008 survey examined two special situations in which lower levels of confidence or point estimates might be appropriate, as described in the IAAO *Standard on Ratio Studies*. In the first scenario, the survey asked whether a decision based on reliability statistics could be based on point estimates or lower levels of confidence given longstanding noncomplying point estimates. Three states indicated they would lower levels of confidence in this situation. No state currently using confidence intervals would substitute point estimates. For the second scenario, the survey asked whether the response would change if the COD also showed poor uniformity. In this case, 3 states would use lower levels of confidence, but 20 states would substitute point estimates. The 1999 *Standard on Ratio Studies* recommends such lower degrees of confidence “when independent samples show long-term appraisal inequity as evidenced by poor level and uniformity statistics for at least three consecutive years....”

Market Value

While it appears the number of states appraising non-agricultural property at current market value has increased, with 32 states reporting this system for 2008, this question was reworded; hence, comparison with responses in previous surveys is questionable. Some states appraise non-agricultural property at current market value, but have fractional assessment ratios to determine taxable value. This distinction must be taken into account when comparing 2003 with 2008 responses. For example, for residential property, 26 states appraise at market value and do *not* use fractional assessment ratios below 100%. Some states set market value as an appraisal goal but restrict the meaning of this term somewhat by establishing base

years. Typically, a base year represents the point in time when an assessment is frozen or subject to limited increases. The number of states using a base year decreased slightly, to 10 in 2008.

The number of states adjusting values during interim years between reappraisals decreased from 14 to 6. States with uniform assessment cycles (e.g., all property is assessed at market value once every four years) in which appraisals are to reflect 100% of market value when property reaches its reassessment time in the cycle were included as assessing at 100% of market value. In such cyclic systems, this will not be true of all property each year.

Measures of Assessment Level

States typically compute three measures of level: the mean, the median, and the weighted mean. Although these statistics are computed by similar numbers of states, either the median or weighted mean predominates for equalization purposes.

The 2008 survey further differentiated between statistics used for direct and indirect equalization. The median is the dominant statistic used for direct equalization, with 25 states using this measure, while the weighted mean is used by a few more states than the median for indirect equalization (15 states versus 12 states, respectively). The 1999 *Standard on Ratio Studies* differentiates between direct (parcels) and indirect (funding) equalization, suggesting that the median is more appropriate for the former and the weighted mean for the latter.

Outliers

The number of states identifying outliers was similar in 2003 and 2008. In 2008, the survey was expanded to explore methods of outlier identification. Despite considerable treatment of this subject in the *Standard on Ratio Studies*, no particular method prevails in practice.

Sales Chasing

In 2008, 27 states reviewed samples to determine whether sales chasing was

distorting results. This question was expanded in 2008 to enable states to indicate which technique was most often used to identify potential sales chasing. The most commonly used technique is comparison of average value changes on sold and unsold parcels. Nebraska establishes a lower limit on the COD as a possible indicator of sales chasing. A detailed report of the preferred techniques states use to detect sales chasing is presented in appendix E.

Sample Size and Representativeness

Uncertainty continues about the minimum sample size standard that should be used to evaluate assessment performance based on a ratio study. There is considerable variance among jurisdictions and no significant change from 2003 to 2008.

The number of states testing samples for representativeness decreased from 32 in 2003 to 21 in 2008. Stratification questions were deleted for the 2008 survey.

Legal Action

Fewer states indicated that a ratio study could result in outside legal action. Although 37 states in 2003 indicated this could occur, only 28 states indicated this was a possibility in 2008.

Recent Trends—Canada

The 2008 survey includes responses from all Canadian provinces and the Northwest Territories. Except for the Yukon Territory, which did not respond in 2008, the same provinces and territories responded as in 2003. There were fewer responding in 1994, making comparisons with that year difficult. In a few cases, significant trends are apparent and are stated. In other cases, the general nature of Canadian ratio studies is discussed and some comparison with U.S. practices is offered.

General

The number of provinces or territories performing annual ratio studies has remained unchanged at eight since 2003.

However, in an increasing number of provinces or territories, the ratio study is performed at the provincial or territorial level, rather than by local jurisdictions.

As in 2003, only one province, Alberta, adds appraisals to sales samples. In 2003, Northwest Territories indicated it relied strictly on appraisals for its ratio study. This jurisdiction has now switched to using sales only, so there no longer are any Canadian provinces or territories using appraisals only.

Personal property is exempt in all but two provinces. None of the provinces performs personal property ratio studies.

Procedural audits are used by six provinces, but they substitute for ratio studies only in the Northwest Territories.

Disclosure of Sale Price

All 11 of the responding jurisdictions have full disclosure as well as transfer fees. In 2003, all but the Yukon Territory, which did not respond in 2008, had full disclosure.

Intangible Property

The number of provinces and territories reporting a statutory exemption for intangible personal property decreased from six in 2003 to three in 2008.

Adjustments to Sales Prices

Adjustments for time, personal property, and financing are the most common and appear at about the same relative frequency as in the United States. No Canadian jurisdiction makes overall adjustments at this time.

Use of Ratio Studies

The predominant use of ratio studies is as a tool to advise local jurisdictions or to assist mass appraisal programs. Only one province (New Brunswick) uses its ratio study to adjust locally determined values, and in two provinces, it can be used to equalize funding. No province uses the study to order reappraisal, although Saskatchewan indicated this use in 2003. As has been the case since

1997, none uses the study to adjust utility (centrally assessed) values. Regardless of authority, no province has actually ordered adjustments to locally determined values or ordered reappraisal in the past three years.

Standards—Level and Uniformity

Use of uniformity standards is similar to that reported in 2003, with eight provinces using such standards. Most of the reporting provinces use standards similar to those found in the IAAO *Standard on Ratio Studies*.

Six provinces continue to report use of PRD standards, and five of these cite the range found in the IAAO *Standard on Ratio Studies*.

Five provinces can initiate action based on uniformity. This number is down from seven reporting such a possibility in both 1997 and 2003.

The number of provinces using allowable variance ranges for assessment level grew from five in 2003 to eight in 2008. Three of these provinces use a $\pm 10\%$ range for this purpose, while only one used this range in 2003. Two continue to use a tighter $\pm 5\%$ range.

Reliability

In five provinces, confidence intervals are computed and could influence a determination of compliance with assessment level standards. Five provinces can review level measures or use additional information to make decisions if the COD indicates poor uniformity. In the Northwest Territories, compliance could be based on point estimates if attainment has been based only on confidence intervals for several years.

The number of provinces testing the reliability of the COD and PRD increased from four and two in 2003 to five and four, respectively, in 2008.

Market Value

Although full value assessment had been more prevalent in Canada than in the United States, the number of provinces

reporting annually updated current residential market value decreased from 2003 to 2008 (from eight in 2003 to four in 2008). During the same period, the number reporting use of base years increased (six in 2008 versus five in 2003).

Measures of Assessment Level

Canadian use of the various measures of assessment level is similar to that in the United States. However, no Canadian province uses the weighted mean for equalization, while two used this statistic in 2003. Five provinces test normality of the data distribution.

Outliers

Seven provinces test for outliers; this is a decrease from nine in 2003. Two provinces place limits on the number of sales that can be trimmed.

Sales Chasing

No province has statutes requiring testing for sales chasing. Two provinces (Alberta and Newfoundland) use the comparison of average value change technique to test for sales chasing. Additional details on sales-chasing detection methods are provided in appendix E.

Sample Size and Representativeness

Sample size quotas are used only by Prince Edward Island Province. Minimum sample size requirements generally are similar to those in the United States. Four provinces test samples for representativeness.

Legal Action

Only in Alberta can legal action be taken as a result of ratio studies.

Conclusions

Ratio studies remain critical ways for measuring, evaluating, and working toward the improvement of assessment practices in most places. A degree of order in the development and use of these studies has been brought about by the use and availability of the IAAO

Standard on Ratio Studies. However, aside from isolated instances, there does not appear to be any clear continuing trend for states and provinces to adopt more features of this IAAO standard.

The report on the 2003 ratio study survey indicated that a growing number of states and provinces were basing assessment level compliance on confidence intervals and suggested that a major change in practice related to this issue was emerging. However, such a trend is not supported by the results of the 2008 survey, which shows similar or diminishing numbers of jurisdictions using reliability tests in such decision making. Even more troubling, inconsistencies among answers to multiple questions on this subject lead this committee to conclude that the degree of understanding of statistical reliability measures is deficient. We now believe that previous conclusions on trends of use of such statistics may have been dubious at best. As a corollary in support of this conclusion, few states and provinces or territories appear to have responded to the recommendation first found in the 1999 *Standard on Ratio Studies* to lower the level of confidence when long-term inequities are apparent. The lack of response in this area suggests a lack of understanding of the underlying statistical measures.

On a more positive note, many states and some provinces are using the methods outlined in the IAAO standard for identifying outliers and for detecting sales chasing. Even the observed versus expected distribution of ratios test, first introduced in the 1999 standard, is being used and is the method of first choice by six states. In future surveys, follow-up questions could explore issues of resolution once sales chasing is identified.

The 1999 IAAO *Standard on Ratio Studies* continues the tradition of providing valuable guidance and assistance and is widely cited and used. It is hoped this survey will provide focus for U.S. states and for Canadian provinces and territories attempting to evaluate their ratio study

systems and work toward internationally recognized guidelines. It is also hoped states will use the survey results as an impetus to become more knowledgeable about technical aspects of ratio studies they have not yet incorporated into their practices.

Authors Note

The survey questionnaire and the detailed compilations of survey results found in the appendix are available online at the IAAO Web site, www.iaao.org, in the Topics of Interest area.

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Appendix A. 2008 Ratio Study Practices Questionnaire

Q1: Enter your full contact information. Name/Title/Jurisdiction/Agency name/
Country/E-mail address/Phone

Q2: What is your jurisdiction type? ☐ State agency ☐ Provincial agency
☐ Territory ☐ Local ☐ Other, describe (50 char. limit):

Q3: How often is your jurisdiction required to conduct ratio studies? Indicate if
annual or explain other variations.

Q4: Who conducts your ratio study? (check all that apply) ☐ State/province/terri-
tory officials ☐ Local officials ☐ Contracted service provider (university or private
company) ☐ Other, specify (50 char. limit):

Q5: Which of the following does your real property ratio study include? ☐ Sales
only ☐ Independent appraisals only ☐ Both sales and independent appraisals

**Q6: If you use both sales and independent appraisals, can they be combined in
order to study one type or category of property?** ☐ No ☐ Yes, comments (50
char. limit):

**Q7: If sales are used in the ratio study, which jurisdiction performs the sample selec-
tion?** ☐ State or province ☐ Local ☐ Both ☐ Other, specify (50 char. limit):

Q8: Which jurisdiction conducts the sales validation (screening)? ☐ State/provin-
cial agency ☐ Local ☐ Contracted service provider ☐ Other, specify (50 char.
limit):

**Q9: If the state/provincial agency does NOT conduct the sales validation, does the
agency perform an audit of the sales validation process?** Yes/No

**Q10: If an audit of sales is performed by the oversight agency, briefly summarize
your audit policy:**

**Q11: Does your agency perform procedural audits of local assessment procedures/
practices?** Yes/No

**Q12: If your agency performs a procedural audit of local assessment procedures/
practices, is the audit used INSTEAD OF a ratio study?** Yes/No Additional com-
ment:

**Q13: If your agency performs a procedural audit of local assessment procedures/
practices, is it used IN ADDITION TO ratio study information?** Yes/No

**Q14: If your agency performs a procedural audit of local assessment procedures/
practices, is it used SOLELY to advise or assist local appraisal offices?** Yes/No Ad-
ditional comment:

Q15: Can equalization or a reappraisal be ordered as a result of such audits?
☐ No ☐ Yes, describe authorized actions (50 char. limit):

**Q16: Regarding sales price disclosure: Does your jurisdiction have a law requir-
ing disclosure of real estate sales prices to assessment officials?** ☐ Yes, disclosure
made to state/province/territory officials ☐ Yes, disclosure made to local assessors
☐ Yes, disclosure made to both ☐ No

Q17: When does the sale price disclosure occur? ☐ During deed recording
☐ Other (e.g., 30 days or other statutory period)

Appendix A. 2008 Ratio Study Practices Questionnaire (continued)

Q18: Is a method in place to track a disclosure document for every recorded sale? Yes/No

Q19: If a method is in place to track a disclosure document for every recorded sale, describe the method:

Q20: What type of disclosure document is used? ☐ Sale price statement ☐ Comprehensive questionnaire ☐ Both ☐ Other, describe (50 char. limit):

Q21: What office is responsible for initially accepting the disclosure document? ☐ Recorder/registrar ☐ Local assessor ☐ State office ☐ Other, describe (50 char. limit):

Q22: Are disclosed sale prices confidential? Yes/No Explain:

Q23: Is a value-related fee charged (e.g., transfer tax, deed stamp) for real property transfers? ☐ No ☐ Yes, provide the rate(s) (50 char. limit):

Q24: Does your jurisdiction have a law making recordation/registration mandatory for real property transfers? Yes/No

Q25: Regarding sales price adjustments: Which of the following adjustments to sale price do you have authority to implement in your ratio studies? (check all that apply) ☐ No authority to implement adjustments ☐ Time ☐ Financing ☐ Personal property ☐ Closing costs ☐ Brokerage fees ☐ Intangible personal property ☐ Delinquent taxes ☐ Other, describe (50 char. limit):

Q26: Which of the following adjustments to sale price do you actually use in your ratio studies? (check all that apply) ☐ Time ☐ Financing ☐ Personal property ☐ Closing costs ☐ Brokerage fees ☐ Intangible personal property ☐ Delinquent taxes ☐ Other, describe (50 char. limit):

Q27: Are blanket or global adjustments made to sales prices prior to computing ratios? (For example, some jurisdictions adjust all prices down by 1% in an attempt to adjust for personal property that is difficult to isolate sale by sale; others might adjust all sales by 10% for financing considerations.) Yes/No

Q28: If blanket or global adjustments are made to sale prices prior to computing ratios, describe the types of adjustments and indicate the maximum percentage adjustment generally permitted by this procedure:

Q29: Are there any court cases in your jurisdiction affirming or disallowing these blanket or global adjustments? ☐ No ☐ Yes, provide citation (50 char. limit):

Q30: How is your ratio study used? (check all that apply) ☐ To order adjustments to locally determined assessed values ☐ To equalize state or provincial funding of local jurisdictions ☐ To order local jurisdictions to reappraise ☐ To advise provincial, state, or local jurisdictions of assessment conditions ☐ To assist mass appraisal programs ☐ To approve tax assessment roll ☐ To adjust or equalize centrally determined assessed values (such as utilities) ☐ Other, describe (50 char. limit):

Q31: Do you or another oversight agency have authority to order adjustments to, or a reappraisal of, locally determined values? Yes/No

Q32: How many local jurisdictions have been issued orders to ADJUST values in the past three years? (50 char. limit)

Q33: How many local jurisdictions have been issued orders to REAPPRAISE values in the past three years? (50 char. limit)

Q34: If you order adjustments to locally determined assessed or appraised values, which of the following procedures are used? (check all that apply) ☐ Order local officials to apply trending factors to individual classes or categories of property ☐ Trend all types of property equally, based on a jurisdiction-wide adjustment factor ☐ Give local officials a compliance grace period to apply indicated factors ☐ Give local officials a grace period to recalibrate mass appraisal models ☐ Other, describe (50 char. limit):

Q35: Do you have an appraisal level standard that allows some variance from your statutorily required appraisal level? ☐ Yes, 0.90–1.10 ☐ No ☐ Yes, other level standard (describe variance):

Q36: If yes to Q35, is the appraisal level variance set by statute? ☐ Yes ☐ No ☐ If no, describe (50 char. limit):

Q37: If you use your ratio study to test appraisal level compliance, are allowances made for sample reliability using statistical tests, such as confidence intervals? ☐ Yes ☐ No ☐ Not applicable—appraisal level compliance is not tested

Q38: If you use your ratio study to test appraisal level compliance, describe the reliability tests used:

Q39: Check each measure of level that you calculate and indicate if it is used for direct and/or indirect equalization. ☐ ARITHMETIC MEAN ☐ Used for direct equalization ☐ Used for indirect equalization; ☐ MEDIAN ☐ Used for direct equalization ☐ Used for indirect equalization; ☐ WEIGHTED MEAN ☐ Used for direct equalization ☐ Used for indirect equalization; ☐ GEOMETRIC MEAN ☐ Used for direct equalization ☐ Used for indirect equalization ☐ OTHER ☐ Used for direct equalization ☐ Used for indirect equalization ☐ If other measure of level, specify (50 char. limit):

Q40: Do you test the distribution of ratios to see if it is statistically normal? Yes/No

Q41: If you test the distribution of ratios to see if it is statistically normal, how does this determination affect the measure(s) of level used for testing compliance or equalization? Describe:

Q42: Have you incorporated portions of the IAAO *Standard on Ratio Studies* in your statutes or rules and regulations? Yes/No

Q43: When testing reliability for level of appraisal, which of the following is used to determine statistical compliance with standards for appraisal level? ☐ Point estimates ☐ Confidence intervals ☐ Both point estimates and confidence intervals

Q44: Hypothetical situation: There is a legal requirement for appraisals to fall between 90 and 110% of market value as measured by the ratio study sample median. An equalization order could be issued if the requirement is not met. A study sample has a median ratio of 85%, and has a 95% confidence interval that falls in the range of 76 to 94%. Would your agency rule this result to be in compliance with statutory appraisal level requirements? ☐ Yes, the confidence interval overlaps the threshold for compliance. ☐ No, only the point estimates are used to make inferences about compliance. ☐ No, the confidence interval fails to overlap 100%.

Appendix A. 2008 Ratio Study Practices Questionnaire (continued)

Q45: Hypothetical (cont.): If the confidence interval overlaps the threshold for compliance and the situation (median ratio point estimate is out of compliance) continues for several years, which actions would your agency take? (check all that apply) ☐ Lower the level of confidence and reevaluate ☐ Base the compliance decision on point estimates ☐ Continue to find the jurisdiction in compliance ☐ Other

Q46: If you checked “Other” in Q45, describe here:

Q47: Hypothetical (cont.): How would your response differ if the sample COD (or other measure of uniformity) also showed very poor uniformity? (check all that apply) ☐ No influence on decisions regarding level of confidence ☐ Lower the level of confidence ☐ Use the point estimate only to evaluate level ☐ Review level measures from previous years ☐ Use additional information, such as sample size, to make a final determination about level compliance

Q48: Regarding assessment uniformity: Do you have specific standards or requirements for assessment uniformity as measured by the COD (coefficient of dispersion)? (These may be statutory or procedural, but in either case would be used to find jurisdictions in or out of compliance.) Yes/No

Q49: For improved residential property (single-family homes, condominiums, manufactured housing, 2–4 family units), if you have specific standards or requirements for assessment uniformity as measured by the COD, enter any differences from the following standards. (50 char. limit in each field) COD 10.0 or less for very large jurisdictions/densely populated/newer properties/active markets; COD 15.0 or less for large to mid-sized jurisdictions/older and newer properties/less active markets; COD 20.0 or less for rural or small jurisdictions/older properties/depressed market areas. Some other standard/requirement, specify:

Q50: For income-producing properties (commercial, industrial, apartments), if you have specific standards or requirements for assessment uniformity as measured by the COD, enter any differences from the following standards. (50 char. limit in each field) COD 15.0 or less for very large jurisdictions/densely populated/newer properties/active markets; COD 20.0 or less for large to mid-sized jurisdictions/slower development/less active markets; COD 25.0 or less for rural or small jurisdictions/older properties/depressed market areas. Some other standard/requirement, specify:

Q51: For residential vacant land, if you have specific standards or requirements for assessment uniformity as measured by the COD, enter any differences from the following standards. (50 char. limit in each field) COD 15.0 or less for very large jurisdictions/rapid development/active markets; COD 20.0 or less for large to mid-sized jurisdictions/slower development/less active markets; COD 25.0 or less for rural or small jurisdictions/little development/depressed markets; Some other standard/requirement, specify:

Q52: For other vacant land (non-agricultural), if you have specific standards or requirements for assessment uniformity as measured by the COD, enter any differences from the following standards. (50 char. limit in each field) COD 20.0 or less for very large jurisdictions/rapid development/active markets; COD 25.0 or less for large to mid-sized jurisdictions/slower development/less active markets; COD 30.0 or less for rural or small jurisdictions/little development/depressed markets. Some other standard/requirement, specify:

Q53: If you do not use the COD, what uniformity measure is used? ☐ No uniformity measure is used ☐ Other, describe measure and standard (50 char. limit):

Q54: Has a lower limit on the COD been established as an indicator of possible sales chasing? ☐ No ☐ Yes, describe lower limit that you use (50 char. limit):

Q55: Do you have standards for price-related bias (vertical inequity) as measured by the PRD (price-related differential) or other statistical tests? Yes/No

Q56: If, in addition to or as an alternative to the PRD, you use another statistical test for price-related bias (vertical inequity), describe:

Q57: If you have standards for price-related bias (vertical inequity), which do you use? ☐ PRD 0.98–1.03 ☐ Other, describe (50 char. limit):

Q58: Can your agency initiate any action as a result of assessment uniformity (e.g., COD, PRD, etc.) conditions? Yes/No

Q59: What actions can your agency initiate as a result of assessment uniformity conditions? (check all that apply) ☐ Order a reappraisal ☐ Withhold funding (e.g., revenue sharing) ☐ Other

Q60: If you answered “Other” to Q59, describe what actions your agency can initiate:

Q61: Do you calculate reliability measures, such as confidence intervals, on uniformity statistics around the: ☐ COD ☐ PRD ☐ Both ☐ Neither

Q62: If you initiate action as a result of assessment uniformity conditions, what indicator is action dependent upon? ☐ Point estimates ☐ Confidence intervals ☐ Not applicable ☐ Other, describe (50 char. limit):

Q63: Are local jurisdictions required to annually value categories of property (other than agricultural or timberland) at 100% of current market value (full cash value)? Yes/No

Q64: Is property that is not required to be appraised during a given year required to have its value updated during the interim year or years? Yes/No

Q65: Is property appraised at a uniform base year (e.g., 2001)? ☐ No ☐ Yes, indicate most recent base year used (50 char. limit):

Q66: Describe property classes associated with the base year:

Q67: Describe how your appraisal and valuation update cycles work:

Q68: Is there a uniform fractional assessment ratio for each category of property in every local assessment jurisdiction? ☐ Yes, but ratios may differ by category ☐ No, they can be established by each local jurisdiction ☐ Other, every category of real property is required to be at 100%

Q69: If there is a uniform fractional assessment ratio for each category of property, how are the rates set? ☐ Statute ☐ Constitution

Q70: For residential properties, is the required assessment ratio set at 100% of market value? ☐ Yes ☐ No, enter your assessment ratio (50 char. limit):

Q71: For farmland, ranchland, and timberland, is the required assessment ratio set at 100% of market value? ☐ Yes ☐ No, enter your ratio percentage (50 char. limit):

Q72: For commercial property, is the required assessment ratio set at 100% of market value? ☐ Yes ☐ No, enter your ratio percentage (50 char. limit):

Appendix A. 2008 Ratio Study Practices Questionnaire (continued)

Q73: For industrial property, is the required assessment ratio set at 100% of market value? ☐ Yes ☐ No, enter your ratio percentage (50 char. limit):

Q74: For public utilities, is the required assessment ratio set at 100% of market value? ☐ Yes ☐ No, enter your ratio percentage (50 char. limit):

Q75: For railroads, is the required assessment ratio set at 100% of market value? ☐ Yes ☐ No, enter your ratio percentage (50 char. limit):

Q76: For other real property types, is the required assessment ratio set at 100% of market value? Yes/No

Q77: For personal property (chattel [tangible PP]), is the statutorily set and/or mandated (ordinance, regulations, etc.) assessment ratio 100% of market value? ☐ Yes ☐ No, enter your ratio percentage (50 char. limit):

Q78: How is farmland/ranchland assessed in relation to market value? ☐ 100% of productivity value or legislated value ☐ 100% of market value ☐ Other % of productivity/legislated value (50 char. limit):

Q79: How is timberland assessed in relation to market value? ☐ 100% of productivity value or legislated value ☐ 100% of market value ☐ Other % of productivity/legislated value (50 char. limit):

Q80: Regarding sample size, what is the smallest sample you will use to evaluate any category of property? ☐ Less than 5 observations ☐ 5 to 9 observations ☐ 10 to 19 observations ☐ 20 to 30 observations ☐ More than 30 observations ☐ Other, describe (50 char. limit):

Q81: Do you establish sample size quotas or goals (e.g., 3% of parcels in a category or a number based on a statistical sample size formula)? Yes/No

Q82: If you establish sample size quotas or goals, describe how they are established:

Q83: Do you identify and trim outlier ratios? Yes/No

Q84: If outliers are trimmed, what procedure do you use? (check all that apply)
☐ 1.5 * interquartile range ☐ 3.0 * interquartile range ☐ Beyond 2 standard deviations ☐ Fixed symmetric points (e.g., remove ratios < .50 or > 1.50) ☐ Fixed asymmetric points (e.g., remove ratios < .30 or > 2.00) ☐ Good judgment ☐ Other, describe (50 char. limit):

Q85: Is there a limit on the maximum percentage of sales that can be trimmed out of a sample? (e.g., 20%) ☐ No ☐ Yes, indicate percentage (50 char. limit):

Q86: Do you attempt to determine sample representativeness? Yes/No

Q87: If you attempt to determine sample representativeness, what is your procedure? Describe:

Q88: Do you have statutory requirements to check for sales chasing?
☐ Yes ☐ No ☐ Nonstatutory requirement

Q89: Do you test for sales chasing? Yes/No

Q90: If you test for sales chasing, what techniques do you use? (check all that apply in order of use: 1 = Not used; 2 = First choice ... 7= Sixth choice) Comparison of average value changes; Comparison of average unit values; Split sample technique; Comparison of observed vs. expected distribution of ratios; Mass appraisal techniques; Other

Q91: If you test for sales chasing and you said “Other” for techniques used, describe the technique(s):

Q92: Can a taxing district or third party initiate legal action as a result of your ratio study? Yes/No

Q93: Are business or commercial machinery and equipment considered taxable personal property? Yes/No

Q94: If business or commercial machinery and equipment are considered taxable personal property, is a ratio study conducted for this personal property? Yes/No

Q95: If a ratio study is conducted for commercial machinery and equipment, which of the following does the study use? ☐ Sales only ☐ Appraisals only ☐ Both sales and appraisals

Q96: If you use both sales and appraisals for your personal property ratio study, do you combine them in studying one type or category (e.g., vehicles, machinery) of property? Yes/No

Q97: If you use appraisals for your personal property ratio study, what appraisal technique(s) do you use? (check all that apply) ☐ Depreciation or economic life tables ☐ Iowa curves ☐ Other

Q98: If you use other personal property ratio study appraisal techniques, list the techniques:

Q99: Describe how the results of your personal property ratio study are used:

Q100: Do you have a statutory exemption for intangible personal property? Yes/No

Q101: If you have a statutory exemption for intangible personal property, which types of property would receive this exemption? (check all that apply) ☐ Capital stock ☐ Bonds ☐ Deposits ☐ Contracts and contract rights ☐ Copyrights ☐ Goodwill ☐ Customer lists ☐ Custom computer programs ☐ Licenses ☐ Patents ☐ Rights-of-way ☐ Trademarks ☐ Trade secrets ☐ Other, specify (50 char. limit):

Q102: Please provide comments about your ratio study practices that were not covered by this survey:

Q103: Please share any comments you may have about this survey:

Q104: Your time and expertise in completing this survey are greatly appreciated and the IAAO Technical Standards Committee thanks you. Would you like a copy (Adobe Acrobat PDF format) of the final report sent to your e-mail address?
☐ Yes ☐ No ☐ Enter alternate e-mail address here if preferred:

Appendix B. Tabulation of comparable responses

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note
						Numbers of Responses				Numbers of Responses				
						1994	1997	2003	2008	1994	1997	2003	2008	
2	2	2	3	Frequency of ratio studies	Annual	35	41	41	44	1	6	8	8	(a)
					1 per 2 years	5	4	2	2	0	0	0	0	
					1 per 3 years	1	0	0	1	1	1	1	1	
					1 per 4 years	5	7	1	1	5	4	2	2	
					Other	5	7	7	3	0	1	1	0	
3	3	3	4	Who does study?	State or Province/ Territory	26	29	38	44	6	3	7	10	
					Local only	4	7	7	7	0	3	1	0	(b)
					Contracted to others	14	14	4	2	1	4	2	1	(c)
					Both state and local	n/a	n/a	n/a	11	n/a	n/a	n/a	0	
					Other	2	2	2	0	0	1	3	0	
4	4	4	5	What does study include?	Sales only	20	23	25	31	5	8	8	10	
					Appraisals only	5	4	2	1	0	0	1	0	
					Both sales and appraisals	21	25	24	19	2	3	1	1	
4a	4a	4a	6	If both, combined?	Yes			24	17			0	1	
4b	4b	4b	7	Who selects samples?	State or Province/ Territory			35	22			6	7	
					Local			14	12			5	2	
					Both				16				0	
					Private contractor				1				1	
4c	4c	4c	8	Who validates sales?	State or Province/ Territory			23	16			3	5	
					Local			24	24			3	3	
					Both				10			1	1	
					Contracted and other				0			1	1	
			9	Audit of sales validation?					23				3	
5	5	5	93	Personal property (PP) taxable?	Yes	37	40	40	39	3	6	3	2	
5a	5a	5a	94	PP ratio study conducted?	Yes	9	8	7	6	0	0	0	0	
5b	5b	5b	95	For PP ratio study, do you use sales, appraisals, or both?	Sales only			0	0					
					Appraisals only	7	8	7	6					
					Both sales and appraisals	1	0	0	0					
		5c	96	PP ratio study: if both, combine?										
5c	5c	5d	99	How is PP ratio study used?										
		5e	97	PP appraisal techniques	Depreciation or economic life tables			7	4					
					Iowa curves			2	1					
					Other			1	1					

Key to cell shading is located on page 55.

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note
						Numbers of Responses				Numbers of Responses				
						1994	1997	2003	2008	1994	1997	2003	2008	
		6	100	Intangible personal property										
8	6	6a	100	Statutory exemption?	Yes	25	32	37	40	3	4	6	3	
					No	17	15	9	12	4	4	6	8	
		6b	101	Exempt intangible personal property	Capital stock			32	33			3	1	
					Bonds			33	31			3	1	
					Deposits			33	30			3	1	
					Contracts and contract rights			34	30			3	1	
					Copyrights			35	31			3	1	
					Goodwill			30	28			3	1	
					Customer lists			34	29			3	1	
					Custom computer programs			29	30			3	1	
					Licenses			34	30			3	1	
					Patents			35	31			3	1	
					Rights-of-way			22	20			2	1	
					Trademarks			35	31			3	1	
					Trade secrets			35	29			3	1	
					Other			6	2			1	0	
6	7	7	12	Procedural audit in lieu of ratio study?	Yes	19	17	22	2	2	3	3	1	
					No	n/a	n/a	n/a	30	n/a	n/a	n/a	5	
	7a	n/a	11	Procedural audit on any category?	Yes				32				6	
					No			19				5		
			14	Is procedural audit advisory?	Yes				14				4	
					No				17				1	
	7c	7b	13	Is procedural audit in addition to ratio studies?	Yes		25	26	26		4	5	4	
					No				5				2	
	7b	7c	15	Can equalization or reappraisal be ordered from audits?	Yes	11	14	15	12	2	5	4	4	
					No	n/a	n/a	n/a	16	n/a	n/a	n/a	2	
7		8	16	Disclosure										
	8a	8a	16	Legal requirement?	Yes	30	35	37	36	6	9	11	11	(d)
7a	8a	8a	16	Disclosure made to:	State or Province/ Territory only			2	6			11	7	
					Local assessors only			8	8			2	2	
					Both			20	22			5	2	
		8b	17	Disclosure occurs when?	At deed recording			35	33			11	11	
					Within statutory time period			4	1			0	0	
					Other			3	2			0	0	
		8c	18	Are documents tracked?	Yes			31	29			8	11	

Appendix B. Tabulation of comparable responses (continued)

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note	
						Numbers of Responses				Numbers of Responses					
						1994	1997	2003	2008	1994	1997	2003	2008		
		8d	20	Type of disclosure document?	Sale price statement			17	10			10	5		
					Comprehensive questionnaire			7	10			0	0		
					Both			7	9			1	3		
					Other			8	7			0	3		
7a	8a	8e	22	Is disclosure confidential?	Yes	9	6	5	9	3	4	4	2		
					No			39	29	4	7	8	9		
7b	8b	8f	23	Value-related fee?	Yes	30	36	34	35	5	10	10	11		
7c	8c	8g	24	Mandatory recordation?	Yes	28	25	26	27	5	8	10	10		
		8g	n/a	If yes, recordation occurs at what jurisdictional level?	State or Province/ Territory			10	n/a			6	n/a		
					Local				14	n/a			1	n/a	
					Both				3	n/a			0	n/a	
		8h	n/a	Legal penalties for falsifying?	Yes			35	n/a			9	n/a		
					No				8	n/a			2	n/a	
				No element of disclosure?		3	4	2	7	0	0	0	0		
9	9	9	26	Verified sales prices adjusted?	Yes	33	34	32	40	6	9	9	8		
				Adjust for:	Time	14	15	18	21	4	9	4	6		
					Financing	16	16	15	11	3	8	5	4		
					Personal property	31	32	26	30	6	9	4	7		
					Closing costs	0	5	2	6	0	1	1	1		
					Brokerage fees	1	4	0	2	0	0	1	1		
					Intangibles	5	11	11	16	3	1	3	3		
					Other	7	4	4	7	0	2	3	2		
10	10	10	27	Blanket or global adjustments?	Yes	8	3	3	3	1	0	0	0		
				No	36	45	47	49	6	10	12	11			
10a	10a	10a	28	Describe adjustments.											
10b	10b	10b	29	Court cases?	Yes			1	1						
11	11	11	30	Purposes of ratio study?	Order adjustments	22	27	26	20	3	4	2	1		
					Equalize funding	30	31	31	28	1	3	2	2		
					Order reappraisal	22	31	30	28	2	1	1	0		
					Advise local jurisdictions	35	35	43	39	7	9	5	7		
					Assist mass appraisal			31	22			9	4		
					Adjust or equalize centrally assessed property	13	18	19	17	0	0	0	0		
					Approve tax roll	0	0	5	13	0	0	3	3		
			32	How many states issued orders to adjust?					16				0		

Key to cell shading is located on page 55.

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note
						Numbers of Responses				Numbers of Responses				
						1994	1997	2003	2008	1994	1997	2003	2008	
			33	How many states issued orders to reappraise?				20				0		
12	12	12	34	Adjustment procedures?	Order trend by class/ category	11	14	13	16	1	2	1	0	
					Trend jurisdiction-wide	5	3	3	7	1	1	0	0	
					Grace period	2	12	3	12	0	2	1	0	
					Other	11	4	10	12	6	3	0	0	
13	13	13	48	Assessment uniformity										
13a	13a	13a	48	Statute/standard for COD/ COV?	Yes	32	34	38	40	2	8	9	8	
				No	18	17	13	13	2	3	3	3		
		13a	48	Comparison to IAAO standard	IAAO 1999 standard			23	23			5	6	
				More stringent	6	1	5	6	1	1	4	2		
				Less stringent	21	23	21	11	3	6	3	0		
13b	13b	13b	55/57	Price-related bias/PRD standard?	Yes	11	18	22	27	2	4	6	6	
				No	35	34	28	25	4	7	6	5		
				IAAO standard 0.98–1.03	8	12	17	23	2	2	5	5		
13c	13c	13c	58/59/ 60	Initiate action re: uniformity?	Yes	30	34	34	30	4	7	7	5	
	If so, which actions?			Order reappraisal			23	23			4	3		
	Withhold funding					9	5			0	0			
	Other action					10	11			3	1			
		13d	61	If yes, reliability measures?	COD			24	21			4	5	
				PRD			12	14			2	4		
				Both (added into above totals)										
		13e	62	Action dependent upon:	Point estimates			17	12			4	2	
				Confidence intervals			8	11			0	1		
14	14	14	35	Testing assessment level:										
14a	14a	14a	35	Allowable variance?	Yes	33	34	34	37	5	7	5	8	
				No	13	18	17	15	2	4	7	3	(e)	
				Variance permitted:	± 10%	11	15	16	16	1	4	1	3	
					± 5%	5	6	6	4	2	2	2	2	(f)
					Other	17	17	9	17	2	1	1	2	
14b	14b	14b	36	If yes, variance set by statute?	Yes	15	18	19	18	0	1	3	2	
				No	17	15	18	18	3	3	2	6		
				If no, legal authority?	Administrative rule			8	7			1	0	
				Other			7	11			0	5		

Appendix B. Tabulation of comparable responses (continued)

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note	
						Numbers of Responses				Numbers of Responses					
						1994	1997	2003	2008	1994	1997	2003	2008		
14e	14d	14d	39	Measures of level: Calculate	Arithmetic mean	32	39	36	32	5	8	8	5		
					Median	38	43	38	39	6	10	9	8		
					Weighted (aggregate) mean	35	40	39	32	4	6	7	3		
					Geometric mean	4	2	5	6	0	2	1	0		
					Other	4	1	2	6	0	0	0	1		
				Measures of level: Equalization	Arithmetic mean	5	11	7	18	0	2	1	1		
					Median	19	33	30	37	0	4	2	2		
					Weighted (aggregate) mean	19	21	19	25	1	3	2	0		
					Geometric mean			1	3			1	0		
					Other			0	2			0	1		
			39	Measures of level: Direct equalization	Arithmetic mean				9				1		
			Median					25				0			
			Weighted (aggregate) mean					10				0			
			Geometric mean					1				0			
			Other					1				0			
			39	Measures of level: Indirect equalization	Arithmetic mean				9				1		
			Median					12				1			
			Weighted (aggregate) mean					15				0			
			Geometric mean					2				0			
			Other					1				0			
	14e	14e	40	Test for statistical normality?	Yes		13	13	16		4	4	5		
14c	15	15	43	Testing reliability											
		14c	37	Allowance made for sample reliability tests for appraisal level compliance?	Yes				15				5		
			No					32					3		
			N/A—level compliance not tested					5					3		
14d	15a	15a	43	What is compliance based upon?	Point estimates only		26	19	27		5	3	2		
			Confidence intervals		13	18	20	6		1	6	3			
			Both		n/a	n/a	n/a	11	n/a	n/a	n/a	2			
		15b	n/a	If yes, which test?	95% confidence level			17	n/a			4	n/a		
			90% confidence level				5	n/a			2	n/a			
			Other confidence level				0	n/a			0	n/a			
14d	15b	15c	44	Is a sample mean ratio of 85%, with a 95% confidence interval (CI) between 75 and 94%, in compliance?	Yes, confidence interval overlaps		11	13	11			2	4		
						No, only point estimates used			28	30		1	5	2	
						No, CI fails to overlap 100%			5				1		

Key to cell shading is located on page 55.

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note
						Numbers of Responses				Numbers of Responses				
						1994	1997	2003	2008	1994	1997	2003	2008	
			45	If CI overlaps, but the median continues to be out of compliance for several years, what actions?	Lower confidence level and reevaluate				3				2	
					Base the compliance decision on point estimates				0				1	
					Continue to find in compliance				6				2	
					Other				6				2	
	15c	15d	47	Revise if COD showed poor uniformity?	No change		33	16	7		1	0	2	
					May lower level of confidence			2	3			0	1	
					May use point estimate only			3	20			0	1	
					May review level measures			7	10			0	5	
					May use additional information			16	17			0	5	
15	16	16	63	Residential property appraised annually at 100% of current market value?	Yes	17	22	23	32	6	6	8	4	(g)
15a	16a	16a	64/65	Property appraised as of a constant base year?	Yes	5	13	13	10	2	5	5	6	
	16b			Are property values updated during an interim year?	Yes		18	14	6		5	5	3	
		16b	68	Can local jurisdictions establish different assessment ratios?	Yes			10	16			0	0	
15b	16c	16c	70–77	Statutorily set ratios	Residential @ 100% of MV			23	26			8	9	
					Farmland @ 100% of MV			12	4			7	4	
					Commercial @ 100% of MV			30	28			10	9	
					Industrial @ 100% of MV			30	28			10	9	
					Utilities @ 100% of MV			29	30			5	9	
					Railroads @ 100% of MV			23	26			3	2	
					Personal property @ 100% of MV			18	19			0	1	
17	17	17	80	Ratio study samples										

Appendix B. Tabulation of comparable responses (continued)

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note
						Numbers of Responses				Numbers of Responses				
						1994	1997	2003	2008	1994	1997	2003	2008	
	17a	17a	n/a	Stratification	Range of values		11	18	n/a			4	n/a	
					Geographic neighborhood		20	16	n/a			9	n/a	
					School district		4	8	n/a			1	n/a	
					City (Municipality)		1	12	n/a			4	n/a	
					County			25	n/a			2	n/a	
					Other factors			12	n/a			4	n/a	
16a	17b	17b	80	Smallest sample	Less than 5	4	8	7	10	1	2	3	1	
					5 to 9	7	8	10	10	2	1	1	3	
					10 to 19	3	4	10	6	2	1	3	2	
					20 to 30	9	13	5	7	0	3	1	2	
					Greater than 30	4	3	10	6	0	1	2	0	
					Other	19	16	9	9	2	3	1	2	
	17c	17c	81	Sample size quotas or goals?	Yes	12	11	20	13	0	2	1	1	
	17d	17d	83	Do you identify outlier ratios?	Yes		26	35	35		6	9	7	
			84	Method of outlier identification?	1.5 * interquartile range				5				2	
					3.0 * interquartile range				4				1	
					Beyond 2 standard deviations				6				2	
					Fixed symmetric pts. <.5 or >1.5				4				1	
					Fixed symmetric pts. <.3 or >2.0				6				1	
					Good judgment				10				5	
	17e	17e	n/a	If outliers, what action taken?										
	17f	17f	86	Determine representativeness?	Yes		21	32	21		4	5	4	
	17a			If yes, which apply?	Stratify by geographic area		21	21	n/a		7	4	n/a	
					Stratify by property class		most	29	n/a		5	4	n/a	
					Stratify by value range		11	16	n/a		5	3	n/a	
					Other			6	n/a			2	n/a	
		17g	87	Fixed trim points remove outliers?	Yes			16	9			3	2	
		17h	85	Limit on trimmed sales?	Yes			10	5			3	0	
	18	18	88	Statutes for sales chasing?	No, nonstatutory			n/a	12			n/a	0	
					Yes			10	3			1	0	(h)
			89	Test for sales chasing?	Yes				27				5	

1994 Question Number	1997 Question Number	2003 Question Number	2008 Question Number	Topic	Response	UNITED STATES				CANADA				Note
						Numbers of Responses				Numbers of Responses				
						1994	1997	2003	2008	1994	1997	2003	2008	
			90	Procedure for sales chasing?	Compare average value changes				20				3	(i)
					Compare average unit values				6				3	
					Split sample technique				5				3	
					Compare observed vs. expected distributions				14				4	
					Mass appraisal techniques				17				3	
			42	Incorporate IAAO standards in statutes or rules?	Yes				33				5	
					No				16				6	
17	19	19	92	Legal action re: ratio study?	Yes	30	32	37	28	1	4	3	1	
Legend														
	= These questions are changed from previous surveys													
	= These questions are new to that year's survey													
	= Question was not asked on survey or responses were not tabulated in those years													

Notes

- (a) Two Hawaiian respondents were counted once in some instances and twice in others where applicable.
- (b) Includes District of Columbia and the two Hawaiian local respondents; does not include local respondent from Delaware which does not conduct ratio studies
- (c) For U.S., the contracted totals are also included in the state count.
- (d) The 2008 total reflects addition of Delaware and loss of disclosure in South Carolina and the corrected classification for Nevada.
The U.S. total for 1997 was revised to reflect an error in tabulating Oregon's response, which should have been counted as a "Yes."
The U.S. total for 2003 includes the addition of Pennsylvania and, effective July 2003, New Mexico.
- (e) Allowable variance: Not shown are responses to the 1992 survey, which total 19 "No" U.S. answers to this portion of the question.
- (f) A $\pm 5\%$ variance: Not shown are responses to the 1985 survey, which totaled 7 U.S. responses to this portion of the question.
- (g) 2003 Question 16, Assessments = 100% of MV: U.S. responses were edited so that "Yes" count reflects only those jurisdictions whose assessment level equals 100% of current (2002 or 2003) market value for all residential properties.
- (h) Question 18, Sales chasing: The 1997 responses to this question were not compiled for either U.S. or Canada.
- (i) See appendix E for most popular choices of sales-chasing techniques.

Question No. >		Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q11	Q12
State	Abbreviation	How often does your jurisdiction conduct ratio studies?	Who conducts your ratio study?	Does your study include sales or appraisals or both?	If your study includes both, do you combine?	Who performs the sales sample selection?	Who conducts the sales validation (screening)?	If state does not conduct the validation, does the state audit the process?	Do you perform procedural audits of local assessment procedures/practices?	Is the procedural audit used instead of a ratio study?
Alabama	AL	annually	state	sales		both	state		no	
Alaska	AK	annually	local only	sales		local	local	yes	yes	no
Arizona	AZ	annually	state	sales		both	both	yes	no	
Arkansas	AR	annually	state	both	yes	state	local	yes	yes	no
California	CA	other	state	appraisals		n/a	n/a	n/a	no	
Colorado	CO	annually	state/con	both	yes	local	local	yes	yes	no
Connecticut	CT	annually	state	sales		state	state		no	
Delaware	DE	none	n/a	n/a		n/a	n/a	no	no	
District of Columbia	DC	annually	local only	sales		local	local	no	no	
Florida	FL	annually	state	both	yes	state	local	yes	yes	no
Georgia	GA	annually	state	both	yes	state	state			
Hawaii, County of	HI CO	annually	local only	sales		local	local	no	no	
Hawaii-Honolulu Cty.	HN CO	annually	local only	sales		local	local	no	yes	no
Idaho	ID	annually	state	sales		both	local	no	no	
Illinois	IL	annually	state	sales		state	state		no	
Indiana	IN	annually	local only	sales		local	local	no	no	
Iowa	IA	annually	state	both	yes	state	both	no	no	
Kansas	KS	annually	state	sales		state	state		yes	no
Kentucky	KY	annually	state	both	yes	both	local	yes	yes	no
Louisiana	LA	annually	state	both	yes	state	state		no	
Maine	ME	annually	both	both	yes	state	state		no	
Maryland	MD	annually	state	sales		state	both	yes	yes	no
Massachusetts	MA	every 3 yrs.	both	both	yes	both	local	yes	yes	no
Michigan	MI	annually	local only	both	yes	local	both	yes	yes	no
Minnesota	MN	annually	both	sales		both	both	yes	yes	no
Mississippi	MS	every 4 yrs.	both/con	sales		both/con	both	yes	yes	no
Missouri	MO	every 2 yrs.	state	both	yes	both	local	yes	yes	no
Montana	MT	other	state	sales		state	state		yes	no
Nebraska	NE	annually	state	sales		local	local	yes	yes	no
Nevada	NV	annually	state	both		state	local	yes	yes	no
New Hampshire	NH	annually	state	sales		state	state		yes	no
New Jersey	NJ	annually	both	sales		state	state		yes	no
New Mexico	NM	annually	state	sales		state	local	no	yes	no
New York	NY	annually	state	both	yes	state	both	no	yes	yes
North Carolina	NC	annually	both	sales		both	local	yes	yes	no
North Dakota	ND	annually	both	both	yes	both	local	no	no	
Ohio	OH	every 0.5 yr.	state	sales		state	state		no	
Oklahoma	OK	annually	state	sales		state	state		yes	no
Oregon	OR	annually	local only	sales		local	local	yes	yes	no
Pennsylvania	PA	annually	state	both		state	state		yes	no
Rhode Island	RI	annually	state	sales		both	state		no	
South Carolina	SC	annually	state	sales		local	local	no	yes	no
South Dakota	SD	annually	state	sales			both	yes	no	
Tennessee	TN	every 2 yrs.	state	sales		both	local	yes	yes	no
Texas	TX	annually	state	both	yes	state	state		yes	no
Utah	UT	annually	both	sales		both	both	yes	yes	no
Vermont	VT	annually	state	both	yes	both	local	yes	no	
Virginia	VA	annually	both	sales		both	state		no	
Washington	WA	annually	state	both	yes	state	local	yes	yes	no
West Virginia	WV	annually	state	sales		state	local	yes	yes	no
Wisconsin	WI	annually	both	both	yes	both	both	yes	yes	yes
Wyoming	WY	annually	both	sales		local	local	yes	yes	no

Question No. >	Q13	Q14	Q15	Q16		Q17	Q18	Q20	Q21
State	Is the procedural audit used in addition to ratio study information?	Is the procedural audit used solely to advise or assist the local appraisal offices?	Can equalization or reappraisal be ordered as a result of procedural audits?	Do you have a disclosure law?	Is disclosure made to state or local or both?	Is disclosure made during deed recording?	Is a method in place to track a disclosure document for every recorded sale?	For disclosure, do you use a sale price statement, questionnaire, or both?	What office is responsible for initially accepting the disclosure document?
AL				no					
AK	yes	yes	yes	no					
AZ				yes	both	yes	no	both	recorder
AR	no	no	yes	no					
CA				yes	state	yes		both	recorder
CO	yes	no	yes	yes	local	yes	yes	questionnaire	recorder
CT				yes	both	yes	yes	statement	recorder
DE				yes	local	yes	no	statement	recorder
DC				yes	local	yes	yes	statement	recorder
FL	yes	no	no	yes	both	yes	no	other	recorder
GA				yes	both	yes	yes	other	recorder
HI CO						yes	yes	statement	state
HN CO	yes	yes	no	yes	local	yes	yes		recorder
ID				no					
IL				yes	both	yes	no	questionnaire	recorder
IN				yes	both	yes	no	questionnaire	assessor
IA				yes	both	yes	yes	statement	recorder
KS	yes	no		yes	both	yes	yes	questionnaire	recorder
KY	yes	no		yes	local	yes	yes	other	county clerk
LA				no					
ME				yes	both	yes	yes	questionnaire	recorder
MD	yes	no	no	yes	state	yes	yes	other	state
MA	yes	no	yes	yes	both	yes	yes	other	recorder
MI	yes	no	yes	yes	both	no	no	other	assessor
MN	yes	yes	yes	yes	both	yes	yes	questionnaire	county auditor
MS	yes	yes	yes	no			no		
MO	yes	yes	no	no					
MT			yes	yes	state	yes	yes	both	recorder
NE	yes	no	yes	yes	both	yes	yes	both	recorder
NV	yes	no	no	no					
NH	no	yes	no	yes	both	yes	yes	other	recorder
NJ	yes	yes		yes	both	yes	yes	statement	recorder
NM	yes	yes	yes	yes	local	no	no	statement	assessor
NY	no	no	no	yes	both	yes	yes	questionnaire	recorder
NC	yes	yes	no	no					
ND				yes	both	yes	yes	both	recorder
OH				yes	both	no	yes	other	assessor
OK	yes	no	yes	no					
OR	yes	no	yes	yes	both	yes	yes	statement	recorder
PA	yes	no	no	yes	both	yes	yes	questionnaire	recorder
RI				no					
SC	no	yes	no	no					
SD				yes	local	yes	yes	questionnaire	recorder
TN	yes	no	no	no					
TX	no	yes	no	no					
UT	yes	yes	no	no					
VT				yes	state	yes	yes	questionnaire	recorder
VA				yes	state	yes	yes	statement	recorder
WA	yes	no	no	yes	both	yes	yes	statement	recorder
WV	yes	yes		yes	state	yes	yes		recorder
WI	yes	no	no	yes	both	yes	yes	other	recorder
WY	yes	yes	no	yes	local	yes	yes	both	recorder

Question No. >	Q22	Q23	Q24	Q25							
State	Are disclosed sale prices confidential?	Do you have a transfer tax or deed stamp?	Do you have a mandatory recordation law?	Do you have authority to adjust sale prices? If yes, for:	TIME?	FINANCING?	PERSONAL PROPERTY?	CLOSING COSTS?	BROKERAGE FEES?	INTANGIBLE PERSONAL PROPERTY?	OTHER?
AL		yes	yes	yes	yes	yes	yes			yes	
AK		no	no	yes	yes	yes	yes				
AZ	no	no	yes	yes							yes
AR		yes	no	yes	yes	yes	yes			yes	
CA	yes	yes	no	no							
CO	no	yes	yes	yes	yes	yes	yes			yes	
CT	no	yes	yes	no							
DE	no	yes	no	yes							
DC	yes	yes	yes	yes							
FL	no	yes	no	yes	yes	yes	yes	yes	yes	yes	
GA	no	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
HI CO	no	yes	no	yes							
HN CO	no	yes	yes	yes	yes	yes	yes	yes			yes
ID		no	no	yes	yes		yes				
IL	no	yes	yes	yes	yes		yes				
IN	no	no	yes	yes	yes		yes			yes	
IA	no	yes	no	yes			yes				
KS	yes	no	no	yes	yes	yes	yes	yes		yes	yes
KY	no		no	yes	yes						
LA				yes	yes						
ME	no	yes	no	no							
MD	no	yes	yes	yes							
MA	no	yes	yes	yes	yes						
MI	yes	yes	no	yes		yes	yes			yes	yes
MN	no	yes	yes	yes	yes	yes	yes	yes		yes	
MS	no	no	no	no							
MO		no	no	yes	yes	yes	yes	yes	yes	yes	yes
MT	yes	no	yes	yes			yes				
NE	no	yes	no	yes	yes	yes	yes			yes	
NV		yes	yes	no							
NH	yes	yes	no	yes	yes		yes				
NJ	no	yes	yes	no							
NM	yes	no	yes	no							
NY	no	yes	yes	yes	yes		yes			yes	
NC		yes	yes	yes			yes				
ND	yes	no	no	yes			yes				
OH	no	yes	yes	yes	yes	yes	yes				
OK		yes	yes	yes			yes				
OR	no	no	yes	yes	yes	yes	yes				yes
PA	no	yes	yes	no							
RI		yes	yes	yes	yes		yes			yes	
SC		yes	no	no							
SD	no	yes	no	yes		yes	yes			yes	
TN		yes	no	no							
TX		no	no	yes	yes	yes	yes	yes	yes	yes	yes
UT		no	no	yes	yes	yes	yes	yes			
VT	no	yes	yes	yes			yes	yes			
VA	no	yes	yes	no							
WA	no	yes	yes	yes			yes				
WV	no		yes	no							
WI	no	yes	yes	yes			yes			yes	
WY	yes	no	no	yes	yes	yes	yes			yes	

Question No. >	Q26								Q27
State	Do you make adjustments to sales prices? If yes, do you adjust for:	TIME?	FINANCING?	PERSONAL PROPERTY?	CLOSING COSTS?	BROKERAGE FEES?	INTANGIBLE PERSONAL PROPERTY?	OTHER?	Do you make blanket or global adjustments to sales prices?
AL	yes	yes		yes			yes		no
AK	yes	yes	yes	yes			yes		no
AZ	yes	yes						yes	yes
AR	yes	yes		yes					no
CA	no								no
CO	yes	yes	yes	yes			yes		no
CT	no								no
DE	n/a								no
DC	no								no
FL	yes		yes	yes	yes	yes	yes		yes
GA	yes	yes		yes			yes	yes	no
HI CO	yes			yes					no
HN CO	no								no
ID	yes	yes		yes					no
IL	yes	yes		yes					no
IN	yes	yes		yes			yes		no
IA	yes			yes					no
KS	yes	yes	yes	yes	yes		yes	yes	no
KY	yes	yes							no
LA	yes	yes							no
ME	no								no
MD	no								no
MA	yes	yes							no
MI	yes			yes			yes	yes	no
MN	yes	yes	yes	yes	yes		yes		no
MS	no								no
MO	yes	yes	yes	yes	yes		yes	yes	no
MT	yes			yes					no
NE	yes						yes		no
NV	no								no
NH	yes	yes		yes					no
NJ	no								no
NM	no								no
NY	yes	yes		yes			yes		no
NC	yes			yes					no
ND	yes			yes					no
OH	yes			yes					no
OK	yes			yes					no
OR	yes	yes	yes	yes				yes	no
PA	no								yes
RI	no								no
SC	no								no
SD	yes		yes	yes			yes		no
TN	no								no
TX	yes	yes	yes	yes	yes	yes	yes	yes	no
UT	yes	yes	yes	yes					no
VT	yes			yes	yes				no
VA	no								no
WA	yes			yes					no
WV	no								no
WI	yes			yes			yes		no
WY	yes	yes	yes	yes			yes		no

Question No. >	Q30							Q31
State	Is your ratio study used to order adjustments to locally determined assessed values?	Is your ratio study used to equalize state funding of local jurisdictions?	Is your ratio study used to order local jurisdictions to reappraise?	Is your ratio study used to advise state or local jurisdictions of assessment conditions?	Is your ratio study used to assist mass appraisal programs?	Is your ratio study used to approve tax assessment roll?	Is your ratio study used to adjust or equalize centrally determined assessed values?	Do you have authority to order adjustments to, or reappraisal of, locally determined values?
AL	yes		yes	yes	yes		yes	yes
AK		yes	yes	yes				yes
AZ	yes		yes	yes	yes	yes		yes
AR			yes	yes		yes	yes	yes
CA								no
CO		yes	yes					yes
CT		yes		yes				no
DE								no
DC					yes			no
FL		yes	yes	yes	yes	yes		yes
GA		yes		yes		yes		no
HI CO					yes	yes		yes
HN CO				yes	yes			no
ID	yes	yes		yes				yes
IL	yes	yes		yes				yes
IN	yes	yes	yes	yes			yes	yes
IA	yes	yes	yes	yes				yes
KS				yes	yes		yes	yes
KY			yes	yes		yes		yes
LA			yes	yes				yes
ME		yes	yes	yes	yes			yes
MD				yes	yes			no
MA		yes				yes		yes
MI	yes		yes	yes	yes			yes
MN	yes	yes	yes	yes	yes		yes	yes
MS			yes	yes	yes	yes		yes
MO	yes		yes	yes	yes			yes
MT				yes			yes	no
NE	yes	yes	yes	yes	yes		yes	yes
NV	yes		yes					yes
NH		yes		yes				yes
NJ	yes	yes	yes	yes	yes	yes	yes	yes
NM	yes		yes	yes				yes
NY		yes					yes	no
NC				yes	yes		yes	no
ND	yes		yes	yes				yes
OH	yes		yes			yes		yes
OK	yes	yes	yes	yes	yes			yes
OR	yes		yes	yes	yes	yes	yes	yes
PA		yes		yes				no
RI		yes		yes	yes			no
SC		yes						no
SD		yes		yes				yes
TN	yes	yes	yes	yes	yes		yes	yes
TX		yes						no
UT	yes	yes	yes	yes	yes	yes	yes	yes
VT		yes	yes	yes			yes	yes
VA		yes					yes	no
WA		yes		yes			yes	no
WV				yes	yes			yes
WI		yes	yes	yes			yes	yes
WY	yes		yes			yes		yes

Question No. >	Q32	Q33	Q34			
State	How many local jurisdictions have been issued orders to adjust values in the past three years?	How many local jurisdictions have been issued orders to reappraise values in the past three years?	Do you order local officials to apply trending factors to individual classes of property?	Do you trend all types of property equally, based on a jurisdiction-wide adjustment factor?	Do you give local officials a compliance grace period to apply indicated factors?	Do you give local officials a grace period to recalibrate mass appraisal models?
AL	67	37	yes		yes	
AK	0	1		yes	yes	yes
AZ	2	0			yes	yes
AR	4	4			yes	yes
CA						
CO	1	1			yes	yes
CT						
DE						
DC						
FL	0	0				yes
GA						
HI CO	n/a	n/a				
HN CO						
ID	1	0	yes		yes	yes
IL	0	0		yes		
IN	0	21	yes			
IA	77	0	yes			
KS	0	0				yes
KY	0	0				
LA	0	7				
ME	0	0				
MD						
MA	0	1				
MI	0	25	yes			
MN	350	0	yes	yes	yes	yes
MS	0	6				
MO	23	23	yes		yes	yes
MT						
NE	30	2				
NV	0	0			yes	
NH	0	4				
NJ	150	150	yes	yes	yes	yes
NM	0	1	yes	yes	yes	yes
NY						
NC						
ND	10	3	yes			
OH	1	88	yes			
OK	3	6	yes			
OR	0	0	yes		yes	yes
PA						
RI						
SC						
SD	0	0		yes		
TN	12	0	yes			
TX						
UT	5	2	yes	yes		
VT	0	126				
VA						
WA						
WV	0	0				
WI	0	5				
WY	1	0	yes			

Question No. >	Q35		Q36	Q37	Q39		
State	What is your appraisal level standard?	Do you have an appraisal level standard that allows some variance from your statutorily required appraisal level?	If yes, is the appraisal level variance set by statute?	Are allowances made for sample reliability using statistical tests, such as confidence intervals?	Do you calculate the ARITHMETIC MEAN as measure of a level?	Is the arithmetic mean used for direct equalization?	Is the arithmetic mean used for indirect equalization?
AL	0.98–1.02	yes	no	no			
AK	0.90–1.10	yes	no	no	yes		
AZ	0.74–0.90	yes	yes	yes			
AR	0.90–1.10	yes	yes	yes	yes		
CA		no	n/a	yes			yes
CO	0.95–1.10	yes	no	no			
CT		no	n/a	n/a	yes		yes
DE		no	n/a	no			
DC		no	n/a	no	yes		
FL		yes	no	yes	yes		
GA	0.90–1.10	yes	yes	yes			
HI CO	0.90–1.10	yes	no	n/a	yes	yes	yes
HN CO	0.90–1.10	yes	yes	no	yes		
ID	0.90–1.10	yes	no	yes	yes		
IL		no	n/a	no	yes		yes
IN	0.90–1.10	yes	yes	no			
IA	0.95–1.05	yes	yes	no	yes	yes	
KS	0.90–1.10	yes	no	yes	yes		
KY	0.90–1.10	yes	no	yes			
LA	0.90–1.10	yes	yes	no			
ME	0.70–1.10	yes	yes	no			
MD		no	n/a	no	yes		
MA	0.90–1.10	yes	no	no	yes		
MI	0.49–0.50	yes	no	no			
MN	0.90–1.05	yes	yes	no	yes		
MS	0.75–1.25	yes	yes	no	yes		yes
MO	0.90–1.10	yes	no	yes	yes		
MT	0.90–1.10	yes	no	yes	yes	yes	
NE	0.92–1.00	yes	yes	yes	yes	yes	yes
NV	0.32–0.36	yes	yes	no			
NH		no	n/a	yes	yes		yes
NJ		yes	no	yes	yes		yes
NM	0.85–1.00	yes	no	n/a		yes	
NY		no	n/a	yes			
NC		no	n/a	no			
ND	0.95–1.05	yes	no	no	yes		
OH	0.90–1.10	yes	no	no	yes	yes	
OK	0.11–.135	yes	no	no	yes		
OR	0.95–1.05	yes	yes	no	yes	yes	
PA		no	n/a	no	yes	yes	
RI		no	n/a	n/a	yes		yes
SC	0.80–1.05	yes	yes	no	yes		
SD	0.85–1.00	yes	yes	no	yes		
TN		no	n/a	no	yes		
TX		no	n/a	n/a			
UT	0.90–1.10	yes	yes	yes	yes	yes	
VT	0.80–1.00	yes	yes	no			
VA		no	n/a	no	yes		
WA		no	n/a	no			
WV	0.90–1.10	yes	no	no			
WI		yes	yes	no	yes		yes
WY	0.95–1.05	yes	no	no			

Question No. >	Q39 (continued)									Q40
State	Do you calculate the MEDIAN as measure of a level?	Is the median used for direct equalization?	Is the median used for indirect equalization?	Do you calculate the WEIGHTED MEAN as measure of a level?	Is the weighted mean used for direct equalization?	Is the weighted mean used for indirect equalization?	Do you calculate the GEOMETRIC MEAN as measure of a level?	Is the geometric mean used for direct equalization?	Is the geometric mean used for indirect equalization?	Do you test the distribution of ratios to see if it is statistically normal?
AL		yes								no
AK	yes			yes		yes				no
AZ	yes	yes								no
AR	yes			yes						no
CA										no
CO	yes	yes		yes		yes				no
CT	yes	yes		yes		yes				yes
DE										no
DC	yes	yes		yes						no
FL	yes			yes						yes
GA	yes	yes	yes							no
HI CO	yes	yes	yes	yes	yes	yes				no
HN CO	yes					yes				no
ID	yes	yes		yes		yes	yes			yes
IL		yes				yes				yes
IN	yes	yes	yes							no
IA	yes	yes		yes						no
KS	yes			yes			yes			yes
KY	yes									yes
LA	yes									yes
ME							yes		yes	no
MD	yes			yes						no
MA	yes			yes	yes					no
MI										no
MN	yes	yes	yes	yes						no
MS	yes		yes	yes		yes				no
MO	yes	yes		yes			yes			no
MT	yes	yes		yes	yes					yes
NE	yes	yes	yes	yes	yes	yes				yes
NV	yes		yes	yes						no
NH	yes		yes	yes		yes	yes		yes	yes
NJ	yes		yes	yes		yes				yes
NM		yes			yes					no
NY						yes				no
NC	yes	yes								no
ND	yes	yes								no
OH	yes	yes		yes	yes					no
OK	yes	yes	yes	yes						no
OR	yes	yes		yes	yes		yes	yes		no
PA				yes	yes					yes
RI	yes		yes	yes		yes				no
SC	yes									yes
SD	yes	yes		yes						yes
TN	yes		yes	yes						no
TX				yes		yes				no
UT	yes	yes								yes
VT				yes		yes				no
VA	yes			yes						no
WA				yes	yes	yes				no
WV	yes	yes		yes	yes					no
WI	yes		yes			yes				yes
WY		yes								yes

Question No. >	Q42	Q43	Q44	Q45
State	Are portions of the IAAO Standard on Ratio Studies in your statutes or rules?	When testing reliability for level of appraisal, which is used to determine compliance?	Hypothetical: Legal requirement to fall between 90 and 110%. If a sample has a median ratio of 85%, with a 95% confidence interval (CI) that falls in the range of 76 to 94%, would your agency rule this result to be in compliance with statutory appraisal level requirements?	Hypothetical (cont.): If the CI overlaps but the median continues out of compliance for several years, what action would you take? Lower the CI and reevaluate; Base compliance decision on the point estimate; Continue to find in compliance; Other (check all that apply)
AL	yes		No, only point estimate used	
AK	yes	point estimate	No, only point estimate used	other
AZ	no	both	No, only point estimate used	
AR	yes	both	Yes, the CI overlaps	continue to find in compliance
CA		point estimate	No, only point estimate used	
CO	yes	point estimate	No, only point estimate used	
CT	yes			
DE	no		No, CI fails to overlap 100%	
DC	yes	point estimate	No, only point estimate used	
FL		both	No, CI fails to overlap 100%	
GA	yes	confidence interval	Yes, the CI overlaps	
HI CO	yes	point estimate		
HN CO	no	point estimate	No, only point estimate used	
ID	yes	confidence interval	Yes, the CI overlaps	lower level of confidence
IL	yes	point estimate	No, only point estimate used	
IN	yes	point estimate	No, only point estimate used	
IA	yes	point estimate	No, only point estimate used	
KS	yes	both	Yes, the CI overlaps	continue to find in compliance
KY	yes	confidence interval	Yes, the CI overlaps	lower level of confidence
LA		point estimate	No, only point estimate used	
ME	no		No, only point estimate used	
MD	no	point estimate	No, only point estimate used	
MA	yes		No, only point estimate used	
MI	no	point estimate	No, only point estimate used	
MN	yes	point estimate	No, only point estimate used	
MS	no	point estimate	No, only point estimate used	other
MO	yes	both	Yes, the CI overlaps	continue to find in compliance
MT	yes	both	Yes, the CI overlaps	
NE	yes	both	Yes, the CI overlaps	other
NV	no	point estimate	No, only point estimate used	continue to find in compliance
NH	no	both	Yes, the CI overlaps	continue to find in compliance
NJ	yes	both	Yes, the CI overlaps	other
NM	yes			lower level of confidence
NY	yes	both	No, CI fails to overlap 100%	
NC	yes	point estimate	No, only point estimate used	
ND	no	point estimate	No, only point estimate used	
OH	yes	point estimate	No, only point estimate used	
OK	yes	point estimate	No, only point estimate used	
OR	yes	point estimate	No, only point estimate used	
PA	no	confidence interval	No, CI fails to overlap 100%	other
RI	no			
SC	no	confidence interval	No, only point estimate used	
SD	yes			continue to find in compliance
TN	yes	point estimate	No, only point estimate used	
TX	yes	confidence interval	Yes, the CI overlaps	other
UT	yes	both	No, CI fails to overlap 100%	
VT	yes	point estimate	No, only point estimate used	
VA	no	point estimate	No, only point estimate used	
WA	no			
WV	yes	point estimate	No, only point estimate used	
WI	yes	point estimate	No, only point estimate used	
WY	no	point estimate	No, only point estimate used	

Question No. >	Q47					Q48	
State	Hypothetical (cont.): How would your response differ if the sample COD (or other measure of uniformity) also showed very poor uniformity? No change; May lower level of confidence; May use point estimate (PE) only to evaluate level; May review previous years' level measures; May use additional information, e.g., sample size					Do you have specific standards or requirements for assessment uniformity as measured by the COD?	Is your COD standard the same or less stringent or more stringent than the IAAO 1999 standard?
AL						yes	same
AK					may use	yes	same
AZ			may use PE			yes	less
AR					may use	yes	less
CA						no	n/a
CO			may use PE			yes	same
CT						yes	same
DE						no	n/a
DC			may use PE			yes	same
FL		may lower	may use PE		may use	yes	same
GA			may use PE	may review		yes	same
HI CO			may use PE			yes	less
HN CO			may use PE	may review	may use	yes	more
ID	no change					yes	less
IL					may use	yes	less
IN					may use	yes	same
IA			may use PE			yes	less
KS	no change					yes	less
KY				may review	may use	yes	less
LA			may use PE			yes	same
ME					may use	yes	same
MD						no	n/a
MA						yes	same
MI					may use	yes	less
MN		may lower	may use PE	may review	may use	yes	same
MS	no change					yes	same
MO			may use PE			yes	less
MT					may use	yes	same
NE				may review		no	same
NV	no change					no	n/a
NH	no change					yes	same
NJ			may use PE	may review	may use	yes	more
NM				may review	may use	yes	more
NY					may use	yes	more
NC			may use PE			yes	more
ND			may use PE		may use	no	n/a
OH					may use	no	n/a
OK			may use PE			yes	same
OR			may use PE			yes	same
PA				may review		yes	same
RI						no	n/a
SC		may lower				yes	more
SD	no change					yes	less
TN			may use PE			no	n/a
TX					may use	no	n/a
UT				may review		yes	same
VT			may use PE			yes	same
VA	no change					no	n/a
WA					may use	no	n/a
WV			may use PE			yes	same
WI			may use PE			no	n/a
WY				may review		yes	same

Question No. >	Q53	Q54	Q55	Q57	Q58	Q59		
State	If you do not use the COD, what uniformity measure is used?	Has a lower limit on the COD been established as an indicator of possible sales chasing?	Do you have standards for price-related bias as measured by the PRD or other statistical tests?	If you have standards for price-related bias, which do you use?	Can your agency initiate any action as a result of assessment uniformity?	What actions can your agency initiate as a result of assessment uniformity conditions? Order reappraisal; Withhold funding; Other		
AL		no	yes	0.98–1.03	yes	order reappraisal		
AK		no	yes	0.98–1.03	yes			other
AZ		no	no		yes			other
AR		no	no		yes	order reappraisal	withhold	
CA		n/a	no		no			
CO		no	yes	0.98–1.03	yes	order reappraisal		
CT		no	yes	0.98–1.03	no			
DE	none	no	no		no			
DC		no	yes	0.98–1.03	no			
FL		no	yes	0.98–1.03	yes			other
GA		no	yes	0.95–1.10	no			
HI CO		no	yes	0.98–1.03	yes			other
HN CO		no	yes	0.98–1.03	no			
ID		no	yes	0.98–1.03	no			
IL		no	yes	0.98–1.03	yes	order reappraisal		
IN		no	yes	0.98–1.03	yes	order reappraisal		other
IA		no	yes	0.90–1.10	yes	order reappraisal		
KS		no	yes	0.98–1.03	yes	order reappraisal	withhold	other
KY		no	no		yes	order reappraisal		
LA		no	no		yes	order reappraisal		
ME		no	no		yes	order reappraisal		
MD		n/a	no		yes			other
MA		no	no		yes	order reappraisal		
MI		no	yes	0.95–1.05	yes	order reappraisal		
MN		no	yes	0.98–1.03	yes	order reappraisal		
MS		no	yes	0.92–1.08	yes	order reappraisal	withhold	
MO		no	yes	0.98–1.03	no			
MT		no	yes	0.98–1.03	yes			other
NE		yes	yes	0.98–1.03	yes	order reappraisal		
NV	COV	n/a	no		no			
NH		no	no		yes	order reappraisal		other
NJ		no	yes	0.98–1.03	yes	order reappraisal		
NM		no	yes	0.98–1.03	yes	order reappraisal	withhold	
NY		no	yes	0.98–1.03	no			
NC		no	no		no			
ND	none	n/a	no		yes	order reappraisal		
OH		n/a	yes	0.98–1.03	no			
OK		no	no		no			
OR		no	yes	0.98–1.03	yes	order reappraisal	withhold	
PA		no	no		no			
RI	none	no	no		no			
SC		no	no		no			
SD		no	no		no			
TN	none	n/a	no		no			
TX	none	n/a	no		no			
UT		no	yes	0.98–1.03	yes	order reappraisal		
VT		no	no		yes	order reappraisal		
VA	none	n/a	no		no			
WA	none	n/a	no		no			
WV		no	no		yes			other
WI	none	n/a	no		no			
WY		no	yes	0.98–1.03	yes	order reappraisal		other

Question No. >	Q61	Q62	Q63	Q64	Q65	
State	Do you calculate reliability measures on uniformity statistics around the COD, PRD, both, neither?	If you initiate action as a result of assessment uniformity conditions, what indicator is action dependent upon?	Are you required to annually value categories of property at 100% of current market value?	Is property not required to be appraised during a given year required to have its value updated in interim years?	Is property appraised at a uniform base year (e.g., 2001)?	If yes, indicate most recent base year used.
AL	neither		yes			
AK	neither	point estimate	yes	yes		
AZ	COD	confidence interval	yes			
AR	COD	confidence interval	no	no	no	
CA			no		no	
CO	COD	point estimate	yes			
CT	neither	n/a	no	no	no	
DE			no	no	yes	1987
DC	neither	n/a	yes			
FL	neither	other	yes			
GA	neither	n/a	yes			
HI CO	both	confidence interval	yes			
HN CO	neither	n/a	yes			
ID	COD	n/a	yes			
IL	both	point estimate	no	yes	no	
IN	neither	point estimate	yes			
IA	both	confidence interval	yes			
KS	both	confidence interval	yes			
KY	COD		no	no	no	
LA	neither	point estimate	no	no	yes	2007
ME	COD	n/a	no	no	no	
MD	neither	n/a	no	no	no	
MA	neither	n/a	yes			
MI	neither	n/a	no	yes	yes	
MN	both	confidence interval	yes			
MS			yes		yes	
MO	neither	n/a	no	no	yes	2007
MT	both	n/a	no	no	yes	2002
NE	both	point estimate	yes			
NV	COD	n/a	no	yes	no	
NH	both	confidence interval	yes			
NJ	both	confidence interval	yes			
NM	neither	n/a	yes			
NY	neither	n/a	no	no	no	
NC	neither	confidence interval	no	no	yes	
ND	neither	point estimate	yes			
OH	neither		no	yes	no	
OK	neither	other	yes			
OR	neither	point estimate	yes			
PA	both	point estimate	yes			
RI	neither		no	no	yes	
SC	neither	point estimate	yes			
SD	neither	n/a	yes			
TN	neither	n/a	no	no	yes	
TX	neither	n/a	yes			
UT	neither	point estimate	yes			
VT	neither	n/a	yes			
VA	both	n/a	yes			
WA	neither		yes			
WV	COD	point estimate	no	yes	yes	
WI	both	point estimate	no	no	yes	
WY	both	confidence interval	yes			

Question No. >	Q68	Q69	Q70	
State	Is there a uniform fractional assessment ratio for each category of property in every local assessment jurisdiction?	If there is a uniform fractional assessment ratio for each category of property, how are the rates set?	For residential properties, is the required assessment ratio set at 100% of market value?	If no, what is your assessment ratio
AL	Yes, but ratios may differ by category	constitution	no	10%
AK	Other, required to be at 100%		yes	
AZ	Yes, but ratios may differ by category	statute	no	10%
AR	Other, required to be at 100%		no	20%
CA	Other, required to be at 100%		no	
CO	Yes, but ratios may differ by category	constitution	no	7.96%
CT	Yes, but ratios may differ by category	statute	no	70%
DE	No, established by each locality		no	60%
DC	Other, required to be at 100%		yes	
FL	Other, required to be at 100%		no	
GA	Yes, but ratios may differ by category	statute	no	40%
HI CO	Other, required to be at 100%			
HN CO	No, established by each locality		yes	
ID	Other, required to be at 100%		yes	
IL	No, established by each locality		no	33.33%
IN	Other, required to be at 100%		yes	
IA	Other, required to be at 100%		no	45%
KS	Yes, but ratios may differ by category	constitution	no	11.5%
KY	Other, required to be at 100%		yes	
LA	Yes, but ratios may differ by category	various	no	10%
ME	No, established by each locality		yes	
MD	Other, required to be at 100%		yes	
MA	Other, required to be at 100%		yes	
MI	Other, required to be at 100%		no	50%
MN	Other, required to be at 100%		no	varies
MS	Yes, but ratios may differ by category	statute	no	10%–15%
MO	Yes, but ratios may differ by category	statute	no	19%
MT	Yes, but ratios may differ by category	statute	no	
NE	Yes, but ratios may differ by category	statute	yes	
NV	Other, required to be at 100%		no	35%
NH	Other, required to be at 100%		yes	
NJ	Other, required to be at 100%		yes	
NM	Other, required to be at 100%		yes	
NY	No, established by each locality	various	no	varies
NC	Other, required to be at 100%		yes	
ND	Other, required to be at 100%		yes	
OH	Other, required to be at 100%		yes	
OK	Other, required to be at 100%		no	11%–13.5%
OR	Yes, but ratios may differ by category	constitution	no	
PA	No, established by each locality		yes	
RI	Other, required to be at 100%		yes	
SC	Yes, but ratios may differ by category	constitution	no	4%
SD	Other, required to be at 100%		yes	
TN	Yes, but ratios may differ by category	statute	no	25%
TX	Other, required to be at 100%		yes	
UT	Other, required to be at 100%		yes	
VT	Other, required to be at 100%		yes	
VA	Other, required to be at 100%		yes	
WA	Other, required to be at 100%		yes	
WV	Other, required to be at 100%		yes	
WI	Yes, but ratios may differ by category	statute	yes	
WY	Yes, but ratios may differ by category	statute	no	9.5%

Question No. >	Q71		Q72		Q73		Q74	
State	For farmland, ranchland, and timberland, is the required assessment ratio set at 100% of market value?	If no, what is your farmland ratio?	For commercial property, is the required assessment ratio set at 100% of market value?	If no, what is your commercial ratio?	For industrial property, is the required assessment ratio set at 100% of market value?	If no, what is your industrial ratio?	For public utilities, is the required assessment ratio set at 100% of market value?	If no, what is your public utility ratio?
AL	no	10%	no	20%	no	20%	no	30%
AK	no		yes		yes		yes	
AZ	no	16%	no	23%	no	23%	no	23%
AR	no	20%	no	20%	no	20%	no	20%
CA	no							
CO	no	29%	no	29%	no	29%	no	29%
CT	no	70%	no	70%	no	70%	no	70%
DE	no	60%	no	60%	no	60%	no	60%
DC	no		yes		yes		yes	
FL	no		yes		yes		yes	
GA	no	40%	no	40%	no	40%	no	
HI CO	yes		yes		yes		yes	
HN CO	yes		yes		yes		yes	
ID	no		yes		yes		yes	
IL	no	33.33%	no	33.33%	no	33.33%	no	33.33%
IN	no		yes		yes		yes	
IA	no		yes		yes		yes	
KS	no	30%	no	25%	no	25%	no	30%
KY	no		yes		yes		yes	
LA	no		no	15%	no	15%		
ME	no		no		no		no	
MD	no		yes		yes		yes	
MA	no		yes		yes		yes	
MI	no	50%	no	50%	no	50%	no	50%
MN	no		yes		yes		yes	
MS	no	15%	no	15%	no	15%	no	30%
MO	no	12%	no	32%	no	32%	no	32%
MT	no		no		no		no	
NE	no	75%	yes		yes		yes	
NV	no	35%	no	35%	no	35%	no	35%
NH	no		yes		yes		yes	
NJ	no		yes		yes		yes	
NM	no		yes		yes		yes	
NY	no	varies	no	varies	no	varies	no	varies
NC	no		yes		yes		yes	
ND	no		yes		yes		yes	
OH	no		yes		yes		yes	
OK	no	11%–13.5%	no	11%–13.5%	no	11%–13.5%	no	12%–23%
OR	no		no		no		no	
PA	yes		yes		yes		yes	
RI	no		yes		yes		yes	
SC	no		no	6%	no	10.5%	no	10.5%
SD	yes		yes		yes		yes	
TN	no	25%	no	40%	no	40%	no	55%
TX	no		yes		yes		yes	
UT	no		yes		yes		yes	
VT	no		yes		yes		yes	
VA	yes		yes		yes		yes	
WA	no		yes		yes		yes	
WV	no		yes		yes		yes	
WI	no		yes		yes		no	
WY	no		no	9.5%	no	11.5%	no	11.5%

Question No. >	Q75		Q76	Q77		Q78	
State	For railroads, is the required assessment ratio set at 100% of market value?	If no, what is your railroad ratio?	For other real property, is the required assessment ratio set at 100% of market value?	For personal property, is the required assessment ratio set at 100% of market value?	If no, what is your personal property ratio?	For farmland, do you assess at 100% of productivity or legislated value?	For farmland, do you assess at some other % of productivity value or legislated value?
AL	no	20%	no	no	20%	no	10%
AK	yes		yes	yes			
AZ	no	21%	no	no	23%	yes	16%
AR	no	20%	no	no	20%	no	20%
CA							
CO	no	29%	no	no	29%	yes	
CT	no	70%	no				
DE	no	60%	no	no			
DC	yes		yes	no			
FL	yes		yes	yes		yes	
GA	no		no	no	40%	no	40%
HI CO	no		yes			yes	
HN CO	no		yes	no			
ID	yes		yes	yes		yes	
IL	no	33.33%	no			yes	
IN	yes		yes	yes		yes	
IA	yes		yes	no		yes	
KS	no	25%	no	no	30%	no	30%
KY	yes		yes	yes			
LA			no			yes	
ME	no		no	no		yes	
MD	yes		yes	yes		yes	
MA	yes		yes	yes			
MI	no	50%	no	no	50%	no	50% market value
MN	yes		yes	yes		yes	
MS	no	30%	no	no	15%	yes	
MO	no	32%	no	no	33.33%	no	12% market value
MT	no		no	no	3.00%	yes	
NE	yes		yes	no		no	75% market value
NV	no	35%	no	no		no	35% taxable value
NH	yes		yes	no			varies
NJ	yes		yes	yes		yes	
NM	yes		yes	no		yes	
NY	no	varies	no			yes	
NC	yes		yes	yes		yes	
ND	yes		yes	no		yes	
OH	yes		yes	no		yes	
OK	no	11.84%	no	no	10%–15%	no	11%–13.5%
OR	no		no	yes		yes	
PA	yes		yes	yes			
RI	yes		yes	no		yes	
SC	no	9.5%	no	no	10.5%	yes	
SD	yes		yes	no			
TN	no	55%	no	no	30%	no	25%
TX	yes		yes	yes		yes	
UT	yes		yes	yes		yes	
VT	yes		yes	yes		yes	
VA	yes		yes	yes			
WA	yes		yes	yes		yes	
WV	yes		yes	no	60%		
WI	no		yes	yes		yes	
WY	no		no	yes		yes	

Question No. >	Q79		Q80	Q81	Q83	Q85
State	For timberland, do you assess at 100% of productivity value or legislated value?	For timberland, do you assess at some other % of productivity value or legislated value?	Regarding sample size, what is the smallest sample you will use to evaluate any category of property?	Do you establish sample size quotas or goals?	Do you identify and trim outlier ratios?	Is there a limit on the maximum % of sales that can be trimmed out of a sample?
AL		10%		yes	no	
AK	yes		less than 5	no	yes	no
AZ	no	23%	20 to 30	no	yes	no
AR	no	20%	more than 30	no	yes	no
CA				yes	yes	
CO			30 or more	no	yes	no
CT			less than 5	no	no	
DE				no	no	
DC			20 to 30	no	no	
FL	yes		20 to 30	yes	yes	no
GA	no	40%	10 to 19	no	yes	no
HI CO	yes		5 to 9	no	yes	no
HN CO			5 to 9	no	no	
ID	yes		5 to 9	no	yes	no
IL	yes		20 to 30	no	yes	no
IN	yes		5 to 9	no	no	
IA	yes		2% or 10	yes	no	
KS	no	30%	less than 5	yes	yes	20%
KY			20 to 30	no	yes	no
LA	yes			no	yes	no
ME	yes		10 to 19	no	yes	no
MD	yes		no set limit	no	yes	no
MA			5 or more	yes	no	
MI	no	50% market value	10 to 19	no	yes	no
MN	yes		5 to 9	no	yes	5%
MS	no	15%	5 to 9	no		
MO	yes		more than 30	no	no	
MT	yes		20 to 30	no	yes	no
NE	no	75% market value	no set limit	no	no	
NV	no	35% taxable value	5 to 9	yes	no	
NH		varies	5 to 9	yes	yes	no
NJ	yes		less than 5	no	no	
NM			more than 30	no	yes	no
NY	yes		less than 5	no	yes	no
NC	yes		more than 30	yes	no	
ND			30 or 10%	yes	no	
OH	yes		20 to 30	no	yes	no
OK	no	11%–13.5%	10 to 19	yes	yes	
OR			varies	no	yes	no
PA			more than 30	yes	yes	15%
RI	yes		less than 5	no	yes	no
SC	yes		less than 5	no	yes	no
SD			10 to 19	no	no	
TN	no	25% market value	less than 5	no	yes	no
TX	yes		5 to 9	yes	yes	
UT	yes		10 to 19	no	no	
VT	yes		less than 5	no	yes	no
VA			5 to 9	no	yes	no
WA	yes		5 to 9	no	yes	5%
WV			3	no	yes	
WI			less than 5	no	yes	no
WY	yes		varies	no	yes	5%

Question No. >	Q86	Q88	Q89	Q92	Q93
State	Do you attempt to determine sample representativeness?	Do you have statutory requirements to check for sales chasing? Note if you have a nonstatutory requirement.	Do you test for sales chasing?	Can a taxing district or third party initiate legal action as a result of your ratio study?	Is commercial machinery and equipment considered taxable personal property?
AL	yes	no	yes	no	yes
AK	no	no	no	no	yes
AZ	no	no	no	yes	yes
AR	no	nonstatutory	yes	yes	yes
CA	no		no		yes
CO	no	nonstatutory	yes	no	yes
CT	no	no	no	yes	yes
DE	no	no	no		no
DC	no	no	no	no	no
FL	yes	no	yes	yes	yes
GA	yes	no	yes	yes	yes
HI CO	no	no	yes	no	no
HN CO	yes	no	yes	no	no
ID	yes	nonstatutory	yes	no	yes
IL	no	no	no	yes	no
IN	no	nonstatutory	no	yes	yes
IA	no	no	no	yes	no
KS	yes	no	no	no	yes
KY	yes	nonstatutory	no	no	yes
LA	yes	no	yes		yes
ME	yes	no	yes	yes	yes
MD	no	no	no	no	yes
MA	no	no	no		yes
MI	yes	nonstatutory	yes	yes	yes
MN	yes	yes	yes	yes	no
MS	no	no	yes	no	yes
MO	no	no	yes	no	yes
MT	no	no	yes	no	yes
NE	yes	no	yes	yes	yes
NV	yes	no	no	no	yes
NH	no	no	no	no	no
NJ	no	no	no	yes	yes
NM	no	no	yes	no	yes
NY	no	no	yes	yes	no
NC	no	yes	yes	yes	yes
ND	no	no	no	no	no
OH	no	no	yes	yes	no
OK	no	no	no	no	no
OR	yes	nonstatutory	no	yes	no
PA	yes	nonstatutory	yes	yes	yes
RI	no	no	no	yes	yes
SC	no	no	no	yes	yes
SD	no	nonstatutory	yes	yes	no
TN	yes	nonstatutory	yes	yes	yes
TX	yes	yes	yes	yes	yes
UT	no	no	yes	yes	yes
VT	no	no	no	yes	yes
VA	yes	no	no	yes	yes
WA	yes	no	no	no	yes
WV	no	nonstatutory	yes		yes
WI	yes	no	yes	yes	yes
WY	yes	nonstatutory	yes	yes	yes

Question No. >	Q94	Q95	Q97	Q100
	Is a ratio study conducted for personal property?	Does the ratio study for personal property use sales, appraisals, or both?	For your appraisals, what techniques do you use: Depreciation or economic life tables; Iowa curves; Other?	Do you have a statutory exemption for intangible personal property?
State				
AL	no			yes
AK	no			yes
AZ	no			no
AR	yes	appraisals	tables	yes
CA	yes	appraisals		yes
CO	yes	appraisals	table; curves	yes
CT	no			no
DE				yes
DC				no
FL	no			yes
GA	no			yes
HI CO				no
HN CO				no
ID	no			yes
IL				yes
IN	no			yes
IA				yes
KS	no			no
KY	no			yes
LA	no			no
ME	no			yes
MD	no			yes
MA	no			yes
MI	no			yes
MN				yes
MS	no			no
MO	no			yes
MT	no			yes
NE	no			yes
NV	yes	appraisals	tables	yes
NH				yes
NJ	no			no
NM	no			yes
NY				yes
NC	no			yes
ND				yes
OH				yes
OK	no			yes
OR				yes
PA	no			no
RI	no			yes
SC	no			yes
SD				yes
TN	no			yes
TX	yes	appraisals	other	yes
UT	no			no
VT	no			yes
VA	no			no
WA	yes	appraisals	tables	yes
WV	no			yes
WI	no			yes
WY	no			yes

Question No. >	Q101														
	CAPITAL STOCK EXEMPT?	BONDS EXEMPT?	DEPOSITS EXEMPT?	CONTRACTS AND CONTRACT RIGHTS EXEMPT?	COPYRIGHTS EXEMPT?	GOODWILL EXEMPT?	CUSTOMER LISTS EXEMPT?	CUSTOM COMPUTER PROGRAMS EXEMPT?	LICENSES EXEMPT?	PATENTS EXEMPT?	RIGHTS- OF-WAY EXEMPT?	TRADEMARKS EXEMPT?	TRADE SECRETS EXEMPT?	OTHER EXEMPT?	
State															
AL															
AK	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes			
AZ															
AR	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
CA															
CO	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
CT															
DE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
DC															
FL	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
GA	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes		
HI CO															
HN CO															
ID	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
IL	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
IN	yes	yes	yes	yes	yes		yes	yes	yes	yes	yes	yes	yes		
IA	yes	yes	yes	yes	yes		yes	yes	yes	yes		yes	yes		
KS															
KY															
LA															
ME															
MD	yes	yes						yes							
MA	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
MI															
MN	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
MS															
MO															
MT	yes	yes	yes	yes	yes		yes	yes	yes	yes		yes	yes		
NE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
NV	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
NH	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
NJ															
NM	yes	yes	yes	yes	yes	yes		yes	yes	yes	yes	yes	yes		
NY	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
NC	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
ND	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
OH	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes		
OK	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
OR	yes	yes	yes	yes	yes	yes	yes	yes		yes		yes	yes		
PA															
RI	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes		
SC	yes	yes	yes	yes	yes	yes	yes		yes	yes		yes	yes		
SD	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
TN	yes	yes	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes		
TX	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
UT															
VT															
VA															
WA	yes	yes	yes	yes	yes	yes			yes	yes		yes			
WV	yes	yes													
WI	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		yes	yes		
WY	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	

Appendix D. Canadian 2008 Survey Results

Question No. >		Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q11
		How often does your jurisdiction conduct ratio studies?	Who conducts your ratio study?	Does your study include sales or appraisals or both?	If your study includes both, do you combine?	Who performs the sales sample selection?	Who conducts the sales validation (screening)?	If province does not conduct the validation, does it audit the process?	Do you perform procedural audits of local assessment procedures/practices?
Province/Territory	Abbreviation								
Alberta	AB	annually	province	both	yes	local	local	yes	yes
British Columbia	BC	annually	province	sales	n/a	province	province		yes
Manitoba	MB	annually	province	sales	n/a	province	local	yes	yes
New Brunswick	NB	annually	province	sales	n/a	province	n/a	yes	yes
Newfoundland	NL	every 3 yrs.	province	sales	n/a	province	province		no
Northwest Territories	NT	every 4 yrs.	contracted	sales	n/a	contractor	contracted service provider	no	yes
Nova Scotia	NS	annually	province	sales	n/a	province	province		no
Ontario	ON	every 4 yrs.	province	sales	n/a	province	province		yes
Prince Edward Island	PEI	annually	province	sales	n/a	province	province		no
Quebec	QC	annually	province	sales	n/a	local	local	no	no
Saskatchewan	SK	annually	province	sales	n/a	both	both	no	no

Question No. >	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q20	
Province/ Territory	Is the procedural audit used instead of a ratio study?	Is the procedural audit used in addition to ratio study information?	Is the procedural audit used solely to advise or assist the local appraisal offices?	Can equalization or reappraisal be ordered as a result of procedural audits?	Do you have a disclosure law?	Is disclosure made to province or local or both?	Is disclosure made during deed recording?	Is a method in place to track a disclosure document for every recorded sale?	For disclosure, do you use a sale price statement, questionnaire, or both?
AB	no	yes	yes	yes	yes	both	yes	yes	statement
BC	no	no	yes	yes	yes	province	yes	yes	both
MB	no	yes	yes	yes	yes	province	yes	yes	statement
NB	no	yes	no	yes	yes	local	yes	yes	other
NL					yes	province	yes	yes	other
NT	yes	no	yes	no	yes	territory	yes	yes	statement
NS					yes	local	yes	yes	statement
ON	no	yes		no	yes	province	yes	yes	both
PEI					yes	province	yes	yes	other
QC					yes	province	yes	yes	statement
SK					yes	both	yes	yes	both

Question No. >	Q21	Q22	Q23	Q24	Q25							
Province/Territory	What office is responsible for initially accepting the disclosure document?	Are disclosed sale prices confidential?	Do you have a transfer tax or deed stamp?	Do you have a mandatory recordation law?	Do you have authority to adjust sale prices? If yes, for:	TIME?	FINANCING?	PERSONAL PROPERTY?	CLOSING COSTS?	BROKERAGE FEES?	INTANGIBLE PERSONAL PROPERTY?	OTHER?
AB	recorder	no	yes	yes	yes	yes	yes	yes				yes
BC	recorder	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
MB	recorder		yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
NB	recorder	yes	yes	yes	no							
NL	recorder	no	yes	yes	yes	yes	yes	yes				
NT	recorder	no	yes	yes	no							
NS	recorder	yes	yes	yes	yes	yes	yes	yes				
ON	recorder	no	yes	yes	yes							
PEI	recorder	no	yes	no	yes	yes						
QC	recorder	no	yes	yes	yes	yes		yes			yes	
SK	recorder	no	yes	yes	no							

Question No. >	Q26								Q27
Province/ Territory	Do you make adjustments to sales prices? If yes, do you adjust for:	TIME?	FINANCING?	PERSONAL PROPERTY?	CLOSING COSTS?	BROKERAGE FEES?	INTANGIBLE PERSONAL PROPERTY?	OTHER?	Do you make blanket or global adjustments to sales prices?
AB	yes	yes	yes	yes				yes	no
BC	yes	yes	yes	yes			yes		no
MB	yes		yes	yes	yes	yes	yes	yes	no
NB									no
NL	yes	yes		yes					no
NT									no
NS	yes		yes	yes					no
ON	yes	yes		yes					no
PEI	yes	yes							no
QC	yes	yes		yes			yes		no
SK									no

Question No. >	Q30							Q31
Province/ Territory	Is your ratio study used to order adjustments to locally determined assessed values?	Is your ratio study used to equalize provincial funding of local jurisdictions?	Is your ratio study used to order local jurisdictions to reappraise?	Is your ratio study used to advise provincial or local jurisdictions of assessment conditions?	Is your ratio study used to assist mass appraisal programs?	Is your ratio study used to approve tax assessment roll?	Is your ratio study used to adjust or equalize centrally determined assessed values?	Do you have authority to order adjustments to, or reappraisal of, locally determined values?
AB		yes						yes
BC				yes	yes			yes
MB				yes	yes			yes
NB	yes	yes		yes				no
NL					yes			yes
NT				yes				no
NS						yes		no
ON				yes				no
PEI				yes	yes			no
QC						yes		no
SK				yes		yes		no

Question No. >	Q32	Q33	Q35		Q36	Q37
Province/ Territory	How many local jurisdictions have been issued orders to adjust values in the past three years?	How many local jurisdictions have been issued orders to reappraise values in the past three years?	What is your appraisal level standard?	Do you have an appraisal level standard that allows some variance from your statutorily required appraisal level?	If yes, is the appraisal level variance set by statute?	Are allowances made for sample reliability using statistical tests, such as confidence intervals?
AB	0	0	0.95–1.05	yes	yes	no
BC	0	0	0.90–1.10	yes	yes	yes
MB	0	0	0.90–1.10	yes	yes	yes
NB				no	n/a	n/a
NL	0	0	0.90–1.10	yes	yes	yes
NT				no	n/a	no
NS			0.90–1.10	yes	yes	no
ON				no	n/a	n/a
PEI			1.00	no	yes	yes
QC			0.95–1.05	yes	yes	yes
SK			0.98–1.02	yes	yes	no

Question No. >	Q39								
Province/ Territory	Do you calculate the ARITHMETIC MEAN as measure of a level?	Is the arithmetic mean used for direct equalization?	Is the arithmetic mean used for indirect equalization?	Do you calculate the MEDIAN as measure of a level?	Is the median used for direct equalization?	Is the median used for indirect equalization?	Do you calculate the WEIGHTED MEAN as measure of a level?	Is the weighted mean used for direct equalization?	Is the weighted mean used for indirect equalization?
AB				yes		yes			
BC				yes					
MB	yes			yes			yes		
NB									
NL	yes			yes			yes		
NT	yes		yes						
NS	yes			yes			yes		
ON									
PEI	yes			yes					
QC				yes	yes				
SK				yes					

Question No. >	Q39 (continued)			Q40	Q42	Q43
Province/ Territory	Do you calculate the GEOMETRIC MEAN as measure of a level?	Is the geometric mean used for direct equalization?	Is the geometric mean used for indirect equalization?	Do you test the distribution of ratios to see if it is statistically normal?	Have you incorporated portions of the IAAO <i>Standard on Ratio Studies</i> in your statutes or rules?	When testing reliability for level of appraisal, which is used to determine compliance?
AB				no	yes	point estimate
BC				yes	no	both
MB				yes	no	both
NB				no	yes	point estimate
NL				no	yes	confidence interval
NT				no	no	
NS				yes	no	
ON				yes	yes	
PEI				yes	no	confidence interval
QC				yes	yes	confidence interval
SK				no	no	

Question No. >	Q44	Q45			
Province/ Territory	Hypothetical: Legal requirement to fall between 90 and 110%. If a sample has a median ratio of 85%, with a 95% confidence interval (CI) that falls in the range of 76 to 94%, would your agency rule this result to be in compliance with statutory appraisal level requirements?	Hypothetical (cont.): If the CI overlaps but the median continues out of compliance for several years, what action would you take? Lower the CI and reevaluate; Base compliance decision on the point estimate (PE); Continue to find in compliance; Other (check all that apply)			
AB	No, only point estimate used				
BC	Yes, the confidence interval overlaps				
MB	No, confidence interval fails to overlap 100%				
NB	No, only point estimate used				
NL	Yes, the confidence interval overlaps				other
NT		lower			
NS	Yes, the confidence interval overlaps				
ON				continue	
PEI	Yes, the confidence interval overlaps	lower	PE	continue	other
QC	Yes, the confidence interval overlaps				
SK					

Question No. >	Q47					Q48		Q53
Province/ Territory	Hypothetical (cont.): How would your response differ if the sample COD (or other measure of uniformity) also showed very poor uniformity? No change; May lower level of confidence; May use point estimate only to evaluate level; May review previous years' level measures; May use additional information, e.g., sample size					Do you have specific standards or requirements for assessment uniformity as measured by the COD?	Is your COD standard the same or less stringent or more stringent than the IAAO 1999 standard?	If you do not use the COD, what uniformity measure is used?
AB					may use	yes	same	
BC		may lower				yes	same	
MB					may use	yes	same	
NB					may use	yes	same	
NL					may use	yes	same	
NT	no change					no	n/a	no measure
NS					may use	yes	more	
ON	no change					yes	more	
PEI				may review	may use	yes	same	
QC			may use PE			no	n/a	
SK						no	n/a	no measure

Question No. >	Q54	Q55	Q57	Q58	Q59			Q61
Province/ Territory	Has a lower limit on the COD been established as an indicator of possible sales chasing?	Do you have standards for price-related bias as measured by the PRD or other statistical tests?	If you have standards for price-related bias, which do you use?	Can your agency initiate any action as a result of assessment uniformity?	What actions can your agency initiate as a result of assessment uniformity conditions? Order reappraisal; Withhold funding; Other			Do you calculate reliability measures on uniformity statistics around the COD, PRD, both, neither?
AB	no	no		yes			other	neither
BC	no	yes	0.98–1.03	no				both
MB	no	yes	0.98–1.03	no				both
NB	no	yes	0.98–1.03	yes	order reap.			neither
NL	no	yes	0.98–1.03	yes	order reap.			both
NT	n/a	no		no				neither
NS	no	yes	0.95–1.05	no				neither
ON	no	yes	0.98–1.03	yes				COD
PEI	no	no		yes	order reap.			both
QC	n/a	no		no				neither
SK	n/a	no		no				neither

Question No. >	Q62	Q63	Q64	Q65		Q68
Province/ Territory	If you initiate action as a result of assessment uniformity conditions, what indicator is action dependent upon?	Are local jurisdictions required to annually value categories of property at 100% of current market value?	Is property not required to be appraised during a given year required to have its value updated in interim years?	Is property appraised at a uniform base year (e.g., 2001)?	If yes, indicate most recent base year used.	Is there a uniform fractional assessment ratio for each category of property in every local assessment jurisdiction?
AB	n/a	yes				Other, required to be at 100%
BC		no	no	yes	2007	Other, required to be at 100%
MB	n/a	no	yes	yes	2003	Other, required to be at 100%
NB	point estimate	yes				Other, required to be at 100%
NL	confidence interval	yes				Other, required to be at 100%
NT		no	no	yes	2007	No, established by each locality
NS		yes				Other, required to be at 100%
ON	confidence interval	no	yes	yes	2005	Other, required to be at 100%
PEI	confidence interval	no	yes	yes	1979	No, established by each locality
QC	point estimate	no	no	no		No, established by each locality
SK	n/a	no	no	yes	2002	Other, required to be at 100%

Question No. >	Q70		Q71		Q72		Q73	
Province/ Territory	For residential properties, is the required assessment ratio set at 100% of market value?	If no, what is your assessment ratio	For farmland, ranchland, and timberland, is the required assessment ratio set at 100% of market value?	If no, what is your farmland ratio?	For commercial property, is the required assessment ratio set at 100% of market value?	If no, what is your commercial ratio?	For industrial property, is the required assessment ratio set at 100% of market value?	If no, what is your industrial ratio?
AB	yes		no		yes		yes	
BC	yes		no		yes		yes	
MB	yes		yes		yes		yes	
NB	yes		no		yes		yes	
NL	yes		yes		yes		yes	
NT	yes		no		yes		yes	
NS	yes		yes		yes		yes	
ON	yes		no		yes		yes	
PEI	no		no		no		no	
QC	yes		yes		yes		yes	
SK								

Question No. >	Q74		Q75		Q76	Q77	
Province/ Territory	For public utilities, is the required assessment ratio set at 100% of market value?	If no, what is your public utility ratio?	For railroads, is the required assessment ratio set at 100% of market value?	If no, what is your railroad ratio?	For other real property, is the required assessment ratio set at 100% of market value?	For personal property, is the required assessment ratio set at 100% of market value?	If no, what is your personal property ratio?
AB	yes		yes		yes	no	
BC	yes		yes		yes	no	
MB	yes		yes		yes	yes	
NB	yes		yes		yes	no	
NL	yes		yes		yes	no	
NT	yes		yes		yes	no	
NS	yes		yes		yes	no	
ON	yes		yes		yes	no	
PEI	no		no		no	no	
QC	yes		yes		yes		
SK							

Question No. >	Q78		Q79		Q80	Q81	Q83
Province/ Territory	For farmland, do you assess at 100% of productivity value or legislated value?	For farmland, do you assess at some other % of productivity value or legislated value?	For timberland, do you assess at 100% of productivity value or legislated value?	For timberland, do you assess at some other % of productivity value or legislated value?	Regarding sample size, what is the smallest sample you will use to evaluate any category of property?	Do you establish sample size quotas or goals?	Do you identify and trim outlier ratios?
AB	no	regulated rates			15	no	no
BC	yes		yes		20 to 30	no	yes
MB					5 to 9	no	yes
NB			no	\$100/acre	less than 5	no	yes
NL					10 to 19	no	yes
NT	yes		yes		10 to 19	no	yes
NS					5 to 9	no	no
ON	yes		yes		5 to 9	no	yes
PEI	no	flat rates	no	flat rate	flexible	yes	yes
QC					20 to 30	no	no
SK	no	productivity	no	pasture		no	no

Question No. >	Q86	Q88	Q89	Q92	Q93	Q94
Province/ Territory	Do you attempt to determine sample representativeness?	Do you have statutory requirements to check for sales chasing? Note if you have a nonstatutory requirement.	Do you test for sales chasing?	Can a taxing district or third party initiate legal action as a result of your ratio study?	Are business or commercial machinery and equipment considered taxable personal property?	Is a ratio study conducted for personal property?
AB	no	no	yes	yes	yes	no
BC	yes	no	yes	no	no	
MB	yes	no	yes	no	no	
NB	no	no	no	no	no	
NL	no	no	yes	no	no	
NT	yes	no	no	no	no	
NS	no	no	no	no	no	
ON	no	no	yes	no	no	
PEI	yes	no	no	no	no	
QC	no	no	no	no	no	
SK	no	no	no	no	yes	no

Question No. >	Q100	Q101					
Province/ Territory	Do you have a statutory exemption for intangible personal property?	CAPITAL STOCK EXEMPT?	BONDS EXEMPT?	DEPOSITS EXEMPT?	CONTRACTS AND CONTRACT RIGHTS EXEMPT?	COPYRIGHTS EXEMPT?	GOODWILL EXEMPT?
AB	yes						
BC							
MB							
NB							
NL							
NT		yes	yes	yes	yes	yes	yes
NS							
ON	yes						
PEI							
QC							
SK							

Question No. >	Q101 (continued)							
Province/ Territory	CUSTOMER LISTS EXEMPT?	CUSTOM COMPUTER PROGRAMS EXEMPT?	LICENSES EXEMPT?	PATENTS EXEMPT?	RIGHTS-OF-WAY EXEMPT?	TRADEMARKS EXEMPT?	TRADE SECRETS EXEMPT?	OTHER EXEMPT?
AB								
BC								
MB								
NB								
NL								
NT	yes	yes	yes	yes	yes	yes	yes	
NS								
ON								
PEI								
QC								
SK								

*Appendix E. Techniques used to detect sales chasing:
United States and Canada, 2008*

	Not Used		First Choice		Second Choice		Third Choice		Fourth Choice	
	U.S.	Canada	U.S.	Canada	U.S.	Canada	U.S.	Canada	U.S.	Canada
Comparison of average value changes	3	2	13	2	7	0	0	0	0	1
Comparison of observed vs. expected distribution ratios	6	0	6	0	0	3	7	1	1	0
Use of mass appraisal techniques	8	1	3	1	2	1	3	1	1	0
Comparison of average unit values	11	1	2	1	3	1	1	1	0	0
Use of split sample technique	9	1	1	1	4	2	0	0	0	0



Mass Appraisal Explained

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1. Collect Data
2. Use CAMA software to model
- 3 Apply to specific class of property
***** Then; *****
4. Confirm validity of result!

CBJ lacks any CAMA analysis;
The "Study" is the A/S validation of arbitrary numbrers!

GENERAL INFORMATION

Assessors nationwide use what are commonly referred to as "Mass Appraisal Techniques" in the valuation of property. Mass appraisal is a widely accepted tool for the valuation of property for the purposes of taxation. It differs markedly from appraisal techniques utilized by fee appraisers, who are concerned with the valuation of one specific property only. While both mass appraisal and fee appraisal have techniques available to estimate value utilizing cost, income, and market approaches, Colorado law specifically prohibits the Assessor from utilizing the cost or income approach in the valuation of improved residential property. Colorado Assessors must rely exclusively on the market approach when valuing improved residential property. In as much as the market approach is often the best indicator of value for various other types of property, it is often used for valuation of non-residential property classes, as well.

MASS APPRAISAL HISTORY

The office of the County Assessor was created by the Colorado Constitution adopted in 1876. Property has been assessed for purposes of taxation in Colorado since that time. Since property had to be valued in order to be assessed, mass appraisal techniques were developed to value property. For many years, the state provided cost manuals to the County Assessor that were utilized to value property. All property statewide was valued using the same manuals. The cost system, while fairly efficient and relatively simple, displayed a few glaring deficiencies, particularly relating to real property valuation. (Computerized cost information is still often used in the valuation of non-agricultural business personal property.) The most obvious deficiency of cost valuation is that original or replacement cost that is not adjusted for local influences or market conditions

very often does not reflect the fair market value of property.

The advent of computer systems and software with large data storage and sophisticated analytical capability made possible utilization of sales information, property characteristics, and statistical techniques to estimate the value of individual properties using sales information from many properties. This capability is the basis of the modern Computer Aided Mass Appraisal system (CAMA) employed nearly universally by Assessors nationwide.

BRIEF SUMMARY OF MARKET-BASED COMPUTER AIDED MASS APPRAISAL (CAMA)

The building of a market-based CAMA model involves three basic steps:

1. Data gathering Data is gathered concerning both sold and unsold properties. This includes inventory of property characteristics, location, and other factors that may affect value. Sales information concerning sale date, dollar amounts, non-real property items included in the sale price, financing, unusual circumstances concerning the sale, and other pertinent information is collected. From this information, an accurate inventory of each property, sold and unsold, is derived. Also, a sales list of "valid," meaning arms-length, sales transactions is developed.
2. CAMA modeling. The appraiser developing a CAMA model uses various techniques in order to develop an appraisal model that replicates the market in assigning value to the various features of a property. Such techniques may include linear or multiple regression statistical analysis, trend analysis, other statistical techniques, or modification of existing or accepted models. A key part of the modeling process involves continual testing of the model to determine if it is accurately predicting the value of properties. This is generally done by comparing the sale price of properties with the value assigned by the

CON'D ON REVERSE

model to the property. The statistical tests that the model must meet are part of Colorado valuation regulations and will be discussed below.

3. Application of the model. Once a CAMA model is developed by the appraiser for a class or subclass of property, it is then applied to all properties, sold and unsold, in that class or subclass. This assures that all properties in the class or subclass are treated equitably; it is also required by Colorado law and property assessment regulations.

STATISTICALLY TESTING THE CAMA MODEL

Not only is testing of the CAMA appraisal model necessary to insure relative accuracy in valuation, statistical compliance is required under Colorado assessment regulation. A model that meets Colorado requirements is presumed to be valid for purposes of assessment for property taxation. There are two statistical tests that the CAMA model must pass to be valid under Colorado regulation. Both tests involve sales ratio analysis under which the CAMA value (also called "Assessor's Actual Value") is compared with the adjusted sales price of a property.

Definitions:

- *Assessor's Actual Value.* The value calculated for a property by the CAMA model.
- *Adjusted Sales Price.* The sales price of the real property. Colorado regulation requires the assumption that the sale price for a property reflects the owner's conveyance of fee simple ownership. If significant inflation or deflation has occurred in the market, the sales price may have to be adjusted to the end of the data collection period to account for the inflation or deflation.
- *Sales Ratio.* Assessor's Actual Value divided by Adjusted Sales Price.
- *Data-collection period.* Generally, 18 months prior to the "appraisal date." (The appraisal date for the current assessment cycle is June 30, 2018.) Assessors may gather information in 6 month increments prior to the 18 month

period if insufficient sales (usually less than 30) are available during the 18 month period for a particular property class or subclass. Information from more than 5 years prior to the appraisal date can never be considered under Colorado regulation.

Statistical Tests:

1. *Median Sales Ratio.* Calculation of median sales ratio is a fairly straightforward technique. First, a Sales Ratio is calculated for each sale in the sales base. This is done by dividing the Assessor's Actual Value by the Adjusted Sales Price (for example, if the Assessor's Actual Value for a property is \$95,000 and the Adjusted Sales Price is \$100,000, the Sales Ratio for that property would be .95). Sales Ratios for all qualified sales in the sales base are then arrayed from lowest ratio to the highest and the Median Sales Ratio is calculated. **Colorado assessment regulations require that the Median Sales Ratio for vacant land, commercial property, and improved residential property must fall between .95 and 1.05 for each class of property, within a county.**
2. *Coefficient of Dispersion.* The second statistical test that is applied to a sales base is calculation of the Coefficient of Dispersion (often referred to as COD). After the Median Sales Ratio is calculated, it is subtracted from each sold property's Sale Ratio. The result is called the Absolute Deviation (ignoring a positive or negative sign of the sum) for each sold property. For example, if a property's Sales Ratio is 1.05, the Absolute Deviation between it and a Median Sales Ratio of 1.00 would be .05. The Absolute Deviation between a Sales Ratio of .95 and a Median Sales Ratio of 1.00 would also be .05. After all Absolute Deviations are computed, they are added and an Average Absolute Deviation computed. The Average Absolute Deviation is then divided by the Median Sales Ratio. This equals the Coefficient of

Dispersion.

Colorado Assessment regulations require that the Coefficient of Dispersion must be less than or equal to .1599 (or 15.99%) for the improved residential property class and less than or equal to .2099 (20.99%) for vacant land and commercial property classes within a county.

What does all that mean in English? These two tests are designed to measure two important factors. One is that, to the best means available, the value computed for properties approximates what they sold for in a large number of cases. Second, that the difference between the value computed for properties, and their actual adjusted sales price is minimized in a large number of individual cases. The goal is to achieve assessment equity for the largest number of properties; that is, that a computed value approximates the actual adjusted sales price for the largest number of cases. Such a model can then be applied with confidence to the unsold properties in the county. While these tests are applied countywide to classes of property to insure compliance with state assessment guidelines, they are often also applied to subclasses of property (i.e., neighborhoods, building types, construction qualities, etc.) to test the CAMA model's prediction of value. While this appraisal methodology differs considerably from a market approach fee-type appraisal, it is similar in its intent in that it utilizes market information to estimate value of subject properties.

Greed, Corruption, and the Modern State

Essays in Political Economy

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7. Saving Gotham: fighting corruption in New York City's property tax system*

Paul Lagunes and Rongyao Huang

The Department of Finance collects vital revenue for the City of New York. One of its major responsibilities is determining the value of more than one million properties spread across the city's five boroughs (NYC Finance 2014). To accomplish this task Finance's Real Property Assessment Unit relies on property tax assessors.

Property tax assessors are front-line bureaucrats responsible for determining the rate at which property owners should be taxed. They perform three important tasks: First, property tax assessors ensure that properties are assigned to the appropriate tax categories; second, they verify that the characteristics of both building and land are correct; and third, they value properties in accordance with the existing guidelines (NYC Finance 2014).

The role that property tax assessors play in New York City's public administration supports the thesis that bureaucrats often have considerable bearing on citizen's lives (Weber 1958; Wilson 1978; Lipsky 1980; Woll 2009). In carrying out their responsibilities, they have access to privileged information and wield broad discretionary powers, which place them at an advantage vis-à-vis the voting public (Dodd and Schott 1979; Ferejohn 1999; Rose-Ackerman 1999; Stiglitz 2002).

The information asymmetry that gives bureaucrats, in general, and property tax assessors, in particular, relative power over the citizenry can lead to abuse. It is an institutional flaw that a free and active press (Gentzkow, Glaeser and Goldin 2006: 188; Schiffrin 2014), independent

* We would like to thank Nicola Bonucci and Gautam Nair for their useful comments to an early draft of this chapter. Participants at the Conference on Grand and Petty Corruption in Developing States at Yale also made suggestions that guided our revisions. Finally, we are especially thankful that Milica Koscica, Lise Martina and Jennifer Rodgers were willing to provide detailed edits to an advanced draft of our work. Any remaining mistakes are our own.

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accounting offices (Manin, Przeworski and Stokes 1999: 24), freedom of information procedures (Ackerman and Sandoval-Ballesteros 2006: 93; Banisar 2006), and anti-corruption agencies endeavor to correct (Winslow and Burke 1993; Manion 2004). Still, the information asymmetry is sufficiently entrenched that bureaucrats continue to find opportunities to abuse their power. To illustrate, we provide a case study that examines a scandal involving New York City property tax assessors.¹

In February of 2002, shortly after Mayor Michael Bloomberg first took office, federal prosecutors arrested 18 current and former tax assessors. They were charged with participating in an over-three-decades-old corruption scheme that involved more than 500 properties and cost the city an estimated \$40 million in revenue a year (Bagli and Rashbaum 2002b). The total loss amounted to approximately one billion dollars (Committee on Real Property Taxation 2002: 57–8).

Mayor Bloomberg captured the case's significance by referring to it as the 'largest and most damaging corruption scheme ever conducted within the city' (Seifman 2004). A spokesman for the New York City Department of Investigation (DOI) went so far as to state that it knew of no larger municipal fraud case in US history (Mcgurk 2002). If these assertions are correct, then this property tax assessment scheme had a greater negative impact on the city than the 1970s affair involving corruption in the police and buildings departments (for further details refer to: Knapp Commission 1973; Maas 1973; Gardiner and Lyman 1978); the 1986 Democratic party machine fiasco (Newfield and Barrett 1988); and the 1994 'Dirty Thirty' case of drug dealing cops (Treaster 1994; Anechiarico and Jacobs 1996: 164–70).

In any case, this study is the first scholarly effort to examine corruption in New York City's property tax system. We interviewed Charles V. Bagli, a veteran *New York Times* reporter who has covered the intersection of politics and real estate since 1987.² We also spoke with

¹ There are those who view case studies as beset by a degree-of-freedom problem and as vulnerable to selection bias (King, Keohane and Verba 1994: 119–20, 128; McKeown 1999; Geddes 2006: 89). Although we acknowledge the method's limitations, we also view case studies as a useful tool for identifying testable hypotheses and exploring the intricacies of extreme cases (Van Evera 1997: 55; Sambanis 2004: 260; George and Bennett 2005: 19). In this chapter, we use the case study approach to achieve the latter objective, but also to motivate future empirical work.

² Charles V. Bagli is the author of, *Other People's Money*, a book that details the dynamics that led to the recent US real estate meltdown. Bagli first caught wind of the problem in the City's Property Assessment Office thanks to an anonymous call. He wrote over 12 news articles on the topic.

Sharon L. McCarthy, one of the three prosecutors in the criminal case resulting from the tax assessor scandal.³ In addition to the in-person interviews, we corresponded with Rose Gill Hearn.⁴ Between 2002 and 2013, Gill Hearn served as DOI Commissioner. Prior to her appointment at DOI, Gill Hearn was a federal prosecutor for ten years in the US Attorney's Office for the Southern District of New York. Finally, to complement the perspectives gathered through direct communications, we studied government reports, news articles, legal documents in the public domain, and transcripts from the hearings held by the New York State Assembly Standing Committee on Real Property Taxation.

Part I reviews key conceptual issues in the study of corruption. In this section we address questions such as: What are the institutional structures that sustain bureaucratic corruption? How are corruption and inefficiency related, and why do anti-corruption agencies tend to target both phenomena? What distinguishes New York City's Department of Investigation from other such agencies, and what do we know about this particular agency's history, statutory powers, legal obligations, institutional capacity and track record? Part II introduces the reader to the structure of urban property taxation. Part III is the heart of the chapter. There we provide a close examination of the 2002 corruption scandal. Finally, we conclude with a summary and a brief description of a collaborative research project with DOI. This partnership is ongoing and should serve to evaluate distinct anti-corruption mechanisms through a randomized control trial.

I. A CONCEPTUAL APPROACH TO URBAN CORRUPTION

There is much that the voting public, and even elected and appointed officials, do not know about the workings of government and the bureaucracy. To some extent, their ignorance is justified. Elected and appointed officials often hold vast responsibilities and are, thus, personally incapable of overseeing the work of every agent under their charge. Similarly, the electorate dedicates a majority of its time to private, non-governmental

³ Sharon L. McCarthy is a partner at the law firm Kostelanetz & Fink, LLP. She represents individuals and corporations in civil and white-collar criminal litigation and tax controversies and trials. Before rejoining the private sector in 2006, she served for 12 years in the US Attorney's Office for the Southern District of New York.

⁴ Rose Gill Hearn is a Principal at Bloomberg Associates, which is a pro-bono consulting group that advises city governments in the United States and around the world on governance, economic and other issues.

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affairs. When citizens do engage their government as individuals petitioning for assistance, they are often confused and repelled by legal and procedural complexities. This is not to say that every citizen petition is just; however, democracy is founded on the idea that government serves society. The members of the voting public are government officials' *de jure* principals, and government officials are reminded of the voting public's supremacy on Election Day. In other words, an electoral connection exists between the citizenry and the officials who populate government, but the connecting thread becomes thinner the deeper it pierces into the layers of public administration. An example from local government illustrates this point.

Citizens elect a mayor. The mayor is the city government's highest-ranking executive and by extension most bureaucrats' *de facto* principal. If the mayor is interested in running for re-election or higher office, she faces institutional incentives to serve the public. These same career incentives might reasonably motivate the mayor to appoint cabinet members who seem willing and capable of serving the citizenry, and yet these appointed high-level officials are two steps removed from the ballot box. Being invited to serve as the secretary of a local ministry or department hinges on the electorate's choice of mayor, and on the elected mayor's choice of close collaborators.

Following the mayor's example, the top leadership of city government fills select positions with agents of their choosing. These appointed officials, however, generally rely on the existing corps of lower-level officials to carry out the lion's share of operations. This dynamic presents an advantage: a level of continuity is ensured from one mayoral administration to the next. Everything does not stop when the outgoing mayor and her close collaborators pack their bags, and the incoming mayor and her staff find their way around city hall. From the standpoint of democratic accountability, however, this setup poses two significant challenges. First, the officials who join government in the wake of an election often depend on the experience and technical knowledge of bureaucrats. Second, these bureaucrats are at minimum three degrees removed from the power of the ballot box, and are, therefore, significantly less sensitive to the interests of the voting public.

Being removed from the electorate grants bureaucrats considerable discretion, and this discretionary power is subject to abuse. However, influence over a state activity, such as deciding whether a property owner receives an illegitimate tax cut, is a necessary but not sufficient condition for corruption. Other factors, including personal values, prevailing social norms, job satisfaction, probability of detection, and severity of the penalty, help determine whether an official becomes corrupt.

A bureaucrat who values personal integrity may avoid acting corruptly for fear of incurring a psychological penalty in the form of guilt. The likelihood that a bureaucrat will be corrupt also depends on the bureaucrat's expectations regarding the behavior of others. If corruption is prevalent, she can hide her malfeasance within the mix of other corrupt acts. Job satisfaction, driven in large part by remuneration, is another variable of potential interest. A competitive public sector wage may reduce the probability that a bureaucrat will participate in corruption by eliminating her incentive to supplement an inadequate salary with illegal rents. Additionally, given the employment alternatives in the labor market, a competitive public sector wage raises a bureaucrat's opportunity costs of losing her current job in government because of malfeasance. However, the idea of losing a public sector job or being penalized in some other way for corruption depends on the probability of detection, and corruption detection is anything but a simple endeavor.

Corruption is difficult to identify, in part, because it is often confused with inefficiency, a seemingly lesser ill. Crucially, corruption and inefficiency are related pathologies—an institution affected by corruption is often also inefficient, and vice versa. Corruption and inefficiency may enjoy a mutually reinforcing relationship. For instance, red tape in the form of excessive bureaucratic delays creates an incentive for corrupt payments. Similarly, we assume that corruption breeds an environment where bureaucrats are unmotivated to work energetically to advance the government's official, public-oriented goals. After all, corruption is by definition an act that places individual interests above those of the collective.

The key difference between the two is that corruption commonly promises material gain or the avoidance of material loss by at least one of the parties involved in a transaction. In contrast, inefficiency implies waste. Inefficiency occurs when resources—such as time, energy, or capital—are not expended in a manner that most directly furthers an agency's official goals.

Inefficiency may be caused by an agent's lack of competence, drive, or focus, or by an agency's poor organizational structure. Similar to corruption, inefficiency produces suboptimal outcomes from a public interest perspective. This is precisely why anti-corruption agencies, such as New York City's Department of Investigation, tend to target *both* phenomena (City of New York 2004). Indeed, DOI is meant to promote better management in NYC, whether or not linked to corrupt acts (Seidman 1941).

DOI was originally known as the Office of the Commissioners of Accounts, and is one of the oldest law enforcement agencies in the United States dedicated to fighting corruption (Department of Investigation

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2014b). It was founded in 1873 to oppose Tammany Hall's influence (Winslow and Burke 1993: 1–4). In this sense, 'The creation of DOI was through a reactive process, as opposed to a proactive process' (Green 2013: 12). Be that as it may, by the mid-1950s, the agency had evolved into a strong, nonpartisan watchdog for the municipal government in New York City (Anechiarico and Jacobs 1996: 76–81; Department of Investigation 2014a).

DOI stands today as an independent department supported by an annual budget of approximately \$22 million and a staff of about 470 members (Green 2013: 14; Peters 2014a: 4). The agency employs attorneys, investigators, forensic auditors, computer forensic specialists and administrative personnel (Graycar and Villa 2011: 423; Peters 2014b: 2). DOI holds significant powers (including the power to subpoena and conduct arrests), and is responsible for investigating and referring for criminal prosecution cases of unethical behavior by local officials, contractors and others who receive benefits from or conduct business with the city (Department of Investigation 2014b).⁵ Based on recent data, a vast majority of DOI's investigations appear to focus on New York City's Housing Authority (Dobkin 2014). However, DOI also conducts numerous investigations within the Department of Correction, the Department of Buildings, the Fire Department and the School Construction Authority, among other agencies (ibid.).⁶ Importantly, a majority of these cases involve a threat to the city's capacity to meet requirements set by legislation (Graycar and Villa 2011).

On the question of efficacy, Anechiarico and Jacobs (1996) find important instances in DOI's history where it failed to prevent corruption. However, Anechiarico and Smith (2008) also note that, 'serious cases [of corruption] have been cut by almost two-thirds in recent years'.⁷ Other metrics reveal that, since 2002, DOI investigations have led to more than 6,400 arrests and the recovery of more than \$500 million (Gill Hearn 2008;

⁵ As described by local statutes, DOI is responsible for 'the investigation and elimination of corrupt or other criminal activity, conflict of interest, unethical conduct, misconduct and incompetence (i) by City agencies, (ii) by City officers and employees, and (iii) by persons regulated by, doing business with or receiving funds directly or indirectly from the City . . .' (see Mayoral Executive Order No. 16 for more information).

⁶ The Department of Finance in particular is the 12th most investigated agency in New York City (Dobkin 2014).

⁷ Based on a different sample (in other words, one that is not solely looking at 'significant cases'), a reporter applauds DOI's efforts during Mayor Bloomberg's administration because it made a record 6,773 municipal corruption arrests (Smith 2013).

Adams Otis 2013; Department of Investigation 2013).⁸ These numbers are of course noteworthy in absolute terms, but their relative significance depends on the unknown quantity of actual corruption events and financial losses due to corruption. Therefore, given what information we have available, the most we are able to say is that DOI's success in recouping hundreds of millions of dollars signals a positive and dutiful effort to fend against the theft of public resources. This is an issue that is particularly relevant given the topic at hand.

As we discuss at length in Part III, the 2002 corruption scandal involving New York City property tax assessors hit soon after the September 11 terrorist attacks. This is a period during which the city faced a \$4 billion budget gap (Bagli 2002a). In court, Sharon McCarthy argued that the tax assessors involved in the corruption scheme abused their power and, 'in doing so deflated assessments, denying the city of certain tax revenue' (*USA v. Marino* 2000: 8).⁹ The prevailing estimate is that the city lost a total of approximately one billion dollars over the course of more than three decades. This is precisely why Rose Gill Hearn (2014), the commissioner of the Department of Investigation during Bloomberg's administration, considers the property tax assessment scheme to be one of the two most costly corruption events in the city's recent history.¹⁰ The other significant case involved fraud in a payroll modernization project that cost taxpayers more than \$600 million (Gross 2011; Weiser 2014).

⁸ In addition to searching for statistics, we also reviewed multiple news articles to see how the media evaluated the level of government integrity during Bloomberg's administration. No single article or quote in *The New York Times*, *The Economist* or *The Wall Street Journal* offered a clear and direct assessment. Most articles focused on specific events related to the issue (scandals, increased oversight, etc.), but none evaluated the overall state of government integrity in New York City. However, taken together, the articles paint a picture that the Bloomberg administration struggled with several integrity issues, but that it also attempted to implement procedures to overcome them.

⁹ Agreeing with McCarthy's assessment, the judge observed that, '[the scheme] went on for quite a number of years. My problem is', he continued, 'we are talking about \$4.1 million in bribes. We are not talking about a small amount. I don't accept the suggestion that there was no substantial loss. I mean, I cannot believe that someone would pay \$4.1 million unless he was getting something substantial in return' (*USA v. Marino* 2000a: 17).

¹⁰ In the interviewee's own words: 'The only other case that comes to mind as comparable in relation to its direct monetary impact is the CityTime case, which we also investigated and brought to a successful conclusion with the U.S. Attorney's Office for the Southern District of New York' (Gill Hearn 2014).

II. MUNICIPAL PROPERTY TAX ASSESSMENT

Property taxation has been the major source of tax revenue for US municipalities since the seventeenth century (Netzer 1966: 3). It is also an important source of local government revenue in Britain, Ireland, South Africa, Australia, and New Zealand (11). But our focus is on the United States, where state and local governments collected an estimated \$488 billion in property taxes in 2013 (US Census Bureau 2013). This considerable amount represents more than a third of all state and local government revenue for that year (Entrikin 2014: 289).

In New York City, property taxes account for approximately \$18.4 billion of its budget, or about 40 percent of all the city tax revenue collected in fiscal year 2013 (Office of Management and Budget 2014). It is the city’s single largest and most stable source of funding. The property tax is, moreover, a source of revenue that has been growing since fiscal year 2002, a fact that we highlight in Figure 7.1, where the x-axis stands for fiscal year and the y-axis represents the adopted tax revenue budget in million US dollars. The light grey ribbon shows the property tax revenue from 2002 to 2014; the dark grey ribbon shows all other tax revenue. Together, they constitute the total tax revenue for New York City.

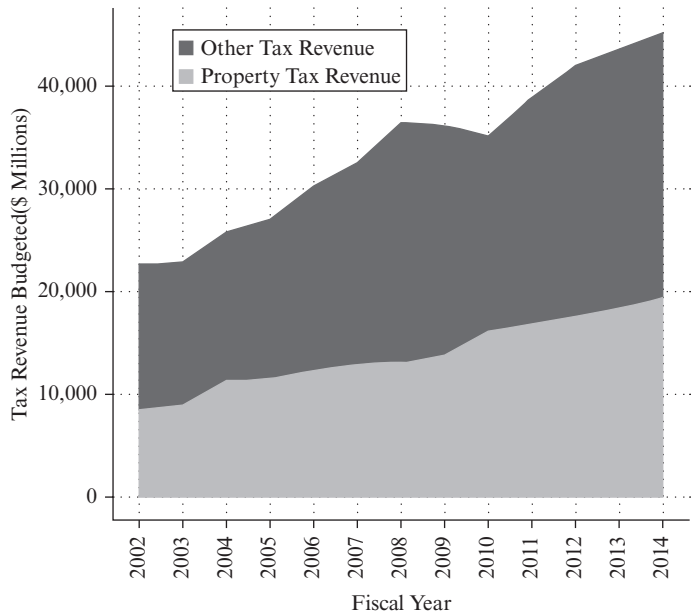
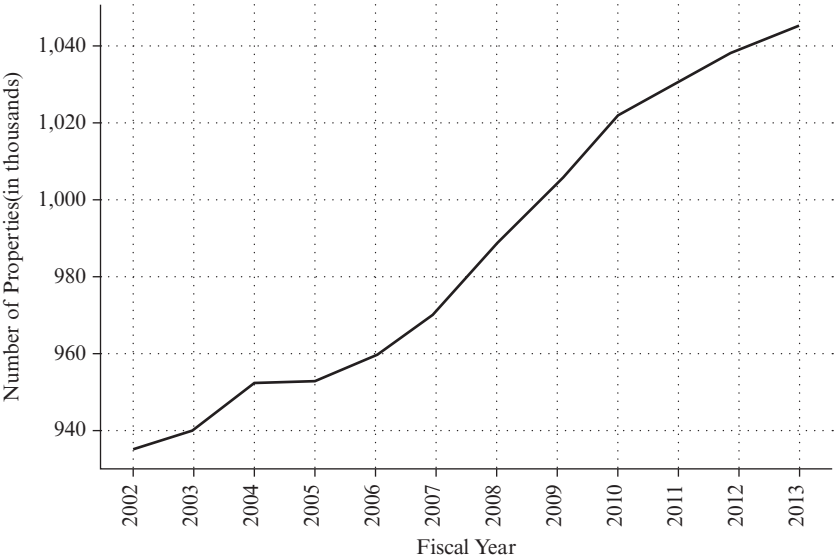


Figure 7.1 The importance of property tax revenue for New York City



Note: The graph includes partially taxable and fully taxable properties. It excludes fully exempt properties.

Figure 7.2 Number of taxable properties in NYC

The Department of Finance (DOF) is responsible for collecting property taxes in New York City. As noted in the introduction, the task is one of monumental proportions. In fact, as Figure 7.2 reveals, the number of properties in New York City has been growing rapidly since fiscal year 2002, and now exceeds one million (NYC Finance 2013).

DOF has an office known as Real Property Assessments. This is the specific unit that assesses¹¹ the value of properties in the city, issues Notices of Assessment to taxpayers, and collects property taxes from taxpayers (NYC Finance 2014). The Real Property Assessments Unit employs approximately 119 assessors and has offices in each of New York City’s five boroughs. Of the five boroughs, as Figure 7.3 shows, Manhattan accounts for the largest taxable value.

¹¹ The term ‘assessment’ refers to the, ‘whole statutory mode of imposing the [property tax]. It embraces all the proceedings for raising money by the exercise of the power of taxation from the inception to the conclusion of the proceedings’ (*Jackson Lumber Co. v. McCrimmon* in *Entrikin* 2014: 5).

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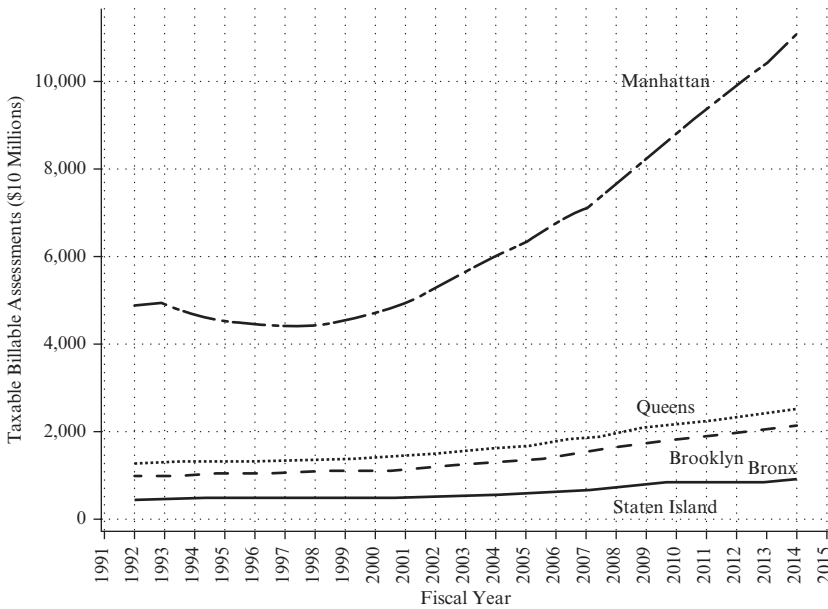


Figure 7.3 Property taxable billable assessments by Borough

Moreover, the borough's taxable value has been growing rapidly since fiscal year 2002.

Another aspect of the New York City property tax system that merits attention is its subdivision by property types. Before 1981, New York City's properties were divided into ten non-housing tax classes (Netzer et al. 1980: I–20). It was a complex system with even greater room for bureaucratic discretion. In particular, the rates of tax for each class were determined by assessors in combination with the Tax Commission and the courts (I–2). Then, in 1981, the New York State legislature enacted S7000A. This statute created a system with four classes of property, each class being taxed on a different share of its market value. Following is a description of each tax class:

- Class 1 encompasses one- to three-unit residential properties.
- Class 2 refers to residential properties with more than 3 units, including cooperatives and condominiums.
- Class 3 is meant for utility company equipment and special franchise properties.
- Class 4 captures all other properties, including office buildings and hotels.

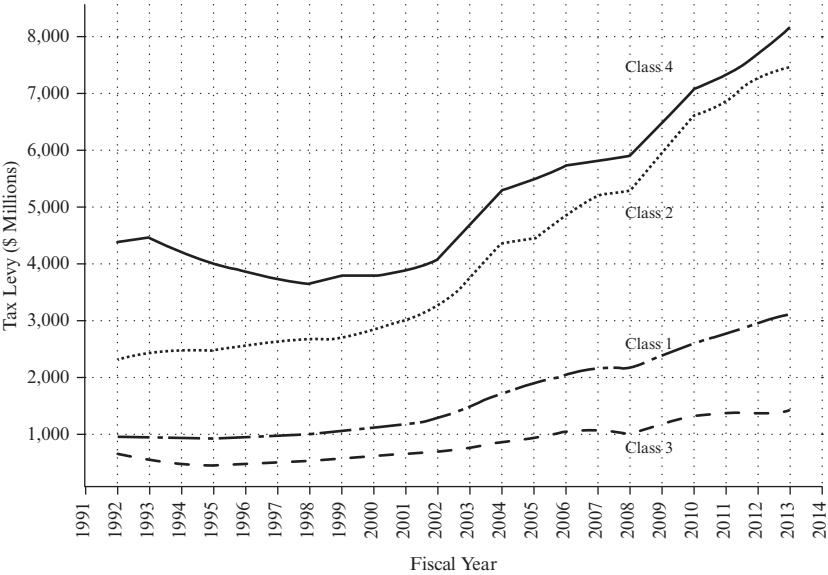


Figure 7.4 Tax levy by tax class

Figure 7.4 compares the tax levy for the four tax classes. The data reveal that, across all of New York City, tax class 4 has the largest share of tax collections among the tax classes.

All properties—regardless of the tax class or borough they belong to—are assessed on a yearly basis. The assessment process follows a set timeline. On 5 January, DOF determines the taxable status of each parcel of real property in New York City. Ten days later, on 15 January, DOF makes public the tentative assessed values for every parcel of real property. It does so by mailing a Notice of Assessment to every property owner, but also by publishing the Tentative Tax Roll. The Tentative Tax Roll is open for public inspection from 16 January to 16 March of each year. Property owners who disagree with DOF’s assessment may file an appeal with the Tax Commission. After the Tentative Tax Roll is closed to public inspection and after DOF and the Tax Commission have made their corrections, the annual roll is made final on 25 May. Then, on 1 July, a new fiscal year begins.

Thus far we have described property taxation as it is supposed to work. However, Diane B. Paul, a scholar who has written about property taxation in the U.S. describes the activity as one of ‘the most corrupt of urban functions’ (Paul 1975: 7). The author of *The Politics of the Property Tax* further explains that:

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[T]he actual work of valuing property is done by 'street level bureaucrats' over whom there is generally little effective supervision. The decisions made by urban assessors are sometimes of great importance to taxpayers, particularly owners of apartment buildings and commercial and industrial property, and it is precisely for these kinds of property that well-defined standards of assessment are lacking. Assessing, like police work, is both discretionary and subjective, combining constant temptation with minimal likelihood of exposure . . . (8).

This last problem—specifically, imperfect monitoring in taxation—is analyzed by Das-Gupta and Mookherjee (1998) and by Flatters and Macleod (1995). Moreover, it is a problem that local news coverage has recently exposed in Los Angeles (Dolan 2013), Cayahoga County (Caniglia 2013), and Cook County (Meisner 2013).

In summary, property tax assessment is a vital but imperfectly monitored government activity that relies on bureaucratic discretion. This is true even for agencies that have come to rely on new technology, such as computer modeling. Data analytics allows government auditors to identify individuals or firms who are paying less in taxes compared to others showing similar characteristics. During David Frankel's tenure as commissioner, DOF created the Data Intelligence Group in order to improve the efficiency of its auditing activities (Goldsmith 2014). In spite of these efforts, however, the property tax system continues to rely on assessors to conduct field inspections and interpret property tax laws. Herein lies the risk.

III. THE 2002 PROPERTY TAX SCANDAL

Large and small property owners may seek relief from property taxes by hiring consultants. Tax consultants are middlemen whose compensation often comes in the form of a fraction (typically, 30 to 50 percent) of the tax savings obtained for a property owner (Entrikin 2014: 300). Many property tax consultants follow ethical and professional standards, but there are also those who rely on questionable methods to influence tax officials. This explains why tax consultants are sometimes painted in a negative light as bureaucratic lobbyists. As stated by a New York City real estate executive, 'We pay lobbyists. That's the system we live in. Sometimes you get one that's crooked' (Rashbaum and Bagli 2002).

Enter Albert Schussler. After 30 years of working as a tax assessor for the City of New York, Schussler left government in 1967 to begin a career as a private sector consultant (Bagli and Rashbaum 2002b; Entrikin 2014: 318). Schussler aimed to capitalize on his knowledge about and contacts within the real estate industry. For the next 35 years, he charged

property owners substantial fees¹² in exchange for contriving to reduce their property taxes.¹³

In 2002, authorities accused Schussler of masterminding a massive corruption scheme (US District Court 2002). According to the indictment, Schussler had paid a total of \$10 million in bribes so that tax assessors would undervalue some 562 properties (*ibid.*).¹⁴ The bribes ranged from expensive dinners to thousands of dollars in cash payments. In exchange, assessors—whose official salaries ranged from \$46,000 to \$68,000 a year¹⁵—agreed to show Schussler their valuations before assessments were made public (Newman 2002: 73). Schussler would then provide a counter-assessment. In some cases, assessments dropped. In other cases, they stayed the same as the previous year or did not increase as much as they should have under normal circumstances (*ibid.*).¹⁶

When the scandal hit, the President of the Real Estate Board of New York responded by focusing the blame on the indicted tax assessors, and by defending the reputation of the city's real estate industry (Committee on Real Property Taxation 2002: 106).¹⁷ This is an industry with significant political influence in the city (Bagli 2014; Craig, Raushbaum and Kaplan 2014), and yet the interests of its members are not always aligned. As a case in point, the corruption scheme described here hurt many more landlords than it helped. This explains why nearly 1,000

¹² According to one report, Albert Schussler charged his customers a flat retainer of \$200,000 to \$400,000 (Bagli and Rashbaum 2002b).

¹³ Schussler's influence grew to the point that he became an active figure in the Real Estate Board of New York. He also purchased and managed properties, including the iconic Ansonia Hotel (US District Court 2002 4; Bagli 2003a).

¹⁴ The exact number of undervalued properties is unclear. One report, for example, has the number at 545 (Bagli 2002b).

¹⁵ During the State Assembly hearings the union representative for tax assessors suggested that, 'Assessors should be better compensated and receive financial incentives for obtaining professional designations and higher education' (Committee on Real Property Taxation 2002: 73).

¹⁶ In alphabetical order and according to news reports, a few of the real estate firms whose property taxes were lowered as a result of Schussler's intervention were: Cohen Brothers Realty, Glenwood Management, Helmsley Spear, Jack Resnick and Sons, Lefferts-Fore and SL Green Realty (Danis 2002; Bagli 2002a; Bagli and Rashbaum 2002a; Bagli 2002c).

¹⁷ 'As an industry', the President of the Real Estate Board asserted, 'we have a proud history of [. . .] contributing our time, energy, and money to causes, cultural, social, educational, enhancing the quality of life and the image of our City around the world, despite the baseless accusations of reckless editorials who have commented on this episode' (Committee on Real Property Taxation 2002: 106).

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property owners sued the city on the basis that they had been forced to pay higher taxes to make up for the losses caused by tax assessor corruption (Bagli 2002e; Bagli 2003b).

In spite of the mounting pressure due to the lawsuits and media coverage, not a single property owner was criminally charged. Reflecting on this outcome, one of the prosecutors expressed the following statement:

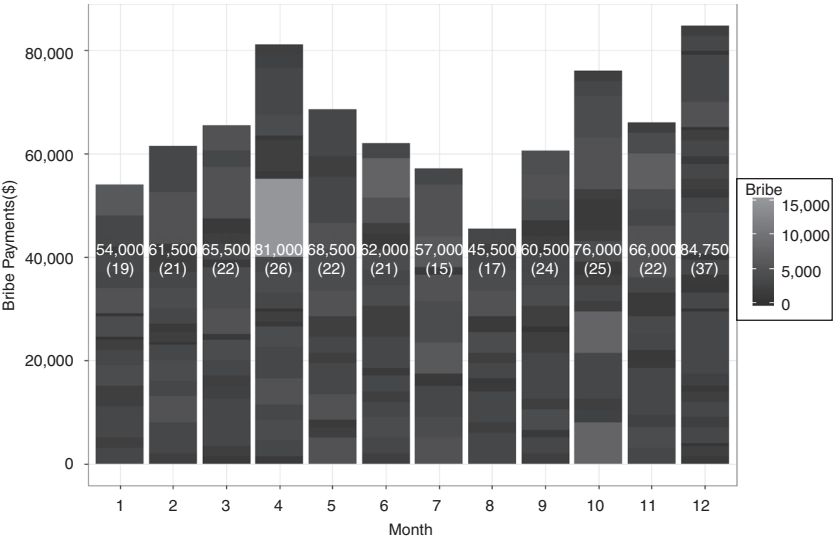
[Y]ou'd love to follow the rainbow to its very end, and get every single person along the way who has been committing crimes, but, unfortunately, it's not possible. You need evidence, and in a case like this the best way to get evidence is from people who dealt directly with the property owners. The person who dealt directly with the property owners is Albert Schussler, and he passed away, and, so [we lost the] ability to go after anyone else. And, you know, [. . .] there was no clear evidence that any of the property owners knew that Albert Schussler was paying bribes. So, none of the Tax Assessors, at least none of the witnesses that we worked with, had ever met directly with the property owners (McCarthy 2014).

In other words, by relying on a tax consultant property owners managed to advance their financial interests, while maintaining a safe distance from the actual assessment process.

Now, in order to better comprehend the tax scheme itself it is worth reviewing what we know about a tax assessor who served as Schussler's closest collaborator, Joseph Marino. A reporter describes Marino as a 'real tough guy . . . [often] smoking Camel cigarettes, and when he did come in the office he'd snap his fingers, and there was this other guy who didn't go out into the field anymore because he'd gotten beat up once, he'd bring him over his cup of espresso' (Bagli 2014). Standing before a judge, Marino admitted that he received as much as \$4.1 million in bribes from Schussler between 1991 and 1997 (*USA v. Marino* 2000: 13). These bribe payments flowed as checks from Schussler's firm to that of one of Marino's relatives. The latter then declared the payments as taxable income (ibid.).

In terms of the number of officials implicated, around 40 percent of the city's 38 Manhattan assessors were directly involved in the corruption scheme (Bagli and Rashbaum 2002b). Two more officials, Roberta C. Hand and Aldo Macina, were arrested a year later (Friedman 2003; Saulny 2003).

There is much we can also learn from studying the information contained in the original indictment (see: U.S. District Court 2002). Our review of the bribes paid to tax assessors in Manhattan between 1997 and 2002 shows that corruption was a particular risk in the months of



Note: The first number represents the total amount of bribes paid; the second number in parenthesis represents the number of bribe payments.

Figure 7.5 Bribe payments by month

December and April—that is, before the tentative and final tax rolls were published. Figure 7.5 illustrates our finding. The x-axis represents months in a year (1=January, 2=February, and so on) and the y-axis captures bribe data in US dollars. The height of a bar signals the total amount of bribes paid on a given month over the course of five years. Each colored block in a bar is a bribe payment. The block’s tone and size signals the bribe’s magnitude.

The corruption scheme’s proportions are evident when examining the geographical area affected, the number of tax assessors involved, and the amount of bribes paid and tax revenue lost. Reports show that the scheme extended from Lower Manhattan through the Upper East Side to Harlem. It also covered the area between West 41st Street and West 96th Street, west of Eighth Avenue/Central Park West (Bagli 2002a; Bagli and Rashbaum 2002a). The following map pinpoints a partial sample (N=198) of these properties.

Finally, we turn to the question of bribes and revenue. Figure 7.7 summarizes key information about the known illicit payments made to 16 of the assessors implicated in the corruption scheme. The x-axis represents bribe amount in US dollars, and the y-axis lists the name of assessors. The

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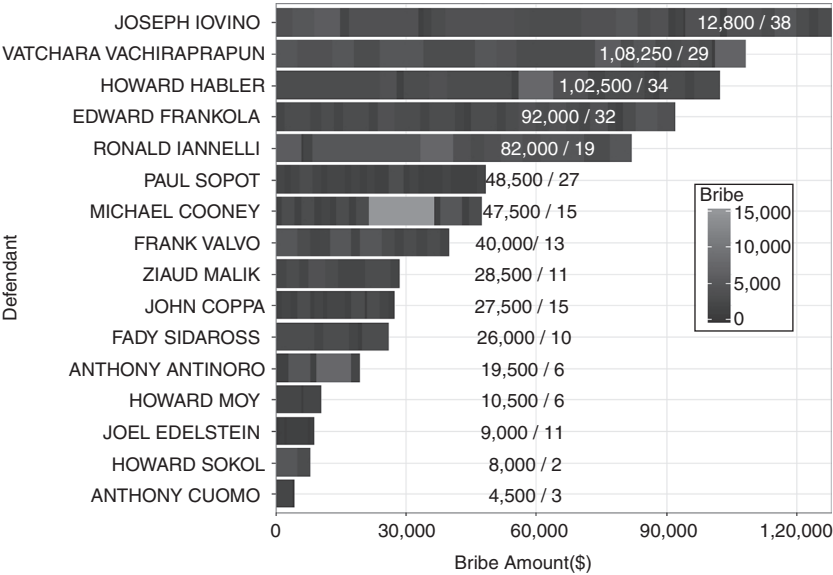
Note: * The map includes 198 properties with their values assessed Fiscal Year 2009.

Figure 7.6 Map: properties involved in the 2002 scandal

most corrupt assessor is shown at the top, and the least corrupt is shown at the bottom. The size of a bar signals the total amount of bribes received between 1997 and 2002. Each shaded block in a bar is one bribe payment. The block’s tone and size signals the bribe’s magnitude. The numbers shown with each bar are: (1) the average amount of bribes, and (2) the number of bribes recorded for each assessor. The top three assessors in terms of total amount of bribes received are Joseph Iovino, Vatchara Vachirapapun, and Howard Habler. Figure 7.8 suggests a correlation between hierarchy and corrupt returns: the higher the position, the greater the bribes.

On the question of revenue, it is difficult to calculate exactly how much was lost because of corruption. That said, prosecutors estimated that the

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Note: The first number represents the total amount of bribes paid; the second number represents the number of bribe payments.

Figure 7.7 Bribe payments by defendant

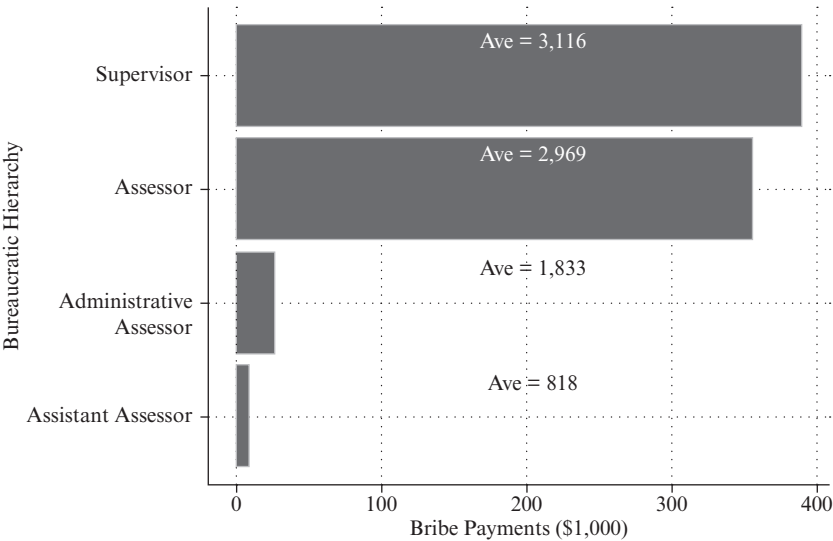


Figure 7.8 Bribe by position in the bureaucracy's hierarchy

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scheme cost the city \$40 million a year in tax income, or \$160 million between 1997 and 2002 (Bagli 2002d). Considering that the scheme went on for approximately 35 years, the city may have lost up to one billion dollars (Committee on Real Property Taxation 2002: 57–8).

As the engineer of the corruption scheme, Schussler risked spending 25 years in prison (Miller 2003). However, shortly before his trial, in early 2003, the tax-assessor-turned-consultant suffered a lethal stroke at the age of 85 (Bagli 2003a). ‘So we had given [Schussler] a deadline’, the interviewed prosecutor explained, ‘in which to tell us whether he was going to proceed to trial, or enter a guilty plea. And he died that day, the day that we were expecting his answer. [. . .] I was shocked when he died, of course. I was shocked. He seemed to be in fine health. I didn’t have any concerns about his health; his lawyers didn’t raise any health concerns. But I imagine he was under quite a bit of stress’ (McCarthy 2014).¹⁸ Needless to say, Schussler’s passing was an important setback for the prosecution—one that perhaps could have been avoided had the corruption scheme been detected sooner. On the subject of timing, Mayor Bloomberg complained that fraud in property taxation had ‘gone on through six mayors, innumerable commissioners of finance’ (Danis 2002).

There had been earlier signs. A former president of the city’s Tax Commission, David Goldstein, claimed to have written an urgent letter in 1993 to DOI alerting it to possible corruption in the tax assessor’s office. The letter apparently made explicit references to Albert Schussler and one of his associates, Thomas McArdle (Bagli 2002f). Aware of these suspicions, DOI launched a focused investigation into the question of corruption in property tax assessment around 1997. As part of its investigation, DOI twice inserted undercover agents into the Manhattan

¹⁸ Bagli (2014) tells the following story to suggest that Schussler’s death was surprising:

At one point, while I’m writing this story, I’m waiting outside [the courthouse] and [Schussler] comes out and his lawyer, whom I’d gotten to know, comes over to me and says, ‘Would you like to meet Mr. Schussler?’ And I was kind of surprised . . . So he came over, and we shook hands, and he congratulated me on my reporting. Kind of weird. So, ultimately, at a certain point I knew that he was going [to court] in January, I forget whether it was . . . it must have been January of 2003, he was supposed to go in to talk to the US prosecutor, and he was going to Florida for the holidays. Upon his return he was scheduled for a meeting. The night before the meeting he died. This shook the hell out of his lawyer, as well as everybody else. You began to hear and think of those stories of Russian spies and getting stabbed underneath a bridge in London with an umbrella. . . . Well, I know that when I talked to his lawyer the next day, he was really shaken [sic]. And it sort of took the wind out of the sails because the hope or the expectation was that he was going to name names.

property valuations unit (Rashbaum and Bagli 2002). However, DOI's search faced three significant obstacles:

- The city's tax assessors worked as a tightly knit group, which some described as 'clannish' and akin to 'an organized crime family' (ibid.).
- The assessment process was fraught with complexities that helped hide the corruption.¹⁹
- One of DOI's undercover agents, Nancy Sidaross, leaked confidential information about the investigation to the assessors (Seifman 2002).

In spite of these significant hurdles, a news article claims that DOI had a lucky break while conducting an interview about corruption allegations involving Brooklyn assessors. The interviewee misunderstood his questioners and began disclosing information about corruption in the Real Property Assessment's Manhattan office (Rashbaum and Bagli 2002). This helped authorities close in on Joseph Marino.

When Marino pleaded guilty in September of 2000, Albert Schussler dropped out of the corruption scheme. In July of 2001, however, Alan Edelstein, age 52, took Schussler's place in a revived version of the operation (2002f). Evidently, Edelstein did not realize that the investigation was ongoing. In fact, by this point, investigators had the cooperation of Marino and two other individuals—specifically, Thomas and Stephen McCardle—who also participated in the corruption scheme (Bagli 2002f). Stephen McCardle, in particular, was crucial, because, in cooperating with the investigation, later recorded tax assessors' descriptions of their involvement in the tax scheme (McCarthy 2014).

In the end, the accumulated evidence enabled authorities to prosecute a total of 20 individuals. It also made it possible for authorities to seize \$17,597,842 of Schussler's ill-gotten assets (Gearty 2004; Gill Hearn 2004). This offered a degree of closure to a major case of urban fraud. Some might even see these actions by the authorities as inhibiting a similar corruption scheme from arising in the future. However, the fact that not everyone who benefited from Schussler's shady operations was disciplined might have generated a moral hazard problem. Property tax assessment

¹⁹ In the words of a law enforcement official, 'It's one thing to have the allegations. But the target can always come back and say, "This is why we ranked this building at a lower assessment than the guy next door"' (Rashbaum and Bagli 2002).

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remains a complicated process with significant financial implications in the hands of modestly paid bureaucrats. Gotham, thus, needs DOI's unceasing vigilance.

IV. CONCLUSION AND RESEARCH AGENDA

In this chapter we examined a corruption scandal in New York City's recent history. The case involved a fraudulent scheme in property tax assessment that lasted over three decades and may have cost the city as much as one billion dollars in revenue. Approximately 40 percent of the city's Manhattan assessors were directly implicated. Even global news agencies—from *The New York Times* to *The Guardian*—reported on the story, and yet only a short period after the criminal case ended few people seem to remember the event.

Even fewer realize that a similar scheme had been uncovered in California a few decades before (Phelan 1966). Albert Schussler's counterpart in that earlier scheme was James C. Tooke. Like Schussler, Tooke was a former tax assessor turned consultant who knew how to grease the wheels of bureaucracy. Another parallel between the cases is that not a single individual or firm that hired Tooke was charged with wrongdoing or complicity. Thus, there appears to exist a pattern, and scholars writing on administrative corruption summarize that pattern with the following: 'Delinquent taxpayers are practically never prosecuted' (Flatters and Macleod 1995: 398).

However, beyond the question of prosecution, as researchers, what we are most interested in is corruption prevention. It is, thus, worth reviewing some of the reforms that DOF implemented after the 2002 scandal. These reforms included:

- Reducing the amount of contact between assessors and property owners.
- Engaging in random assessment reviews, and restructuring the Internal Audit and Department Advocate's Units.
- Requiring that assessors file financial disclosure forms.
- Implementing new technology to enhance the assessment process (NYC Finance 2004).

In spite of these innovations, however, there have been new, if sporadic, reports of property tax evasion (Bagli 2012; Gonzalez 2014). Corruption hazards continue to exist in the city's tax system; however, DOI has reaffirmed its commitment to effective monitoring. As a sign of this

commitment, the agency opened itself up to a collaborative research project that tests ways to curb corruption in property taxation.

As was noted earlier, according to an independent assessment, DOI has reduced serious cases of corruption by almost two-thirds in recent years (Anechiarico and Smith 2008: 76). This finding, nonetheless, is based on observational data and is, therefore, vulnerable to certain forms of measurement bias. Indeed, given the nature of the data, we are unable to distinguish whether the reduction in cases of corruption is explained by DOI's enhanced efforts or some other factor, such as inhibited corruption reporting or heightened sophistication among those who partake in corruption. But even if we grant that DOI has raised the level of government integrity in New York City, the existing data does not help us evaluate the effectiveness across DOI's different anti-corruption strategies. Therefore, we conducted a randomized control trial (or RCT) in order to answer two questions. First, does monitoring by DOI help ensure that property assessments are conducted with greater integrity and efficiency? Second, which is more effective in ensuring that property assessments are performed in an honest and efficient manner: proactive or reactive audits?

RCTs are a powerful tool for advancing scientific knowledge, especially when applied to real-world situations. As case in point, Lawrence Sherman and coauthors (1995) conducted an RCT on deterrence in criminal justice. Similarly, in 2009, criminologists from Temple University collaborated with the city of Philadelphia in order to conduct an RCT that tested the effectiveness of foot patrols in fighting crime. Their finding that patrolling city blocks by foot reduces violent crime by 23 percent overturned conventional views about policing (Ratcliffe et al. 2011).

In the realm of corruption studies, RCTs are also increasingly popular (Peisakhin 2011). For instance, in Indonesia, Ben Olken (2007) tested whether grassroots versus centralized monitoring is more effective in reducing corruption. In another study, Ferraz and Finan (2011) analyzed data from local corruption audits in Brazil. Their results show that corruption is less common among mayors seeking re-election. Following a similar approach, Lagunes conducted an RCT in Querétaro, one of Mexico's most populous cities. In this study a random sample of construction permit applications were entered into a treatment group. Plan Examiners (that is, the low-level officials responsible for reviewing building permit applications) and the Permits Office Director were made aware that an independent anti-corruption auditor was reviewing all the physical documentation (for example, title deeds, blue prints, and tax receipts) for applications within this group. Simultaneously, these same officials were unaware that the auditor was reviewing another set of randomly selected applications via the government's computer network. With implications

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for law enforcement, the study's results reveal that monitoring spurs greater diligence and stringency among bureaucrats, but *only* when they sense the risk of a top-down sanction.

In this new and independently funded RCT the main hypothesis is that the threat of an audit will stimulate local tax assessors to perform their duty in a more efficient and honest manner. An additional hypothesis is that, compared to the threat of post-hoc or reactive audits, proactive monitoring by DOI will have a stronger and positive effect on government officials' behavior. This chapter, however, is not about that RCT, which—as of this writing—is in the analysis stage. Instead, this chapter is about an extraordinary case of municipal fraud that begs practitioners and academics alike to persevere in their effort to prevent corruption.

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AUGUST 14, 2013

APB VALUATION ADVISORY 5: IDENTIFYING COMPARABLE PROPERTIES IN AUTOMATED VALUATION MODELS FOR MASS APPRAISAL





THE APPRAISAL FOUNDATION
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APPRAISAL PRACTICES BOARD

APB Valuation Advisory #5

Identifying Comparable Properties In Automated Valuation Models for Mass Appraisal

This communication is for the purpose of issuing guidance on recognized valuation methods and techniques. Compliance with such guidance is voluntary, unless mandated through applicable law, regulation, or policy.

Date Issued: August 14, 2013

Application: Automated Valuation Models in Mass Appraisal

Issue: As part of its ongoing responsibilities, the APB is tasked with identifying where appraisers and appraisal users believe additional guidance is required. One such issue identified by the APB is identifying comparable properties. Comparability analysis is a fundamental study in determining property value. This analysis involves a side-by-side examination of physical and transaction characteristics of the identified comparable properties relative to the subject. The reliability of this valuation technique relies heavily on the proper selection of suitable comparable properties.

The APB discovered in developing guidance on Identifying Comparable Properties that separate guidance on *Identifying Comparable Properties in Automated Valuation Models for Mass Appraisal* was required.

This guidance discusses the terms and definitions associated with a comparable property, the characteristics generally considered for determining comparability; and the degree of suitability of a property as a comparable when using automated valuation and mass appraisal models.

Additionally, a general overview of mass appraisal's automated collateral comparable selection process is included.

The proposed guidance addresses the sales comparison method - direct market models using sales transactions. Model specification and model calibration are discussed. The guidance

APB Valuation Advisory #5 - *Identifying Comparable Properties In
Automated Valuation Models for Mass Appraisal*

1

provides sample model structures using the direct market method. Comparable sales selection is discussed in detail.

Lastly, the guidance examines appraisal uniformity based on the equity comparison method.

Subject Matter Experts: The Appraisal Practices Board and The Appraisal Foundation wish to express our sincere gratitude to each of the following Subject Matter Experts for volunteering their time and expertise in contributing to this document:

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Identifying Comparable Properties for Automated Valuations in Mass Appraisal Models

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NOTE: This Valuation Advisory includes examples that utilize proprietary software applications. Neither the Appraisal Practices Board nor The Appraisal Foundation endorses or recommends utilization of the particular software applications referenced in this document. They have been included to assist in the illustration of the applicability of such applications.

I. Introduction

1 The terms Mass Appraisal Models¹ and Automated Valuation Models (AVM)² involve the use of
2 comparable properties in their market analysis methods. The term AVM is used in this guideline
3 to represent both mass appraisal and automated valuation models keeping the focus on data
4 requirements used in the development of valuation models. “The development of an AVM is an
5 exercise in the application of appraisal principles and techniques, in which data are analyzed
6 from a sample of properties to develop a value prediction model that can be applied to a similar
7 population of properties that represent subject properties. These may be either individual
8 properties of interest or all properties that meet the requirements of the model.”³

9 The Sales Comparison Approach is applied using the AVM via several methods, the two
10 discussed in this guideline are: 1) direct market models; and 2) comparable sales models. A third
11 method used and of interest to appraisers doing ad valorem work is the equity comparable
12 method. The direct market models and the comparable sales models begin with the validation of
13 all transaction data to be used in developing the model. These sales include transactions deemed
14 as arms-length, as they are the most credible. When specific market segments are influenced by
15 “distress” sales (e.g., short sales and foreclosures) these transactions may be used in the model
16 training set. A model training set in this guideline consists of data used to discover predictive
17 relationship in the market place.

18 Income approach models require analyzing leases (rents and occupancy), expense ratios, and
19 capitalization rates in completing the model specification phase. Validation of the comparable
20 includes verification of the property characteristics for each transaction at the time of its
21 consummation. Readers of this document may also want to review the “sister” document,
22 *Identifying Comparable Properties*, as there is some overlap of definitions and concepts.

23 Users and readers of this guidance are encouraged to keep the methods and techniques described
24 in context with their specific scope of work, see STANDARD 6, USPAP⁴. An AVM developed
25 for use in collateral, or portfolio valuation will have a different scope of work than an AVM
26 developed for ad valorem use. Awareness of administrative rules, case law, statutory
27 requirements and client request are required.

II. Sales Comparison Method Direct Market Models using Sales Transactions

28 Primary for developing a direct market model are model specification⁵ and model calibration⁶.
29 Model specification involves indentifying all property characteristics to use in the model. These
30 characteristics include features that represent location, physical, economic, and legal interest.

¹ IAAO. 1997. Glossary for property appraisal and assessment. Chicago: IAAO.

² Ibid

³ IAAO, 2003 Standard on Automated Valuation Models (AVMs) page 5, Chicago

⁴ *UNIFORM STANDARDS OF PROFESSIONAL APPRAISAL PRACTICE* (USPAP) 2012-13 Edition page U49

⁵ IAAO, 1997. Glossary for property appraisal and assessment. Chicago, IAAO.

⁶ Ibid

31 Accurate property characteristics are important in model development as each sale is processed
32 during calibration via a comparative analysis that relies on measuring price changes as the
33 property characteristics change. The sales used for calibration of direct market models also are
34 used in the comparable sales method, as the adjusted comparables.

35 Accurate property characteristics and sales validation provide the cornerstone for achieving
36 credible results in the development of an AVM. The purpose of automated valuation models is
37 to estimate a value for many properties by using an iterative process of data and analysis. The
38 influence of market areas and neighborhoods are captured using proximity variables, be it the
39 street level, neighborhood, or market area. Market influences from another city, state, or
40 country, are addressed when specifying the model. When properly specified and calibrated,
41 these variables will identify and account for the influence of physical location on value.

42 When an AVM is specified using only sales in a specific neighborhood, the model is only
43 applicable to properties within the specific boundaries. If a subject property were located in a
44 neighborhood different from where the comparables are located, the credibility of the AVM
45 suffers due to the fact the AVM may not identify or measure any of the economic influences
46 specific to the subject. The concept of using locational similarities is helpful in identifying all
47 local effects in the marketplace that have influence on a given subject's property value. To draw
48 a distinction, not all neighborhoods or market areas will provide a sufficient sample of
49 transactions for each and every subject property. When the pool of market transactions is
50 insufficient, identification and selection of comparable requires the use of additional physical
51 property characteristics. When market transactions are insufficient in number to provide credible
52 results, selecting transactions from a location outside of the subject's neighborhood, or market
53 area is often required.

The table below provides a focus regarding example proximities that influence the value direction. These proximities variables when specified in the AVM are useful in selecting properties with similar market influences. Adjusting values when the influence is not present or not entirely similar may be required. Markets are dynamic thus any positive can become negative and vice-versa, Table 1 provides an illustration.

TABLE 1: Examples of Location and Proximity Characteristics with a Value Influence

Sample Proximity Categories										
	Schools	Employment Centers	Shopping	Public Trans	Water Front	Golf Courses	Public Parks	Airports	Rail	Highway
Property Class										
Residential	+	+	+	+	+	+	+	-	-	-
Income Producing				+	+		+	+/-	+/-	+/-
Industrial				+	+			+	+	+

54 The previous discussion on the development of the AVM focused on specifying the model
55 specifically for variations due to a subject property's proximity or location. Model specification
56 includes the use of physical characteristics as well. The AVM must be capable of valuing a
57 subject that is different in size, age, condition, style, exterior wall type, quality, and utility as

examples. When the AVM is to value vacant land, features such as lot size, frontage, depth, view, topography, ingress, egress, lot shape, lot location, (e.g., corner lot, interior lot) land use, zoning, etc. are characteristics to be considered. Each property characteristic specified in the AVM is calibrated using the known transaction prices as the dependent variable upon which all market adjustments are based for each of the specified property characteristics.

Property characteristics used in an AVM measure the economic influences, and how each contributes to the value of a subject property. User confidence in the credibility of AVM values will suffer when an important property attribute is either missing, incorrectly specified or calibrated during the modeling process. When working with property data it is important for appraisers to learn about data exploration techniques, to avoid problems with missing data, and models that have been mis-specified, resulting in irrational and unexplainable calibration of a variable. The number of subject properties to which the AVM is applicable is the “hit rate.”⁷ If a subject is outside of acceptable parameter ranges for location or property characteristics, the AVM will not possess sufficient comparability to value the subject property with a high degree of accuracy or credibility.

III. Sample Model Structures - Direct Market Method

Direct market models are expressed in one of three math structures: additive, multiplicative, or hybrid. The skill and experience level of the analyst and software availability are also factors involved with choice of the model structure. The additive model is the most common.

Additive models have the form:

$$MV = B_0 + (B_1 X_1) + (B_2 X_2) + (B_{xx} X_{xx}) \dots$$

- MV is the dependent variable (Sale Price, or Sale Price per Unit);
- B_0 - is a constant dollar amount;
- X_i - represents the independent variables (property characteristics) in the model: X_i represents X_1, X_2 etc. from above model notation, and
- B_i are corresponding adjustment rates or “coefficients” applied to X_i , B_i represents B_1, B_2 etc. from the above model notation

In the model above **MV** also known as the dependent variable and is either “sale price” or “sale price per unit.” When modeling **income** the dependent variable is “income” or “income per unit.”

In a *multiplicative* model, the contribution of the variables are multiplied rather than added:

$$MV = R_0 * (X_1^{B_1}) * (X_2^{B_2}) * (X_{xx}^{B_{xx}}) \dots$$

⁷ IAAO, 2003 Standard on Automated Valuation Models (AVMs) page 28, Chicago

Multiplicative models consist of a base rate (R_0) and percentage adjustments. Base rates are expressed as dollars, or a percentage (e.g., vacancy rate, expense ratios, GIMs, OARs). The multiplicative model advantages include the ability to capture curvilinear and interactive relationships and to make adjustments proportionate to the value of the property appraised. Multiplicative models can be calibrated using linear regression software; doing so will require the variables to be converted to a logarithmic format for calibration. Non-linear regression can be used also and does not require the logarithmic transformation.

Hybrid models are a combination of additive and multiplicative models. Hybrid models allow specifications that separate value into buildings, land, and “other” components (e.g., outbuildings). The model format is:

$$MV = \pi GQ \times [(\pi BQ \times \Sigma BA) + (\pi LQ \times \Sigma LA) + \Sigma OA]$$

- MV is the estimated market value;
- πGQ is the product of general qualitative terms (e.g., location influences market conditions);
- πBQ is the product of building qualitative terms: (e.g., quality, condition, wall types, and styles);
- ΣBA is the sum of building additive terms; (e.g., total living area, total rooms, baths, FP’s);
- πLQ is the product of land qualitative terms: (e.g., view, traffic, topography, egress);
- ΣLA is the sum of land additive terms: (e.g., lot frontage, lot area); and
- ΣOA is the sum of other additive terms: (e.g., pools, out buildings, accessory structures).

A full discussion on the topic of model structures is available in the IAAO Standard on AVMs.⁸ Calibration of the models, developing coefficients, or rates of adjustment may be completed using applications like linear multiple regression analysis (MRA) and non-linear MRA.

Automated valuation models require data representative of the full range of transaction prices and associated property characteristics in a defined area. The sold properties used for market comparison, and unsold subjects to be valued must represent comparable segments of the market population. The AVM relies on market data from standardized property coding methods. Collectively all the validated sold properties represent the potential comparables for any known subject.

Model performance and validation is also an important step to having a direct model that will produce credible results. The IAAO Standard on Automated Valuation Models (AVMs) may be referenced for completing this step.⁹

⁸ Ibid pages 10-12

⁹ Ibid page 24

IV. Sales Comparison Method – Comparable Sales Selection

As with single property appraisal, Automated Valuation Models (AVMs) rely on arms-length sales primarily to adjust a model to local real estate trends. In market areas where properties have a high degree of homogeneity, the AVM will produce value estimates with a high degree of precision. Areas where the market is heterogeneous the error term of the AVM is usually higher and not as precise. The sales comparison model is a familiar format to appraisers and expressed as follows:

$MV = SP_c + ADJ_c$, where:

- MV = Market Value;
- SP_c = Sale Price of the comparable; and
- ADJ_c = adjustment to the comparable $\pm$.

As the integrity of the data used to calibrate an AVM decreases, the precision and accuracy of the value estimate is often deemed less credible. Using automation to select comparable properties that will produce credible and reliable value estimates is the challenge of the AVM. USPAP compliance is attainable using automated selection methods (see the discussion on data verification). The following will provide the steps leading to selecting the most comparable properties for a single subject.

Step (1) is **selecting the best comparables**. Numerous techniques are used in practice with the “exception, or sorting techniques” being most popular. The most efficient and objective technique is the use of a distance metric that assigns a dissimilarity index to each sale in the file. The more similar a comparable property is to the subject, the lower its metric value “dissimilarity index.” Two indexes used frequently are the “Squared Euclidean distance metric”¹⁰ and the “Minkowski metric” (differences are not squared). These distance metrics rely on a selection model or algorithm specified by the appraiser to find the most comparable property (e.g., sales, rents, expenses) used for comparison to a subject.

The Euclidean distance metric is expressed as:¹¹

$$\sum_i^k [W_j(X_{ij} - X_{sj})/\sigma_j]^2$$

Where:

- Σ = the summation of all the weighted squared attribute difference;
- W_j = a weight assigned by the user to the j -th attribute;

¹⁰ IAAO Glossary for Property Appraisal and Assessment, IAAO.org

¹¹ *Fundamental of Mass Appraisal*, IAAO, 2011 p 144

- S_j = the value of the j -th attribute for the subject;
- X_{ij} = the value the j -th attribute of the comparable property;
- σ_j = the standard deviation of the j -th attribute for the comparables;
- 2 = squaring creates an absolute scale of difference; and
- K = the number of attributes over which comparability is defined.

Assigning weights to the selection characteristics is the most difficult aspect of using a dissimilarity index. The higher the weight the greater the importance assigned to the characteristic. As the weight on a characteristic is increased, the algorithm will allow less of a difference in that characteristic.¹²

Tables 2 and 3 on the following page provide an example demonstrating how the metric calculation works:

¹²Ibid144

Table 2: Example of Euclidean Distance Metric -- Comparable No 1

Attribute	Subject	Comparable #1	Difference	Standard Deviation	Standardized difference	Appraiser-assigned weight	Weighted difference	Squared weight difference
Living Area	1800	1660	140	225.7	.6203	2	1.2406	1.5391
Age	10	4	6	4.1	1.4634	1	1.4634	2.1416
Quality	3.5	5	-1.5	0.9	-1.6667	1	-1.6667	2.7778
The sum of the standardized, weighted squared differences is 6.4585 based on the three selection attributes chosen								6.4585

Table 3: Example of Euclidean Distance Metric -- Comparable No 2

Attribute	Subject	Comparable #2	Difference	Stand Deviation	Standardized difference	Appraiser-assigned weight	Weighted difference	Squared weight difference
Living Area	1800	1700	100	225.7	.4431	2	.8861	.7852
Age	10	4	6	4.1	1.4634	1	1.4634	2.1416
Quality	3.5	5	-1.5	0.9	-1.6667	1	-1.6667	2.7778
The sum of the standardized, weighted squared differences is 5.7046 based on the three selection attributes chosen.								5.7046

Comparable No. 2 is closer in size to the subject and has a metric score of 5.7046, lower than the score of 6.4585 for Comparable No. 1. Each sale would require the same number of adjustments but the total adjustment for Comparable No. 2 would be less than for Comparable No. 1.

Minkowski metric differs from the Euclidian, in that absolute differences are used rather than squared differences making a smaller metric scale¹³.

Division by the standard deviation also provides the algorithm the ability to standardize the magnitude in data differences that are measured or recorded in different scales, similar to the use of Z-scores.

Once a distance metric is calculated for all potential comparables, the properties are sorted based on their metric. The comparables most similar to the subject are those with the lowest metric value.

The higher the weight on an attribute the more important that property attribute is in the selecting similar properties. Initially weights are assigned to those property attributes identified as the most influential in explaining why prices change from property to property. Indicators helpful with weighting include; regression coefficients (weights), beta coefficient, correlation coefficients, and T-statistics. Assigning weights forces the algorithm to select comparables whose attributes are most similar to the subjects. The appraisers, skill, knowledge, and experience also play a role in knowing how much weight to assign an attribute. Selecting comparables without disclosing the attribute(s) that are most important has been the practice primarily used by appraisers. Using a dissimilarity index exposes the importance of specific attributes in contrast to attributes considered less important having lower weights or no weight assigned.

¹³ Ibid145

Comparable Sales Selection Method

Table 4: Provides a Distance Metric, Weighting Example, from the NCSS Statistical Software¹⁴

Table 4

Adjustment Variable:	Distance Weight:	Amount (\$ or %):
TOTAL_SF	50	0
SIZEADJ	0	-\$65000
FIN_BS_SF	0	\$20
SF_FIN_ATT	0	\$64.15
LV_MV	0	\$1
AC	0	\$25
NO_FP	0	\$2500
NO_BATHS	0	\$4500
PORCH_SF	0	\$5
DECK_SF	0	\$8
GAR_NO	0	\$5500
POOL_SF	0	\$25
WALL_COEFF	0	10%
GRADE_07QUAL	50	100%
DEP1	50	100%
NH_07FINL_QUAL	25	100%
STY_TYPE	100	

Template Id: Sale Grid Adjustment 12-12-07

The characteristics (variables) Total Square Feet (Total_SF), Quality (GRADE_07Qual), Depreciation (Dep1), Neighborhood, or Location (NH_07FINL_QUAL), and Style, or Story Type (STY_TYPE) are weighted in the selection process. The sales selected for the adjustments have attributes closest in these defined categories collectively and are placed on the adjustment grid. Defining the metric selection model is a skill in attribute importance, and magnitude of the data. Using a distance metric selection will improve the appraiser's impartiality from personal judgment with an objective method.

¹⁴Hintze, J. (2012). NCSS 8. NCSS, LLC. Kaysville, Utah, USA. www.ncss.com. Comparable – Sales Price

194 Table 5 below, indicates five (5) property characteristics that are used in the selection process.
195 Story Type receives the most weight, while Quality, Condition and Location were each given
196 equal weights. The following Table 6 provides a look at the metric scale that is automatically
197 calculated using the formula provided.

Table 5: Example of Characteristics used in comparable selection				
Variables	Weight	Mean	Standard Deviation	COV
TOTAL_SF	10	1847.1	760.0	41
Grade_07Qual	25	1.1	0.2	17
Dep1	25	0.8	0.1	14
NH_07FINL_Qual	25	1.0	0.1	9
STY_TYPE	200	6.5	4.5	69

198 *Of the 18917 properties on the database, 1 was a subject property and 16988 were excluded*
199 *by the selection variable(s), leaving 1928 comparables for consideration.*

200 **Distance Report for Subject = 14-25-103-031**

Table 6: PARCEL_ID	Distance Metric
14-25-103-031	Subject
14-25-103-022 – Comp 1	0.00187
15-31-176-024 – Comp 2	0.01199
14-25-103-037 – Comp 3	0.01741
14-25-102-011 – Comp 4	0.02305
14-25-103-011	0.02519
15-30-155-001	0.02913
15-30-152-013	0.03246
15-31-128-009	0.03501
15-31-128-007	0.03550
20-13-276-007	0.03842

201 The NCSS software allows the user to display the metric report for (n) comparables, in this
202 example. Of the ten (10), the top four move to the grid for adjustment.¹⁵

203 Step (2) – **adjustment methods for the selected sales.** Ideally, adjustments to the selected
204 comparable are based on market parameters derived from a direct market model calibration
205 process used in the AVM development. Using and adjusting comparables from the sales file
206 provides a level of detail and precision pertaining to the subject that exceeds what is available by
207 using only the direct market model values. Since the coefficients (adjustment rates) are derived
208 from the transactions and have been tested using various statistical methods within the modeling
209 process, the appraiser is presented another level of independence, impartiality, and objectivity.

¹⁵ Ibid

In the prior example of the automated comparables, the third column holds the rate of adjustment for the specific property attribute. The rates of adjustment are the same coefficients used in the direct market model and were derived from a non-linear calibration method shown in Table 7. If a direct market model does not exist, other “market intuitive” adjustments are substituted. In an article on the use of automated comparables method, the author addressed the matter of adjustments noting, “It appears that appraisers prefer to say that an adjustment is their opinion confirmed by market research rather than to be responsible for explaining the research itself.”¹⁶ Appraisers have stated that the adjustments on the market grid in the sales comparison approach are market derived without further explanation. Automating the comparable selection process does nothing to defuse that claim. Comparables selection must be emphasized over the adjustment process; the importance of finding comparables that are as similar as possible to the subject greatly reduces the need for making many (sometimes controversial) adjustments to the sales prices.

Table 7 provides an explanation of the property attribute’s on the grid, and the adjustment process.

Table 7		
Adjustment Variables	Adjustment Value	Adjustment Explained
YRMO	-0.003	% Market Change Rate based on study of resale’s
TOTAL_SF	\$0	See SIZEADJ
SIZEADJ	\$-65000	Base rate per total sq.ft. using size curve
FIN_BS_SF	\$20	Finished basement sq.ft. rate
SF_FIN_ATT	\$64	Finished attic sq.ft. rate
LV_MV	\$1	Land value established; adjust comparable to equal value.
AC	\$2500	Lump Sum Adjustment-Air Conditioning
NO_FP	\$2500	Lump Sum Adjustment-Fire Place
BATH_COEFF	\$4500	Lump Sum-per 3 fixture bath
PORCH_SF	\$5	Square foot rate for porch
DECK_SF	\$8	Square foot rate for deck
Gar_NO	\$5500	Lump Sum Adjustment-per garage stall
POOL_SF	\$25	Base rate for pool square feet
WALL_COEFF	75%	Percentage adjustment for difference in Exterior Wall Type
Grade_07Qual	\$50000	Percentage adjustment for difference in quality, a 5% difference is a \$2,500 adjustment
Dep1	50%	Percentage adjustment for difference in condition
NH_07FINL_Qual	10%	Percentage adjustment for difference in location
STY_TYPE	\$0	Style or Story type forced to be identical in selection or nearly identical, no adjustment.

¹⁶ Commercial/Industrial Property and Sales Comparison Approach, IAAO 1986

The SIZEADJ is used to capture the economy of scale built into the model instead of actual square footage. The adjustment for size is non-linear and transformed on the grid to make the correct adjustment in an additive fashion, and in the proper direction.

Step (3) – **Opinion of value from the selected sales after adjustment:** “It is important that the appraiser consider the strengths and weaknesses of each value indication derived, examining the reliability and appropriateness of the market data compiled and the analytical techniques applied.”¹⁷ Appraisers are provided little guidance to help them with what the “**most comparable property**” actually means. Words like “reliability” and “appropriateness” are subjective terms and add nothing to the appraiser’s independence, impartiality, or objectivity.

As AVMs become more universal, the idea of using statistical measures to evaluate comparability will be an acceptable alternative to the previous manual and subjective method. When comparable selection is based on distance metrics of each attribute compared to the subject, user - assigned weights provide added influence actual differences. In turn, the weighting of an attribute implies greater importance on specific attributes. The first comparable on the adjustment grid is typically the most comparable property available. The remaining comparables are scaled based on similarity to the subject and overall comparability. A comparability index may be assigned giving the appraiser an objective measure for each sale on the grid prior to adjustment. The single point estimate can then be based on:

- Closest – the comparable property that is closest in proximity to the subject property.
- Min |\$| Change - a comparable property that had the smallest absolute dollar value change. This property received the smallest dollar adjustment amount.
- Simple Average - adjusted prices of the M comparables that have the smallest distance. User chooses M as number of comparables in average.
- Weighted Average. - Use the weighted average of the adjusted prices of the M comparables that have the smallest distance to the subject property. The weights are proportional to the distance from the comparable property to the subject property.

These choices are programmed into the reporting function chosen by the appraiser in the final analysis. The use of closest, and Min|\$| Change tend to put weight on a single adjusted value, while the simple average and weighted average base the value conclusion on more than a single property as instructed by the appraiser.

Disclosure - It is possible to use a spreadsheet in order to customize the comparable selection and display. The guideline presents a comparable selection application already deployed that can also be fully customized to the user’s needs. Many vendors of appraisal reporting software also include various selection methods. The APB does not endorse any specific software; the NCSS used here is simply available to all as are other off-the-shelf applications.

¹⁷ *The Appraisal of Real Estate*, 13th ed, p 428

260 See Table 8: Automated Comparables Report, on the following page for a full example of the
261 output from an automated comparables program.¹⁸

¹⁸ Generated using, NCSS 2007 Ver.07.1.18 Comparable – Sales Price, released June 29, 2009, J. Hintze

Table 8: Automated Comparables Reports

Page/Date/Database	1 4/24/12 /AVMCOMPS_V3					
Filter	FLAG=1,2,3;YRMO=>200901;land_use=1;sale_use=3					

Comparative Sales Price Adjustment Report for Subject = 14-25-103-031									
	Subject	Comparable No. 1		Comparable No2		Comparable No 3		Comparable No 4	
PARCEL ID	14-25-103-031	14-25-103-022		15-31-176-024		14-25-103-037		14-25-102-011	
	Value	Value	\$Adj	Value	\$Adj	Value	\$Adj	Value	\$Adj
ADDRESS	2501 KARA CROSSING	30 HODGEHAVEN CIR		38 CONWAY CR		2513 KARA CROSSING		7 HODGEHAVEN CIR	
Neighborhood #	65	65		79		65		65	
SF CRAWL	0	0		0		0		0	
SF SLAB		-						-	
Story Type	2 Story	2 Story		2 Story		2 Story		2 Story	
Wall Type	Brick Front	Brick Front		Alum/Vinyl		Brick Front		Alum/Vinyl	
Quality Name	B+5	B+5		B+5		B+5		B+5	
Year Built	1998	1997		2001		1997		1996	
Lot square feet	17,919	10,583		10,557		10,767		10,920	
Year month sale	199804	200901		201003		201103		201104	
Direct Model Val	\$ 296,951	\$ 295,114		\$ 296,989		\$ 286,463		\$ 270,118	
Comparability		100%		100%		99%		99%	
Sale Price / Market Conditions Adj.		\$260,000	(\$18,720)	\$290,000	(\$8,700)	\$267,500	\$1,605	\$227,500	\$2,048
Total Sf	2,954	2,796	\$0	2,853	\$0	2,424	\$0	2,357	\$0
SIZEADJ	0.8273	0.8402	\$837	0.8354	\$528	0.8746	\$3,073	0.8815	\$3,522
Fin. Basmt	0	610	(\$12,200)	1040	(\$20,800)	1030	(\$20,600)	1113	(\$22,260)
Fin. Attic	0	0	\$0	0	\$0	0	\$0	0	\$0
Land Value	\$ 64,929	\$ 50,799	\$14,130	\$ 53,121	\$11,808	\$ 51,321	\$13,608	\$ 51,759	\$13,170
% AC	1	1	\$0	1	\$0	1	\$0	1	\$0
Fire Place	1	3	(\$5,000)	2	(\$2,500)	1	\$0	1	\$0
# Baths	2.5	3.5	(\$4,500)	2.5	\$0	3.5	(\$4,500)	2.5	\$0
Porch SF	195	0	\$975	129	\$330	0	\$975	142	\$265
DECK SF	0	0	\$0	0	\$0	0	\$0	196	(\$1,568)
Garage SF	3	3	\$0	3	\$0	3	\$0	3	\$0
Pool SF	0	0	\$0	0	\$0	0	\$0	0	\$0
Wall Adj	1.057	1.057	\$0	1	\$11,571	1.057	\$0	1	\$9,519
Quality Adj	1.2824	1.2824	\$0	1.2824	\$0	1.2824	\$0	1.2824	\$0
Cond - % Good	0.9275	0.92	\$883	0.95	(\$3,175)	0.92	\$981	0.9125	\$1,741
NH - Loc Adj	0.9667	0.9667	\$0	0.9945	(\$776)	0.9667	\$0	0.9667	\$0
Story Type /Style	10	10	\$0	10	\$0	10	\$0	10	\$0
Net \$Adj.			(\$23,595)		(\$11,714)		(\$4,858)		\$6,438
Sum \$Adj.			\$38,525		\$51,488		\$43,737		\$52,046

APB Valuation Advisory #5 - Identifying Comparable Properties In
Automated Valuation Models for Mass Appraisal

Adj Sales Price	\$	252,817		\$236,405		\$278,286		\$262,642	Page: 0857233,938
BOE Hearing 10-28-2021									

Table 8, Automated Comparables Report, provides the appraiser information supplemental to the adjustment about each sale. These supplemental attribute items are listed above the “**Sale Price/Market Conditions Adj**” on the grid. This display is optional and not all comparables applications provide this option.

Special conditions required of the appraiser by the scope of work can limit the available comparable pool within a specific location. The span of time by transaction date can reduce the pool of available comparables to be considered if, for example, transactions six months old or less are prescribed as part of the valuation problem. All sales in the example report are within one mile of the subject property, identical in style, and similar in size, age and condition. The transaction data is limited to within 36 months of the appraisal date; however, sales are adjusted for appropriate changes in market conditions, also known as a time-of-sale adjustment.

An automated comparable sales selection method saves time and improves consistency in adjustments and results. The automated selection method provides a sophisticated methodology, with the simplicity of explanation that is common with single property comparison methods. Appraisers in the private sector have been entering comparable data into forms software since the mid-1980’s. The recent addition of the Uniform Appraisal Dataset (UAD) provides a method of standardizing comparable data for selection, thus improving results. The UAD will assist the appraiser in developing the AVM and adding value to their product by including an objective, impartial technique for selecting comparables. The automated comparables selection method saves time and builds efficiency into the appraisal process while providing accuracy and credibility not available in the manual comparables comparison approach.

V. Appraisal Uniformity - Equity Comparison Method

A required component in ad valorem mass appraisal is demonstrating the appraisal uniformity or equitable treatment of identical or similar properties during the valuation process. Many court cases and laws support the notion of equal treatment when developing value opinions for the purpose of ad valorem taxation. The court case carrying significant weight is **Allegheny-Pittsburgh Coal Co. v. County Comm’n, 488 U.S. 336 (1989) Allegheny Pittsburgh Coal Co. v. County Commission of Webster County, West Virginia**. In part, the United States Supreme Court ruled; “constitution and laws provide that all property of the kind held by petitioners shall be taxed uniformly according to its estimated market value.”¹⁹ Most states require equality of assessment as part of the mass appraisal process. Practitioners should also check for specific jurisdictional laws and/or rules governing uniformity and equal treatment.

A comparison method available that will reveal uniformity of values and equitable treatment is the previously described comparable sales method, with the caveat that the *appraised value* of the selected comparables is substituted for variable sale price on the comparison grid. All the adjustments are market-derived coefficients used to value all the property in the class. If the

¹⁹ <http://supreme.justia.com/cases/federal/us/488/336/>

mass appraisal is a cost approach model the cost coefficients are used as the rates of adjustment on the grid. This method provides users with an instant view of how the subject property is valued in comparison to other properties and how the adjustment rates affect the value. Relying on uniformity of appraised value as the measure of comparability increases the pool of comparables as no sale is required for this method, the chance of selecting identical or near identical properties is greater than with comparable sales selection. The number of adjustments and their amounts is usually minimized by use of decidedly similar property characteristics.

Appraisal uniformity checks are also helpful as a model performance tool to ensure the accuracy of the data, and the model deployment methods produce consistent values on identical property characteristics. In the text, *Mass Appraisal of Real Property*²⁰ the idea of using a basehome model is presented as another method for supporting the AVM and explaining the concept of appraisal uniformity for the market area or class of properties subject to AVM application.

VI. Definitions

Additive Model

A model in which the dependent variable is estimated by multiplying each independent variable by its coefficient and adding each product to a constant. *Glossary for Property Appraisal and Assessment, p 3*

Assessment Equity

The degree to which assessments bears a consistent relationship to market value. *Glossary for Property Appraisal and Assessment, p 11*

Automated Valuation Model

An automated valuation model (AVM) is a mathematically based computer software program that produces an estimate of market value based on market analysis of location, market conditions, and real estate characteristics from information that was previously and separately collected. The distinguishing feature of an AVM is that it is a market appraisal produced through mathematical modeling. Credibility of an AVM is dependent on the data used and the skills of the modeler producing the AVM. *Standard on Automated Valuation Models (AVMs) IAAO 2003, p 5*

Computer Assisted Mass Appraisal (CAMA)

A system of appraising property, usually only certain types of real property, that incorporates computer-supported statistical analyses such as multiple regression analysis and adaptive estimation procedure to assist the appraiser in estimating value. *Glossary for Property Appraisal and Assessment, p 28*

Direct Market Method/Analysis

²⁰ IAAO 314 W 10th St. Kansas City MO 1999 p207, R.Gludemans, R.Almy,

In the direct market method, the market analyst specifies and calibrates a single model used to estimate market value directly using multiple regression analysis or another statistical algorithm.

Euclidean Distance Metric

A measure of distance between two points “as the crow flies.” In property valuation, it is used to find the nearest neighbor or similar property based on an index of dissimilarity between property location and attributes. When using multivariate selection, the squared difference is divided by the standard deviation of the variable so as to normalize the differences. (Also see Minkowski Metric.) *Glossary for Property Appraisal and Assessment, p 52*

Hybrid Model

A model that incorporates both additive and multiplicative components. See also additive model and multiplicative model. *Glossary for Property Appraisal and Assessment, p 67*

Mass Appraisal

The process of valuing a group of properties as of a given date, using standard methods, employing common data, and allowing for statistical testing. *Glossary for Property Appraisal and Assessment, p 85*

Mass Appraisal/AVM Model

A mathematical expression of how supply and demand factors interact in a market. *Glossary for Property Appraisal and Assessment, p 85*

Minkowski Metric

A way of measuring distance. In mass appraisal model building it is the sum of absolute differences in each dimension. *Glossary for Property Appraisal and Assessment, p 87*

Model Calibration

Calibration: The process of estimating the coefficients in a mass appraisal/AVM model. *Glossary for Property Appraisal and Assessment, p 19.* **Model Calibration:** The development of adjustments, or coefficients based on market analysis that identifies specific factors with an actual effect on market value. *Glossary for Property Appraisal and Assessment, p 88*

Model Specification

The formal development of a model in a statement or equation, based on data analysis and appraisal theory. *Glossary for Property Appraisal and Assessment, p 88*

Multiplicative Model

A mathematical model in which the coefficients of independent variables serve as powers (exponents) to which the independent variables are raised or in which independent variables themselves serve as exponents; the results are then multiplied to estimate the value of the dependent variable. *Glossary for Property Appraisal and Assessment, p 89.*

Population

All the items of interest, for example, all the properties in a **jurisdiction** or **neighborhood**; all the observations in a data set from which a **sample** may be drawn. *Glossary for Property Appraisal and Assessment, p 104*

Regression Coefficient

The coefficient calculated by the regression algorithm for the data supplied that, when multiplied by the value of the variable with which it is associated, will predict (for simple regression) or help to predict (for multiple regression) the value of the dependent variable. For example, in the equation, Value = \$10,000 + \$5,000 x number of rooms, \$5,000 is a regression coefficient. *Glossary for Property Appraisal and Assessment, p 118*

Representative Sample

A sample of observations from a larger population of observations, such that statistics calculated from the sample can be expected to represent the characteristics of the population being studied. *Glossary for Property Appraisal and Assessment, p 120*

VII. Suggested Further Reading

International Association of Assessing Officers, *Glossary for Property Appraisal and Assessment*.

International Association of Assessing Officers, *Standard on Mass Appraisal of Real Property, April 2013*.

International Association of Assessing Officers, *Standard on Automated Valuation Models (AVM's)*, September 2003.

Thimgan, G. E., *Property Assessment Valuation*, 3rd ed. (Kansas City, MO: International Association of Assessing Officers, 2010).

Gloudemans, Robert J., *Mass Appraisal of Real Property*, (Kansas City, MO: International Association of Assessing Officers, 1999).

Gloudemans, Robert J. and Richard Almy, *Fundamentals of Mass Appraisal*, (Kansas City, MO: International Association of Assessing Officers, 2011).

NCSS Statistical Software – Data Analysis & Graphics at www.NCSS.com.

IBM SPSS Statistical Software at www.IBM.com.

XLSTAT Statistical Analysis for Microsoft EXCEL at www.Analyse-it.com.



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KENNETH G WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 0862
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701050091
Property Location	BENTWOOD PL
Appeal No.	APL20210460
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0460

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Bentwood Place/Industrial Blvd

Parcel No.: 4B1701050091

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 130,350	\$ 130,350
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 86,900	\$ 130,350	\$ 130,350

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it is gravel parking.

Subject Characteristics:

- Land
 - 13,169 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS

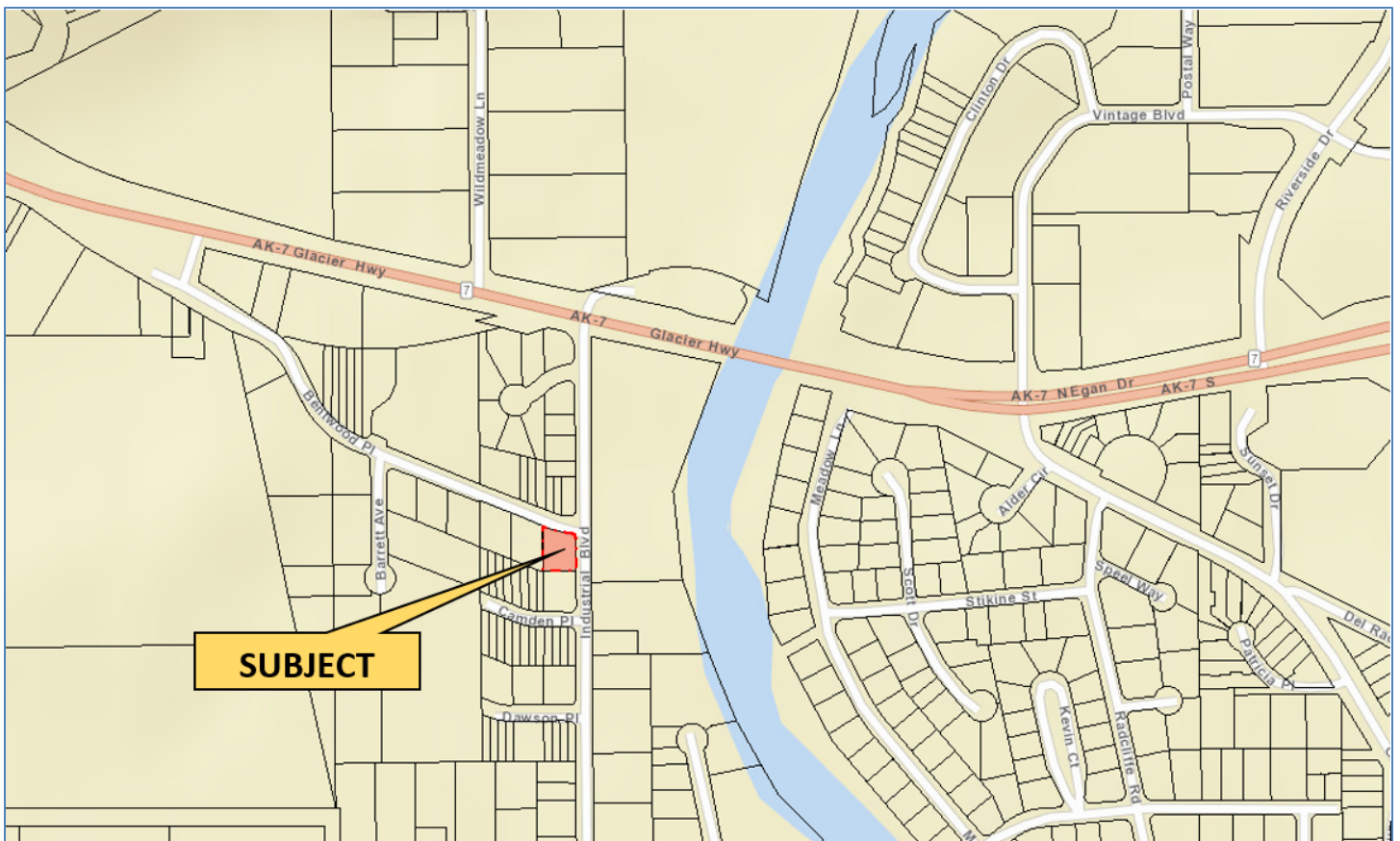


Vacant



Vacant

AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

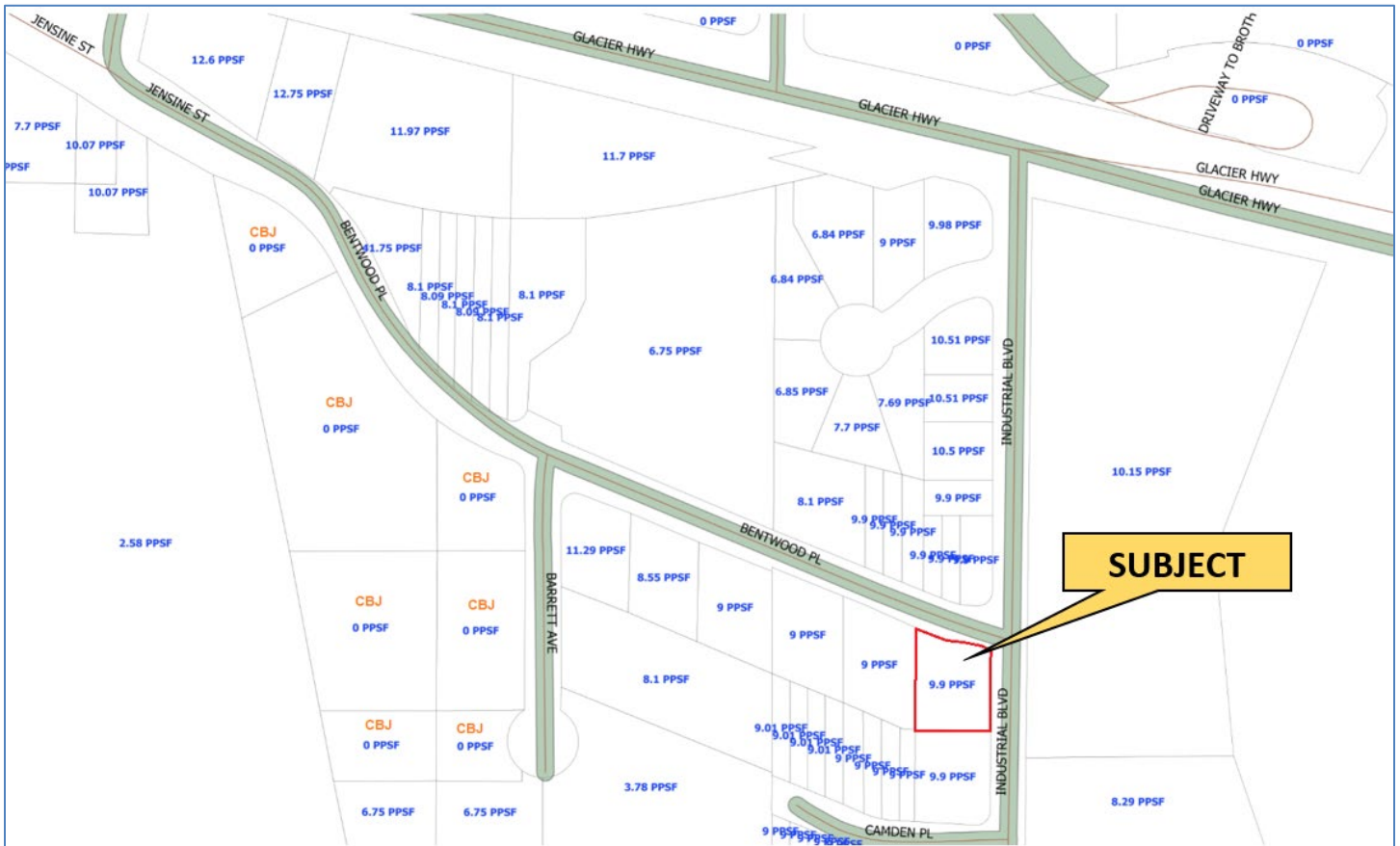
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 13,169 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701050091
KENNETH G WILLIAMSON
BENTWOOD PL
MENDENHALL VALLEY INDUSTRIAL 2 BL 2 LT 16A

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$130,350.00			\$130,350.00
2020	\$86,900.00			\$86,900.00
2019	\$86,900.00			\$86,900.00
2018	\$86,900.00			\$86,900.00
2017	\$86,900.00			\$86,900.00
2016	\$86,900.00			\$86,900.00
2015	\$86,900.00			\$86,900.00
2014	\$86,900.00			\$86,900.00
2013	\$86,900.00			\$86,900.00
2012	\$86,900.00	\$0.00	\$0.00	\$86,900.00
2011	\$86,900.00	\$0.00	\$0.00	\$86,900.00
2010	\$80,000.00	\$0.00	\$0.00	\$80,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 50%.

We find that no change to the 2021 assessed value of \$130,350 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$217,250.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

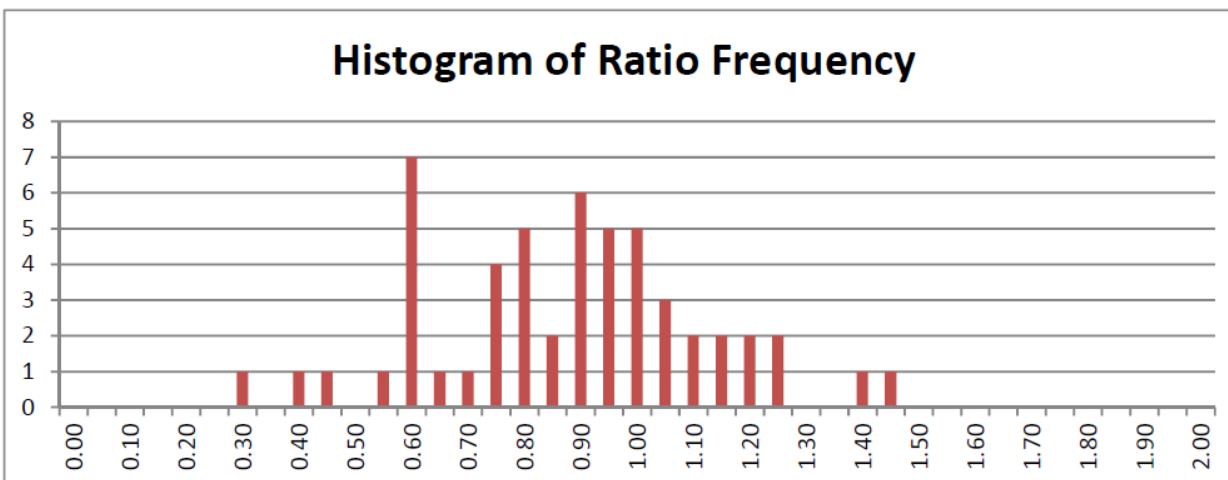
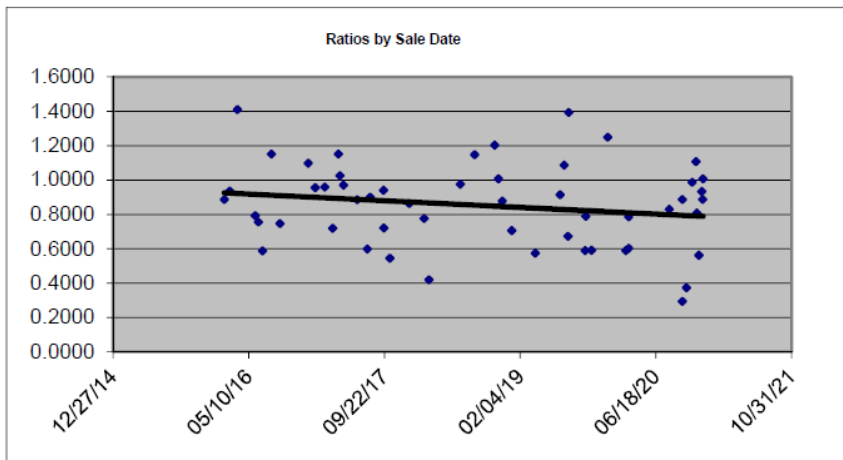
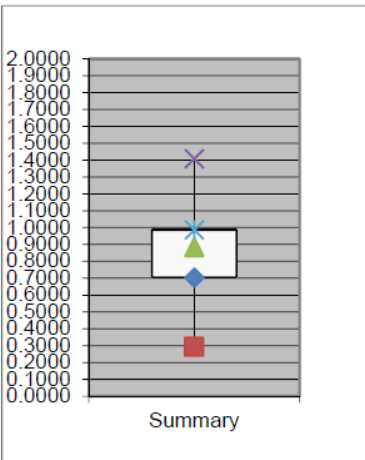
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021 only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications

ADDENDUM D – Additional Property Information

Additional Property Information



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701050091
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701050091
PHYSICAL LOCATION: Bentwood Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701050091**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$130,350
2021 Owner estimate of value:	\$86,900
2021 Final determination:	\$130,350

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☒ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☒ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Purchase Price of Property:

Price	\$	Purchase Date	
-------	----	---------------	--

Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KENNETH G WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 0887
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701050131
Property Location	CAMDEN PL
Appeal No.	APL20210461
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0461

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Camden Pl/NBN Industrial Blvd

Parcel No.: 4B1701050131

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 125,400	\$ 125,400
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 83,600	\$ 125,400	\$ 125,400

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it is gravel parking.

Subject Characteristics:

- Land
 - 12,673 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS

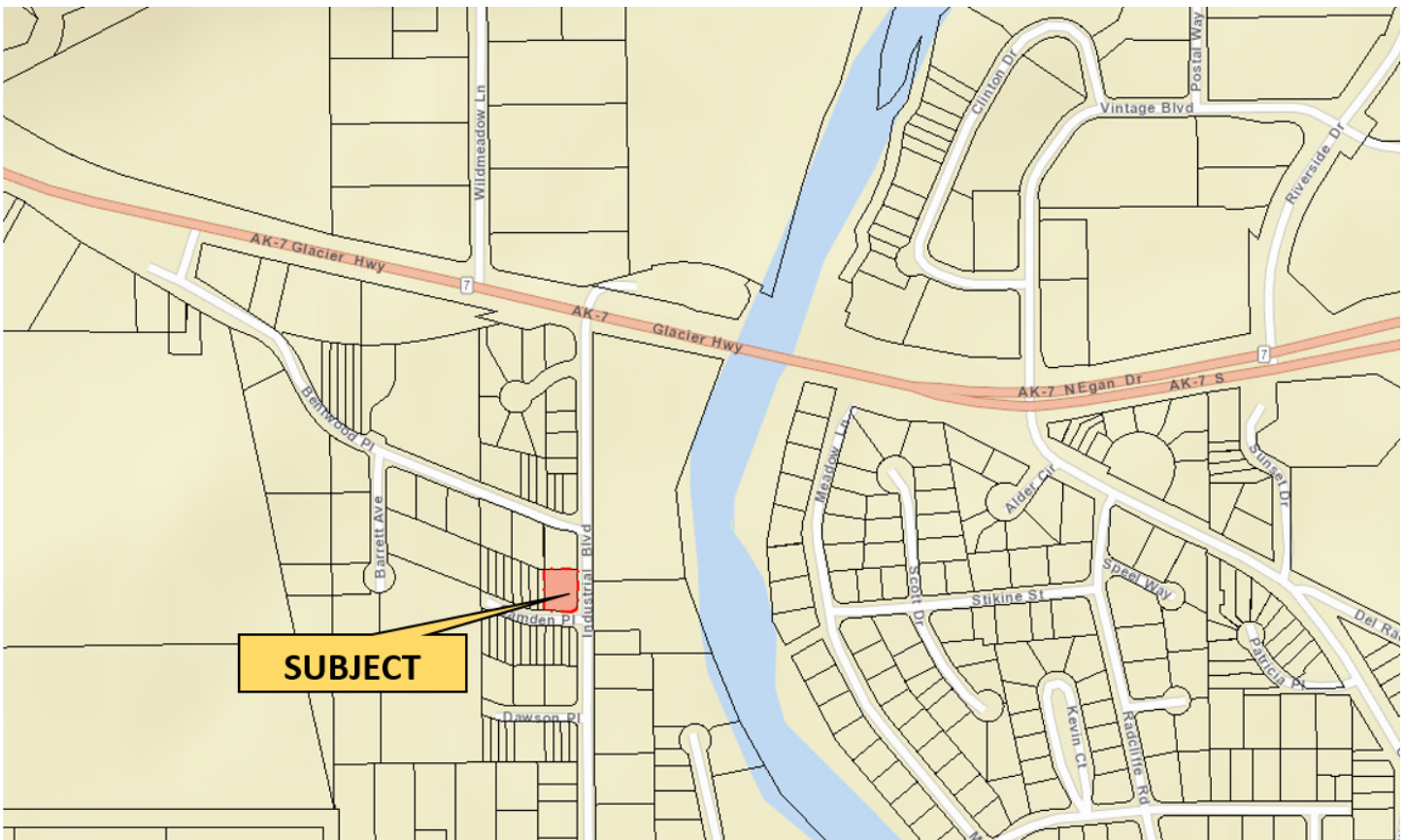


Vacant



Vacant

AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

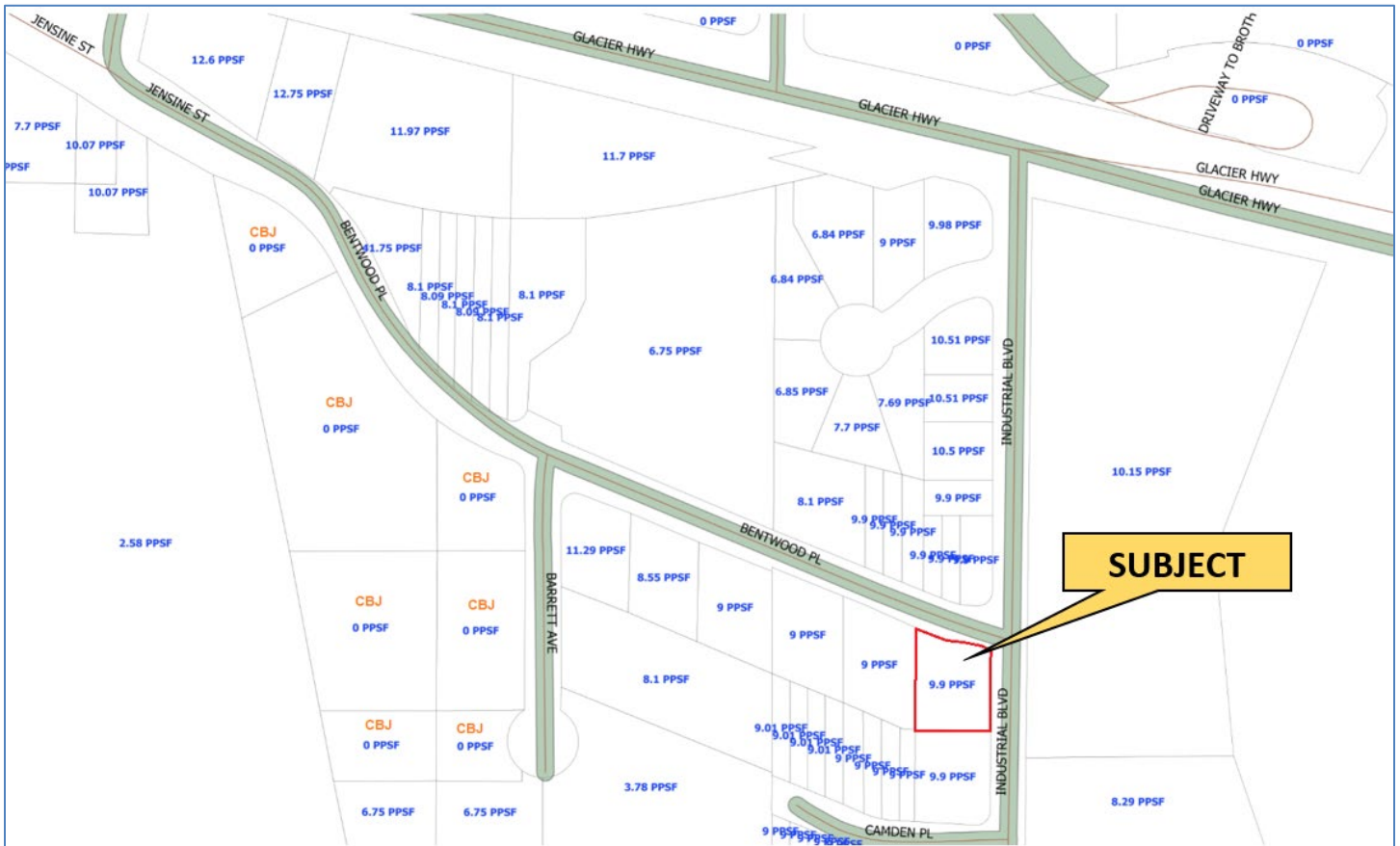
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 12,673 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701050131
KENNETH G WILLIAMSON
CAMDEN PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 2 LT 12A

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$125,400.00			\$125,400.00
2020	\$83,600.00			\$83,600.00
2019	\$83,600.00			\$83,600.00
2018	\$83,600.00			\$83,600.00
2017	\$83,600.00			\$83,600.00
2016	\$83,600.00			\$83,600.00
2015	\$83,600.00			\$83,600.00
2014	\$83,600.00			\$83,600.00
2013	\$83,600.00			\$83,600.00
2012	\$83,600.00	\$0.00	\$0.00	\$83,600.00
2011	\$83,600.00	\$0.00	\$0.00	\$83,600.00
2010	\$80,000.00	\$0.00	\$0.00	\$80,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 50%.

We find that no change to the 2021 assessed value of \$125,400 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$209,000.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

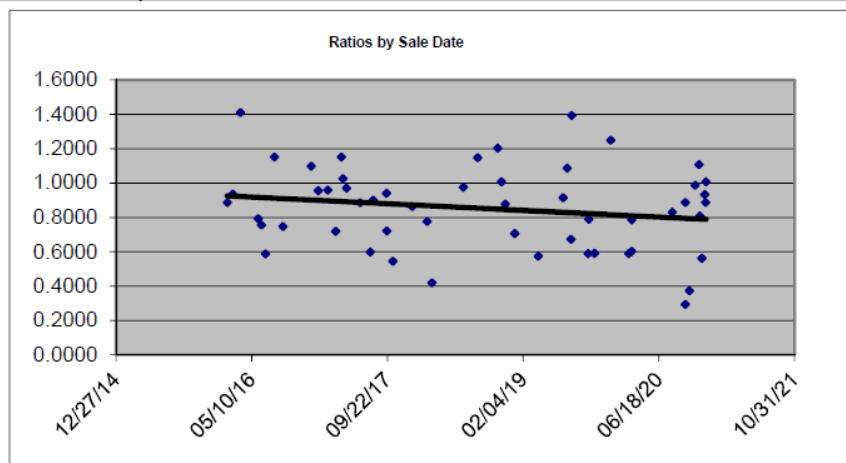
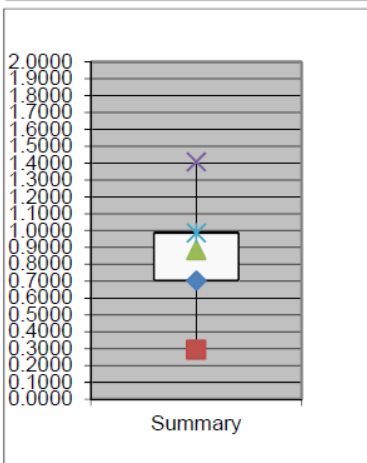
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

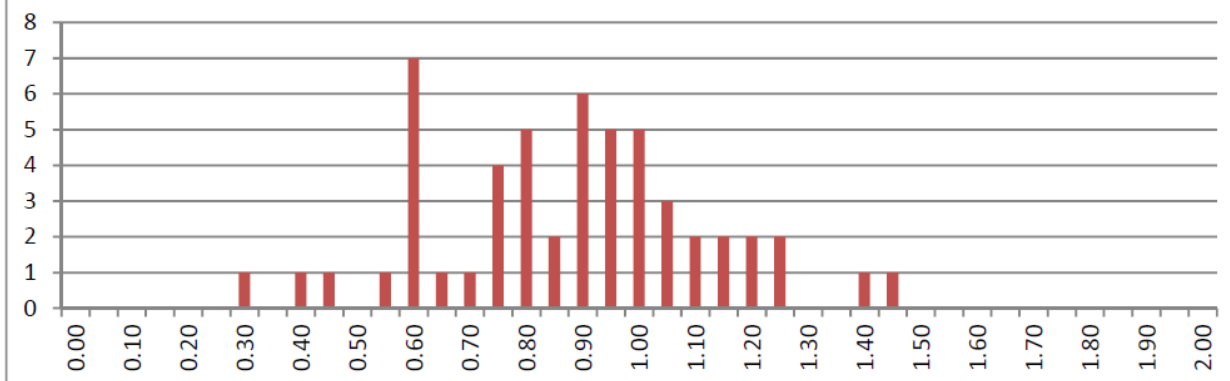
0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



Histogram of Ratio Frequency



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications

ADDENDUM D – Additional Property Information

Additional Property Information



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701050131
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701050131
PHYSICAL LOCATION: Camden Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701050131**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$125,400
2021 Owner estimate of value:	\$83,600
2021 Final determination:	\$125,400

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Purchase Price of Property:

Price	\$	Purchase Date	
-------	----	---------------	--

Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201010050
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201010050
PHYSICAL LOCATION: 5452 Jenkins Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201010050**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$493,050
2021 Owner estimate of value:	\$363,800
2021 Final determination:	\$493,050

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KEN G WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 0014
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Meeting
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201010050
Property Location	5452 JENKINS DR
Appeal No.	APL20210457
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing. Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0457

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken G Williamson

Location: 5452/5454 Jenkins Dr

Parcel No.: 5B1201010050

Property Type: Commercial-Warehouse

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	\$ 258,500	\$ 387,750	\$ 387,750
Buildings:	\$ 105,300	\$ 105,300	\$ 105,300
Total:	\$ 363,800	\$ 493,050	\$ 493,050

Subject Photo



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OVERVIEW

The subject is a property located within the industrial zoned area of Lemon Creek. On the property are two warehouse structures which house several businesses

Subject Characteristics:

- Land
 - 25,345 SF lot
 - Level, developed lot
- Buildings
 - Warehouse 40' x 80'
 - Fair Quality
 - Average Condition
 - 3,200 SF GBA
 - 48 SF Storage Mezzanine
 - Warehouse 40' x 100'
 - Average Quality
 - Average Condition
 - 4,000 SF GBA

SUBJECT PHOTOS



From street

Front

40' x 100' building

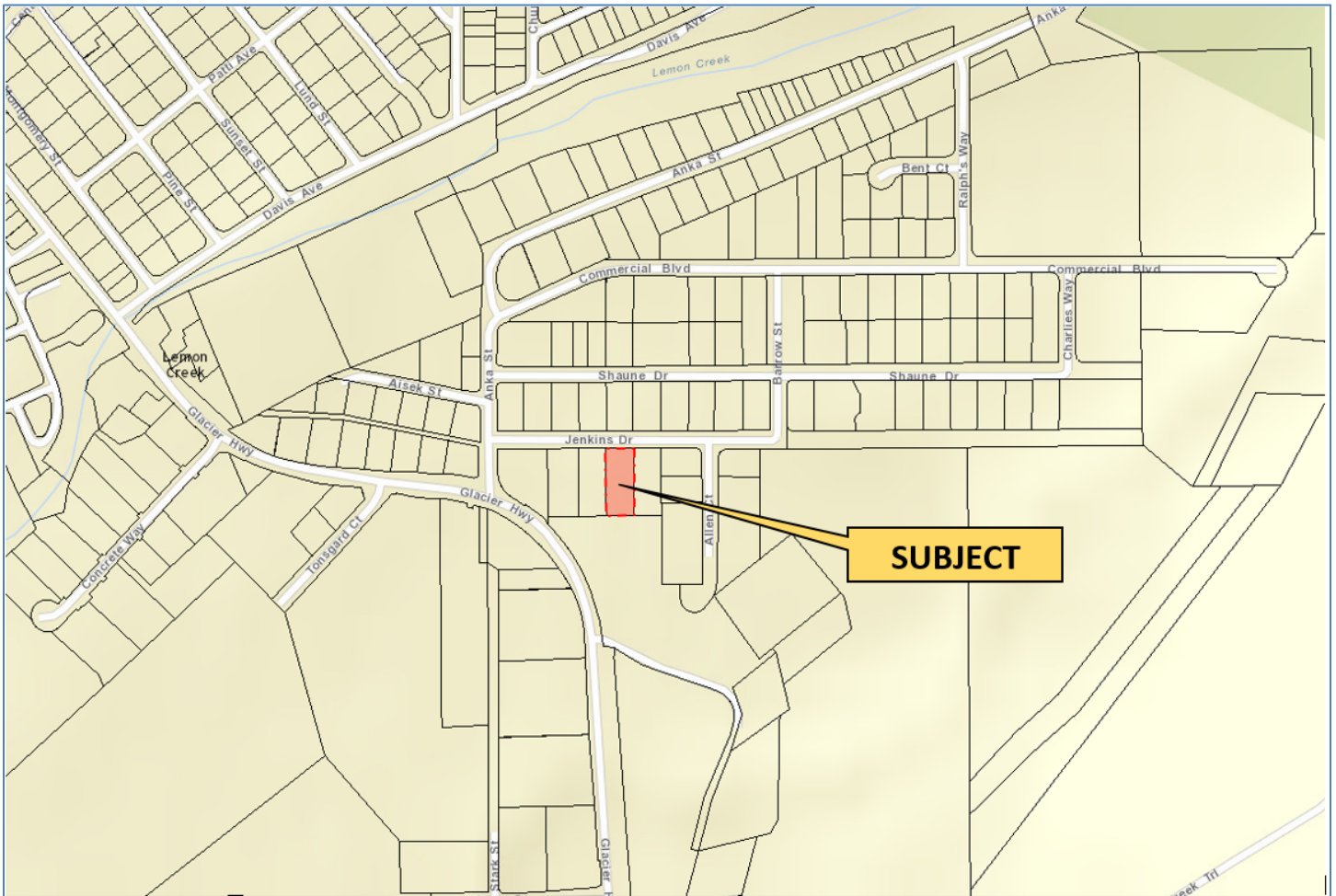


Front

40' x 80' building



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

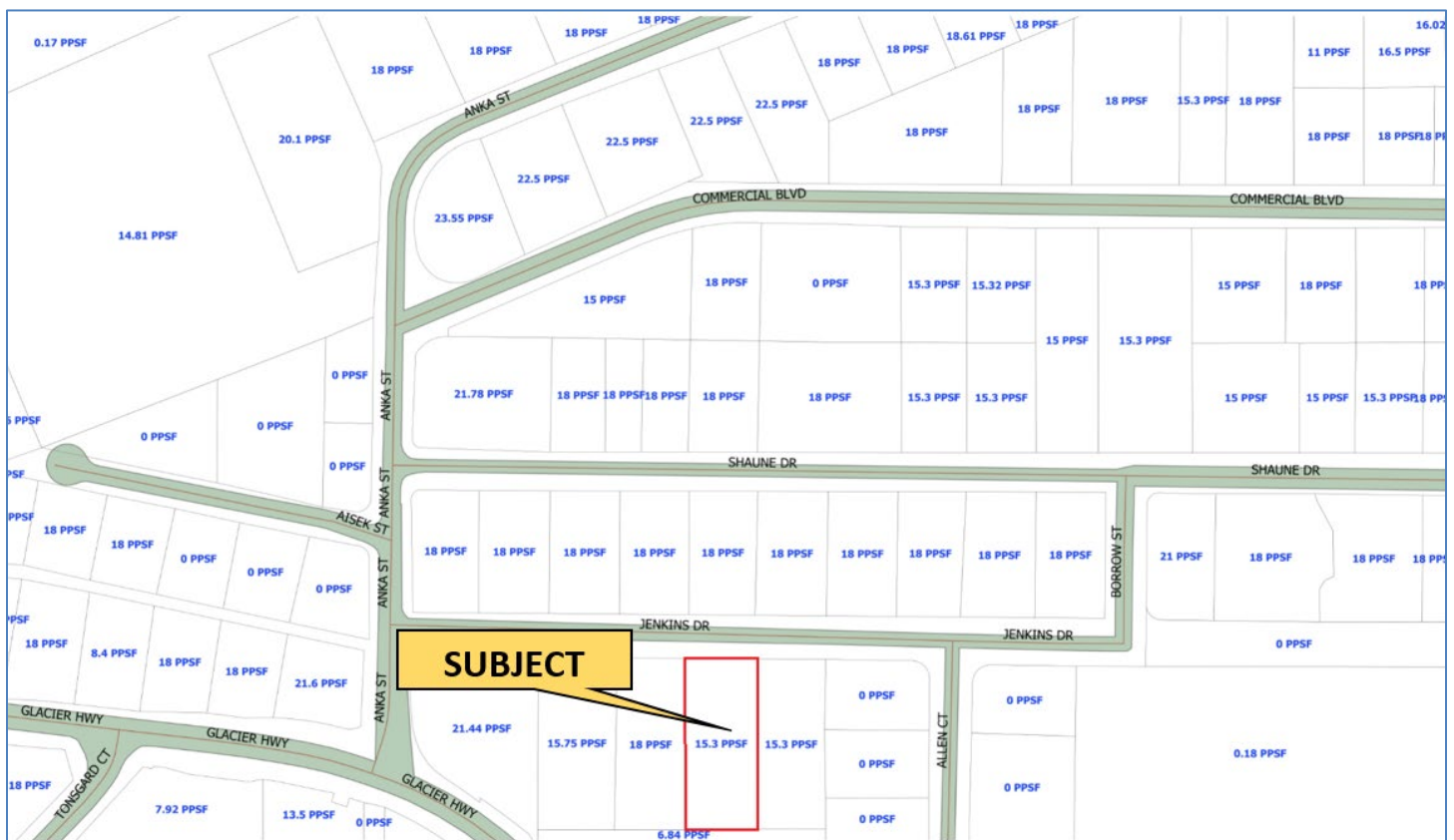
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developed lot located in the industrial area of Lemon Creek. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 25,345 SF lot
- Level, developed lot

Land Values



BUILDING(S)

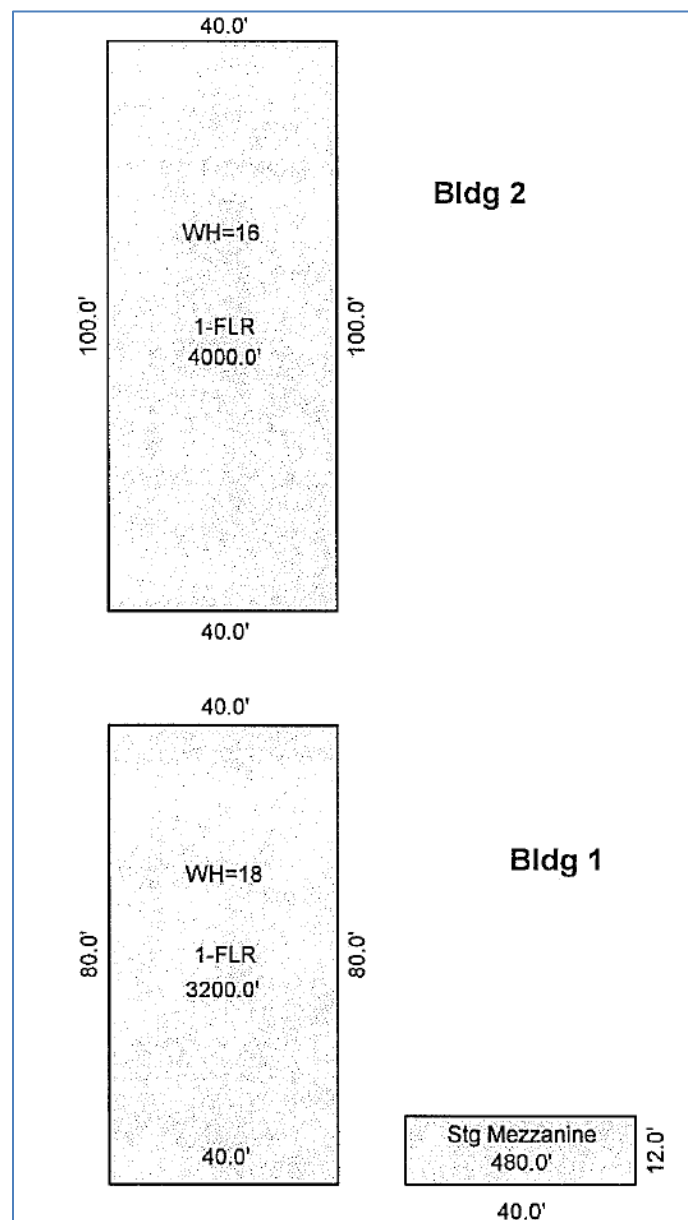
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Warehouse 40' x 80'
 - Fair Quality
 - Good Condition
 - 3,200 SF GBA
 - 48 SF Storage Mezzanine
- Warehouse 40' x 100'
 - Average Quality
 - Average Condition
 - 4,000 SF GBA

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

6625		Record	1		
Parcel Code Number	5B1201010050	Number of Stories (Building)	01		
Owner Name	WILLIAMSON KEN G	Number of Sections	1		
Parcel Address	5452 JENKINS DR	Perimeter	520		
Effective Year Built	2011	Class	D		
Year Built	1978	Height	18		
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank	Low		
Building Type	Storage Warehouse	Total Area	3,200.00		

Section 1	Description	Units	Percent	Cost	+/-	Total
	Base Cost	3200		25.25		80,800
	Exterior Wall Stud -Metal Siding	3200		9.23		29,539
	Heating & Cooling Heating & Cooling	3200		606.00		606
	Heating & Cooling Space Heater	3200		2.30		7,360
	Architect Fee	3200		6.20		19,840
	Sub Total					\$138,145.20
	Local Multiplier		1.43	[X]		\$197,548.00
	Current Multiplier		1.05	[X]		\$207,425.00
	Neighborhood Multiplier			[X]		\$207,425.00
	Depreciation - Physical		15.00	[-]		\$31,114.00
	Depreciation - Functional			[-]		\$0.00
	Depreciation - Economic			[-]		\$0.00
	Percent Complete		100.00	[-]		\$176,311.00
	Cost to Cure					
	Neighborhood Adjustment					
	Replacement Cost less Depreciation					\$176,311

6625		Record		2	
Parcel Code Number	5B1201010050	Number of Stories (Building)		01	
Owner Name	WILLIAMSON KEN G	Number of Sections		1	
Parcel Address	5452 JENKINS DR	Perimeter		0	
Effective Year Built	2001	Class		D	
Year Built	1979	Height		16	
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank		Average	
Building Type	Storage Warehouse	Total Area		4,000.00	
Section 2	Description	Units	Percent	Cost	+/- Total
	Base Cost	4000		36.50	146,000
	Exterior Wall	4000		9.93	39,725
	Heating & Cooling	4000		606.00	606
	Heating & Cooling	4000		2.30	9,200
	Architect Fee	4000		6.50	26,000
	Mezzanine	48		18.00	864
Sub Total					\$222,394.56
	Local Multiplier		1.43	[X]	\$318,024.00
	Current Multiplier		1.05	[X]	\$333,925.00
	Neighborhood Multiplier			[X]	\$333,925.00
	Depreciation - Physical		30.00	[-]	\$100,178.00
	Depreciation - Functional			[-]	\$0.00
	Depreciation - Economic			[-]	\$0.00
	Percent Complete		100.00	[-]	\$233,747.00
	Cost to Cure				
	Neighborhood Adjustment				
Replacement Cost less Depreciation					\$233,747
Total Improvement Value					\$410,100

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

5B1201010050
KEN G WILLIAMSON
5452 JENKINS DR
LEMON GLACIER LT 3

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$387,750.00		\$105,300.00	\$493,050.00
2020	\$258,500.00		\$105,300.00	\$363,800.00
2019	\$258,500.00		\$105,300.00	\$363,800.00
2018	\$258,500.00		\$105,300.00	\$363,800.00
2017	\$258,500.00		\$105,300.00	\$363,800.00
2016	\$228,100.00		\$105,300.00	\$333,400.00
2015	\$228,100.00		\$105,300.00	\$333,400.00
2014	\$228,100.00		\$105,300.00	\$333,400.00
2013	\$304,100.00		\$248,400.00	\$552,500.00
2012	\$304,100.00	\$0.00	\$107,500.00	\$411,600.00
2011	\$304,100.00	\$0.00	\$107,500.00	\$411,600.00
2010	\$304,100.00	\$0.00	\$107,500.00	\$411,600.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 35.5%.

We find that no change to the 2021 assessed value of \$493,050 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$541,813.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B – Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

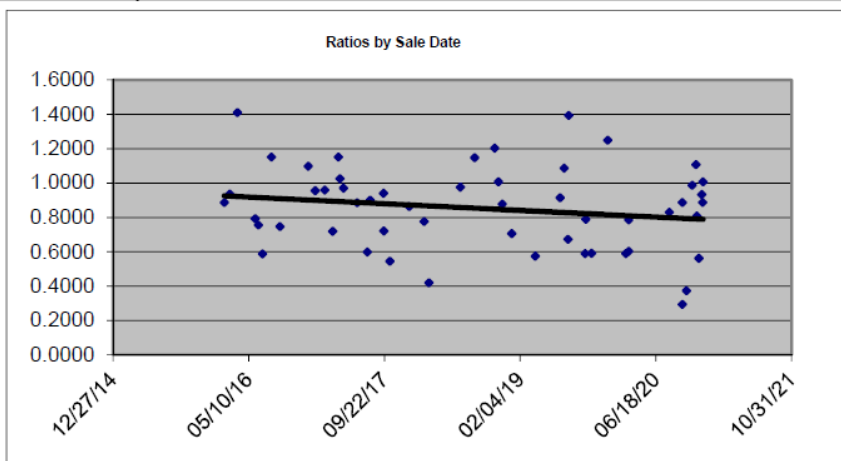
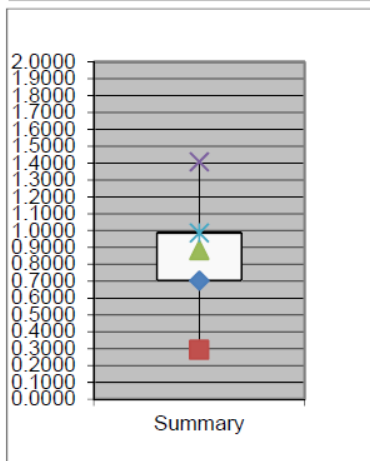
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

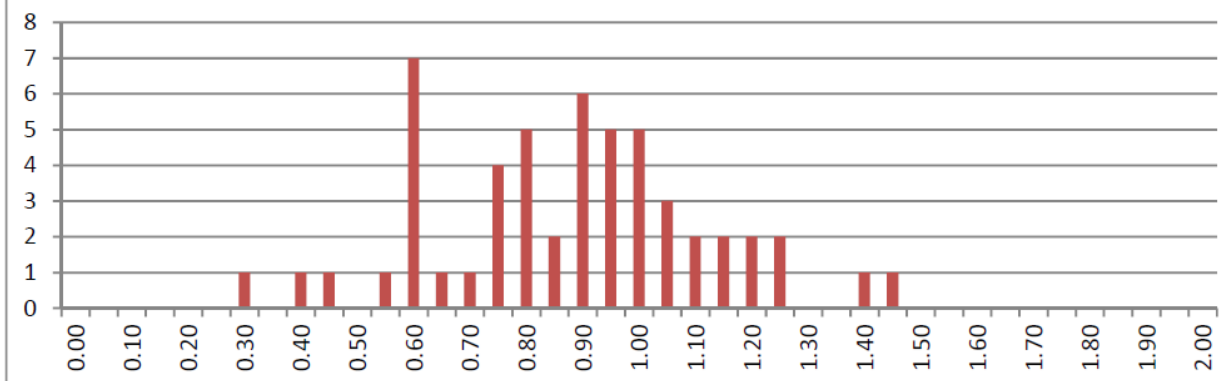
0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



Histogram of Ratio Frequency



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021 only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		
Ken Williamson					

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 0039
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201010060
Property Location	5450 JENKINS DR
Appeal No.	APL20210456
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



ASSESSOR OFFICE

APPEAL #2021-0456

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

Appellant: Ken Williamson

Location: 5448/5450/5450B Jenkins Dr

Parcel No.: 5B1201010060

Property Type: Commercial-Warehouse

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 387,500	\$ 387,500
Buildings:	Not provided	\$ 182,000	\$ 182,000
Total:	\$ 440,500	\$ 569,750	\$ 569,750

Subject Photo



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OVERVIEW

The subject is a property located within the industrial zoned area of Lemon Creek. On the property are two warehouse structures which house businesses.

Subject Characteristics:

- Land
 - 25,345 SF lot
 - Level, developed lot
- Buildings
 - Warehouse 40' x 80'
 - Average Quality
 - Average Condition
 - 3,200 SF GBA
 - Warehouse 30' x 70'
 - Average Quality
 - Average Condition
 - 2,100 SF GBA

SUBJECT PHOTOS



From street

Front

40' x 80' building

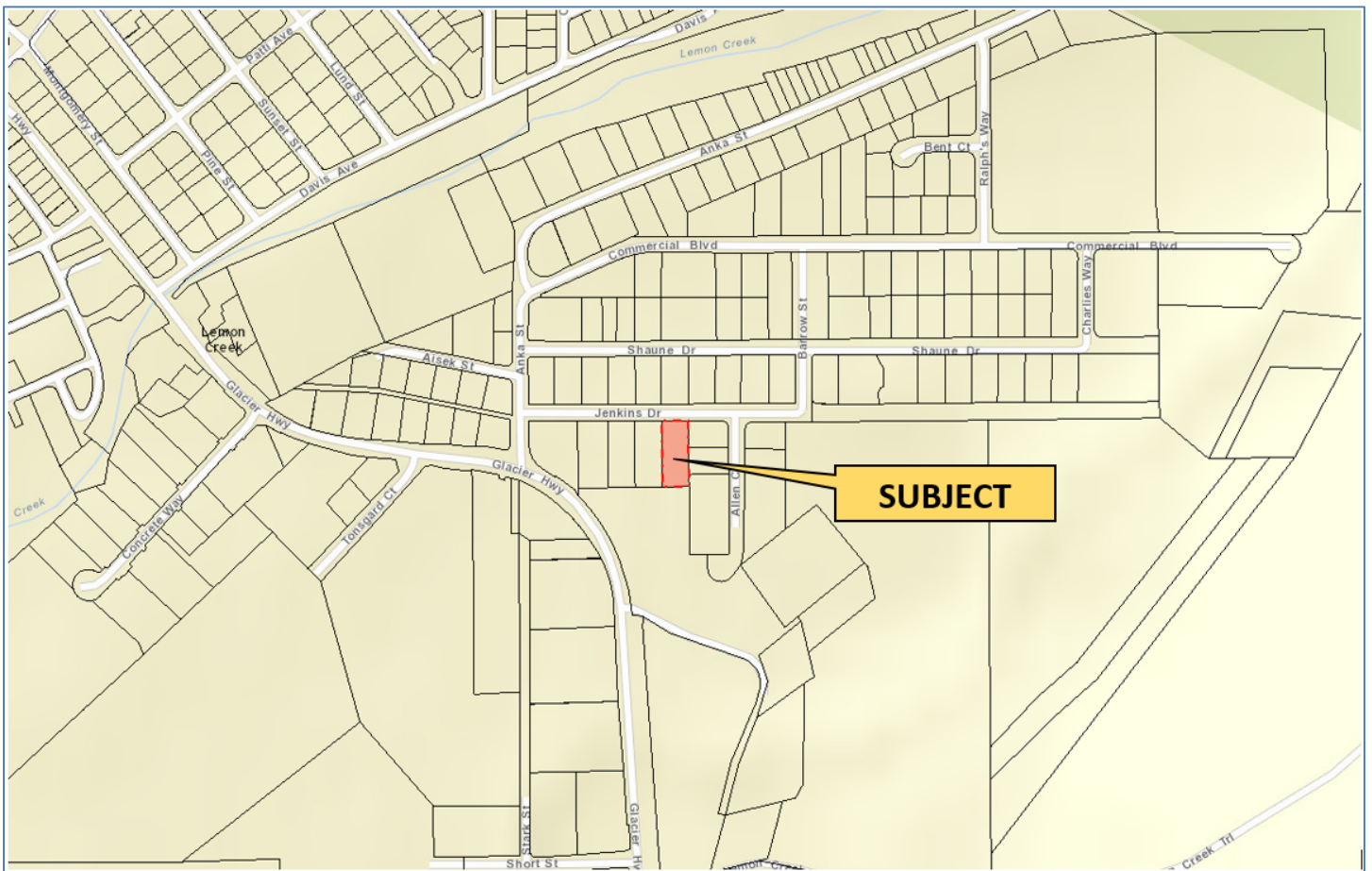


Front

30' x 70' building



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developed lot located in the industrial area of Lemon Creek. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 25,345 SF lot
- Level, developed lot

Land Values



BUILDING(S)

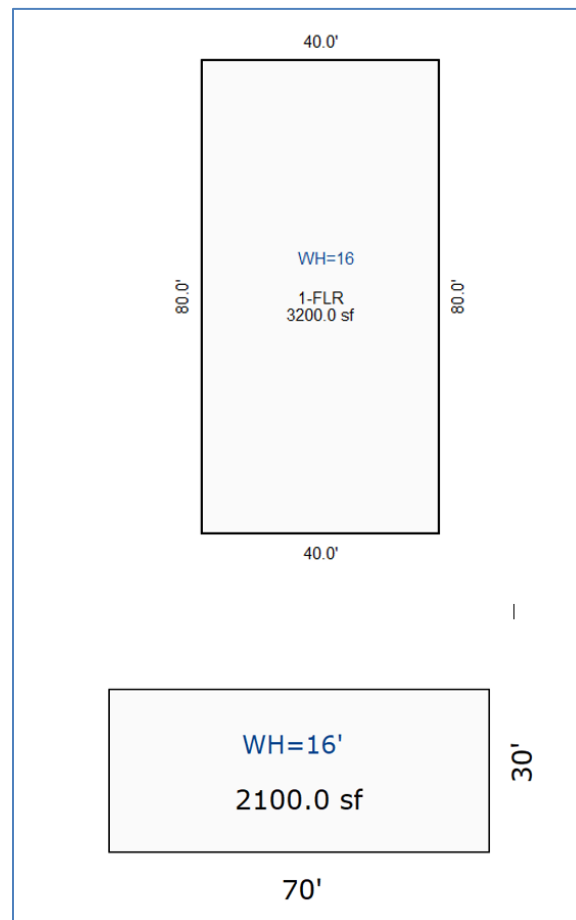
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Warehouse 40' x 80'
 - Average Quality
 - Average Condition
 - 3,200 SF GBA
- Warehouse 30' x 70'
 - Average Quality
 - Average Condition
 - 2,100 SF GBA

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

6626		Record	1
Parcel Code Number	5B1201010060	Number of Stories (Building)	01
Owner Name	WILLIAMSON KEN	Number of Sections	1
Parcel Address	5450 JENKINS DR	Perimeter	240
Effective Year Built	2016	Class	D
Year Built	1980	Height	16
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank	Average
Building Type	Shell, Industrial	Total Area	3,200.00

Base Cost		3200	33.00	105,600
Exterior Wall	Stud -Metal Siding	3200	10.07	32,213
Heating & Cooling	Heating & Cooling	3200	649.00	649
Heating & Cooling	Heat Pump	3200	11.20	35,840
Architect Fee		3200	6.50	20,800
Sub Total				\$195,101.70

Local Multiplier		1.43	[X]	\$278,995.00
Current Multiplier		1.05	[X]	\$292,945.00
Neighborhood Multiplier			[X]	\$292,945.00
Depreciation - Physical		6.00	[-]	\$17,577.00
Depreciation - Functional		10.00	[-]	\$29,295.00
Depreciation - Economic			[-]	\$0.00
Percent Complete		100.00	[-]	\$246,073.00
Cost to Cure				
Neighborhood Adjustment				

Replacement Cost less Depreciation **\$246,073**

6626		Record	3
Parcel Code Number	5B1201010060	Number of Stories (Building)	01
Owner Name	WILLIAMSON KEN	Number of Sections	1
Parcel Address	5450 JENKINS DR	Perimeter	200
Effective Year Built	2016	Class	D
Year Built	1980	Height	16
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank	Average
Building Type	Storage Garage	Total Area	2,100.00

Base Cost		2100	48.50	101,850
Exterior Wall	Stud -Metal Siding	2100	10.15	21,314
Heating & Cooling	Heating & Cooling	2100	606.00	606
Heating & Cooling	Space Heater	2100	2.30	4,830
Architect Fee		2100	6.30	13,230
Sub Total				\$141,830.48

Local Multiplier		1.43	[X]	\$202,818.00
Current Multiplier		1.05	[X]	\$212,959.00
Neighborhood Multiplier			[X]	\$212,959.00
Depreciation - Physical		6.00	[-]	\$12,778.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete		100.00	[-]	\$200,181.00
Cost to Cure				
Neighborhood Adjustment				

Replacement Cost less Depreciation **\$200,181**

Total Improvement Value	\$446,300
--------------------------------	------------------

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report 5B1201010060 KEN WILLIAMSON 5450 JENKINS DR LEMON GLACIER LT 4				
<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$387,750.00		\$182,000.00	\$569,750.00
2020	\$258,500.00		\$182,000.00	\$440,500.00
2019	\$258,500.00		\$182,000.00	\$440,500.00
2018	\$258,500.00		\$182,000.00	\$440,500.00
2017	\$258,500.00		\$79,100.00	\$337,600.00
2016	\$228,100.00		\$79,100.00	\$307,200.00
2015	\$228,100.00		\$79,100.00	\$307,200.00
2014	\$228,100.00		\$79,100.00	\$307,200.00
2013	\$304,100.00		\$97,800.00	\$401,900.00
2012	\$278,800.00	\$0.00	\$93,200.00	\$372,000.00
2011	\$278,800.00	\$0.00	\$93,200.00	\$372,000.00
2010	\$278,800.00	\$0.00	\$93,200.00	\$372,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 29.3%.

We find that no change to the 2021 assessed value of \$569,750 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$626,099.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B – Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

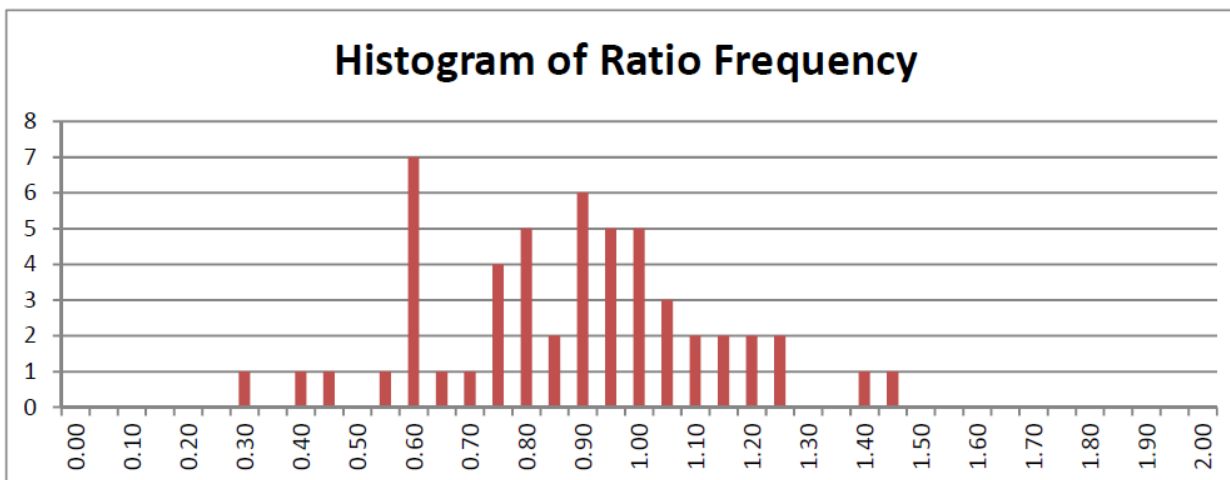
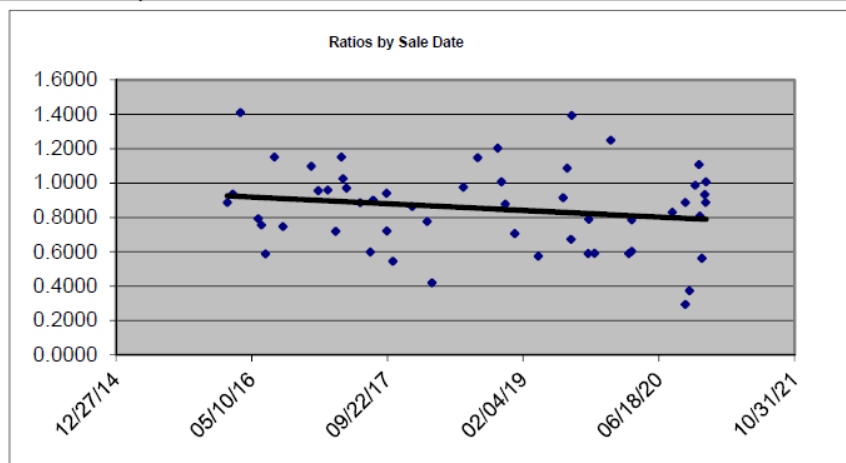
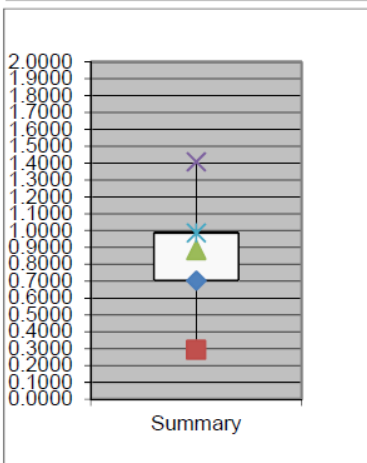
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C

(1) These were the sales available to us for our market analysis for assessment year 2021.

(2) Some sales prices are confidential, specifically when the only sale source is the buyer.

(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.

(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071

(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.

(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.

(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios

(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.

(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201010060
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201010060
PHYSICAL LOCATION: 5450 Jenkins Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201010060**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$569,750
2021 Owner estimate of value:	\$440,500
2021 Final determination:	\$569,750

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
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Purchase Price of Property:

Price	\$	Purchase Date	
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Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out			
Appraiser		Date of Review	
Comments:			
Post Review Assessment			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		
APPELLANT RESPONSE TO ACTION BY ASSESSOR My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below. ☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear. Appellant's Signature _____ Date: _____			

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION			
Scheduled BOE Date	☐ Yes ☐ No		
10-Day Letter Sent	☐ Yes ☐ No		
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 0965
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201020010
Property Location	5461 SHAUNE DR
Appeal No.	APL20210451
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0451

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 5461 Shaune Dr

Parcel No.: 5B1201020010

Property Type: Commercial

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 701,850	\$ 701,850
Buildings:	Not provided	\$ 14,400	\$ 14,400
Total:	\$ 482,300	\$ 716,250	\$ 716,250

Subject Photo



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OVERVIEW

The subject is a level, developed lot located in close proximity to the Lemon Creek commercial area. Currently it houses a drive-thru coffee stand and gravel parking.

Subject Characteristics:

- Land
 - 32,226 SF lot
 - Level, developed lot
- Building
 - Average Quality
 - Average Condition
 - 220 SF GBA

SUBJECT PHOTOS

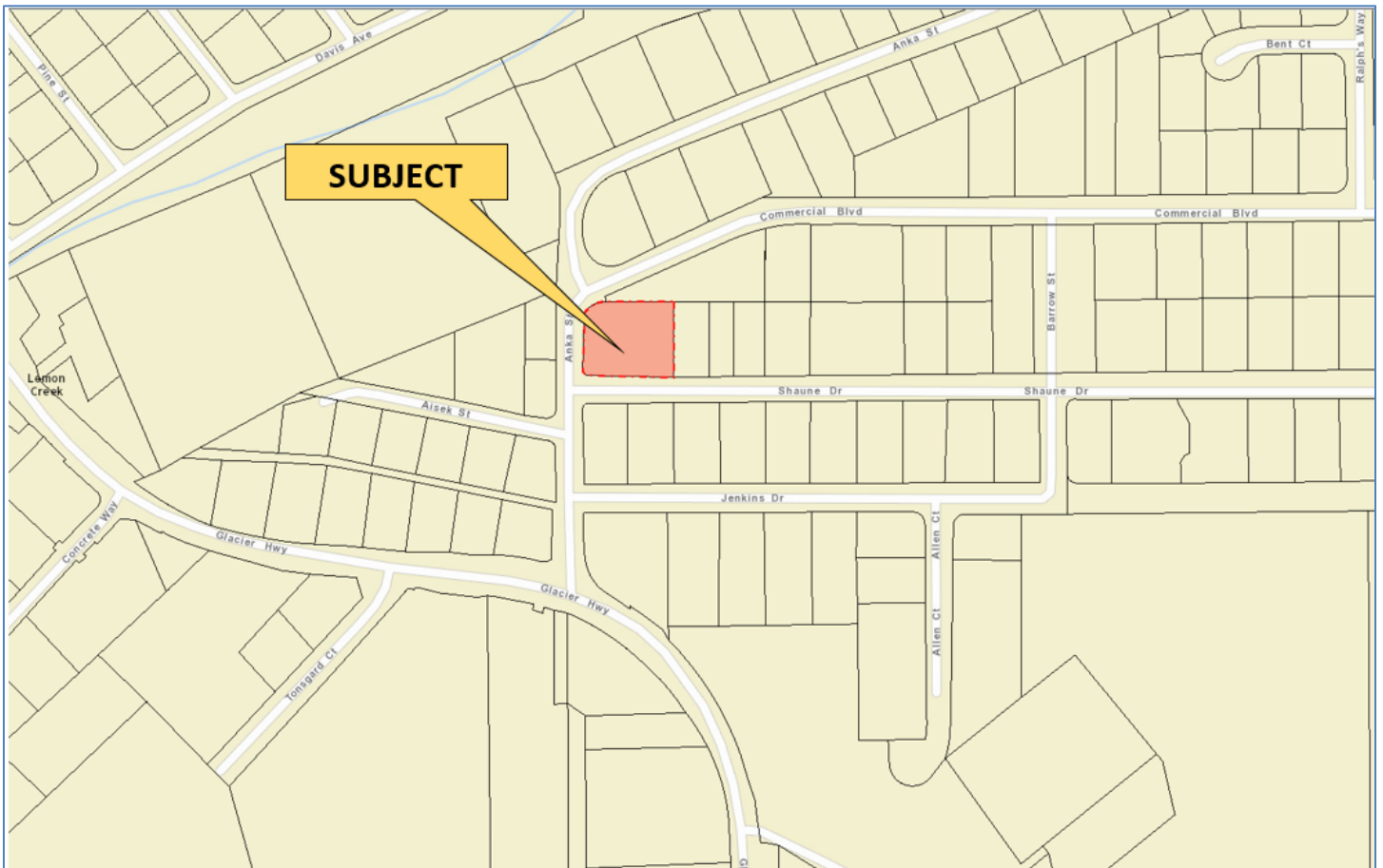


From street

Parking/drive-thru coffee booth



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

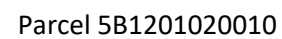
LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developed lot located in close proximity to the commercial area of Lemon Creek. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 32,226 SF lot
- Level, developed lot



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Average Quality
- Average Condition
- 220 SF GBA

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

6636		Record		1
Parcel Code Number	5B1201020010	Number of Stories (Building)		
Owner Name	WILLIAMSON KEN	Number of Sections		1
Parcel Address	5461 SHAUNE DR	Perimeter		62
Effective Year Built	2011	Class		D
Year Built	1998	Height		10
Building Model	C- 13 Stores, Commercials	Rank		Average
Building Type	Snack Bar	Total Area		220.00
Base Cost		220	70.50	15,510
Exterior Wall	Stud -Vinyl Siding	220	11.63	2,558
Heating & Cooling	Heating & Cooling	220	606.00	606
Heating & Cooling	Space Heater	220	1.98	436
Architect Fee		220	6.90	1,518
Sub Total				\$20,627.66
Local Multiplier			1.43 [X]	\$29,498.00
Current Multiplier			1.03 [X]	\$30,383.00
Neighborhood Multiplier			[X]	\$30,383.00
Depreciation - Physical			29.00 [-]	\$8,811.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete			100.00 [-]	\$21,572.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$21,572
Total Improvement Value				\$21,600

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report 5B1201020010 KEN WILLIAMSON 5461 SHAUNE DR SSG LT 1				
<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$701,850.00		\$14,400.00	\$716,250.00
2020	\$467,900.00		\$14,400.00	\$482,300.00
2019	\$467,900.00		\$14,400.00	\$482,300.00
2018	\$467,900.00		\$14,400.00	\$482,300.00
2017	\$467,900.00		\$14,400.00	\$482,300.00
2016	\$483,400.00		\$14,400.00	\$497,800.00
2015	\$483,400.00		\$14,400.00	\$497,800.00
2014	\$483,400.00		\$14,400.00	\$497,800.00
2013	\$483,400.00		\$14,400.00	\$497,800.00
2012	\$483,400.00	\$0.00	\$19,800.00	\$503,200.00
2011	\$483,400.00	\$0.00	\$19,800.00	\$503,200.00
2010	\$483,400.00	\$0.00	\$19,800.00	\$503,200.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 48.5%.

We find that no change to the 2021 assessed value of \$716,250 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$787,088.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

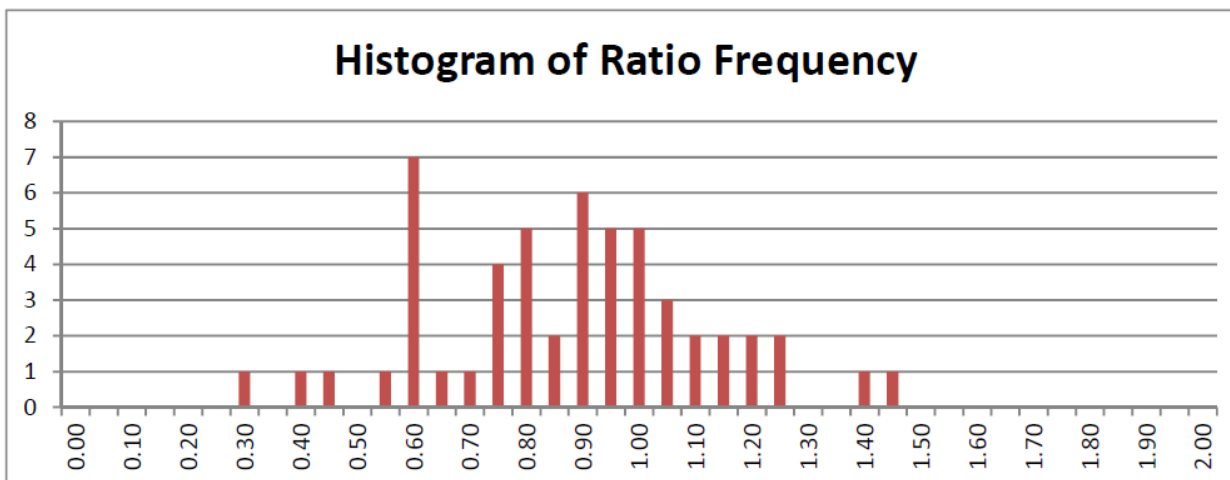
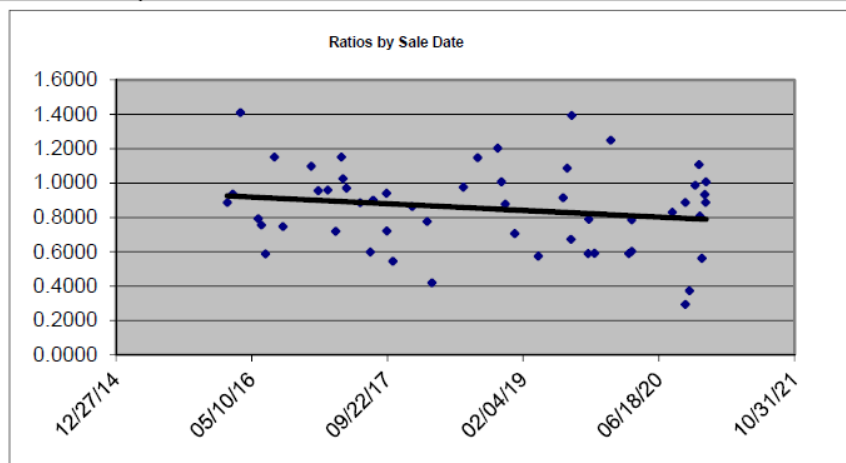
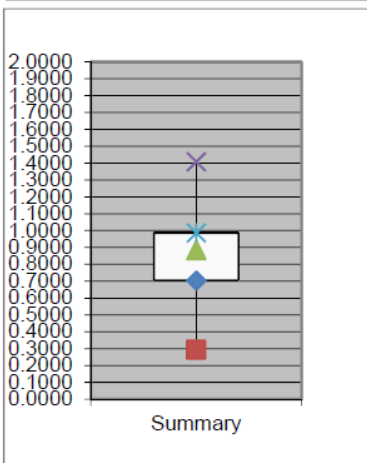
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201020010
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201020010
PHYSICAL LOCATION: 5461 Shaune Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201020010**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$716,250
2021 Owner estimate of value:	\$482,300
2021 Final determination:	\$716,250

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		
Ken Williamson					

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out			
Appraiser		Date of Review	
Comments:			
Post Review Assessment			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		
APPELLANT RESPONSE TO ACTION BY ASSESSOR My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below. ☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear. Appellant's Signature _____ Date: _____			

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION			
Scheduled BOE Date	☐ Yes ☐ No		
10-Day Letter Sent	☐ Yes ☐ No		
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 0990
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201020021
Property Location	5449 SHAUNE DR
Appeal No.	APL20210452
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0452

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 5449 Shaune Dr

Parcel No.: 5B1201020021

Property Type: Commercial - Warehouse

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 228,300	\$ 228,300
Buildings:	Not provided	\$ 126,400	\$ 126,400
Total:	\$ 278,600	\$ 354,700	\$ 354,700

Subject Photo



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OVERVIEW

The subject is a level, developed lot located in close proximity to the Lemon Creek commercial area. Currently it houses a warehouse that is utilized by multiple business. It appears that a portion of the building is utilized in a retail setting.

Subject Characteristics:

- Land
 - 12,682 SF lot
 - Level, developed lot
- Building
 - Storage warehouse 40' x 100'
 - Average Quality
 - Condition
 - 4,400 SF GBA

SUBJECT PHOTOS



Front

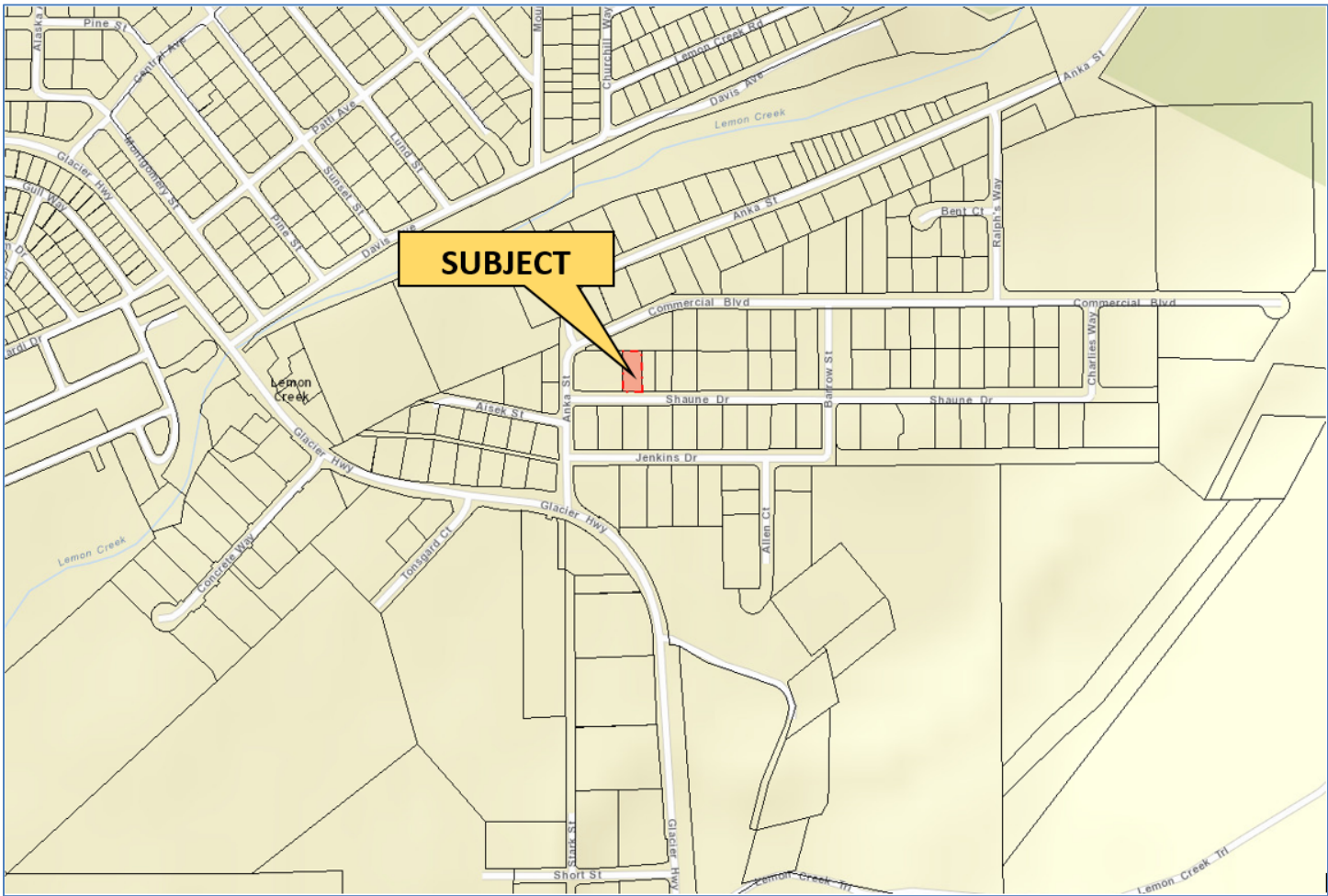
Left



Back



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

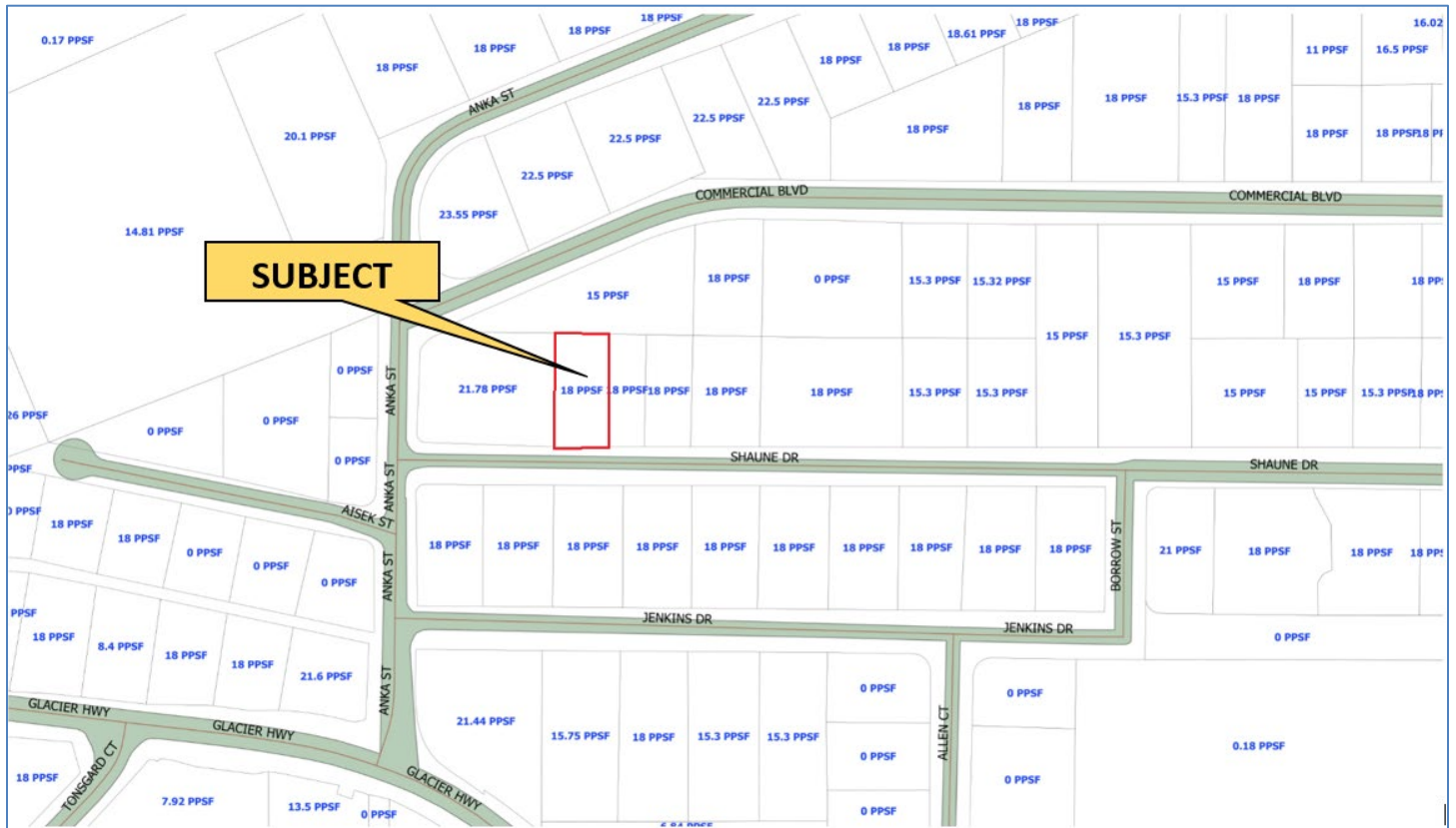
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features a level, developed lot that is in close proximity to the Lemon Creek commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 12,682 SF lot
- Level, developed lot

Land Values



BUILDING(S)

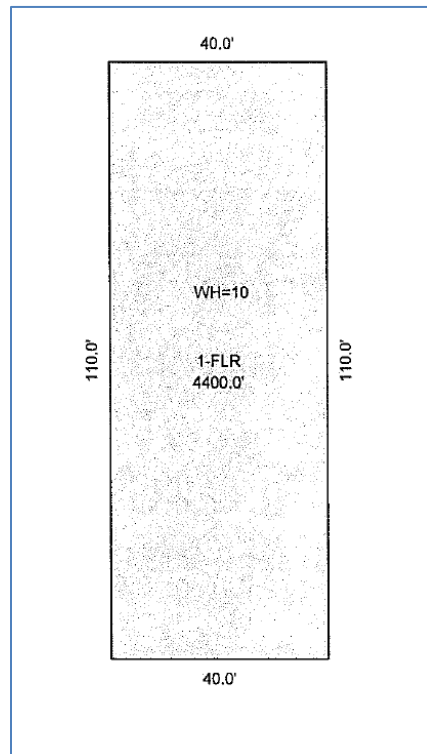
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Storage warehouse 40' x 100'
- Average Quality
- Average Condition
- 4,400 SF GBA

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

6637		Record		1
Parcel Code Number	5B1201020021	Number of Stories (Building)		
Owner Name	WILLIAMSON KEN	Number of Sections		1
Parcel Address	5449 SHAUNE DR	Perimeter		300
Effective Year Built	2001	Class		D
Year Built	1982	Height		10
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank		Average
Building Type	Storage Warehouse	Total Area		4,400.00

Base Cost		4400	36.50	160,600
Exterior Wall	Stud -Textured Plywood	4400	7.99	35,134
Heating & Cooling	Heating & Cooling	4400	606.00	606
Heating & Cooling	Space Heater	4400	2.30	10,120
Architect Fee		4400	6.50	28,600
Sub Total				\$235,060.31

Local Multiplier		1.43	[X]	\$336,136.00
Current Multiplier		1.05	[X]	\$352,943.00
Neighborhood Multiplier			[X]	\$352,943.00
Depreciation - Physical		30.00	[-]	\$105,883.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete		100.00	[-]	\$247,060.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$247,060

Total Improvement Value				\$247,100
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INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report 5B1201020021 KEN WILLIAMSON 5449 SHAUNE DR SSG LT 2A				
<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$228,300.00		\$126,400.00	\$354,700.00
2020	\$152,200.00		\$126,400.00	\$278,600.00
2019	\$152,200.00		\$126,400.00	\$278,600.00
2018	\$152,200.00		\$126,400.00	\$278,600.00
2017	\$152,200.00		\$126,400.00	\$278,600.00
2016	\$152,200.00		\$126,400.00	\$278,600.00
2015	\$152,200.00		\$126,400.00	\$278,600.00
2014	\$152,200.00		\$126,400.00	\$278,600.00
2013	\$152,200.00		\$126,400.00	\$278,600.00
2012	\$152,200.00	\$0.00	\$101,300.00	\$253,500.00
2011	\$152,200.00	\$0.00	\$101,300.00	\$253,500.00
2010	\$152,200.00	\$0.00	\$101,300.00	\$253,500.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 27.3%.

We find that no change to the 2021 assessed value of \$354,700 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$389,780.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B – Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

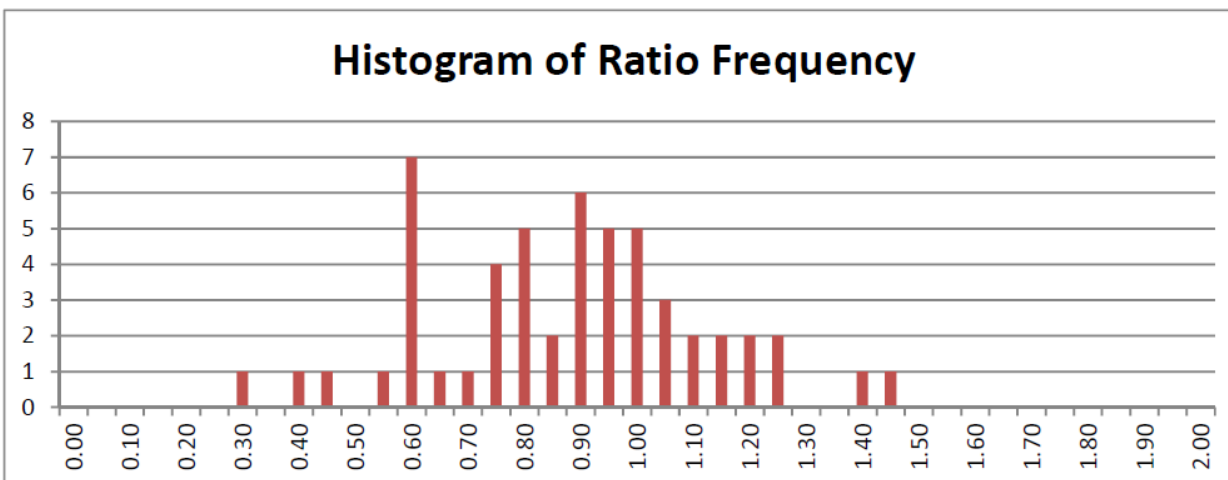
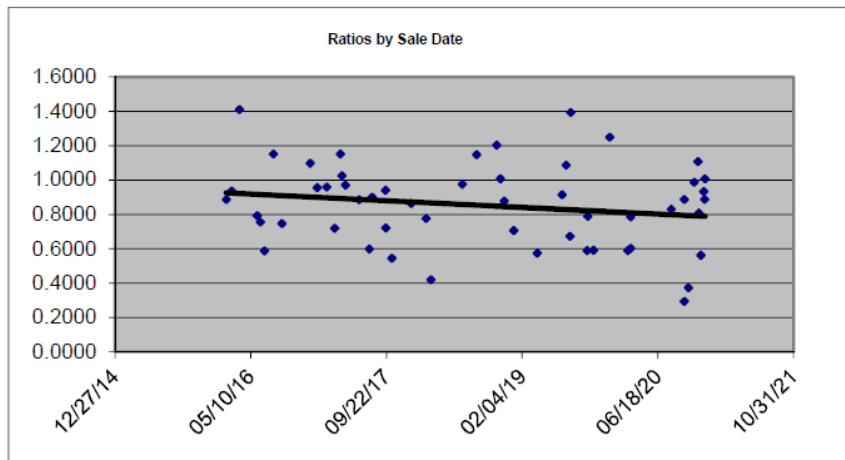
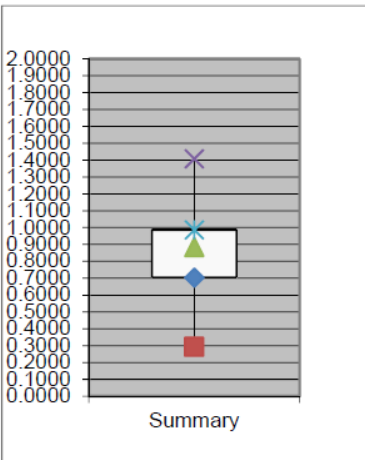
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201020021
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201020021
PHYSICAL LOCATION: 5449 Shaune Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201020021**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$354,700
2021 Owner estimate of value:	\$278,600
2021 Final determination:	\$354,700

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification: I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1016
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201020022
Property Location	5449 SHAUNE DR
Appeal No.	APL20210453
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0453

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 5449 Shaune Dr

Parcel No.: 5B1201020022

Property Type: Commercial - Warehouse

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 162,900	\$ 162,900
Buildings:	Not provided	\$ 88,200	\$ 88,200
Total:	\$ 196,800	\$ 251,100	\$ 251,100

Subject Photo



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OVERVIEW

The subject is a level, developed lot located in close proximity to the Lemon Creek commercial area. Currently it houses a warehouse/mini-storage.

Subject Characteristics:

- Land
 - 9,048 SF lot
 - Level, developed lot
- Building
 - Mini-Storage 30' x 110'
 - Fair Quality
 - Average Condition
 - 3,300 SF GBA

SUBJECT PHOTOS



Looking toward Shaune Dr

Looking toward Commercial
Blvd



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features a level, developed lot that is in close proximity to the Lemon Creek commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 9,048 SF lot
- Level, developed lot

Land Values



BUILDING(S)

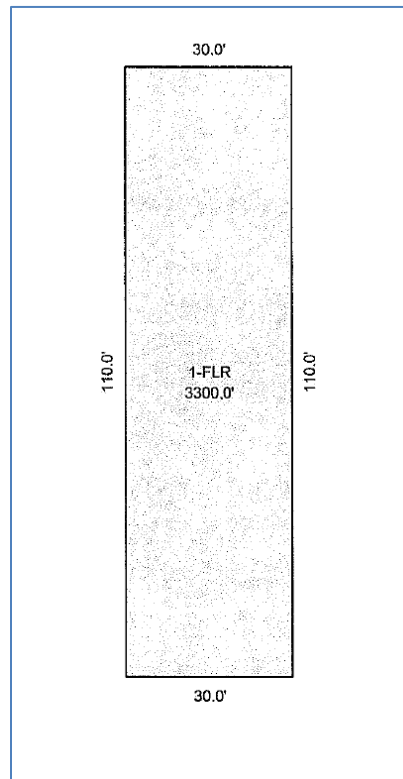
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Mini Storage 30' x 110'
- Fair Quality
- Average Condition
- 3,300 SF GBA

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

6638		Record		1
Parcel Code Number	5B1201020022	Number of Stories (Building)		01
Owner Name	WILLIAMSON KEN	Number of Sections		1
Parcel Address	5449 SHAUNE DR	Perimeter		280
Effective Year Built	2001	Class		D
Year Built	1982	Height		10
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank		Low
Building Type	Mini-Warehouse	Total Area		3,300.00
Base Cost		3300	25.25	83,325
Exterior Wall	Stud -Textured Plywood	3300	7.07	23,342
Heating & Cooling	Heating & Cooling	3300	649.00	649
Architect Fee		3300	6.10	20,130
Sub Total				\$127,445.82
Local Multiplier		1.43	[X]	\$182,248.00
Current Multiplier		1.05	[X]	\$191,360.00
Neighborhood Multiplier			[X]	\$191,360.00
Depreciation - Physical		53.00	[-]	\$101,421.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete		100.00	[-]	\$89,939.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$89,939
Total Improvement Value				\$89,900

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

5B1201020022
KEN WILLIAMSON
5449 SHAUNE DR
SSG LT 2B

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$162,900.00		\$88,200.00	\$251,100.00
2020	\$108,600.00		\$88,200.00	\$196,800.00
2019	\$108,600.00		\$88,200.00	\$196,800.00
2018	\$108,600.00		\$88,200.00	\$196,800.00
2017	\$108,600.00		\$88,200.00	\$196,800.00
2016	\$108,600.00		\$88,200.00	\$196,800.00
2015	\$108,600.00		\$88,200.00	\$196,800.00
2014	\$108,600.00		\$88,200.00	\$196,800.00
2013	\$108,600.00		\$88,200.00	\$196,800.00
2012	\$108,600.00	\$0.00	\$80,300.00	\$188,900.00
2011	\$108,600.00	\$0.00	\$80,300.00	\$188,900.00
2010	\$108,600.00	\$0.00	\$80,300.00	\$188,900.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 27.6%.

We find that no change to the 2021 assessed value of \$251,100 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$275,934.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B – Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

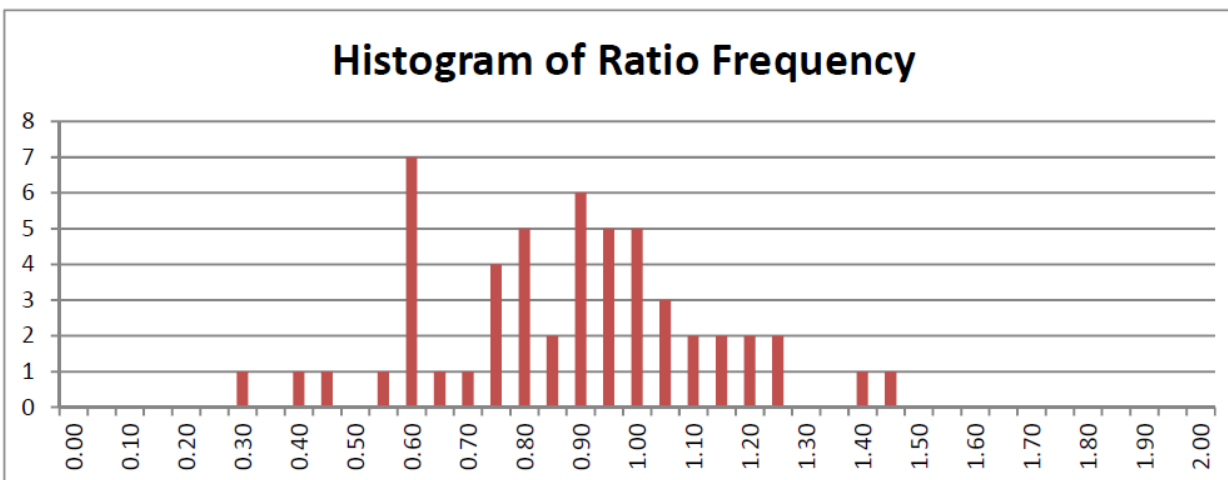
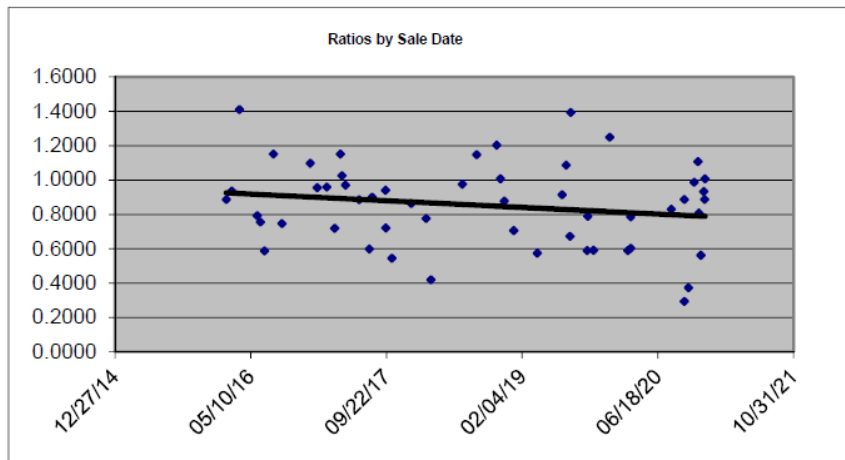
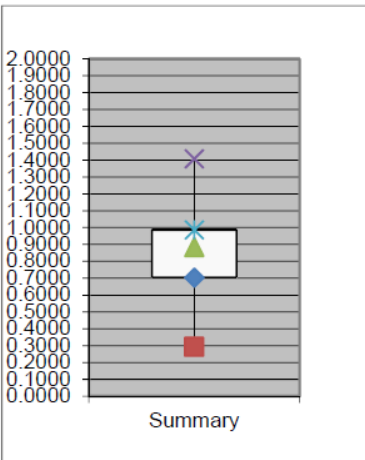
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201020022
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201020022
PHYSICAL LOCATION: 5449 Shaune Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201020022**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$251,100
2021 Owner estimate of value:	\$196,800
2021 Final determination:	\$251,100

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		
Ken Williamson					

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201020023
Property Location	5445 SHAUNE DR
Appeal No.	APL20210454
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0454

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 5445 Shaune Dr

Parcel No.: 5B1201020023

Property Type: Commercial - Warehouse

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 199,500	\$ 199,500
Buildings:	Not provided	\$ 139,600	\$ 139,600
Total:	\$ 272,600	\$ 339,100	\$ 339,100

Subject Photo



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OVERVIEW

The subject is a level, developed lot located in close proximity to the Lemon Creek commercial area. Currently it houses a small businesses.

Subject Characteristics:

- Land
 - 11,083 SF lot
 - Level, developed lot
- Building
 - Storage Warehouse 30' x 125'
 - Average Quality
 - Average Condition
 - 3,750 SF GBA

SUBJECT PHOTOS

From Shaune Dr



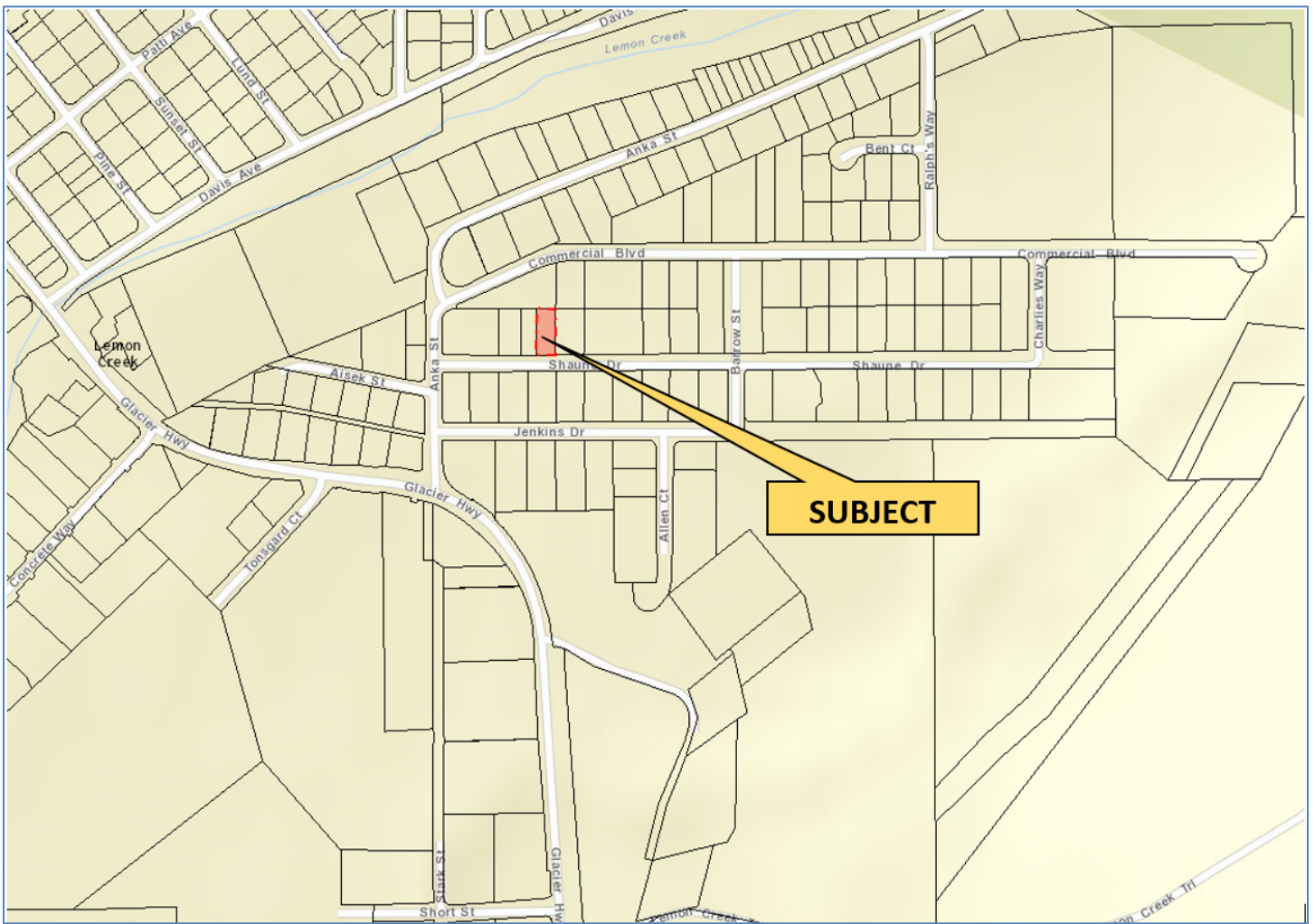
Side



Back



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

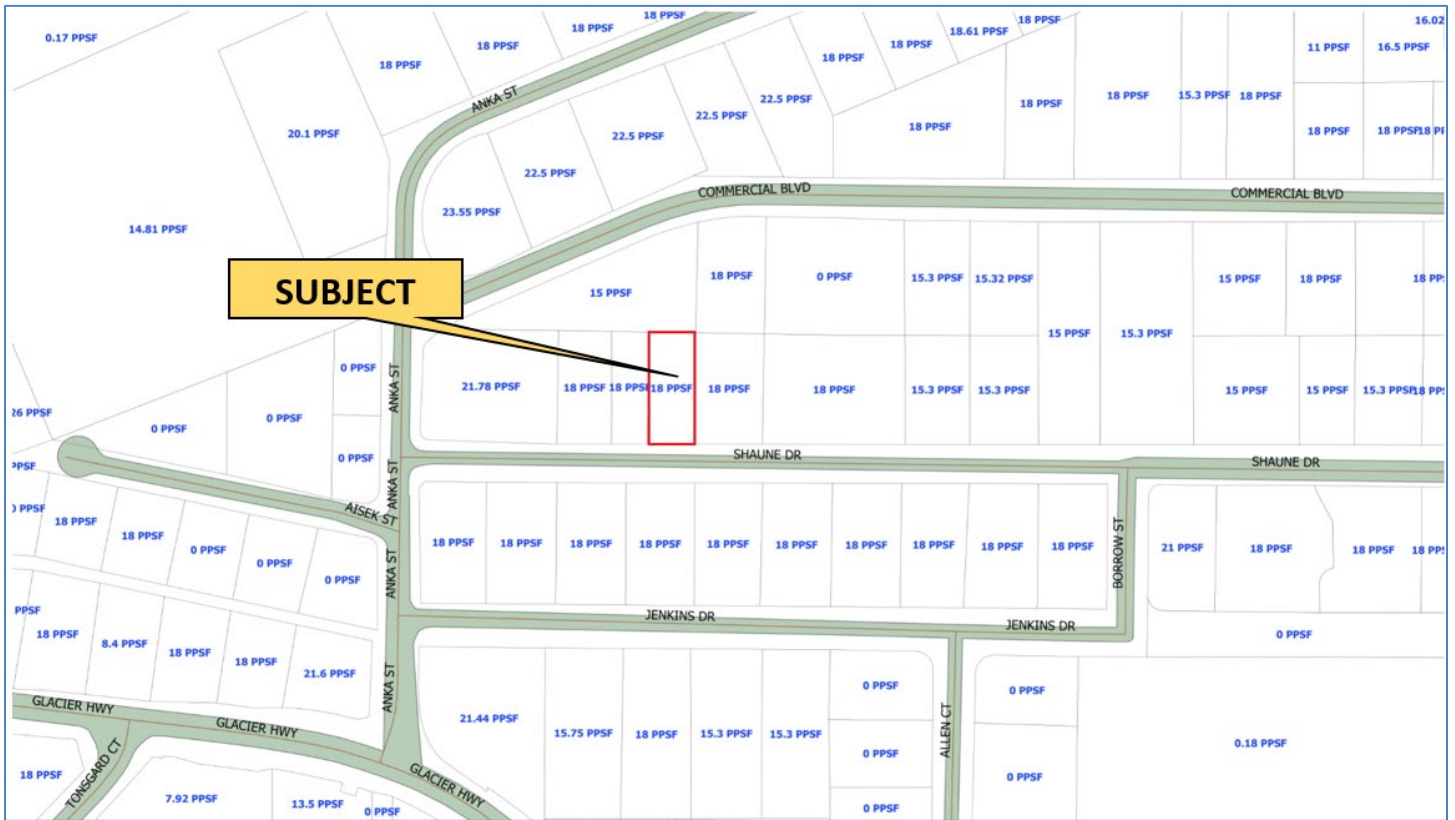
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features a level, developed lot that is in close proximity to the Lemon Creek commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 11,083 SF lot
- Level, developed lot

Land Values



BUILDING(S)

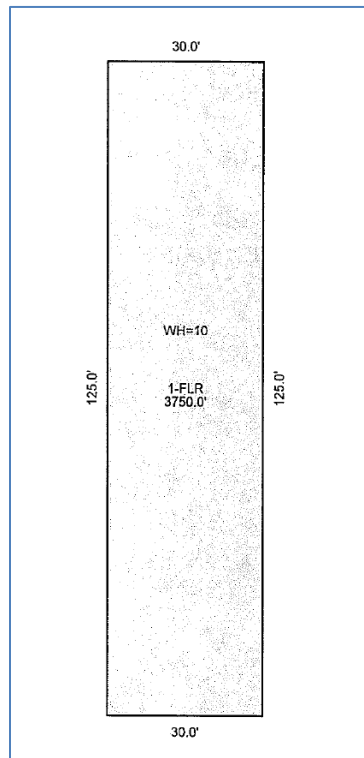
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Storage Warehouse 30' x 125'
- Average Quality
- Average Condition
- 3,750 SF GBA

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

6639		Record		1
Parcel Code Number	5B1201020023	Number of Stories (Building)		01
Owner Name	WILLIAMSON KEN	Number of Sections		1
Parcel Address	5445 SHAUNE DR	Perimeter		310
Effective Year Built	2001	Class		D
Year Built	1982	Height		10
Building Model	C- 14 Garages, Industrials, Lofts, Warehouses	Rank		Average
Building Type	Storage Warehouse	Total Area		3,750.00
Base Cost		3750	36.50	136,875
Exterior Wall	Stud -Textured Plywood	3750	7.99	29,944
Heating & Cooling	Heating & Cooling	3750	606.00	606
Heating & Cooling	Space Heater	3750	2.30	8,625
Architect Fee		3750	6.50	24,375
Sub Total				\$200,425.01
Local Multiplier		1.43	[X]	\$286,608.00
Current Multiplier		1.05	[X]	\$300,938.00
Neighborhood Multiplier			[X]	\$300,938.00
Depreciation - Physical		30.00	[-]	\$90,281.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete		100.00	[-]	\$210,657.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$210,657
Total Improvement Value				\$210,700

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

5B1201020023
KEN WILLIAMSON
5445 SHAUNE DR
SSG LT 2C

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$199,500.00		\$139,600.00	\$339,100.00
2020	\$133,000.00		\$139,600.00	\$272,600.00
2019	\$133,000.00		\$139,600.00	\$272,600.00
2018	\$133,000.00		\$139,600.00	\$272,600.00
2017	\$133,000.00		\$139,600.00	\$272,600.00
2016	\$133,000.00		\$139,600.00	\$272,600.00
2015	\$133,000.00		\$139,600.00	\$272,600.00
2014	\$133,000.00		\$139,600.00	\$272,600.00
2013	\$133,000.00		\$139,600.00	\$272,600.00
2012	\$133,000.00	\$0.00	\$130,200.00	\$263,200.00
2011	\$133,000.00	\$0.00	\$130,200.00	\$263,200.00
2010	\$133,000.00	\$0.00	\$130,200.00	\$263,200.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 24.4%.

We find that no change to the 2021 assessed value of \$339,100 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$372,637.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B – General Information

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

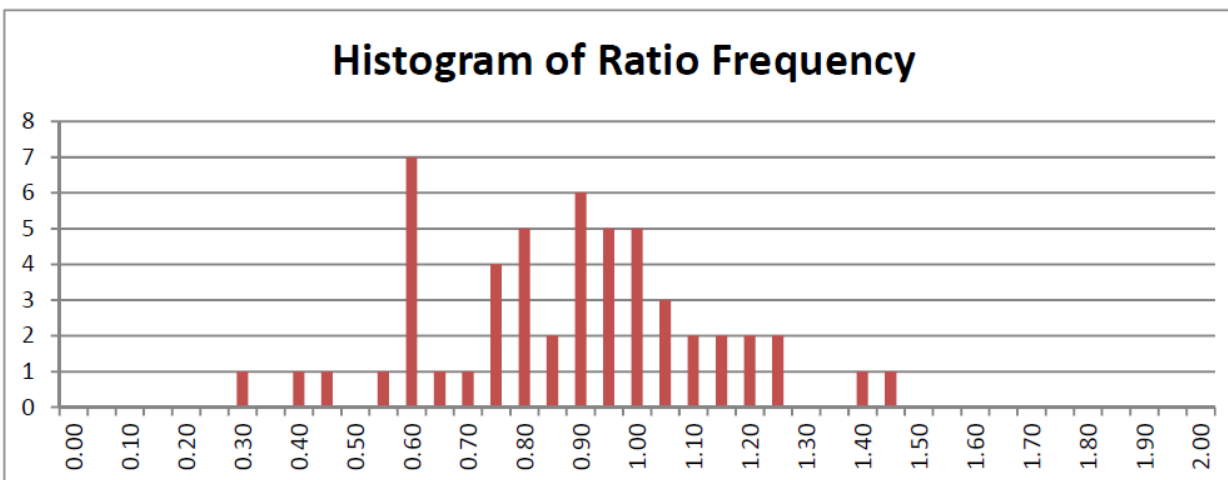
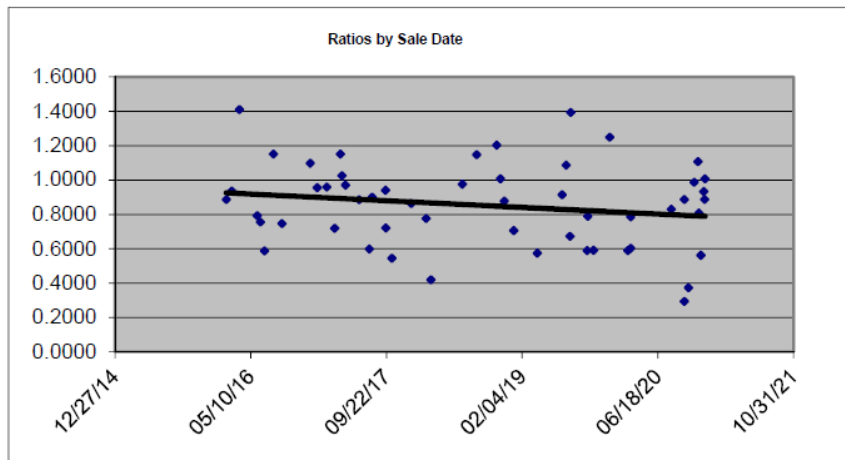
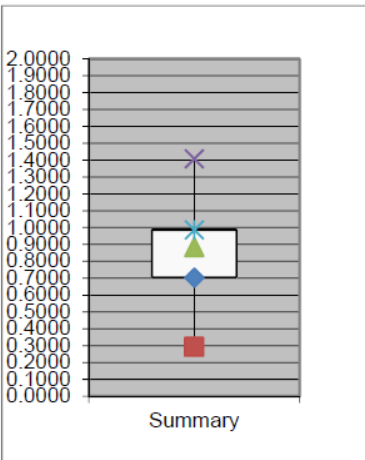
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021 only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201020023
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201020023
PHYSICAL LOCATION: 5445 Shaune Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201020023**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$339,100
2021 Owner estimate of value:	\$272,600
2021 Final determination:	\$339,100

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd	Mailing Address	Same
	Juneau, Ak 99801		

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Purchase Price of Property:

Price	\$	Purchase Date	
-------	----	---------------	--

Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature

Ken Williamson

Date

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
<u>Amount of reduction:</u>		<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201020030
Property Location	SHAUNE DR
Appeal No.	APL20210455
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0455

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Shaune Dr

Parcel No.: 5B1201020030

Property Type: Commercial - Vacant

Appellant's basis for appeal: (Reasons as stated on Petition for Review form)

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 295,350	\$ 295,350
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 196,900	\$ 295,350	\$ 295,350

Subject Photo



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OVERVIEW

The subject is a level, developed lot located in close proximity to the Lemon Creek commercial area. It is currently a vacant gravel lot.

Subject Characteristics:

- Land
 - 16,408 SF lot
 - Level, developable lot
- Building
 - None

SUBJECT PHOTOS

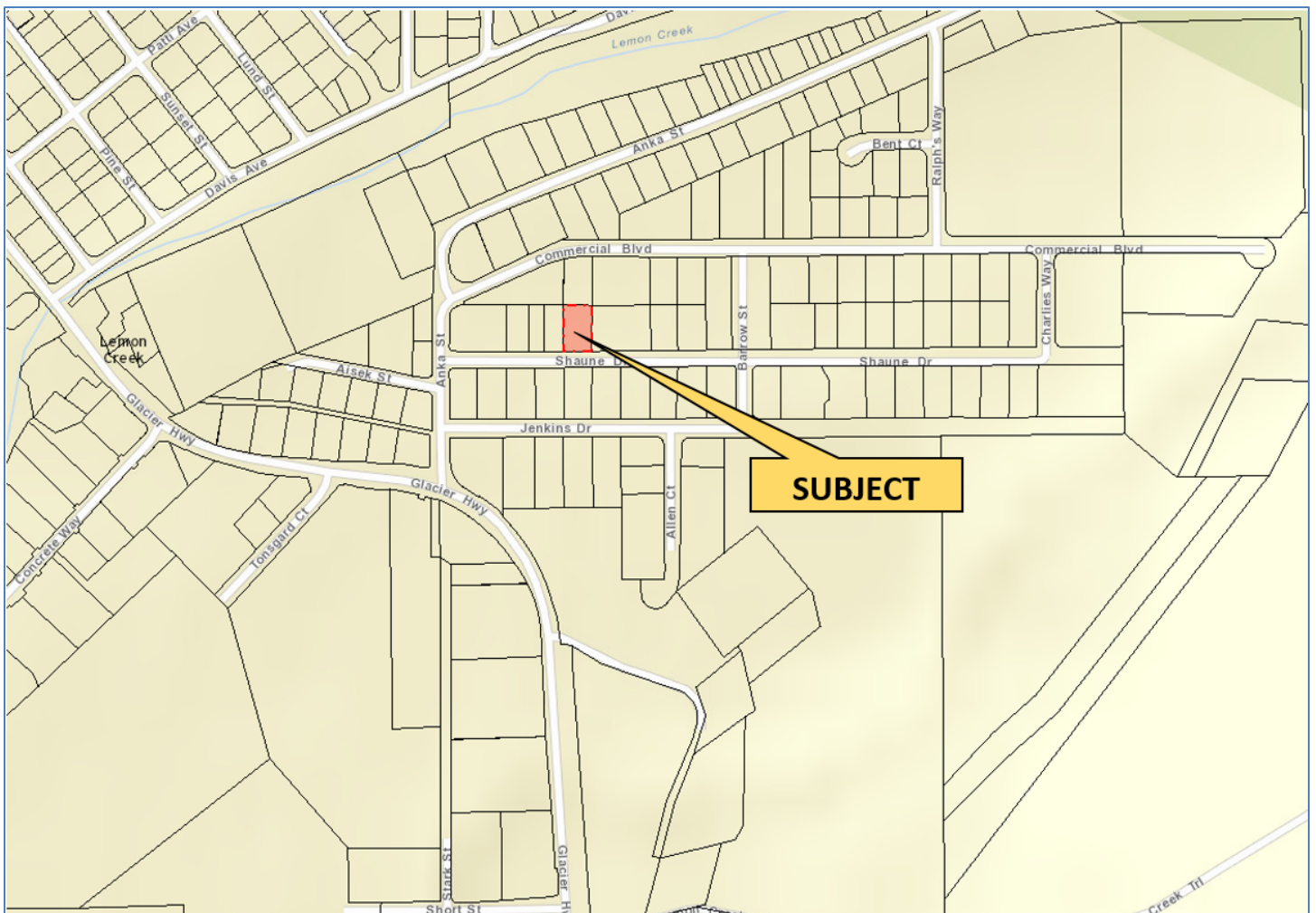


From Shaune Dr

Looking toward Shaune Dr



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

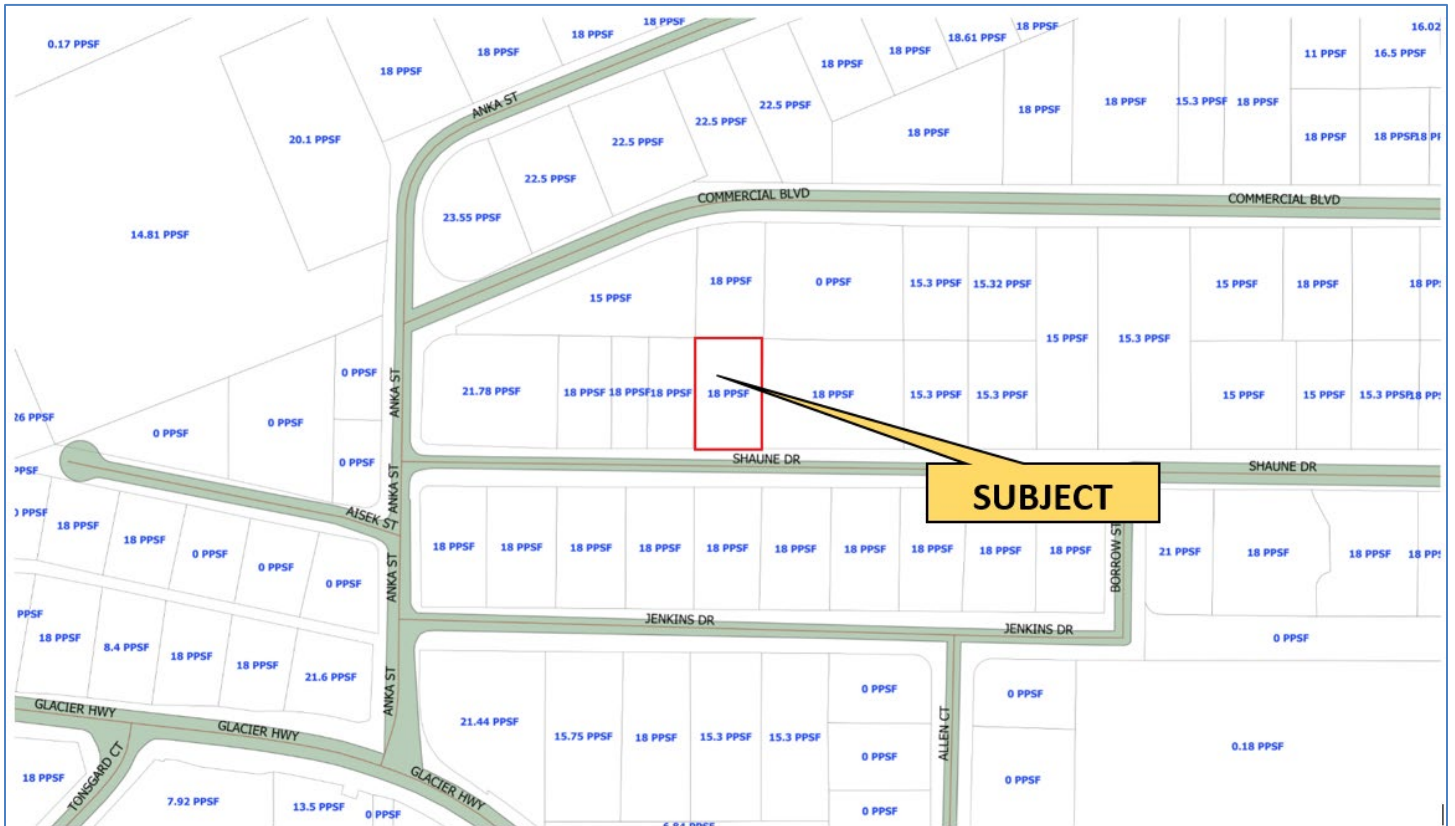
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features a level, developed lot that is in close proximity to the Lemon Creek commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 16,408 SF lot
- Level, developed lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

5B1201020030
KEN WILLIAMSON
SHAUNE DR
SSG LT 3

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$295,350.00			\$295,350.00
2020	\$196,900.00			\$196,900.00
2019	\$196,900.00			\$196,900.00
2018	\$196,900.00			\$196,900.00
2017	\$196,900.00			\$196,900.00
2016	\$196,900.00			\$196,900.00
2015	\$196,900.00			\$196,900.00
2014	\$196,900.00			\$196,900.00
2013	\$196,900.00			\$196,900.00
2012	\$196,900.00	\$0.00	\$0.00	\$196,900.00
2011	\$196,900.00	\$0.00	\$0.00	\$196,900.00
2010	\$196,900.00	\$0.00	\$0.00	\$196,900.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 50%.

We find that no change to the 2021 assessed value of \$295,350 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$492,250.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B – Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

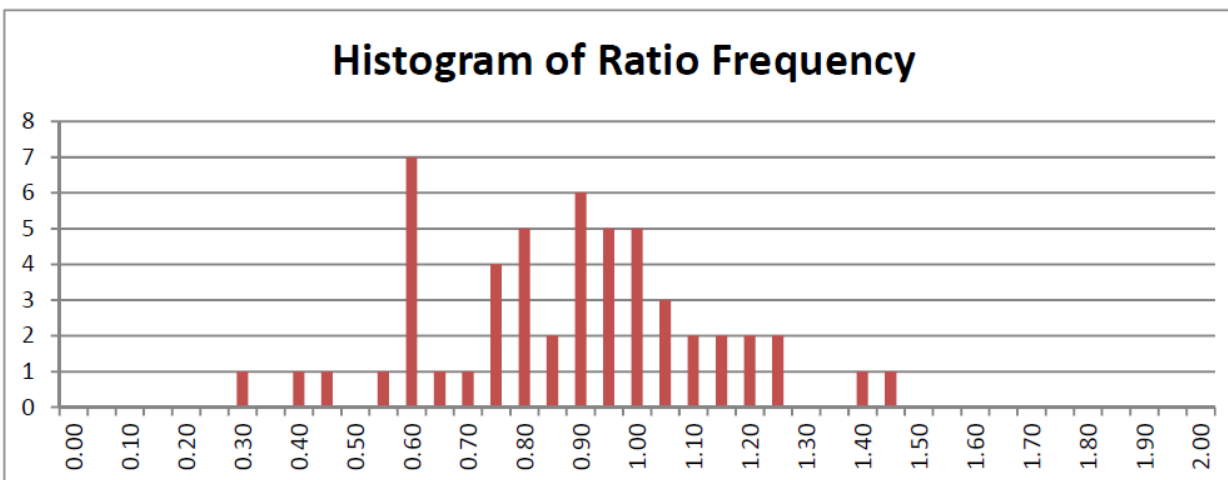
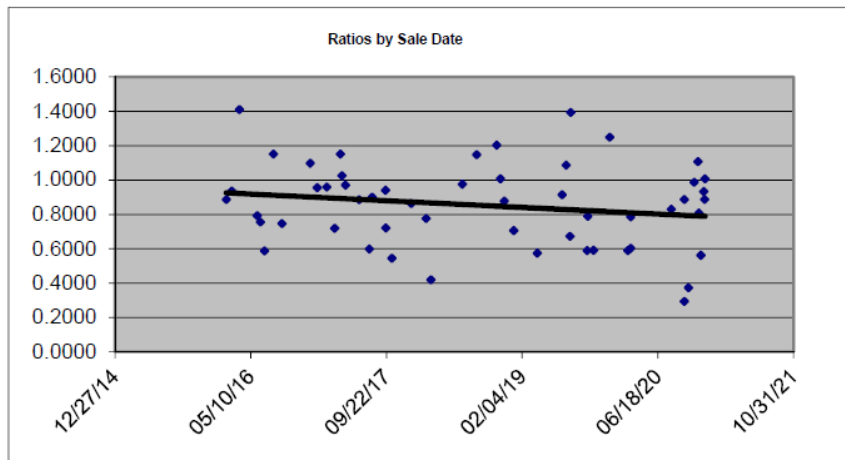
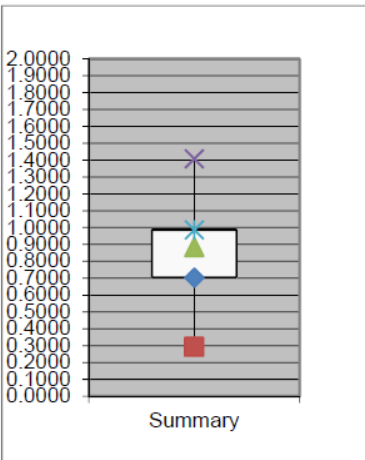
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201020030
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201020030
PHYSICAL LOCATION: Shaune Dr

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201020030**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$295,350
2021 Owner estimate of value:	\$196,900
2021 Final determination:	\$295,350

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd	Mailing Address	Same
	Juneau, Ak 99801		

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
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Purchase Price of Property:

Price	\$	Purchase Date	
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Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
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Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature	<i>Ken Williamson</i>	Date	
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Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN G WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1091
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201390010
Property Location	COMMERCIAL BLVD
Appeal No.	APL20210458
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0458

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken G Williamson

Location: NBN Commercial Blvd

Parcel No.: 5B1201390010

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 435,000	\$ 435,000
Buildings:	Not provided	\$ 0	\$0
Total:	\$ 290,000	\$ 435,000	\$ 435,000

Subject Photo



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OVERVIEW

The subject is a corner arterial level, developed lot located in close proximity to the Lemon Creek commercial area. Currently a vacant gravel lot.

Subject Characteristics:

- Land
 - 28,995 SF lot
 - Level, developed lot
- Building
 - None

SUBJECT PHOTOS



Vacant

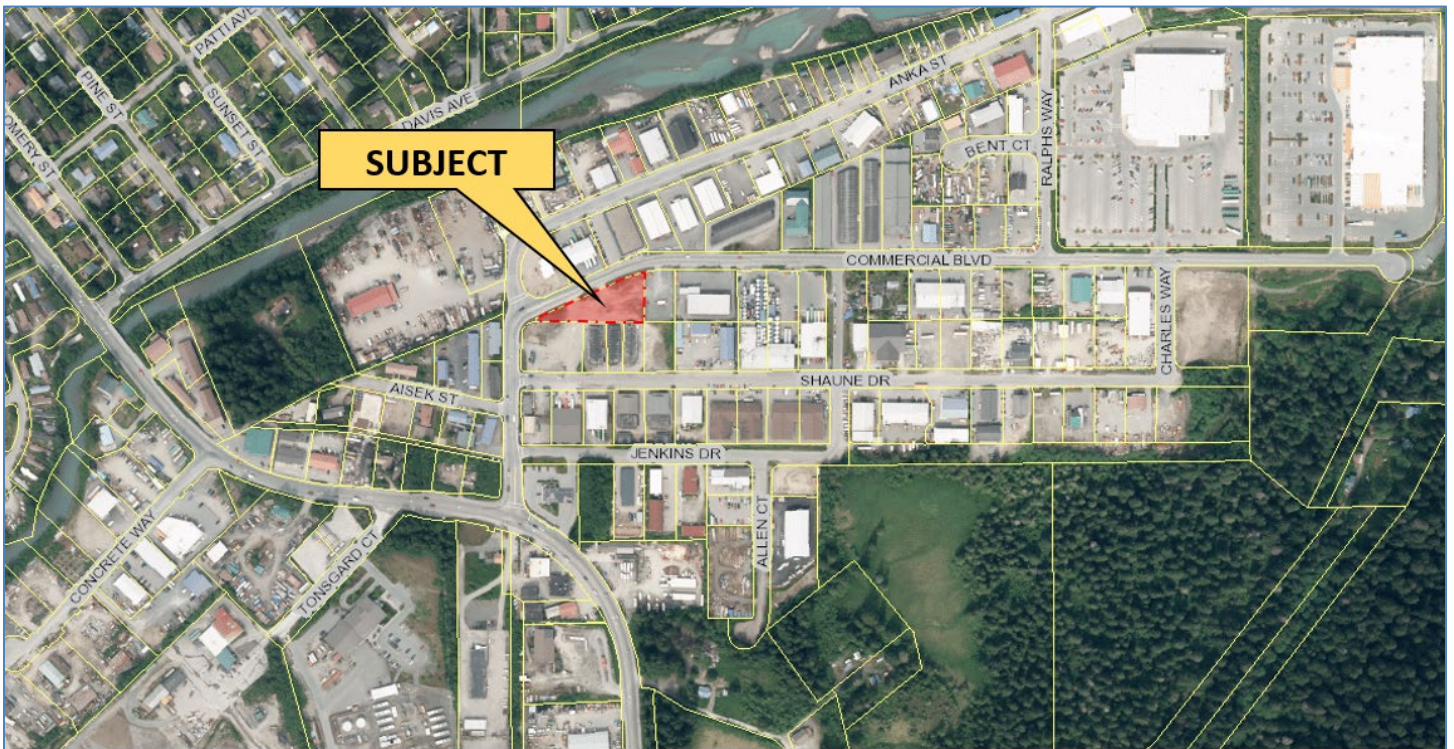
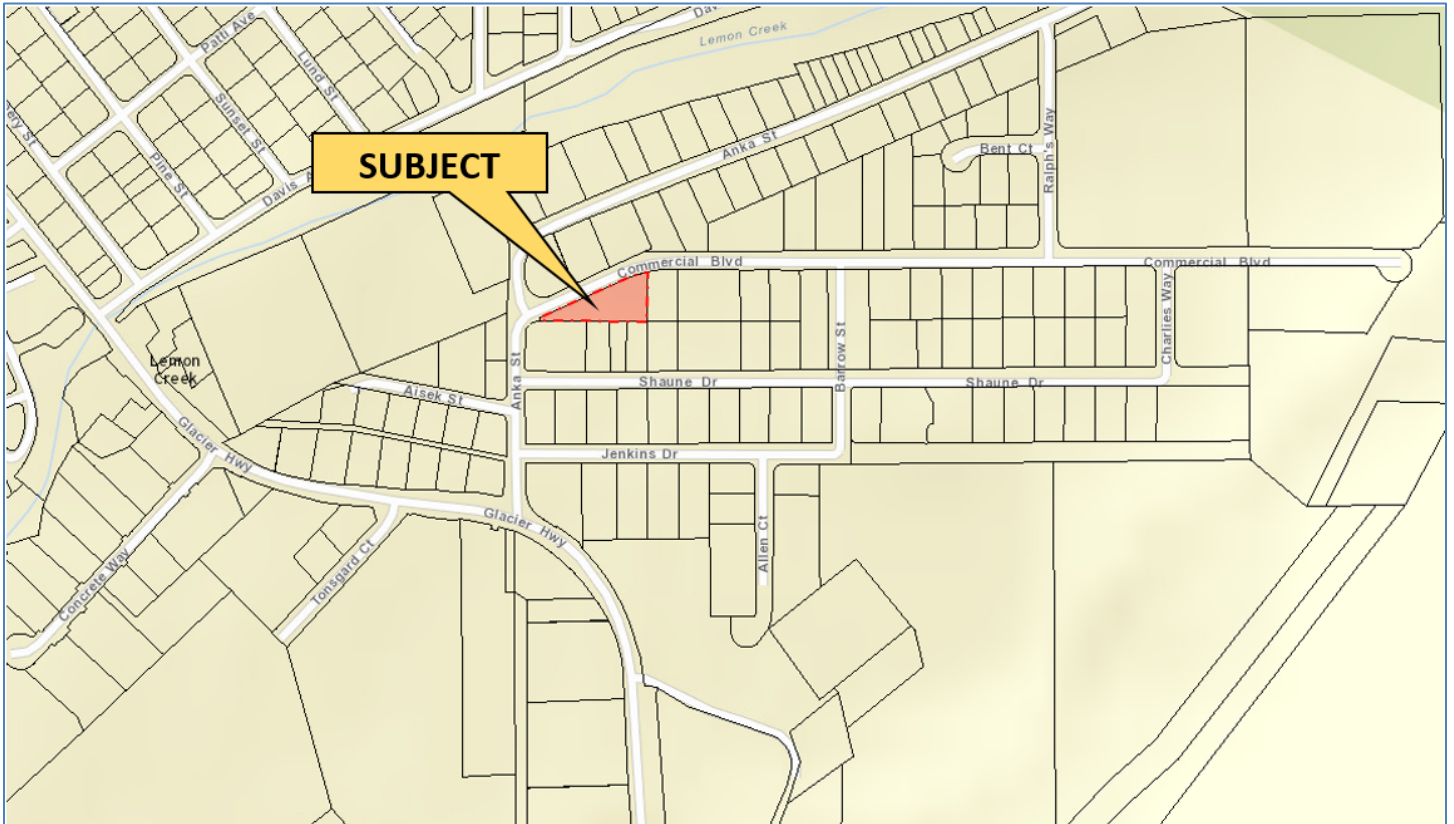
Vacant



Vacant



AREA MAP & AERIAL



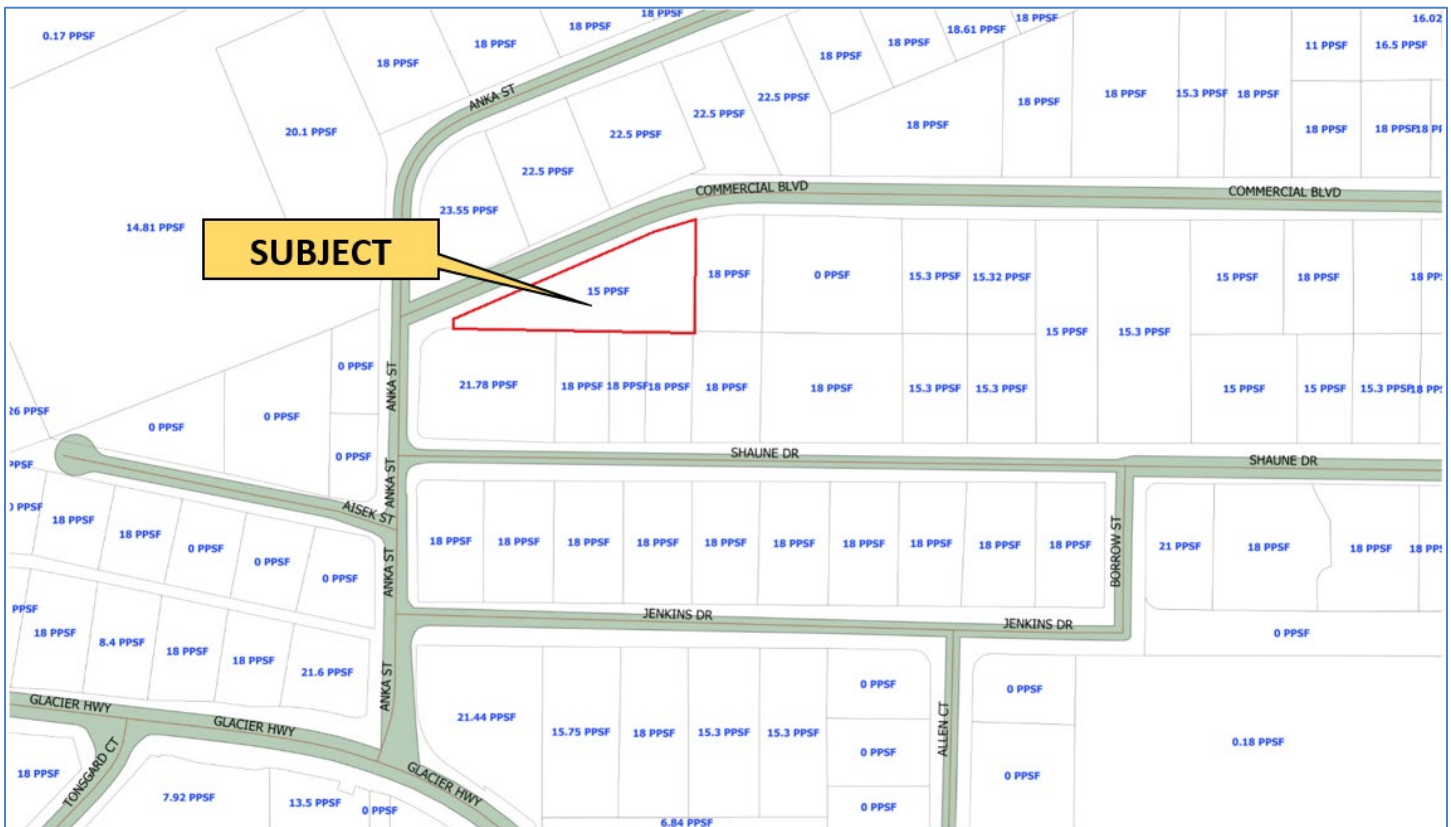
All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

The subject site features a level, developed lot that is in close proximity to the Lemon Creek commercial area. The site offers high visibility as it is a corner lot along the Commercial Blvd arterial. The subject parcel's land value is equitable and is not excessive.

- 28,995 SF lot
- Level, developed lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

5B1201390010
KEN G WILLIAMSON
COMMERCIAL BLVD
SSG IV LT 39

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$435,000.00			\$435,000.00
2020	\$290,000.00			\$290,000.00
2019	\$290,000.00			\$290,000.00
2018	\$290,000.00			\$290,000.00
2017	\$290,000.00			\$290,000.00
2016	\$290,000.00			\$290,000.00
2015	\$290,000.00			\$290,000.00
2014	\$290,000.00			\$290,000.00
2013	\$290,000.00			\$290,000.00
2012	\$290,000.00	\$0.00	\$0.00	\$290,000.00
2011	\$290,000.00	\$0.00	\$0.00	\$290,000.00
2010	\$290,000.00	\$0.00	\$0.00	\$290,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 50%.

We find that no change to the 2021 assessed value of \$435,000 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$725,000.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

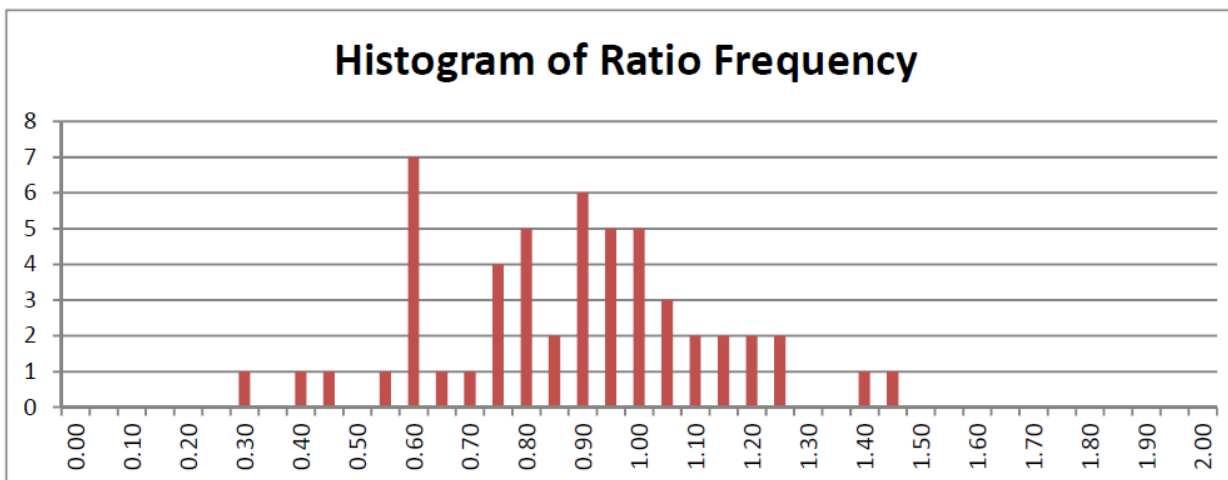
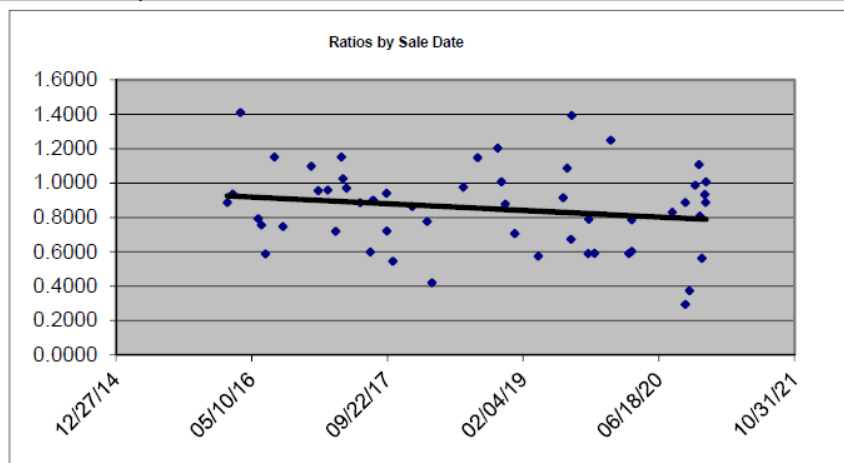
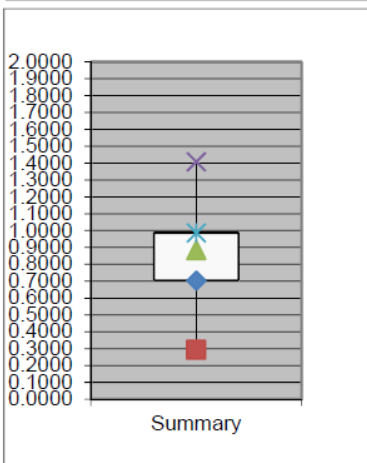
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C

(1) These were the sales available to us for our market analysis for assessment year 2021.

(2) Some sales prices are confidential, specifically when the only sale source is the buyer.

(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.

(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071

(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.

(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.

(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios

(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.

(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201390010
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201390010
PHYSICAL LOCATION: Commercial Blvd

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201390010**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$435,000
2021 Owner estimate of value:	\$290,000
2021 Final determination:	\$435,000

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		
Ken Williamson					

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN G WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	5B1201390020
Property Location	5446 COMMERCIAL BLVD
Appeal No.	APL20210459
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0459

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken G Williamson

Location: 5446 Commercial Blvd

Parcel No.: 5B1201390020

Property Type: Commercial - Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 289,950	\$ 289,950
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 193,300	\$ 289,950	\$ 289,950

Subject Photo



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OVERVIEW

The subject is a level, developed lot located in close proximity to the Lemon Creek commercial area. Currently it is a vacant gravel lot.

Subject Characteristics:

- Land
 - 16,108 SF lot
 - Level, developed lot
- Building
 - None

SUBJECT PHOTOS



Vacant

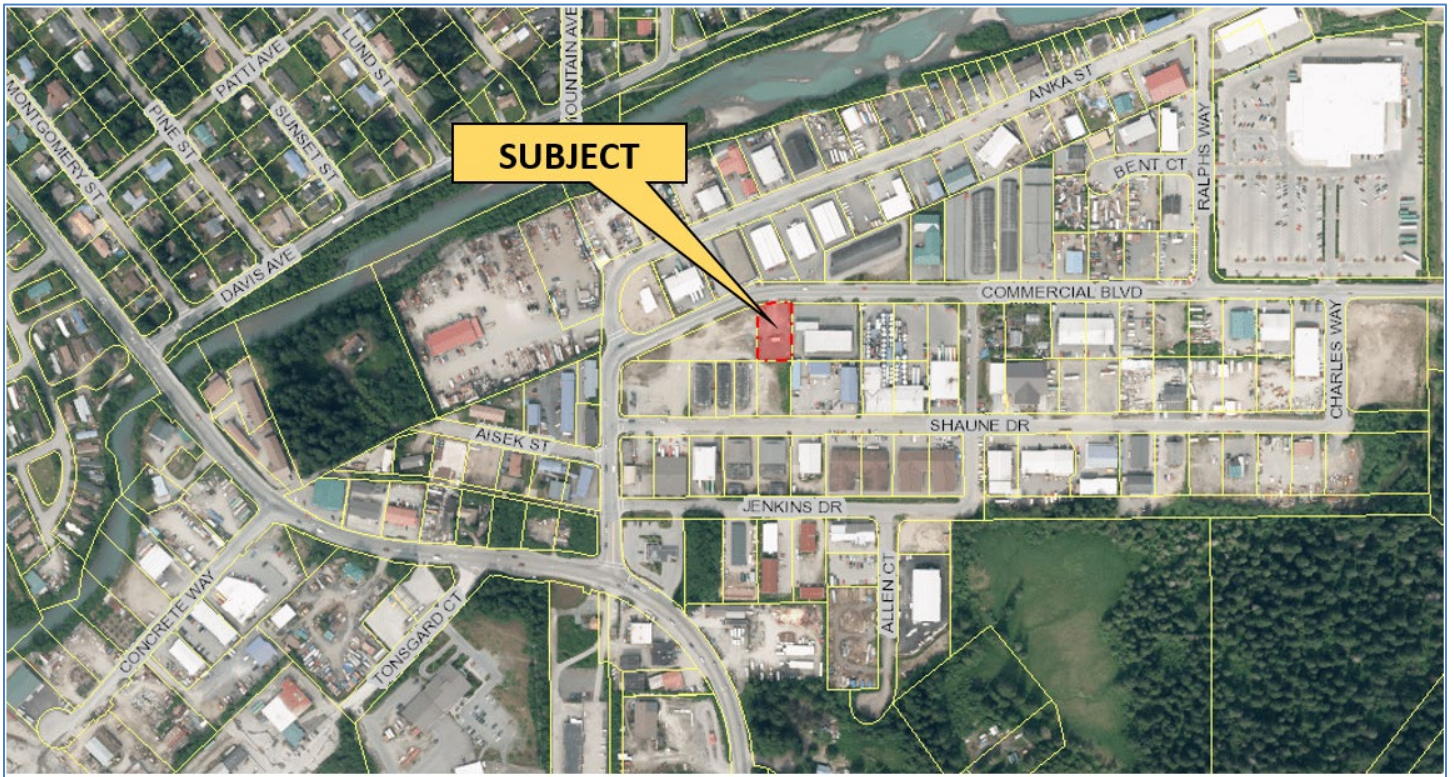
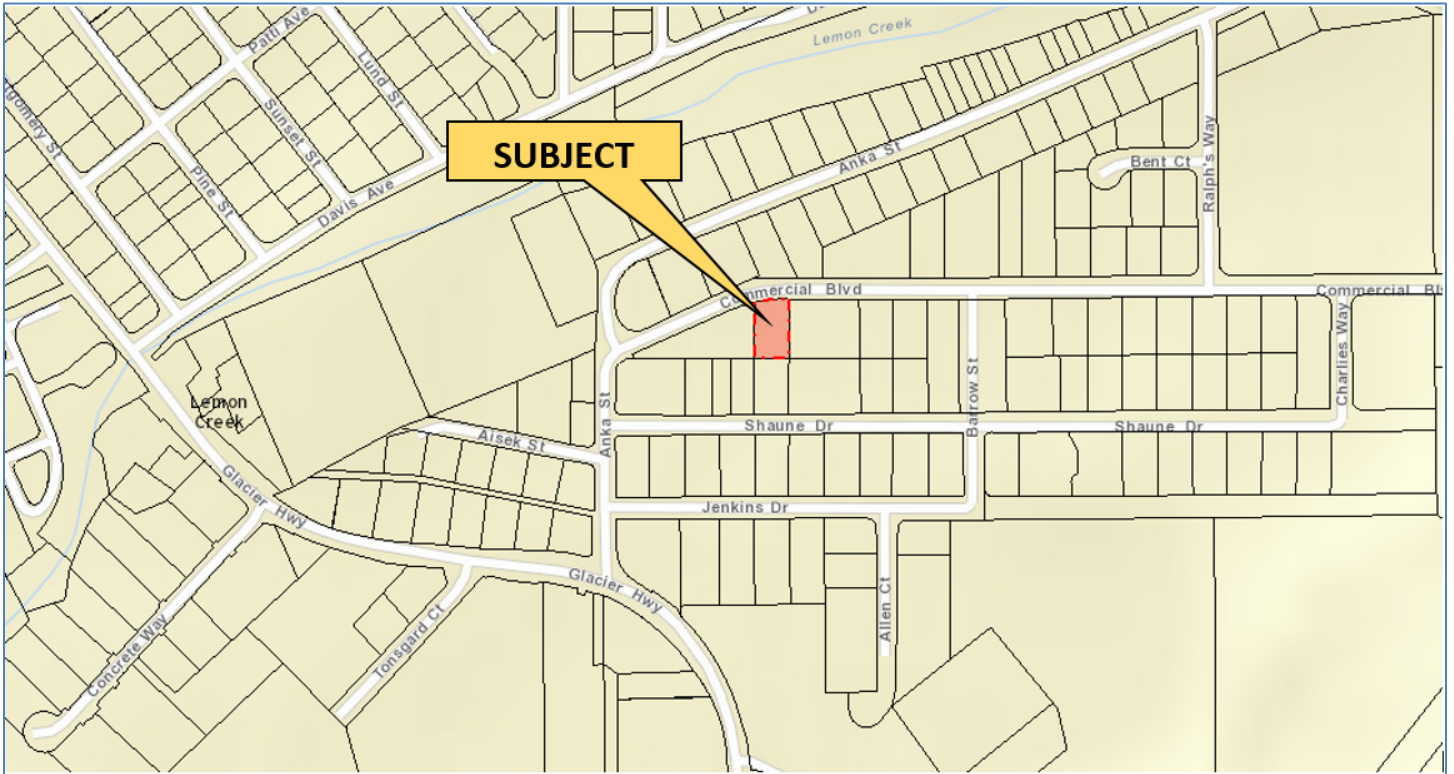
Vacant



Vacant



AREA MAP & AERIAL



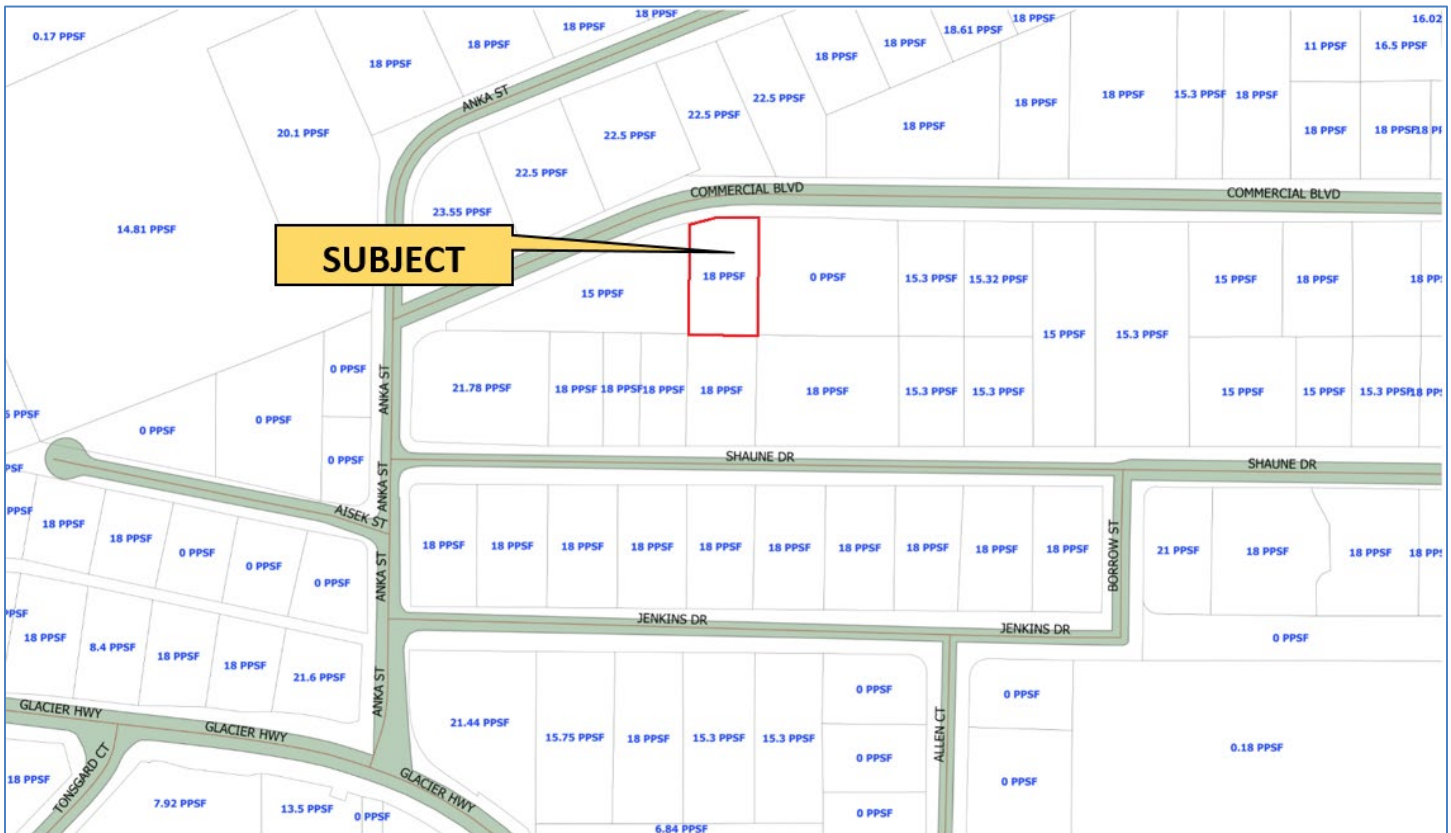
All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

The subject site features a level, developed lot that is in close proximity to the Lemon Creek commercial area. The site offers high visibility along the Commercial Blvd arterial. The subject parcel's land value is equitable and is not excessive.

- 16,108 SF lot
- Level, developed lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

- Building Characteristics:
 - None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

5B1201390020
KEN G WILLIAMSON
5446 COMMERCIAL BLVD
SSG IV LT 40

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$289,950.00			\$289,950.00
2020	\$193,300.00			\$193,300.00
2019	\$193,300.00			\$193,300.00
2018	\$193,300.00			\$193,300.00
2017	\$193,300.00			\$193,300.00
2016	\$193,300.00			\$193,300.00
2015	\$193,300.00			\$193,300.00
2014	\$193,300.00			\$193,300.00
2013	\$177,200.00			\$177,200.00
2012	\$177,200.00	\$0.00	\$0.00	\$177,200.00
2011	\$177,200.00	\$0.00	\$0.00	\$177,200.00
2010	\$177,200.00	\$0.00	\$0.00	\$177,200.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the city’s 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I’m asking for the values be returned to their prior value.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 50%.

We find that no change to the 2021 assessed value of \$289,950 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$483,250.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

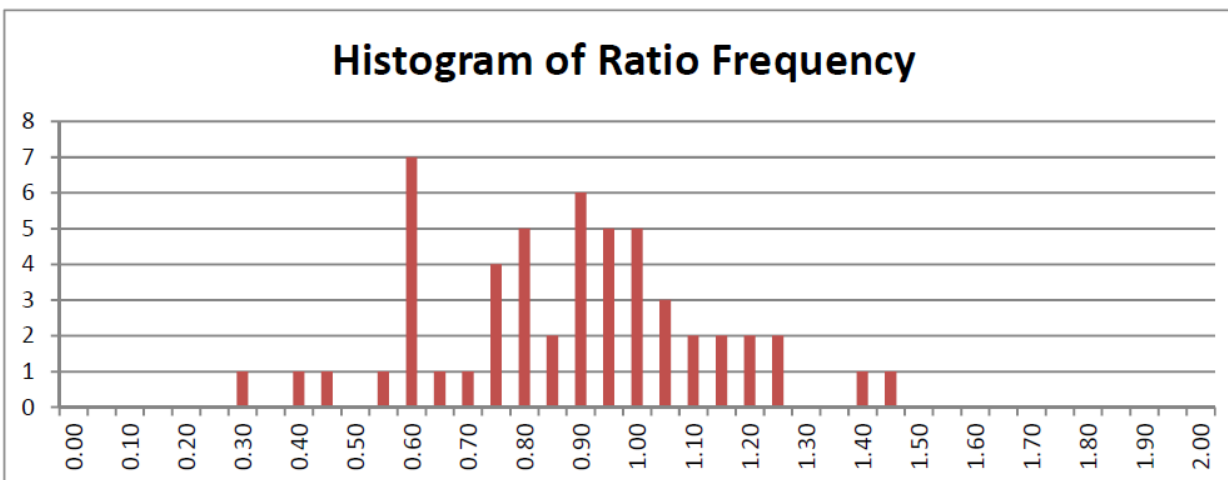
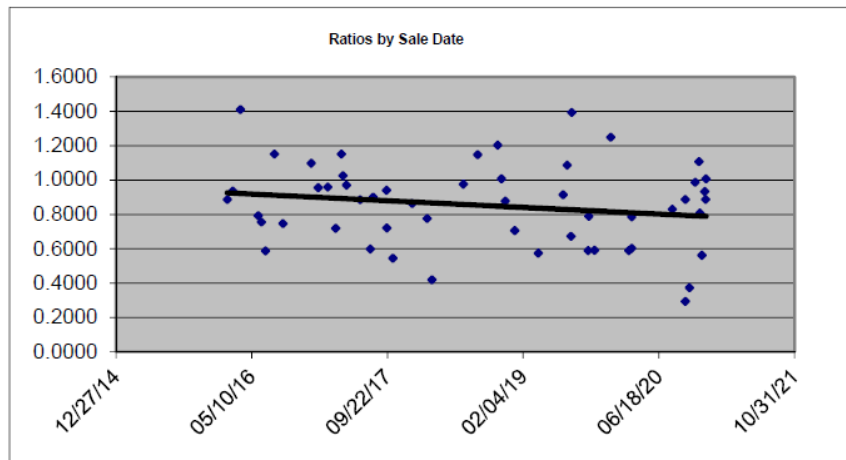
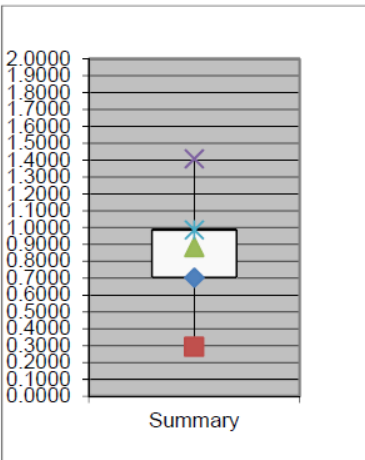
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C

(1) These were the sales available to us for our market analysis for assessment year 2021.

(2) Some sales prices are confidential, specifically when the only sale source is the buyer.

(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021 only sales prior to 11/26/2020 confidential.

(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071

(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.

(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.

(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios

(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.

(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 5B1201390020
RESPONSE DEADLINE: 9/15/2021

PARCEL: 5B1201390020
PHYSICAL LOCATION: 5446 Commercial Blvd

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **5B1201390020**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$289,950
2021 Owner estimate of value:	\$193,300
2021 Final determination:	\$289,950

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
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Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
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Purchase Price of Property:

Price	\$	Purchase Date	
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Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
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Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by approximately 150%. I'm asking for the values be returned to their prior value.

Parcel	Description	2021	S/B reduced to:
5B1201020010	SSG LT1	\$ 716,250.00	\$ 482,300.00
5B1201020021	SSG LT2A	\$ 354,700.00	\$ 278,600.00
5B1201020022	SSG LT2B	\$ 251,100.00	\$ 196,800.00
5B1201020023	SSG LT2C	\$ 339,100.00	\$ 272,600.00
5B1201020030	SSG LT3	\$ 295,350.00	\$ 196,900.00
5B1201010060	LEMON GLACIER LT4	\$ 569,750.00	\$ 440,500.00
5B1201010050	LEMON GLACIER LT3	\$ 493,050.00	\$ 363,800.00
5B1201390010	SSG IV LT39	\$ 435,000.00	\$ 290,000.00
5B1201390020	SSG IV LT40	\$ 289,950.00	\$ 193,300.00
4B1701050091	Mendenhall Industrial 2 BL2 LT	\$ 130,350.00	\$ 86,900.00
4B1701050131	Mendenhall Industrial Park 2	\$ 125,400.00	\$ 83,600.00
	<u>Amount of reduction:</u>	<u>\$ 1,029,450.00</u>	

I appreciate you taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska. Net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301

Mary Hammond

From: Mary Hammond
Sent: Tuesday, August 24, 2021 1:54 PM
To: 'Ken'
Subject: RE: Phone conversation Aug 19
Attachments: AY2021- Com Sales List 20210823a.pdf

Ken,

I understand your frustration regarding the release of sale prices, this office has always been proactive in advocating for that information to be public. The way the ordinance is written, actual sale prices are confidential and under the direction of the law department we are not to release them. I can, however, gladly provide the values for each parcel, which is public information, and have done so in the attachment.

To clarify, the summary report was created using data extracted from Govern, which is a product of Harris. We are looking forward to upgrading to their newest version of Govern but that has not been implemented yet.

My office works diligently to collect accurate verifiable sales information which can be used in analysis. To use false or misleading data to conduct our studies goes against our ethics and our mission, which is to value all taxable properties fairly and equitably, regardless of political pressure or threats of legal action.

We did not create a false assessed value for the former Mental Health Trust parcel (1C060K010031). The assessed value prior to the 2021 trending was determined based on the same land model that was used to value all of the surrounding parcels. If there were no increase to commercial property values, this parcel would have been valued at \$5,016,200. After trending, this parcel has an A/S ratio of less than 40%. This individual sale was not the basis for increasing commercial land values for 2021, rather, all known and verifiable sales information from January, 2016 through December 2020 were considered.

I'm sorry that you feel that commercial properties have been concealed and manipulated, however, we have been very open with the processes and changes. I hope that in the future our hands will not be tied in regards to the disclosure of sales prices. I encourage you to provide any substantive information regarding arm's length sales so that our office can continue in the pursuit of fair and equitable valuation of all properties.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Saturday, August 21, 2021 3:22 PM
To: Mary Hammond
Subject: Phone conversation Aug 19

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

Thanks for getting back to me. I hadn't heard anything and was starting to be concerned. I did receive a copy of the City's *List of 57* properties from another party; however, it's useless until the City releases the values it applied to each tract.

I understand some of the confusion about releasing sales prices which the City obtained solely under authority of the new disclosure ordinance. There may be broader problems with the ordinance but, in this instance, only three sales occurred after its effective date. Those sales were business condos which have token land values of \$5K or \$0.

Double-check with the Law Dept. and then email me the *List of 57* with the sales price and assessed value for each parcel. Omit the sales prices for the three transactions after the effective date of CBJ 15.05.105.

On the phone, you indicated the Summary Study was generated in-house using Govern's CAMA software. I didn't realize the City had upgraded. Which Harris/Govern CAMA package did the City purchase: RealWare, OpenForms or PACS? Please confirm that the charts, graphs and calculations included in the Summary Study were generated by the version of Govern you use.

I've found a number of errors in the Summary Study. Some appear to go beyond accidental misrepresentations. One you and I discussed – the Mental Health Trust land sale to Norwegian Cruise Lines – had no prior assessed value. You cannot create a false assessed value and use it in a ratio value comparison.

A ratio value calculation, as used for real property assessment, is a comparison of the assessed value of the parcel at the time of the sale compared to the actual sales price. It is Assessed value divided by Sales price; often abbreviated: A/S or ASR. You cannot falsify the assessed value for the purpose of creating a ratio value.

Why didn't the Assessor's Office create a value which matches the sales price exactly? Then, the ratio study will *prove* the Assessor's Office is doing a great job since the property sold for the exact amount of the fake assessment. On the other hand, if you create a fake assessed value of one-half of the sales price, that ratio calculation will *prove* assessed values are low – about 50% of what they should be. You can imagine the pandemonium that will follow if the faulty ratio is used as justification to increase land value on hundreds of tracts of property.

I'm bummed. I supported you for the Assessor position when Robin retired. It was good timing for your career and, to the best of my knowledge, you've done a good job. Unfortunately, for the last two years, commercial assessments have been concealed and manipulated. Taxpayers only get to see *Smoke and Mirrors*. I'm not sure the extent you were deceived, but I'm an eternal optimist. There may be some possible solutions.

I've found a number of problems with both the method and the data used for 2021. Apparently an expert on mass assessment techniques will be reviewing the information. He will probably find more problems. It may be a good time to take another look and share any errors you find with the Law Dept.

Let me know if there's anything I can do.

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

CBJ Assessor's Office
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Grant

2, Aug, 2021

Mary:

I've sent several emails requesting information about how the Assessor's Office produced 2021 commercial land values. To date, I've received one item: an analysis without any supporting data: 2021 Summary Report- Commercial 20210526a.pdf. The report appears to be an attempt at using ratio valuation but it's hard to tell what method is actually used. I will assume it is a ratio value study unless you notify me that it is based on some other method.

To the extent the calculation is being concealed, is nonstandard or arbitrary; a property owner is prevented from challenging 2021 assessed values. It's similar to a driver trying to challenge a speeding ticket if the state will not release any information about the speed limit, the vehicle's speed or when and where the violation occurred.

If 2021 assessments are based on an arbitrary factor, please release that information. If the increase was not arbitrary, reveal the method and data the Assessor's Office used so I have an opportunity to challenge it.

Sincerely yours,



Ken Williamson

[Handwritten signature]

From: [Mary Hammond](#)
To: ["Ken"](#)
Subject: RE: Appeals to BOE
Date: Thursday, September 16, 2021 4:23:04 PM
Attachments: [AY2021- Com Sales List 20210823a.pdf](#)

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her

Assessor

City & Borough of Juneau

(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken

Sent: Wednesday, September 15, 2021 4:03 PM

To: Mary Hammond

Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021

155 S. Seward Street

Juneau, Alaska 99801

Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the

Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson

Cell/Text: (503) 789-9630

cc: Jillian Olson

Mary Hammond

From: Mary Hammond
Sent: Friday, September 24, 2021 4:28 PM
To: 'Ken'
Subject: RE: Appeals to BOE
Attachments: Reveiw of 74 Sales provided by Ken Williamson.pdf; AY2021- Com Sales List 20210923a.pdf

Ken,

The law department has interpreted the disclosure provision in CBJ 15.05.105 to mean that the only thing that is confidential is the information disclosed from the buyer directly to the Assessor. I have attached an update list of sales with prices for sales that were discovered or provided in any way other than buyer disclosure.

I'm not certain where the list you provided was published but I have identified which sales were included in the final analysis and which were not. For those sales that were not included in the final analysis, the reason is listed.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Thursday, September 16, 2021 5:06 PM
To: Mary Hammond
Subject: RE: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

The Assessor's office must release the values it used in its Ratio Value calculation(s). Send both the assessed value and the sales price which were used for the 54 properties on the original list that sold prior to 26 November, 2020. Also, provide a copy of the values for the "list of 74" commercial transactions on which the Summary Report was originally based. I've attached the parcel IDs below, for your convenience.

Have you taken a look at all the extent of the falsifications which your office is producing? Please stop and take a look!

Sincerely yours,
Ken Williamson

12/09/20	1C070A050001	230 SEWARD ST
12/07/20	5B15011107E0	2221 JORDAN AVE
12/04/20	4B1701090218	10011 CRAZY HORSE DR
11/23/20	5B1201060260	5719 CONCRETE WAY

11/17/20	4B1701020020	10011 GLACIER HWY
11/13/20	1D060L030011	201 CORDOVA ST
10/30/20	1C060K660110	711 W WILLOUGHBY AVE
10/09/20	1C060K010031	0 EGAN DR
09/24/20	5B1201060160	5740 CONCRETE WAY
09/24/20	5B1201300110	1783 Anka St
08/07/20	5B1501010001	1880 CREST ST
06/23/20	1C020K01E300	1435 Harbor Way
03/10/20	1C110K120051	0 Eastaugh W ay
03/10/20	1C110K120140	0 MILL ST
02/28/20	4B1701090056	10009 CRAZY HORSE DR
02/23/20	4B1701080020	10012 Crazy Horse
12/31/19	4b1701104000	2771 Sherwood ln
12/31/19	1c070k810090	170 S Franklin
12/24/19	5B1201300110	1783 Anka St
10/25/19	1C110K120130	190 MILL ST
10/04/19	5B1201000060	5245 GLACIER HWY
10/02/19	1C110K120120	0 MILL ST
09/03/19	5b1201010010	1610 Anka
08/02/19	5B1201020100	5452 SHAUNE DR
07/30/19	4B1601050160	2276 INDUSTRIAL BLVD
07/16/19	5B1601140043	9309 GLACIER HWY
07/01/19	1C070B0N0011	259 S FRANKLIN ST
06/28/19	1C020K01G280	1435 HARBOR WAY
04/01/19	1C110K120150	0 MILL ST
03/26/19	4b2801050030	3845 Lee Court
02/28/19	1C020K01G290	1435 HARBOR WAY
01/04/19	5B2401610150	4045 DELTA DR
11/30/18	3B1501040120	1544 CREST ST
11/16/18	5B1501040030	8825 MALLARD ST
11/02/18	1C070B0J0020	195 S FRANKLIN ST
10/29/18	4B1601090040	Crazy Horse
08/21/18	5B1601140070	9309 GLACIER HWY
07/25/18	1C020K01G200	1435 HARBOR WAY
07/20/18	1C060U050022	1108 F ST
06/29/18	4B2901020010	10200 MENDENHALL RD
03/05/18	4B1601080070	2278 INDUSTRIAL BLVD
02/15/18	5B1601000023	9151 GLACIER HWY
01/29/18	5B1201450050	5410 Bent Ct
01/09/18	1C100I070050	549 S Franklin
12/22/17	5B15011109B0	2231 JORDAN AVE
10/12/17	3B1501020030	1669 CREST ST
09/20/17	4B1701103003	2769 SHERWOOD LN
09/19/17	4B1601010040	2450 INDUSTRIAL BLVD
09/07/17	1C020K01E230	Aurora Harbor
09/07/17	1C020K01E220	Aurora Harbor
07/31/17	4B1601120130	2270 BRANDY LN
07/21/17	5B1201330160	2005 ANKA ST
06/13/17	4B1601050030	2274 INDUSTRIAL BLVD

04/24/17	4B1701090226	10011 CRAZY HORSE DR
04/11/17	7B0901030071	3161 CHANNEL DR
04/05/17	5B1201040052	1721 ANKA ST
03/16/17	1C110K120101	170 MILL ST
02/14/17	4B1701090223	10011 CRAZY HORSE DR
01/30/17	1c030c280080	712 W 12th
01/27/17	6D0701000020	4755 N Douglas Hiway
01/18/17	5b1201060140	5720 Concrete Way
01/10/17	4B1701090228	10011 CRAZY HORSE DR
12/30/16	7B0901040070	1050 Salmon Creek ln
12/15/16	1C060U040040	800 GLACIER AVE
09/23/16	1C060C000080	3610 Diston
09/02/16	5B1501020170	8401 AIRPORT BLVD
08/10/16	5b160144000	3039 Clinton
08/02/16	5B1201060061	5631 GLACIER HWY
06/30/16	4B1701100146	2789 SHERWOOD LN
06/15/16	5B1501000002	8251 GLACIER HWY
06/03/16	5B1201450110	1731 RALPH'S W AY
03/30/16	1C070A030040	100 N FRANKLIN ST
03/01/16	4B1701100170	10221 GLACIER HWY
02/10/16	5B15011107EO	2221 Jordan

From: Mary Hammond [<mailto:mary.hammond@juneau.org>]
Sent: Thursday, September 16, 2021 4:23 PM
To: 'Ken'
Subject: RE: Appeals to BOE

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken <deltaak@ptialaska.net>
Sent: Wednesday, September 15, 2021 4:03 PM
To: Mary Hammond <mary.hammond@juneau.org>
Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

cc: Jillian Olson



**Office Of The Assessor
155 South Seward Steet
Juneau, AK 99801**

KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 1150
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030081
Property Location	BENTWOOD PL
Appeal No.	APL20210436
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Friday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0436

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Bentwood Place

Parcel No.: 4B1701030081

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 781,350	\$ 781,350
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 562,500	\$ 781,350	\$ 781,350

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it houses construction material and equipment.

Subject Characteristics:

- Land
 - 115,749 SF lot = 2.657 AC
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant



Vacant

AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

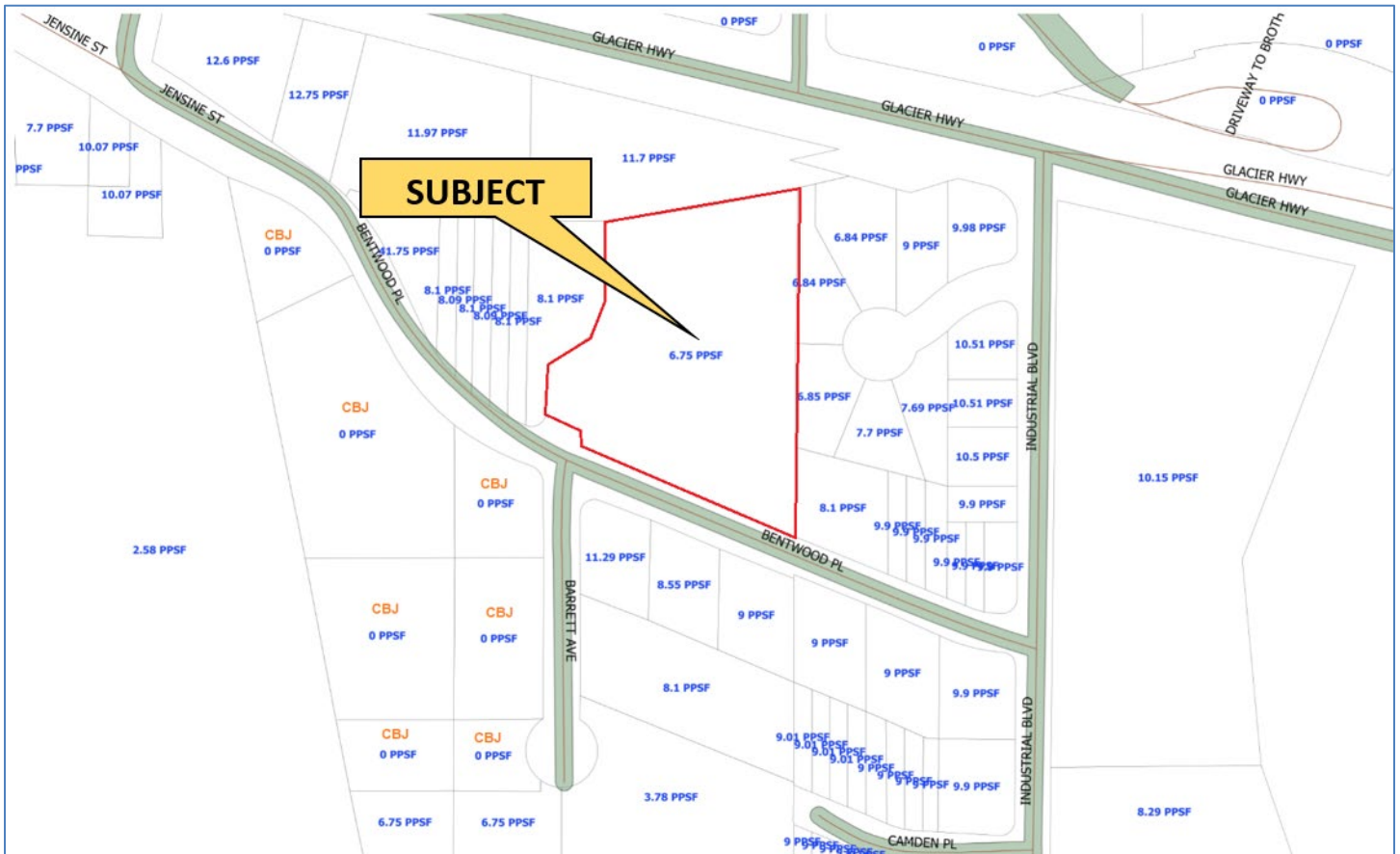
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 115,749 SF lot = 2.657 AC
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

- Building Characteristics:
 - None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030081
KEN WILLIAMSON
BENTWOOD PL
MENDENHALL VALLEY INDUSTRIAL PARK 2 PHASE 2 BL A1

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$781,350.00			\$781,350.00
2020	\$562,500.00			\$562,500.00
2019	\$562,500.00			\$562,500.00
2018	\$520,900.00			\$520,900.00
2017	\$486,100.00			\$486,100.00
2016	\$486,100.00			\$486,100.00
2015	\$486,100.00			\$486,100.00
2014	\$486,100.00			\$486,100.00
2013	\$486,100.00			\$486,100.00
2012	\$486,100.00	\$0.00	\$0.00	\$486,100.00
2011	\$486,100.00	\$0.00	\$0.00	\$486,100.00
2010	\$100,000.00	\$0.00	\$0.00	\$100,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.9%.

We find that no change to the 2021 assessed value of \$781,350 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$1,302,250.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

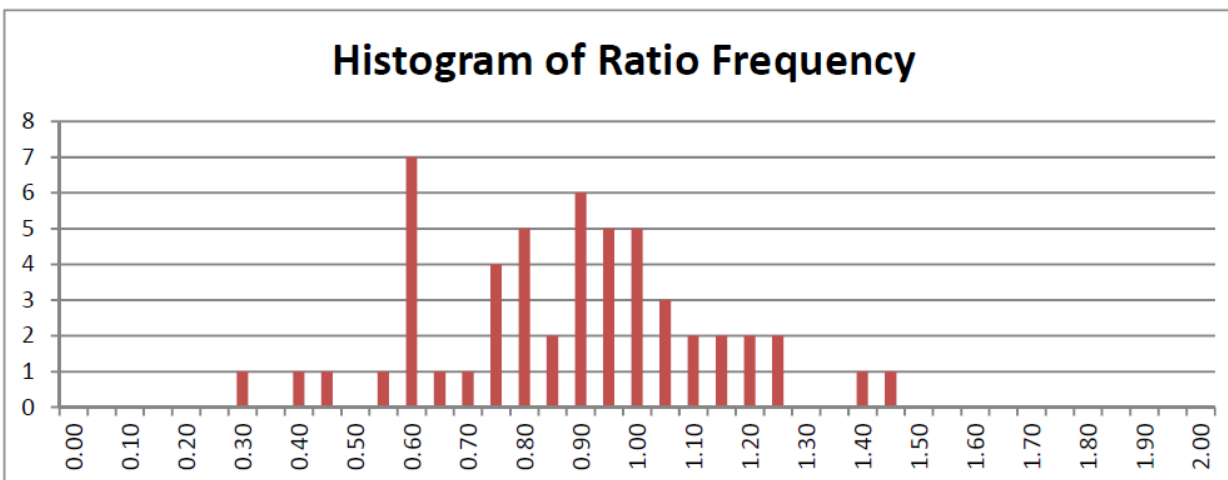
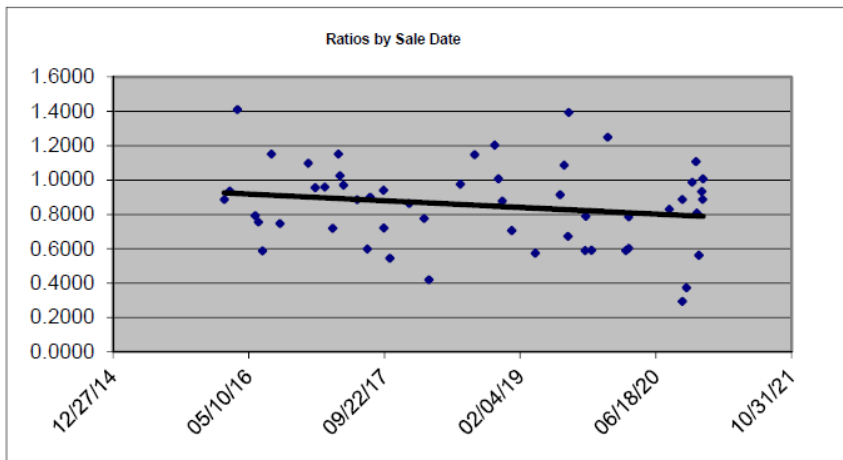
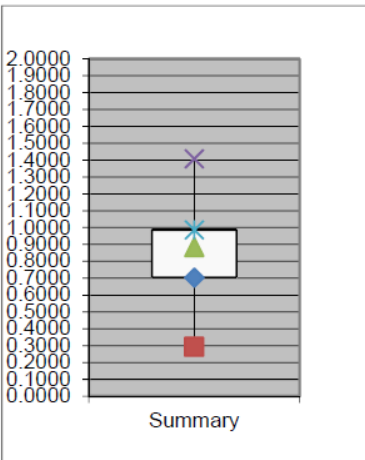
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030081
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030081
PHYSICAL LOCATION: Bentwood Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030081**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$781,350
2021 Owner estimate of value:	\$562,500
2021 Final determination:	\$781,350

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No <i>(if yes complete next line)</i>					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No <i>(if yes provide copy of appraisal)</i>					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030090
Property Location	ASBURY PL
Appeal No.	APL20210444
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0444

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030090

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 76,050	\$ 76,050
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 54,700	\$ 76,050	\$ 76,050

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

- Land
 - 11,112 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

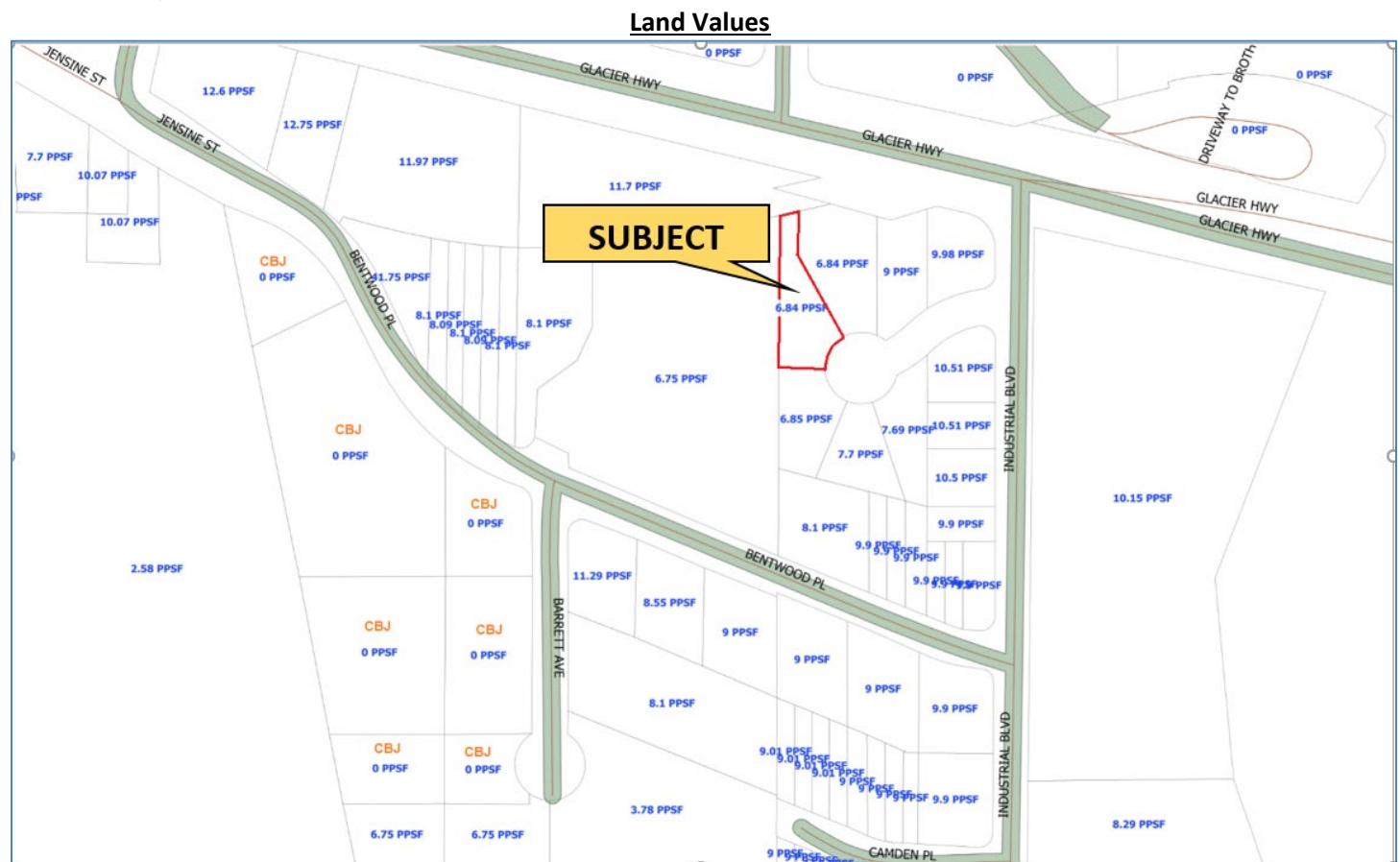
LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 11,112 SF lot
- Level, vacant lot



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

- Building Characteristics:
 - None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030090
KEN WILLIAMSON

ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 18

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$76,050.00			\$76,050.00
2020	\$54,700.00			\$54,700.00
2019	\$54,700.00			\$54,700.00
2018	\$50,700.00			\$50,700.00
2017	\$60,000.00			\$60,000.00
2016	\$80,000.00			\$80,000.00
2015	\$80,000.00			\$80,000.00
2014	\$80,000.00			\$80,000.00
2013	\$80,000.00			\$80,000.00
2012	\$80,000.00	\$0.00	\$0.00	\$80,000.00
2011	\$80,000.00	\$0.00	\$0.00	\$80,000.00
2010	\$60,000.00	\$0.00	\$0.00	\$60,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 39%.

We find that no change to the 2021 assessed value of \$76,050 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$126,750.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

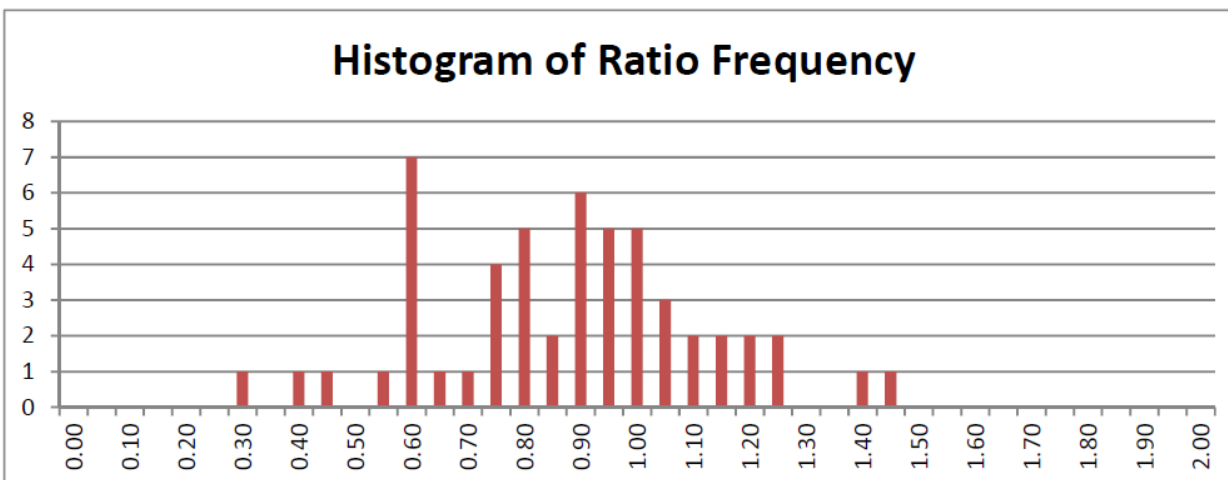
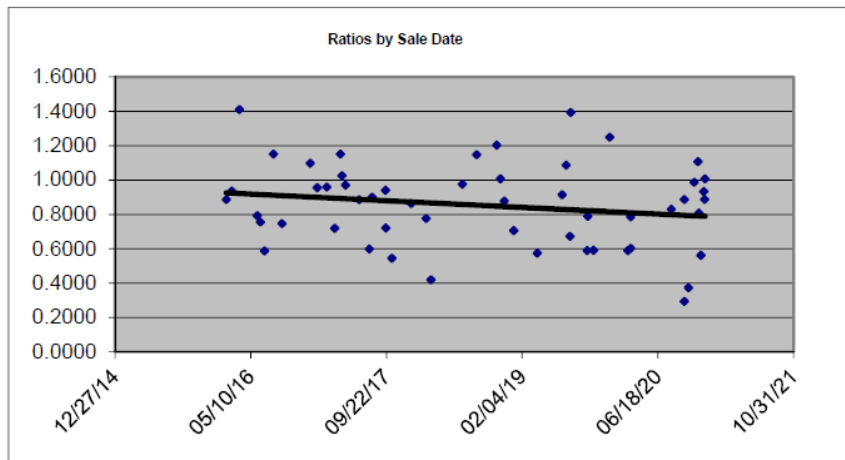
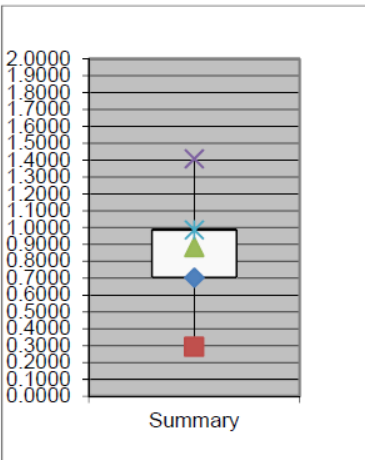
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030090
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030090
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030090**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$76,050
2021 Owner estimate of value:	\$54,700
2021 Final determination:	\$76,050

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out			
Appraiser		Date of Review	
Comments:			
Post Review Assessment			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		
APPELLANT RESPONSE TO ACTION BY ASSESSOR My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below. ☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear. Appellant's Signature _____ Date: _____			

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION			
Scheduled BOE Date	☐ Yes ☐ No		
10-Day Letter Sent	☐ Yes ☐ No		
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Steet
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1197
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030100
Property Location	ASBURY PL
Appeal No.	APL20210443
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0443

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030100

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 108,900	\$ 108,900
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 78,400	\$ 108,900	\$ 108,900

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

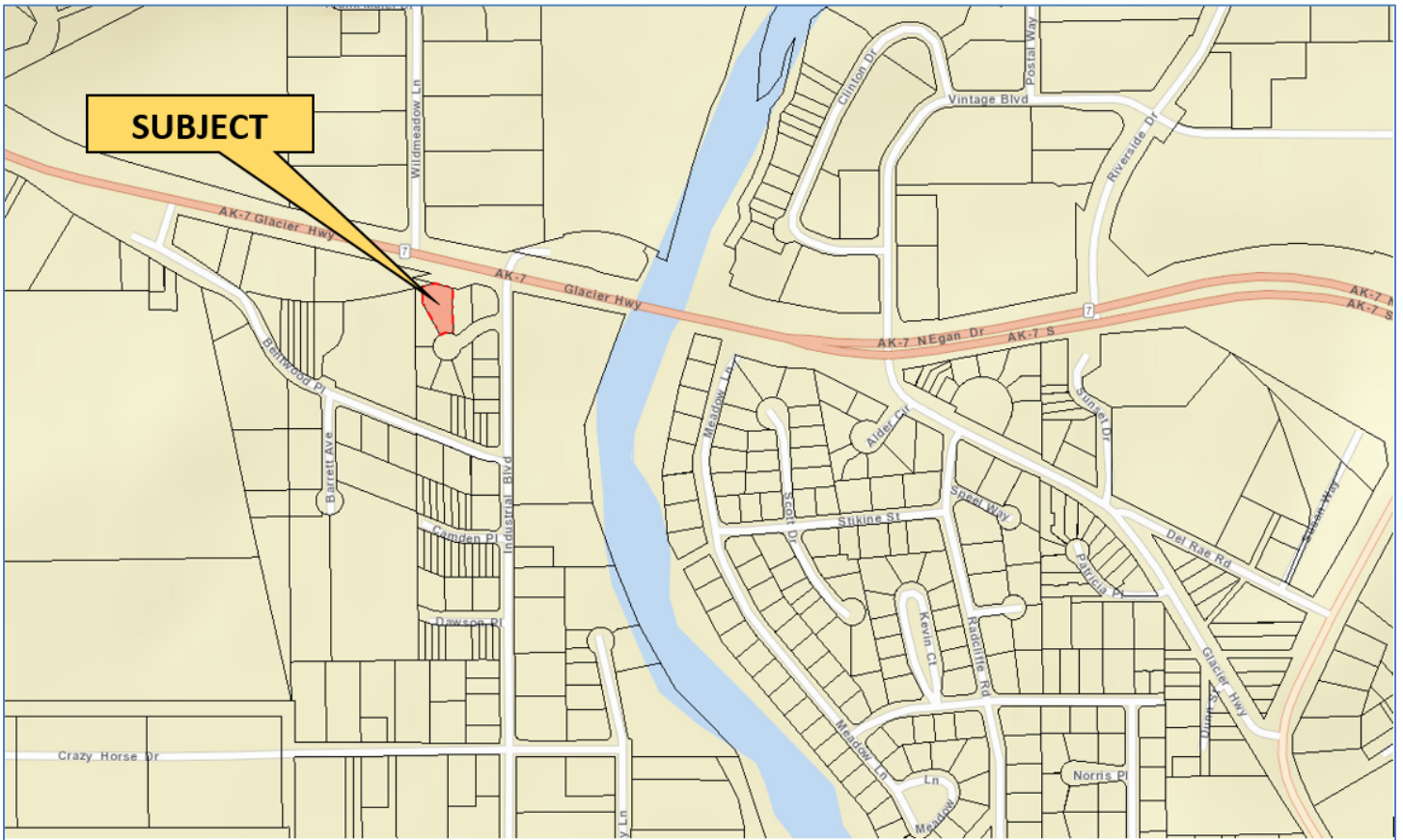
- Land
 - 15,913 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

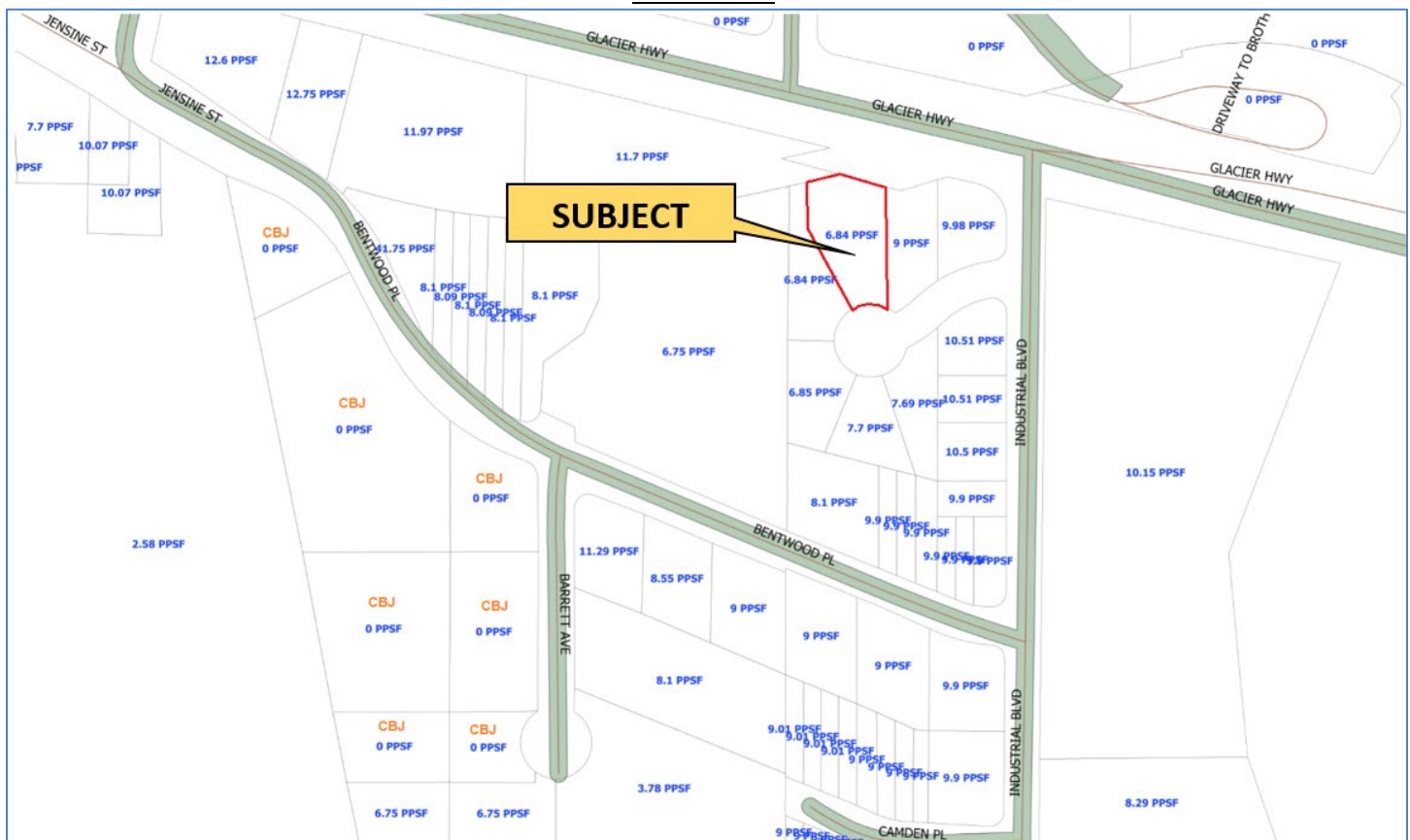
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 15,913 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

- Building Characteristics:
 - None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030100
KEN WILLIAMSON
ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 19

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$108,900.00			\$108,900.00
2020	\$78,400.00			\$78,400.00
2019	\$78,400.00			\$78,400.00
2018	\$72,600.00			\$72,600.00
2017	\$85,900.00			\$85,900.00
2016	\$124,100.00			\$124,100.00
2015	\$124,100.00			\$124,100.00
2014	\$124,100.00			\$124,100.00
2013	\$124,100.00			\$124,100.00
2012	\$124,100.00	\$0.00	\$0.00	\$124,100.00
2011	\$124,100.00	\$0.00	\$0.00	\$124,100.00
2010	\$80,000.00	\$0.00	\$0.00	\$80,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.9%.

We find that no change to the 2021 assessed value of \$108,900 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$181,500.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

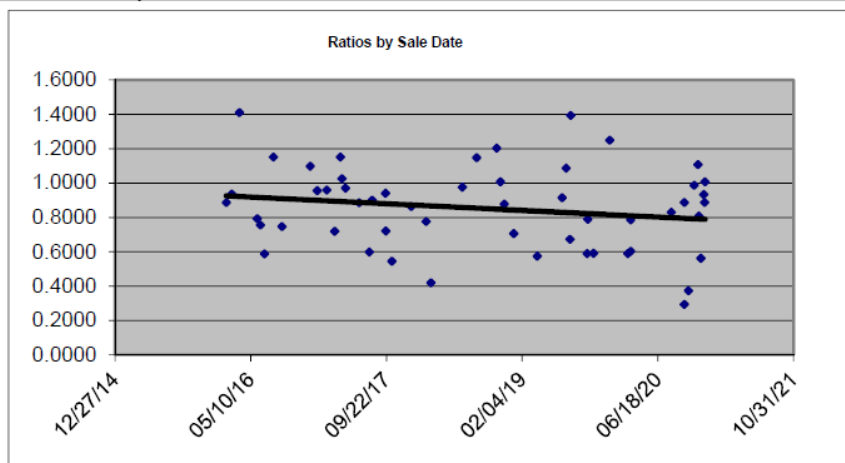
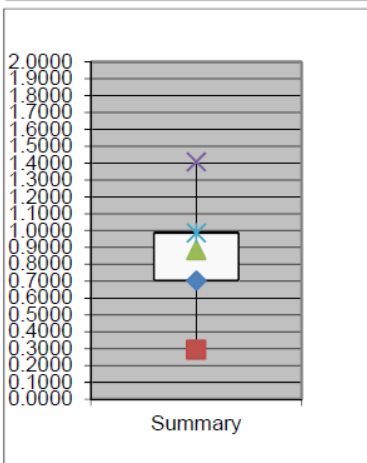
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

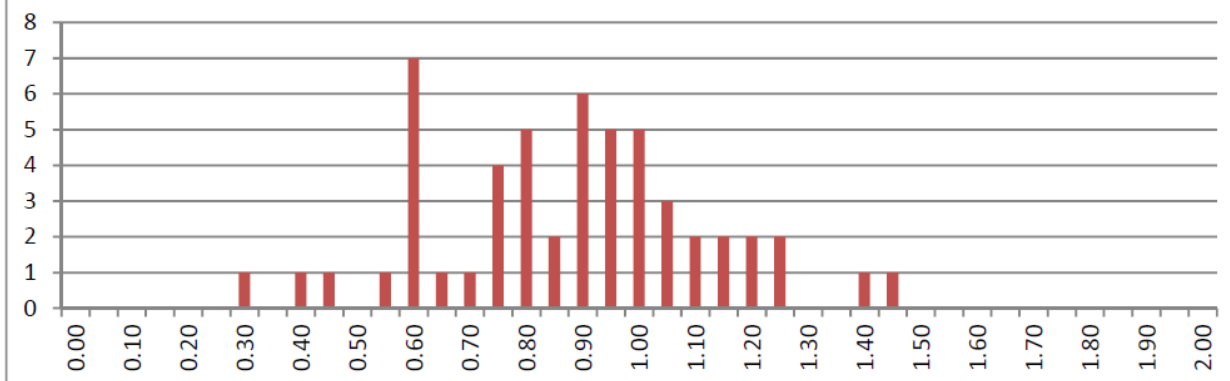
0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



Histogram of Ratio Frequency



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C

(1) These were the sales available to us for our market analysis for assessment year 2021.

(2) Some sales prices are confidential, specifically when the only sale source is the buyer.

(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.

(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071

(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.

(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.

(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios

(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.

(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030100
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030100
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030100**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$108,900
2021 Owner estimate of value:	\$78,400
2021 Final determination:	\$108,900

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson	Name of Applicant			
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net		
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same		
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied		THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes			
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?		☐ Yes ☐ No			
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification: I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1220
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030110
Property Location	ASBURY PL
Appeal No.	APL20210437
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0437

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030110

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 98,250	\$ 98,250
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 70,700	\$ 98,250	\$ 98,250

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

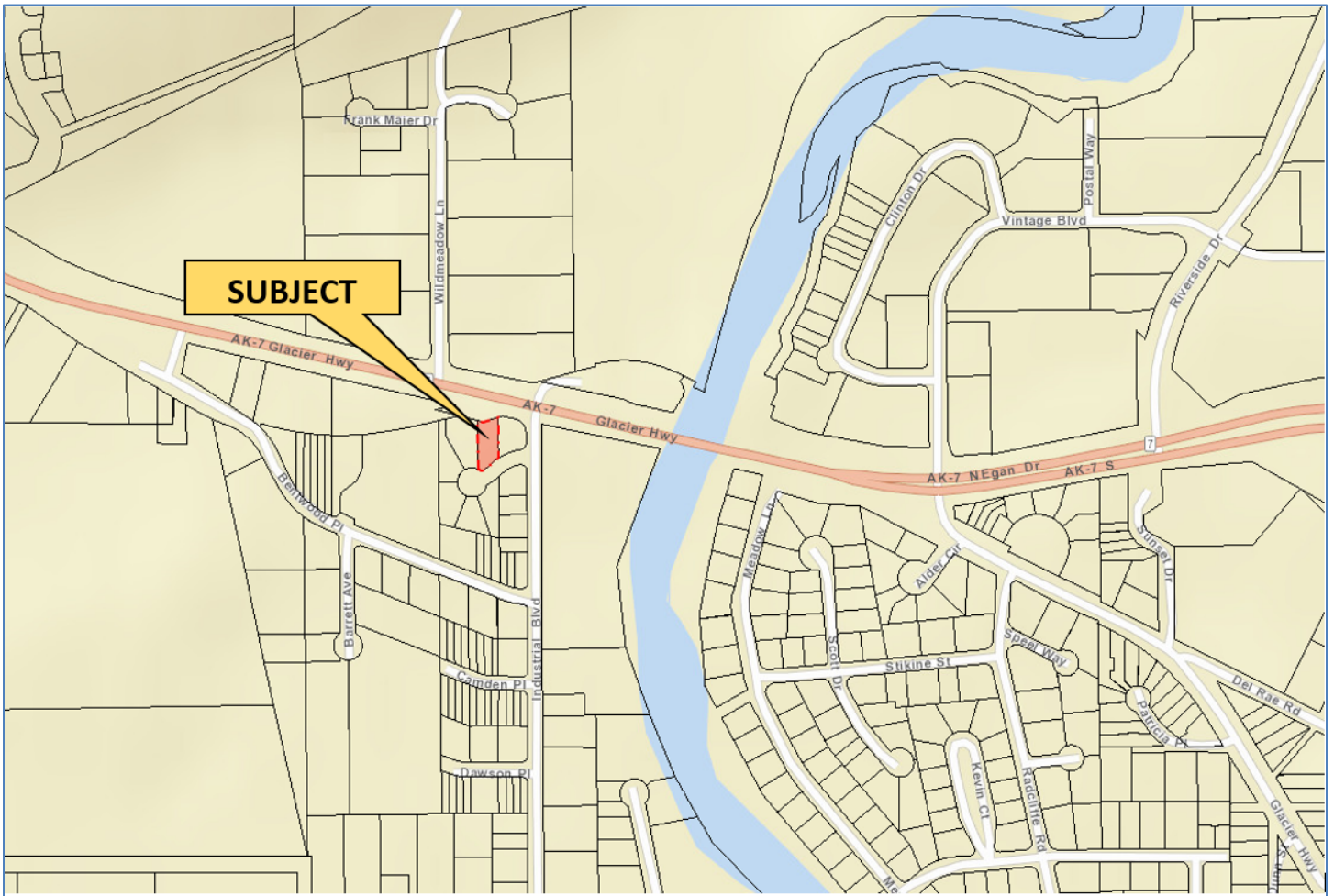
- Land
 - 10,918 SF lot
 - Level, vacant lot
- Building
 - None

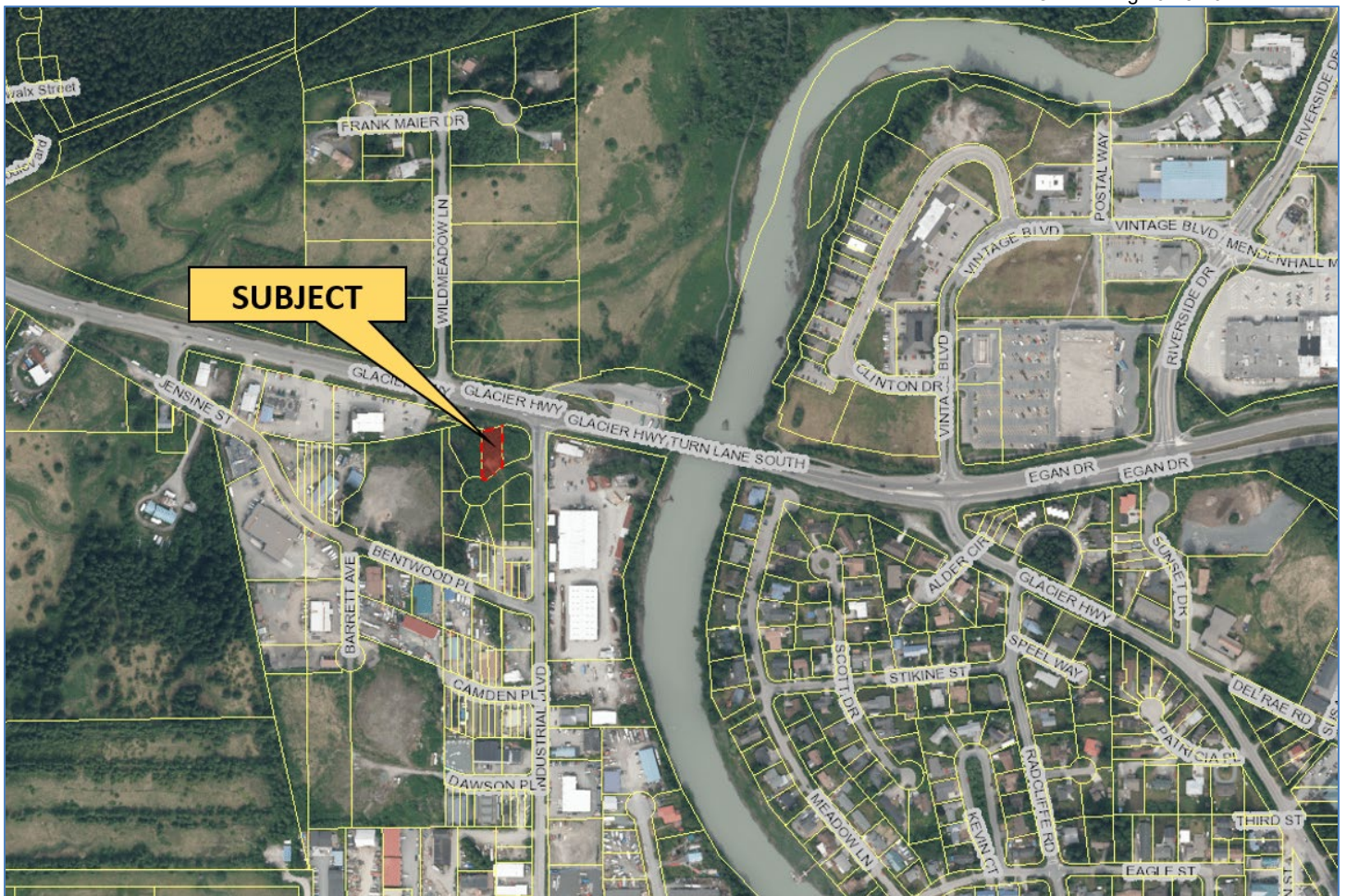
SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

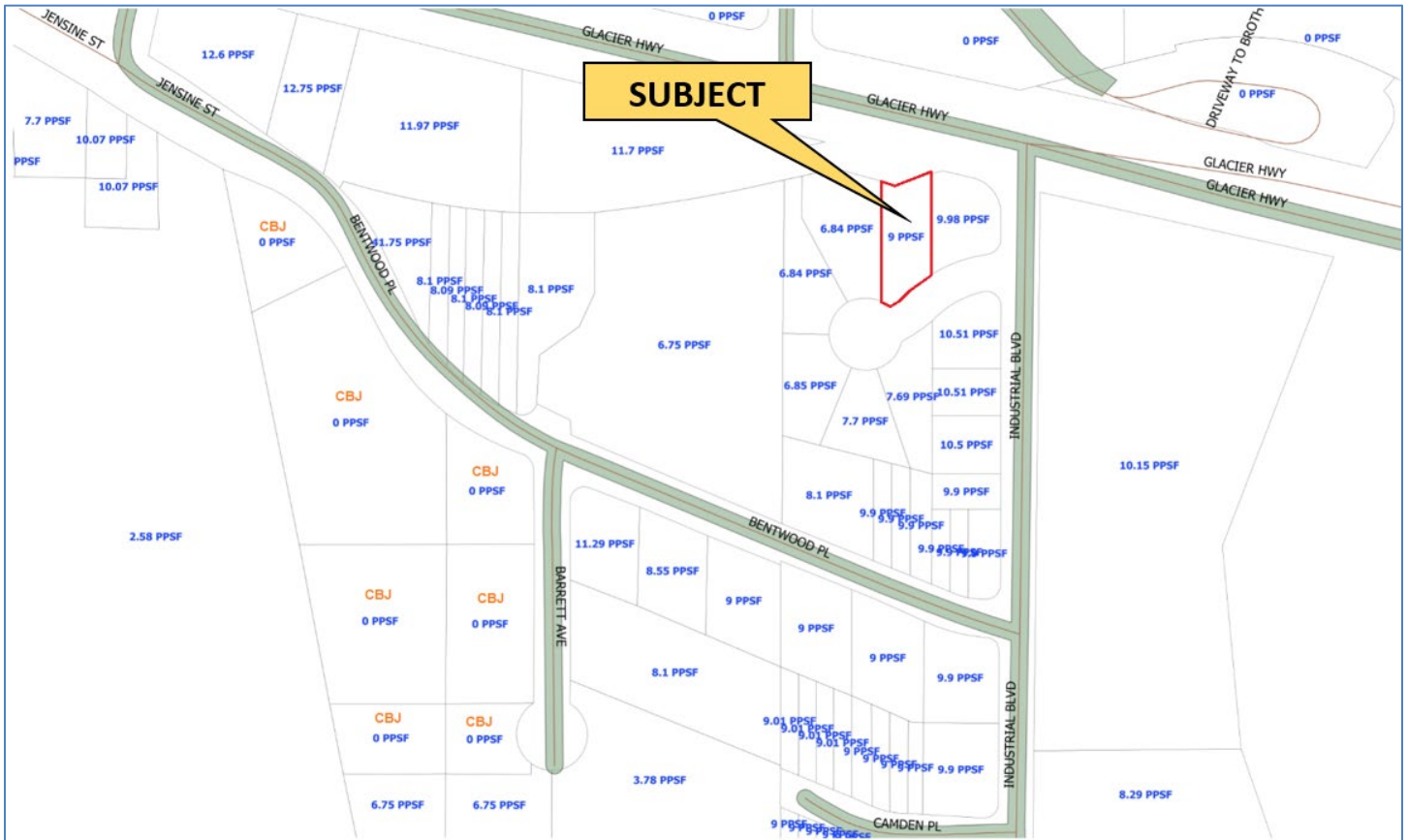
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 10,918 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030110
KEN WILLIAMSON
ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 20

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$98,250.00			\$98,250.00
2020	\$70,700.00			\$70,700.00
2019	\$70,700.00			\$70,700.00
2018	\$65,500.00			\$65,500.00
2017	\$65,500.00			\$65,500.00
2016	\$85,200.00			\$85,200.00
2015	\$85,200.00			\$85,200.00
2014	\$85,200.00			\$85,200.00
2013	\$85,200.00			\$85,200.00
2012	\$85,200.00	\$0.00	\$0.00	\$85,200.00
2011	\$85,200.00	\$0.00	\$0.00	\$85,200.00
2010	\$55,000.00	\$0.00	\$0.00	\$55,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 39%.

We find that no change to the 2021 assessed value of \$98,250 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$163,750.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

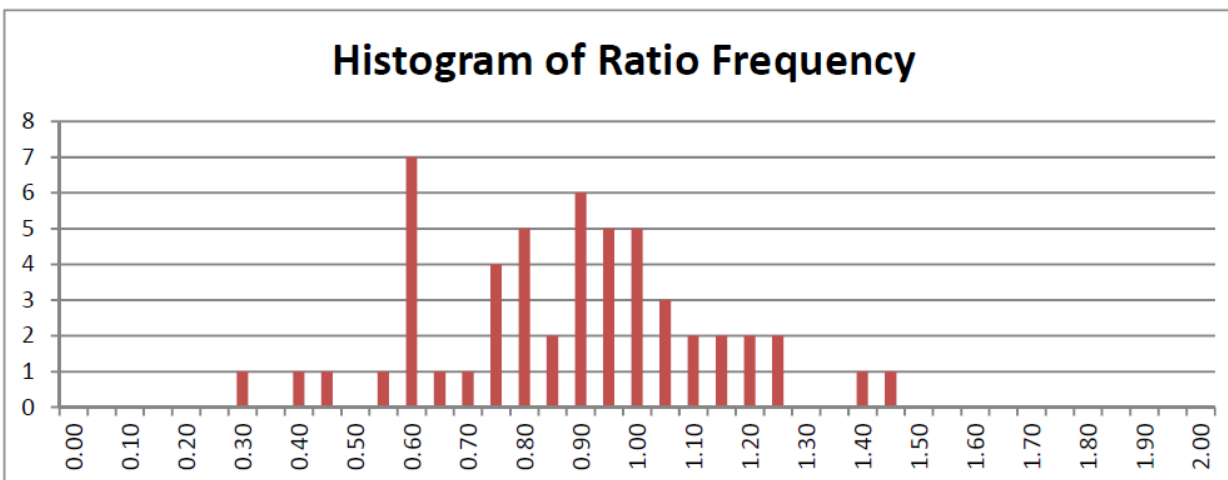
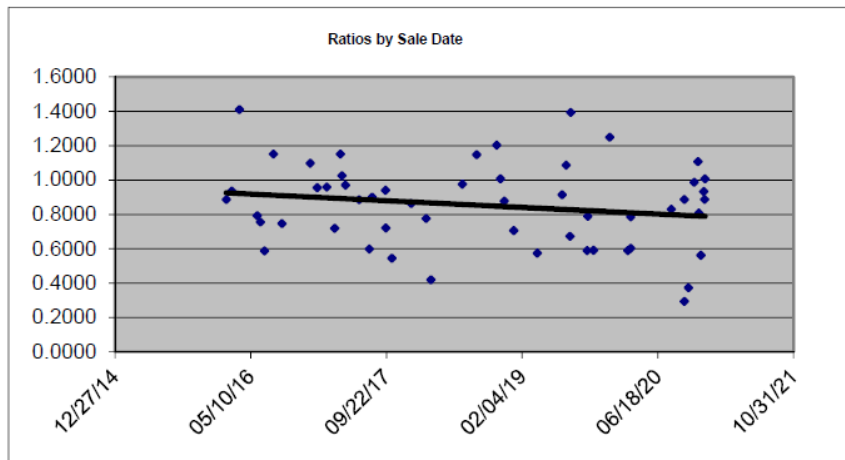
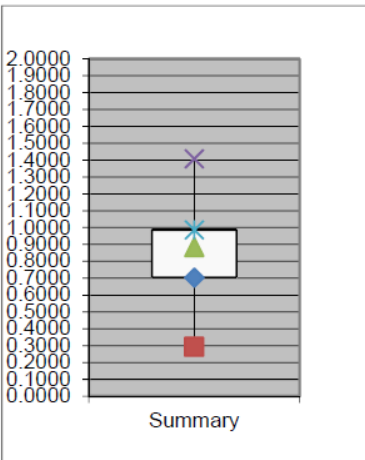
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030110
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030110
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030110**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$98,250
2021 Owner estimate of value:	\$70,700
2021 Final determination:	\$98,250

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out			
Appraiser		Date of Review	
Comments:			
Post Review Assessment			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		
APPELLANT RESPONSE TO ACTION BY ASSESSOR My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below. ☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear. Appellant's Signature _____ Date: _____			

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION			
Scheduled BOE Date	☐ Yes ☐ No		
10-Day Letter Sent	☐ Yes ☐ No		
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KENNETH WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 1244
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030120
Property Location	ASBURY PL
Appeal No.	APL20210441
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013..

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0441

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030120

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 108,750	\$ 108,750
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 78,300	\$ 108,750	\$ 108,750

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

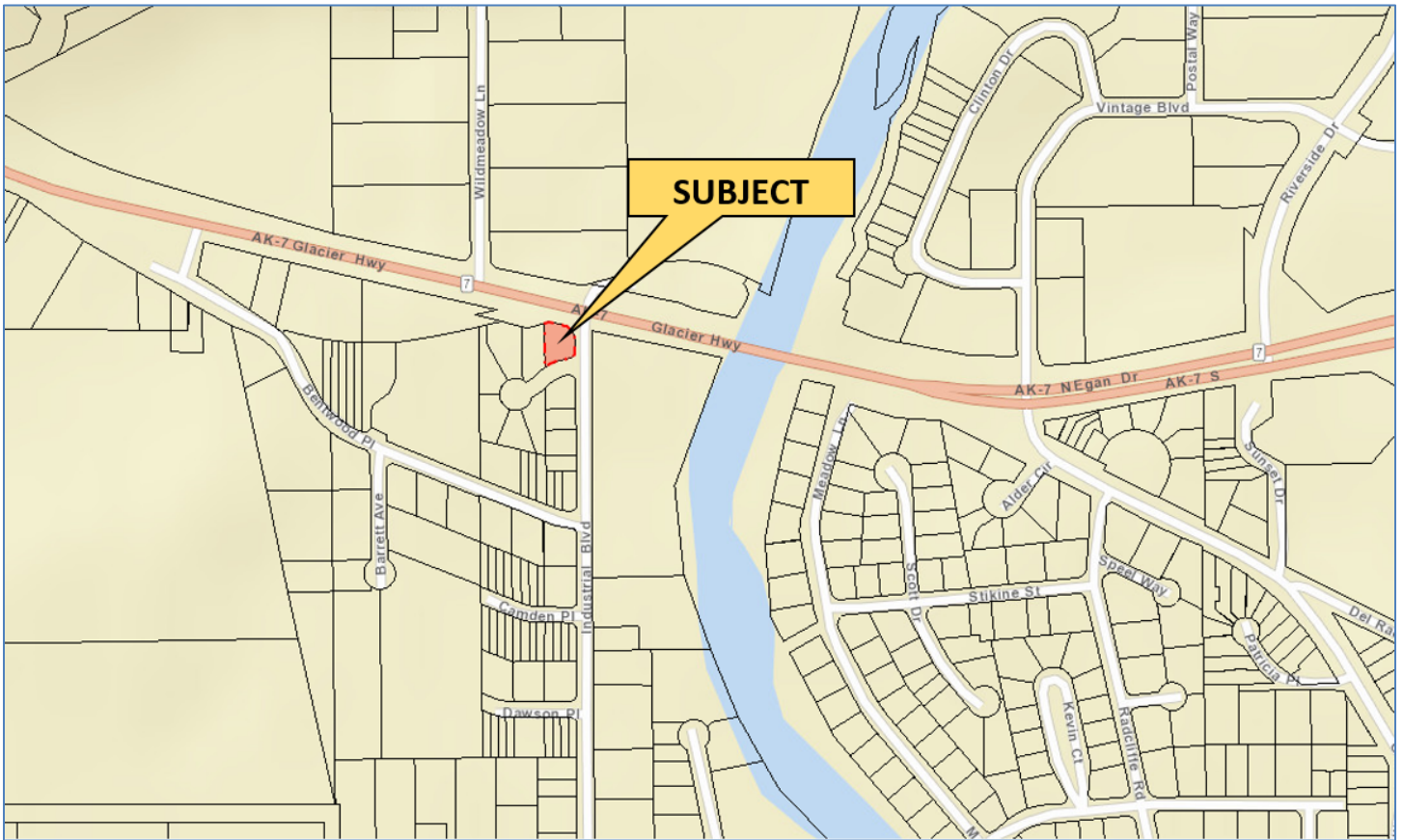
- Land
 - 10,896 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

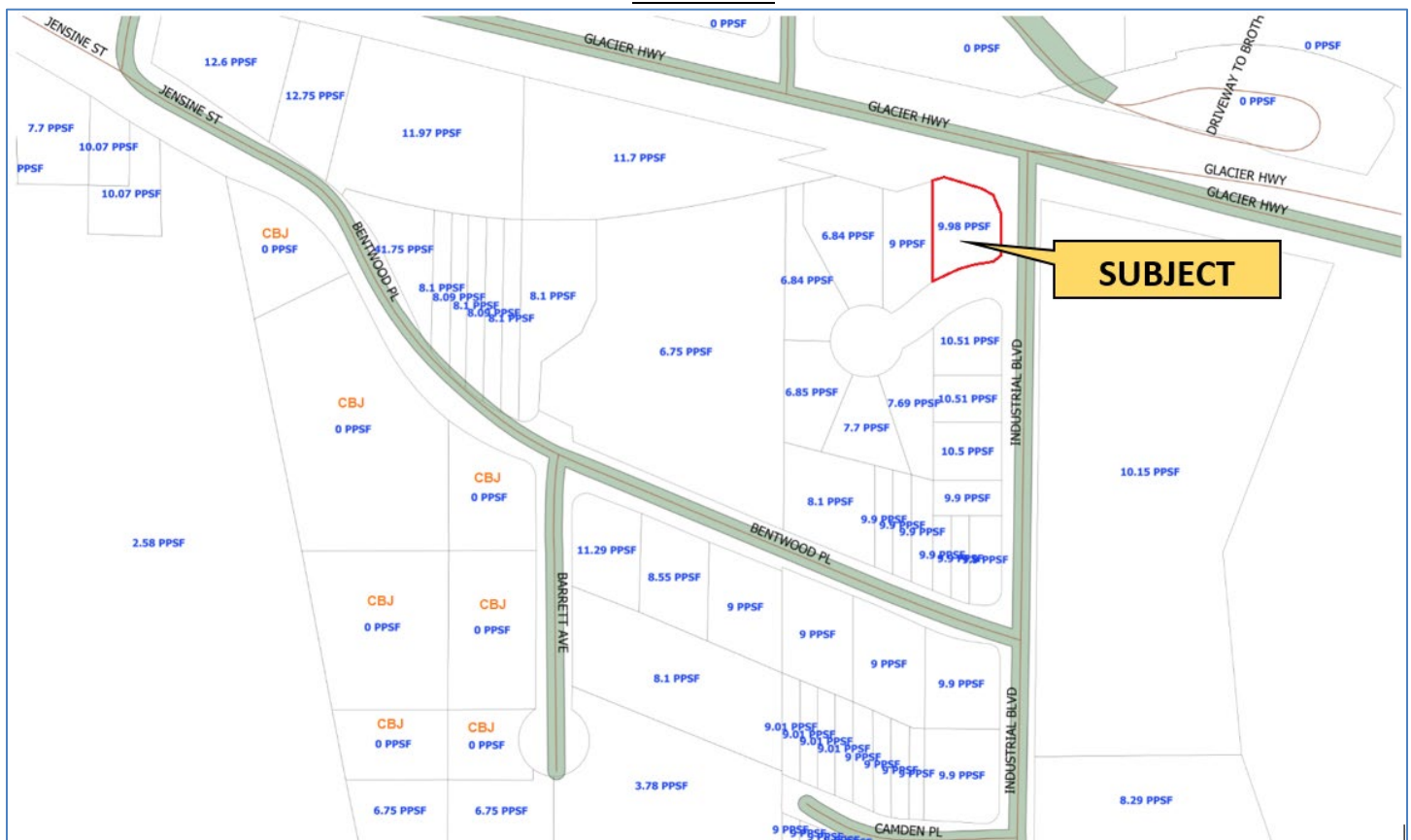
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 10,896 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030120
KENNETH WILLIAMSON
ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 21

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$108,750.00			\$108,750.00
2020	\$78,300.00			\$78,300.00
2019	\$78,300.00			\$78,300.00
2018	\$72,500.00			\$72,500.00
2017	\$65,400.00			\$65,400.00
2016	\$85,000.00			\$85,000.00
2015	\$85,000.00			\$85,000.00
2014	\$85,000.00			\$85,000.00
2013	\$85,000.00			\$85,000.00
2012	\$85,000.00	\$0.00	\$0.00	\$85,000.00
2011	\$85,000.00	\$0.00	\$0.00	\$85,000.00
2010	\$55,000.00	\$0.00	\$0.00	\$55,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.9%.

We find that no change to the 2021 assessed value of \$108,750 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$181,250.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

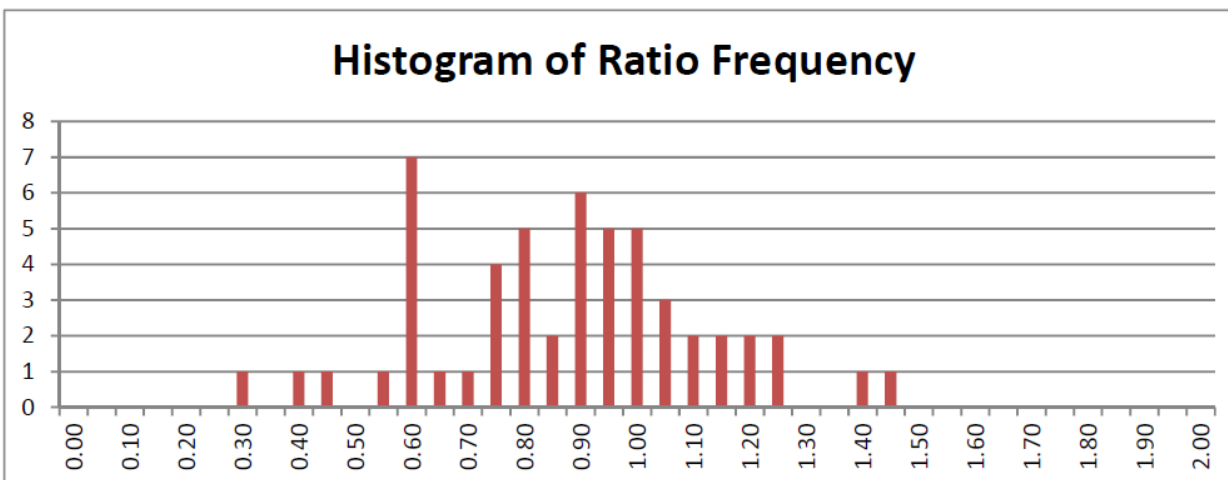
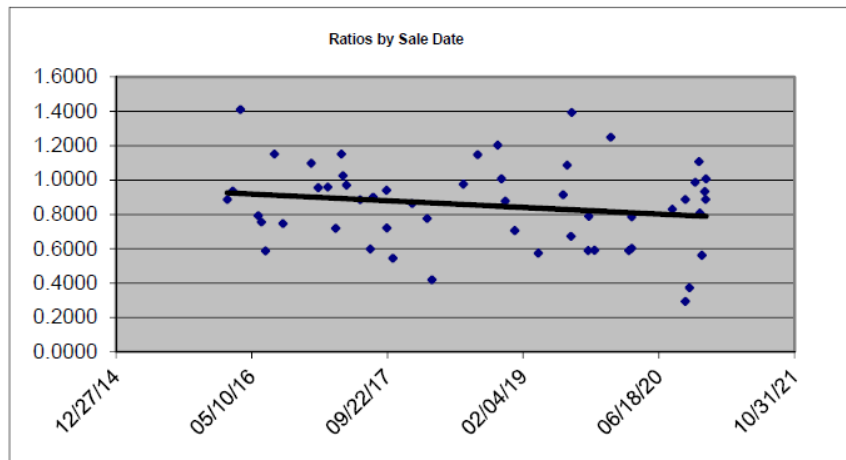
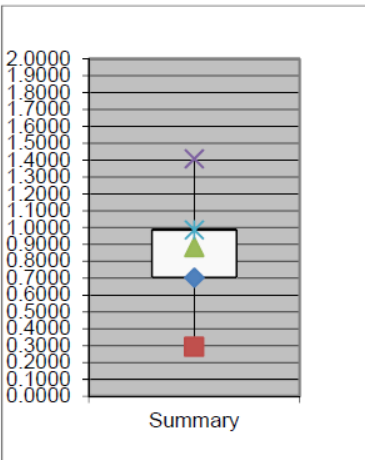
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030120
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030120
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030120**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$108,750
2021 Owner estimate of value:	\$78,300
2021 Final determination:	\$108,750

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
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Purchase Price of Property:

Price	\$	Purchase Date	
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Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KENNETH WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 1267
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030130
Property Location	ASBURY PL
Appeal No.	APL20210442
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0442

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030130

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 77,100	\$ 77,100
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 55,500	\$ 77,100	\$ 77,100

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

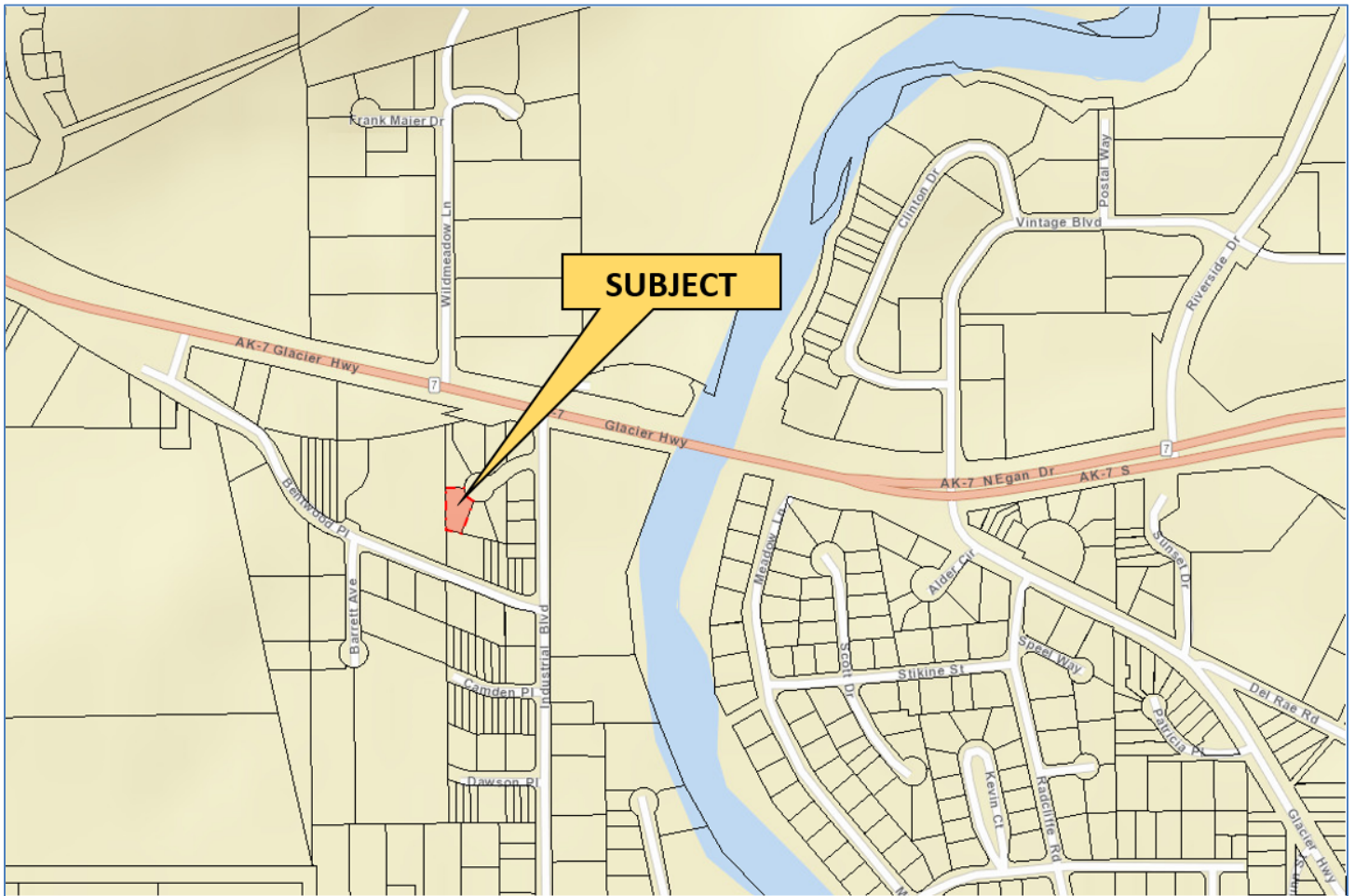
- Land
 - 11,261 SF lot
 - Level, vacant lot
- Building
 - None

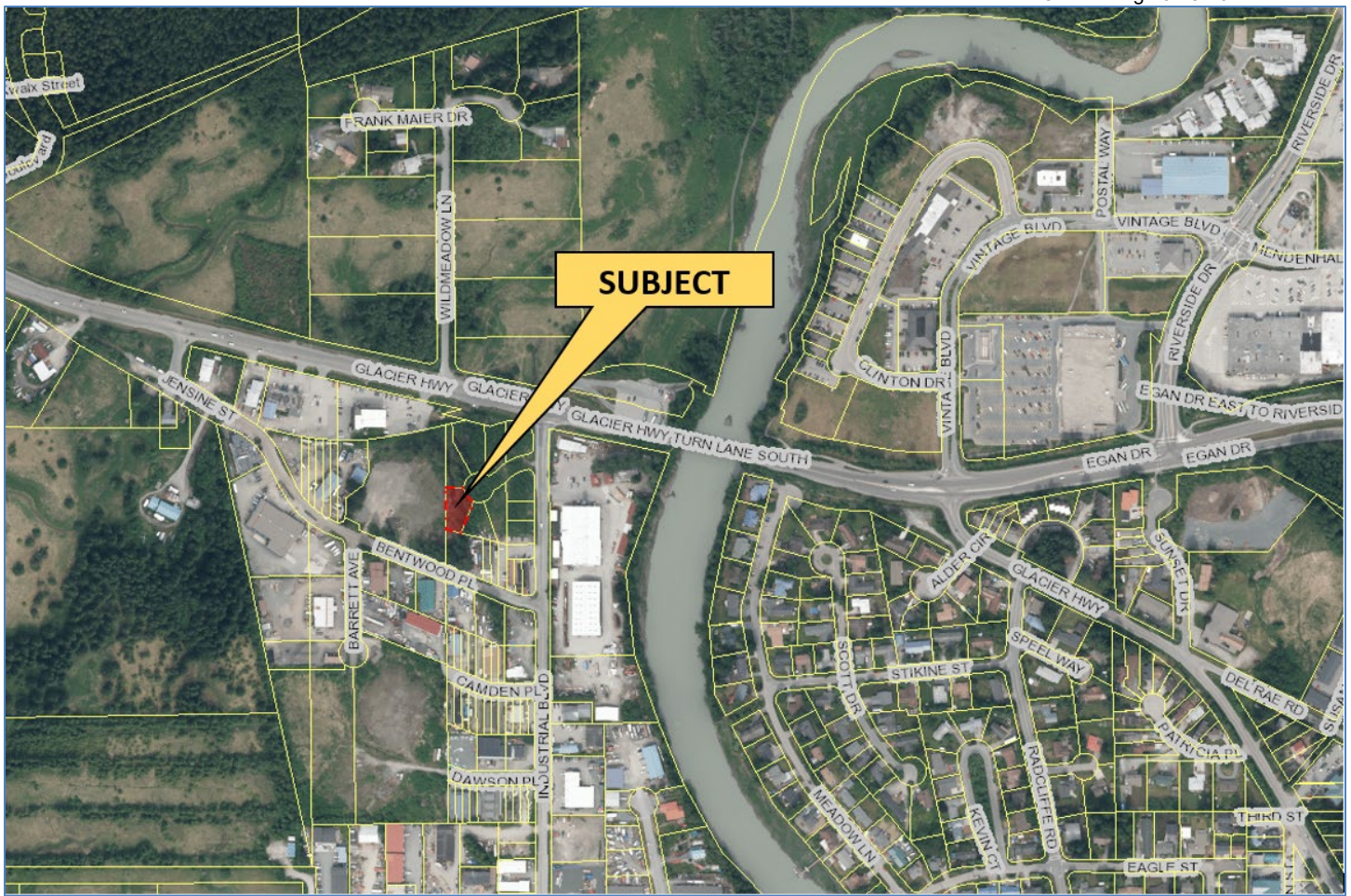
SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

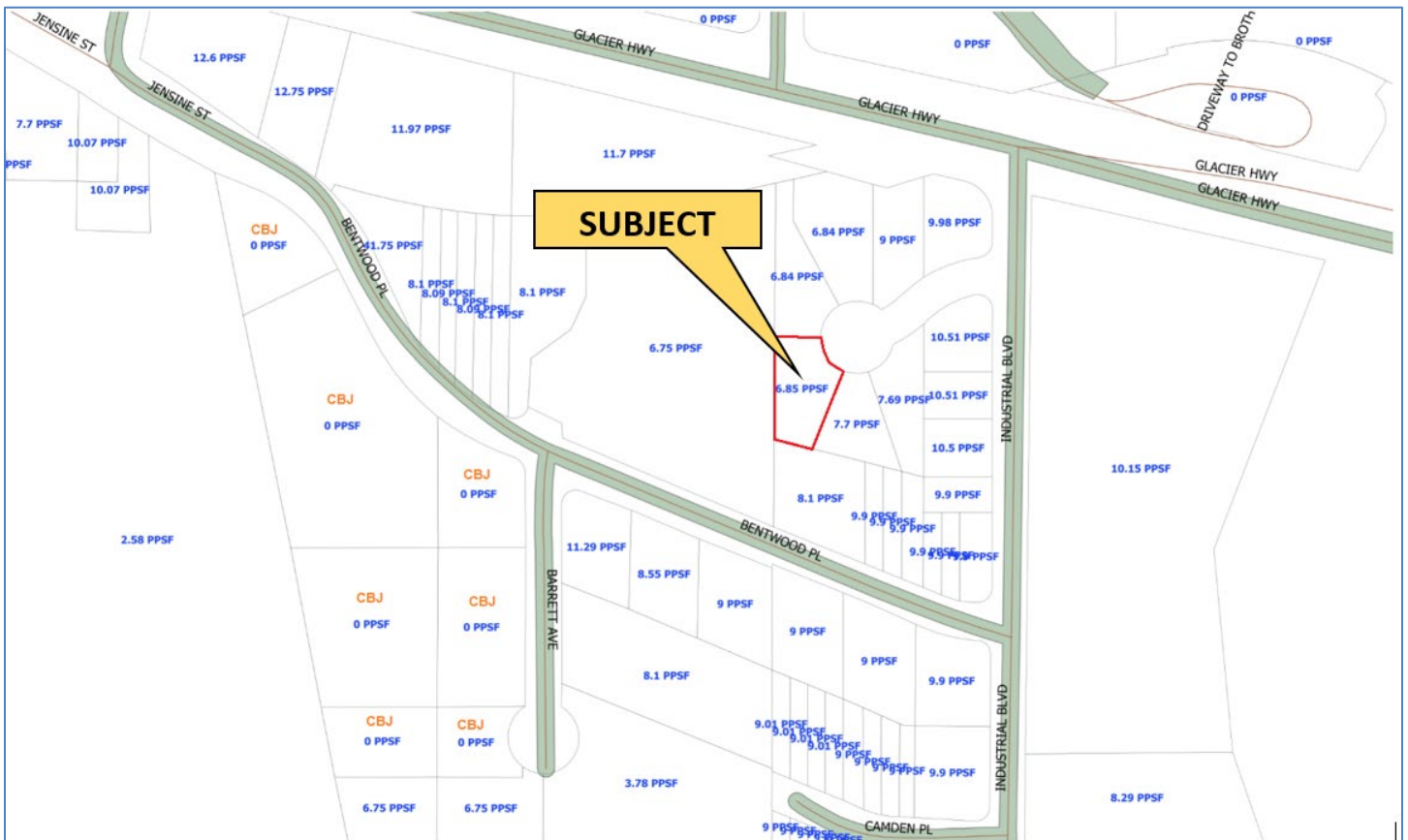
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 10,896 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

- Building Characteristics:
 - None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030130
KENNETH WILLIAMSON
ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 17

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$77,100.00			\$77,100.00
2020	\$55,500.00			\$55,500.00
2019	\$55,500.00			\$55,500.00
2018	\$51,400.00			\$51,400.00
2017	\$60,800.00			\$60,800.00
2016	\$60,800.00			\$60,800.00
2015	\$60,800.00			\$60,800.00
2014	\$60,800.00			\$60,800.00
2013	\$60,800.00			\$60,800.00
2012	\$60,800.00	\$0.00	\$0.00	\$60,800.00
2011	\$60,800.00	\$0.00	\$0.00	\$60,800.00
2010	\$60,000.00	\$0.00	\$0.00	\$60,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.9%.

We find that no change to the 2021 assessed value of \$77,100 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$128,500.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

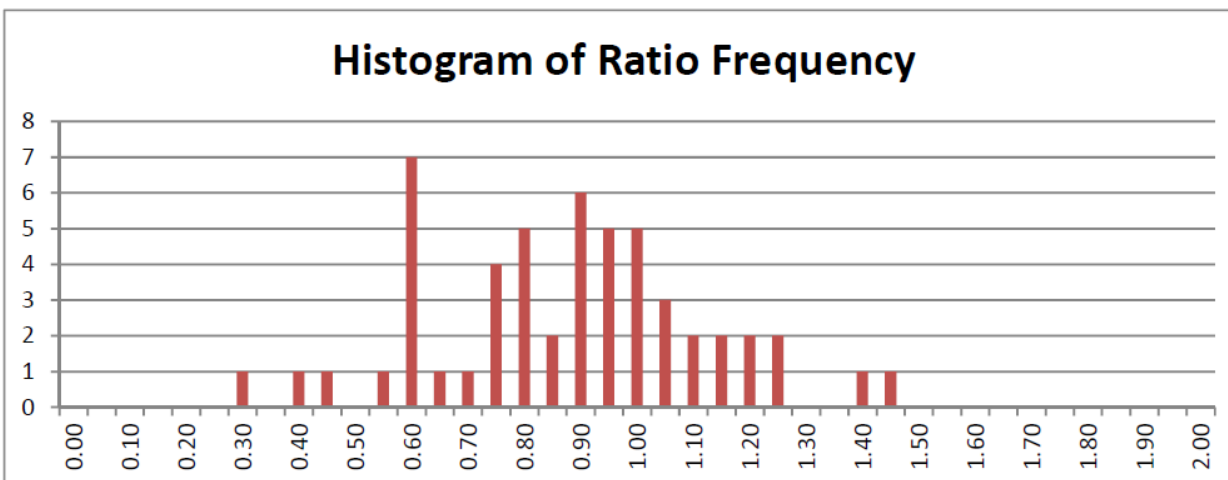
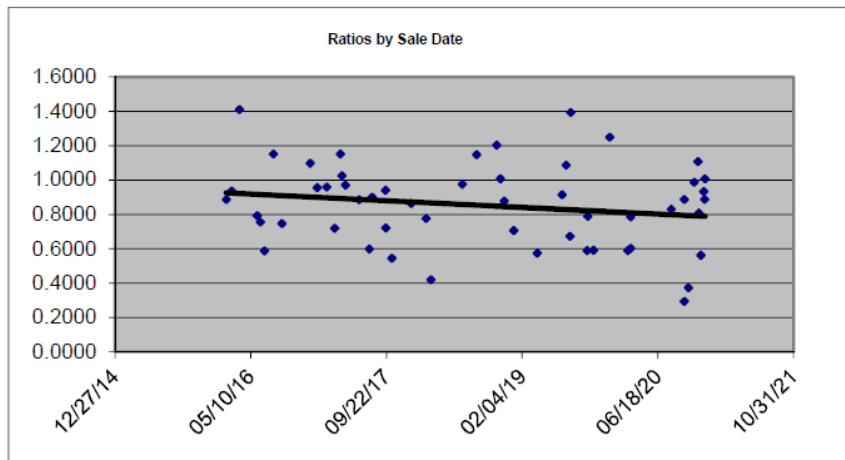
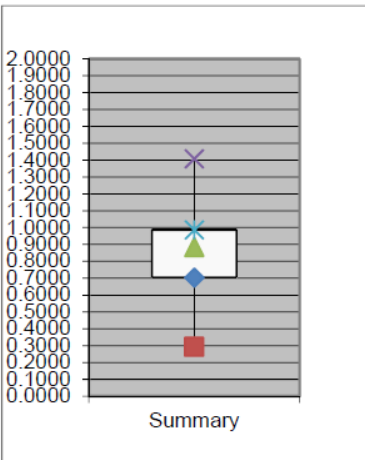
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030130
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030130
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030130**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$77,100
2021 Owner estimate of value:	\$55,500
2021 Final determination:	\$77,100

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1291
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030140
Property Location	ASBURY PL
Appeal No.	APL20210445
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.
If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0445

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030140

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 76,350	\$ 76,350
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 55,000	\$ 76,350	\$ 76,350

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

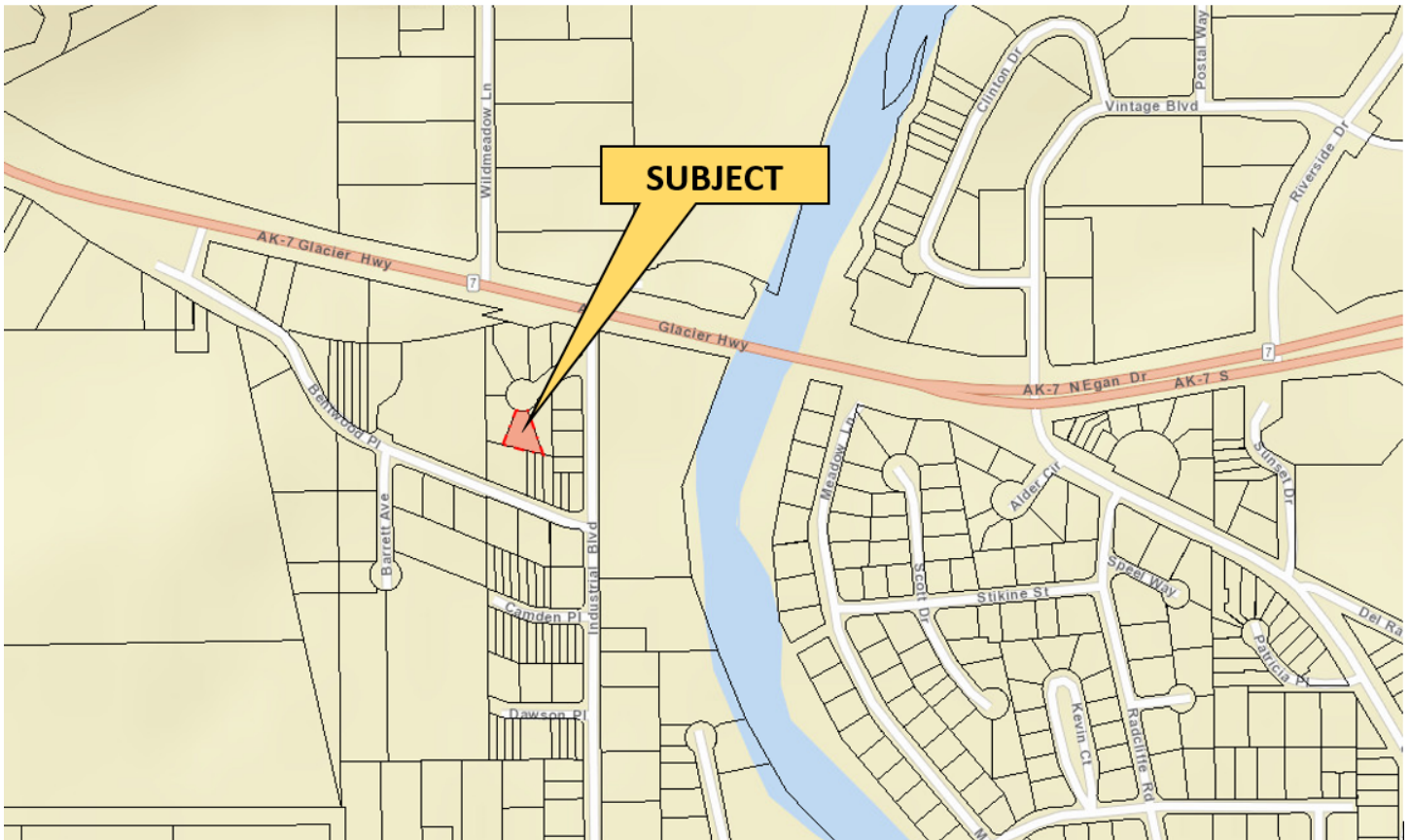
- Land
 - 9,920 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

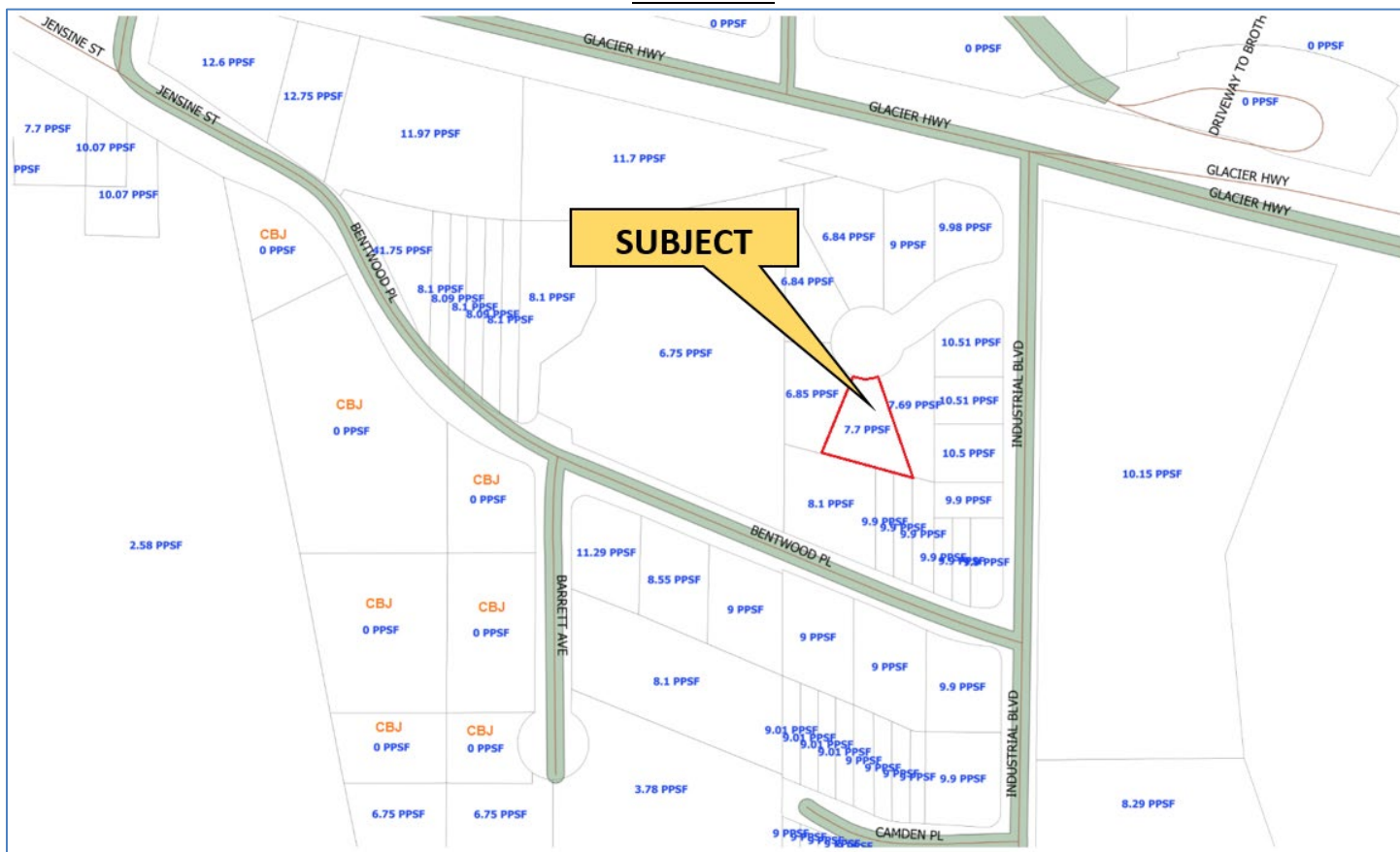
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 9,920 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

- Building Characteristics:
 - None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030140
KEN WILLIAMSON
ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 16

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$76,350.00			\$76,350.00
2020	\$55,000.00			\$55,000.00
2019	\$55,000.00			\$55,000.00
2018	\$50,900.00			\$50,900.00
2017	\$53,600.00			\$53,600.00
2016	\$53,600.00			\$53,600.00
2015	\$53,600.00			\$53,600.00
2014	\$53,600.00			\$53,600.00
2013	\$53,600.00			\$53,600.00
2012	\$53,600.00	\$0.00	\$0.00	\$53,600.00
2011	\$53,600.00	\$0.00	\$0.00	\$53,600.00
2010	\$50,000.00	\$0.00	\$0.00	\$50,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.8%.

We find that no change to the 2021 assessed value of \$76,350 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$127,250.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

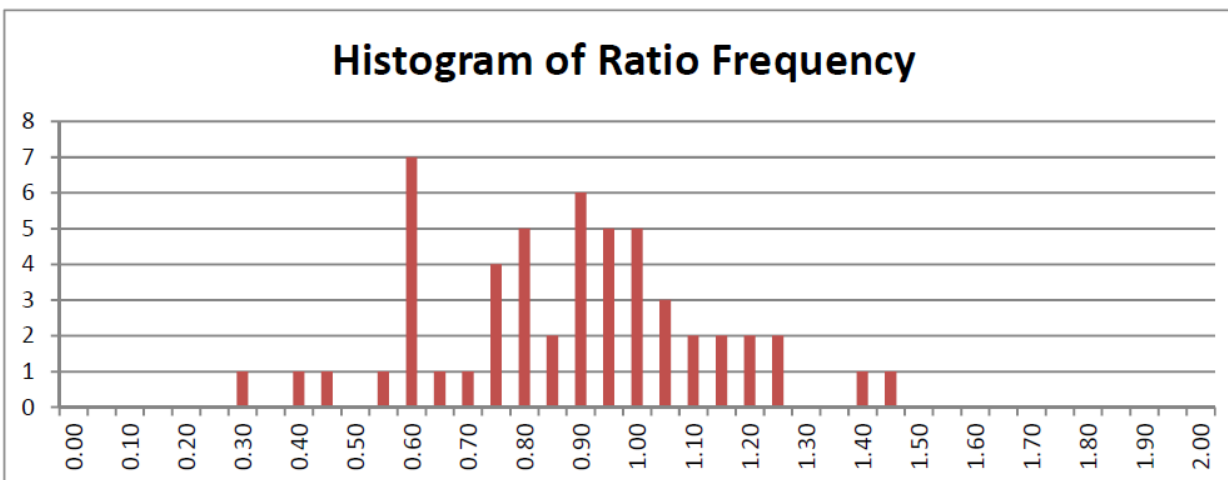
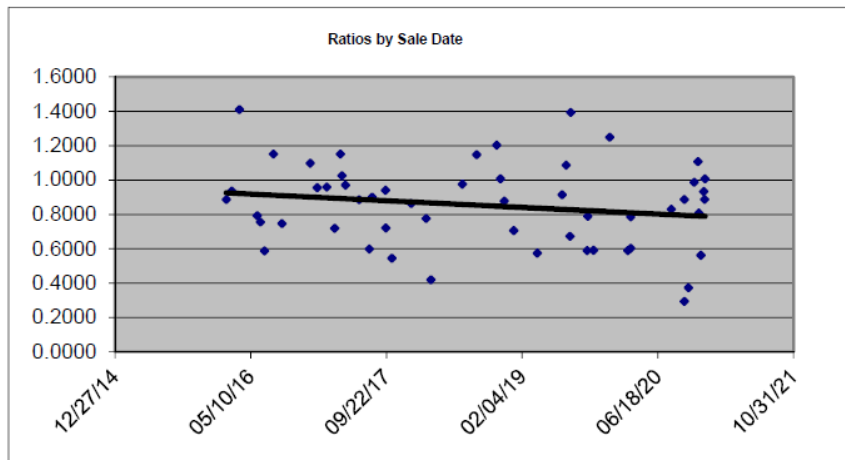
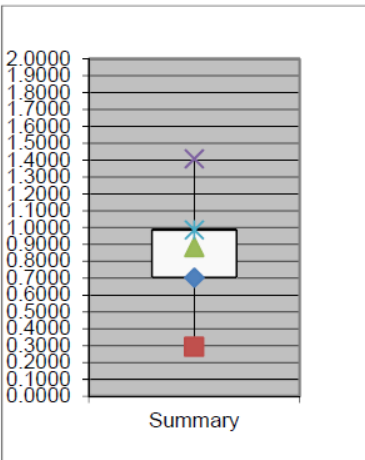
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C

(1) These were the sales available to us for our market analysis for assessment year 2021.

(2) Some sales prices are confidential, specifically when the only sale source is the buyer.

(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.

(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071

(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.

(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.

(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios

(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.

(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030140
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030140
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030140**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$76,350
2021 Owner estimate of value:	\$55,000
2021 Final determination:	\$76,350

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1315
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030150
Property Location	ASBURY PL
Appeal No.	APL20210446
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0446

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Asbury Place

Parcel No.: 4B1701030150

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 77,850	\$ 77,850
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 56,100	\$ 77,850	\$ 77,850

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

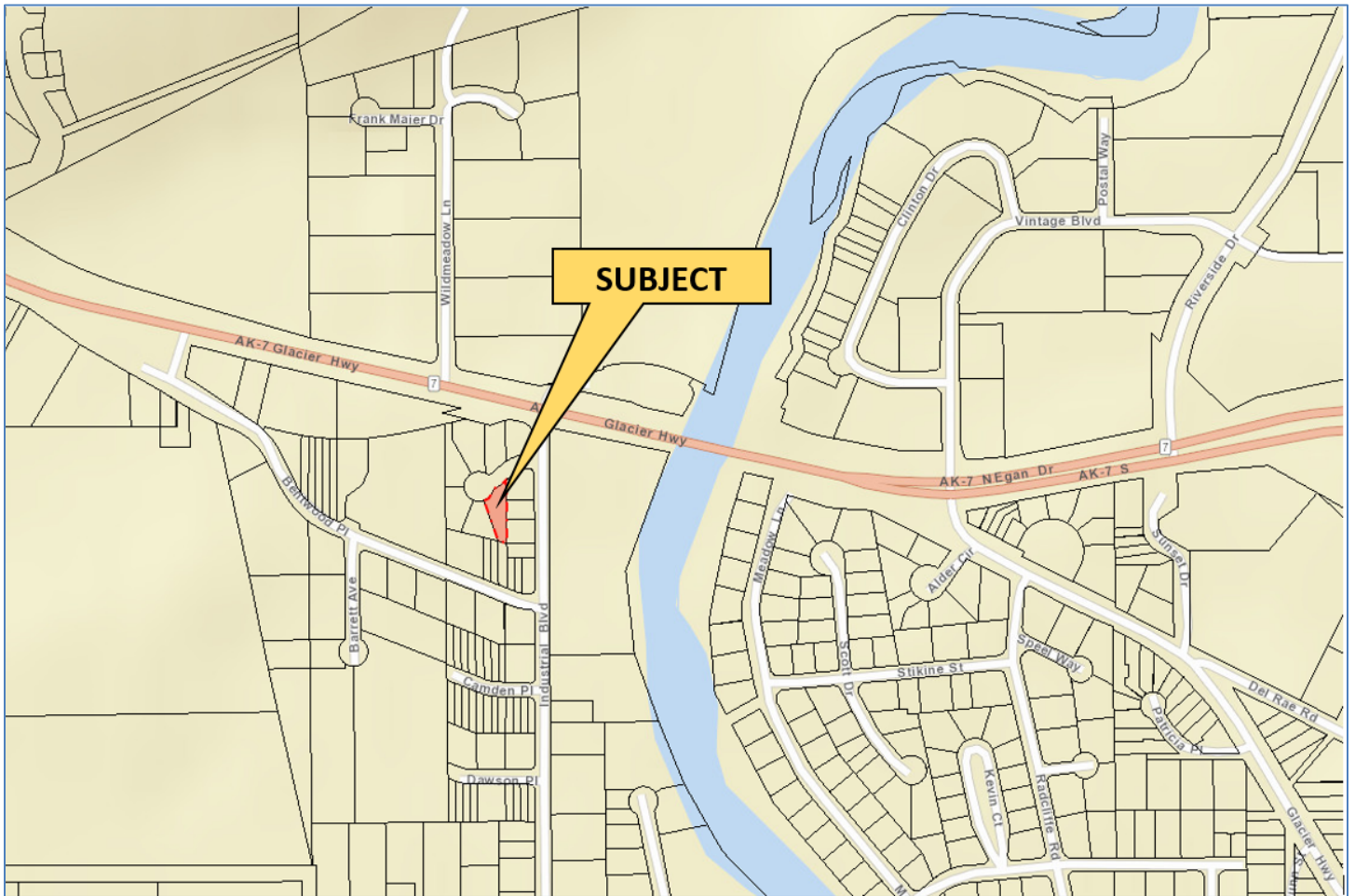
- Land
 - 10,121 SF lot
 - Level, vacant lot
- Building
 - None

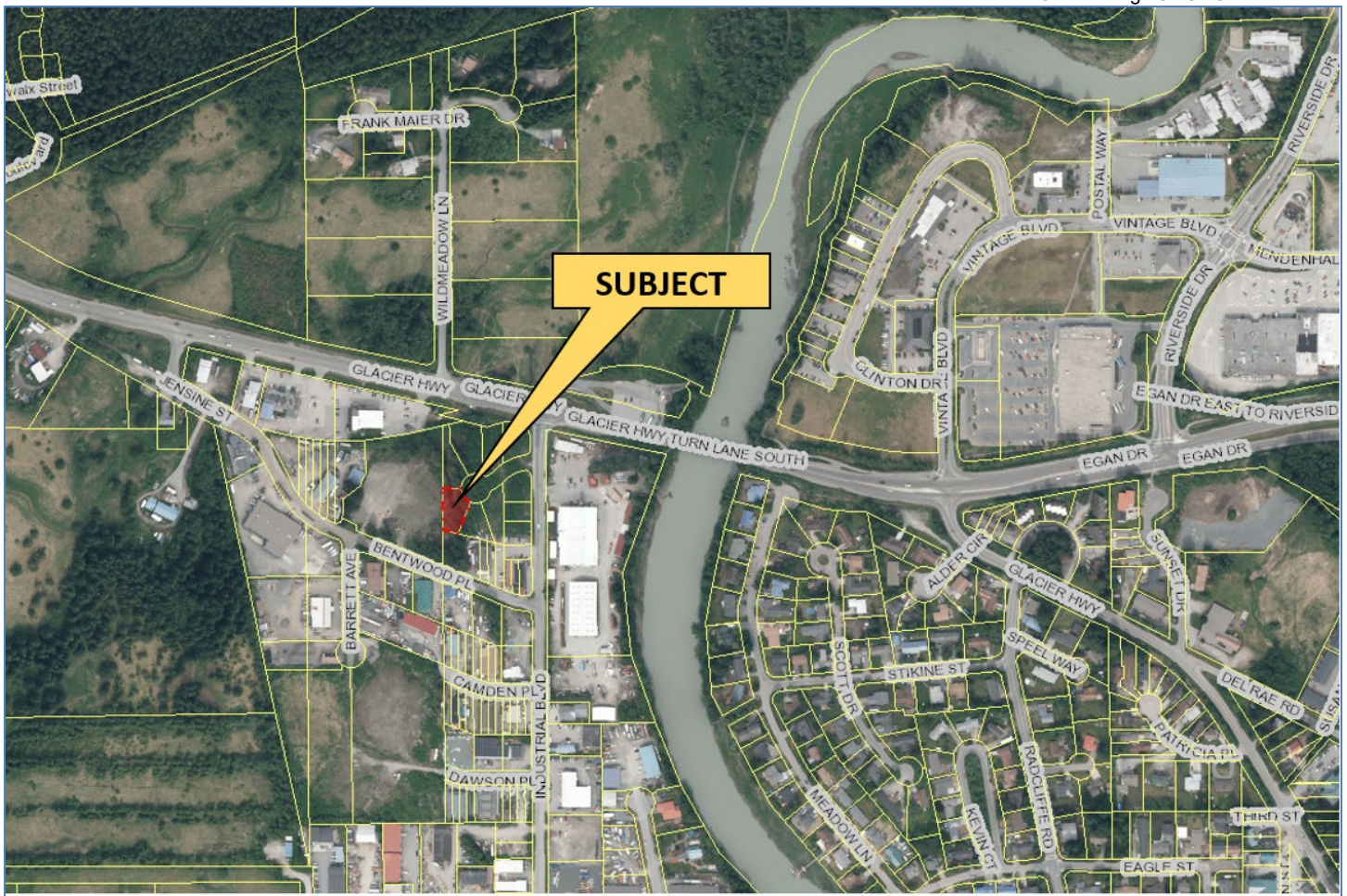
SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

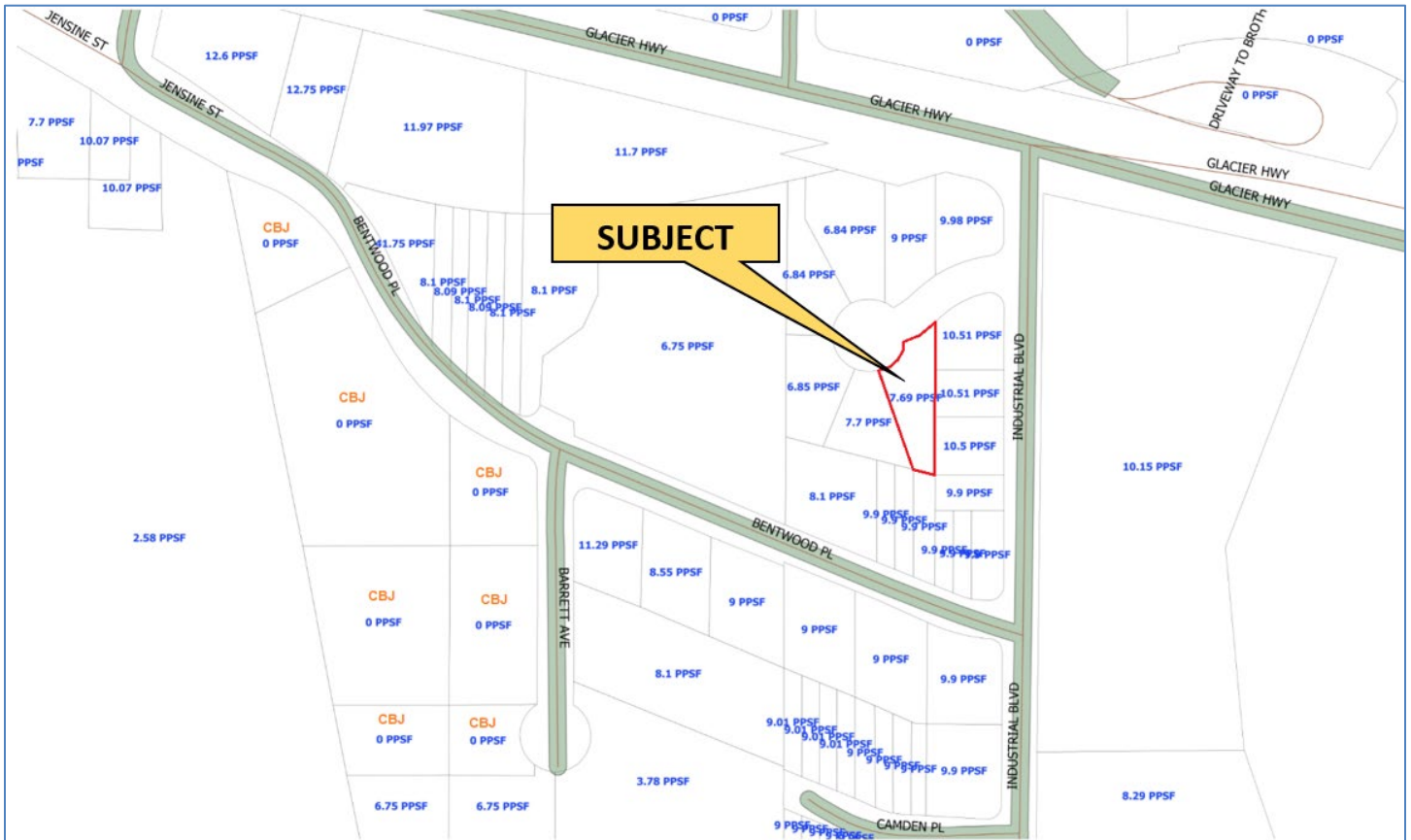
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 10,121 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030150
KEN WILLIAMSON
ASBURY PL

MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 15

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$77,850.00			\$77,850.00
2020	\$56,100.00			\$56,100.00
2019	\$56,100.00			\$56,100.00
2018	\$51,900.00			\$51,900.00
2017	\$54,700.00			\$54,700.00
2016	\$54,700.00			\$54,700.00
2015	\$54,700.00			\$54,700.00
2014	\$54,700.00			\$54,700.00
2013	\$54,700.00			\$54,700.00
2012	\$54,700.00	\$0.00	\$0.00	\$54,700.00
2011	\$54,700.00	\$0.00	\$0.00	\$54,700.00
2010	\$55,000.00	\$0.00	\$0.00	\$55,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.8%.

We find that no change to the 2021 assessed value of \$77,850 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$129,750.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

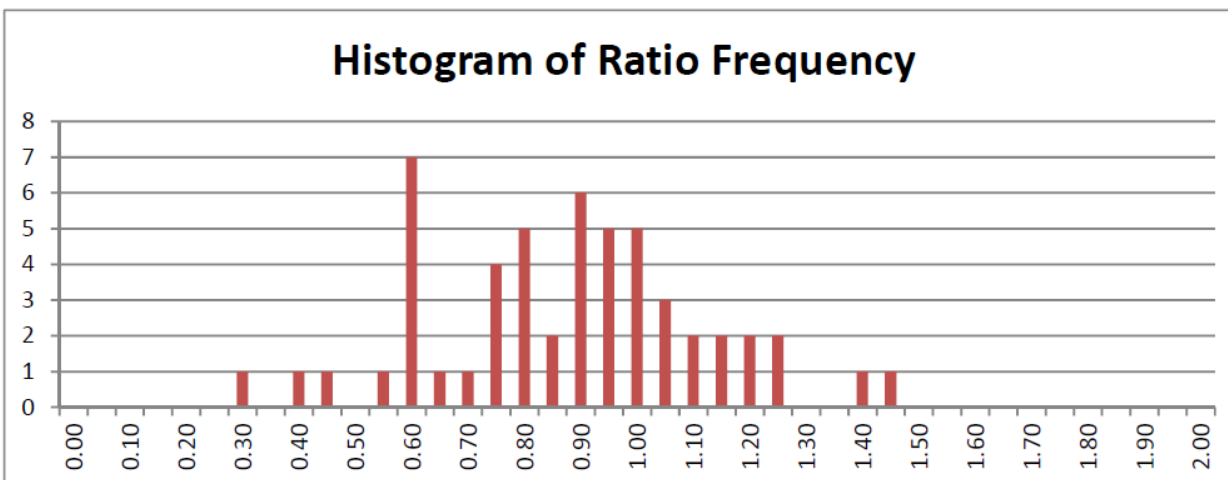
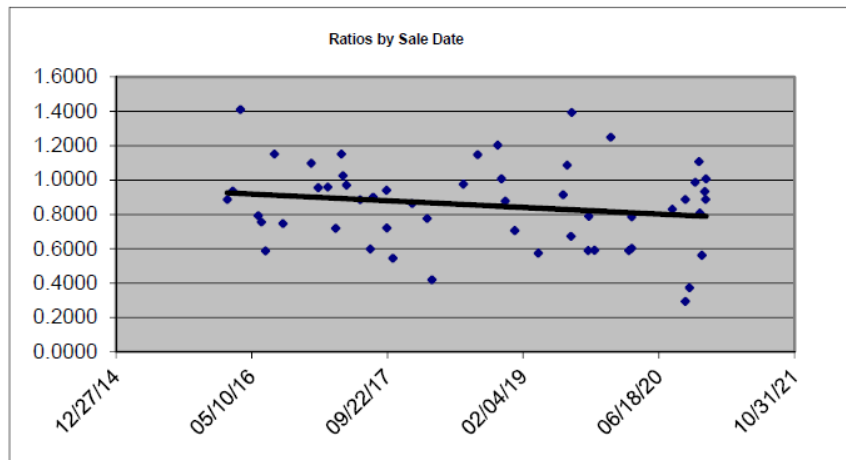
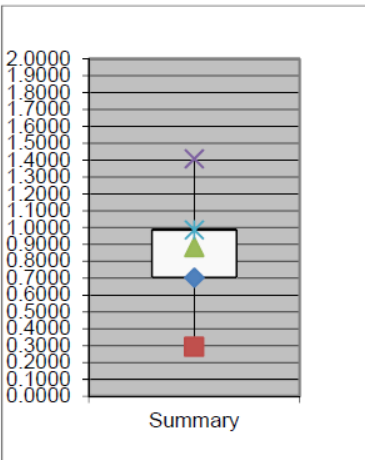
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030150
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030150
PHYSICAL LOCATION: Asbury Place

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030150**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$77,850
2021 Owner estimate of value:	\$56,100
2021 Final determination:	\$77,850

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson	Name of Applicant			
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net		
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same		
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied		THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes			
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?		☐ Yes ☐ No			
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Steet
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030160
Property Location	INDUSTRIAL BLVD
Appeal No.	APL20210438
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0438

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Industrial Blvd

Parcel No.: 4B1701030160

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 95,250	\$ 95,250
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 68,500	\$ 95,250	\$ 95,250

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

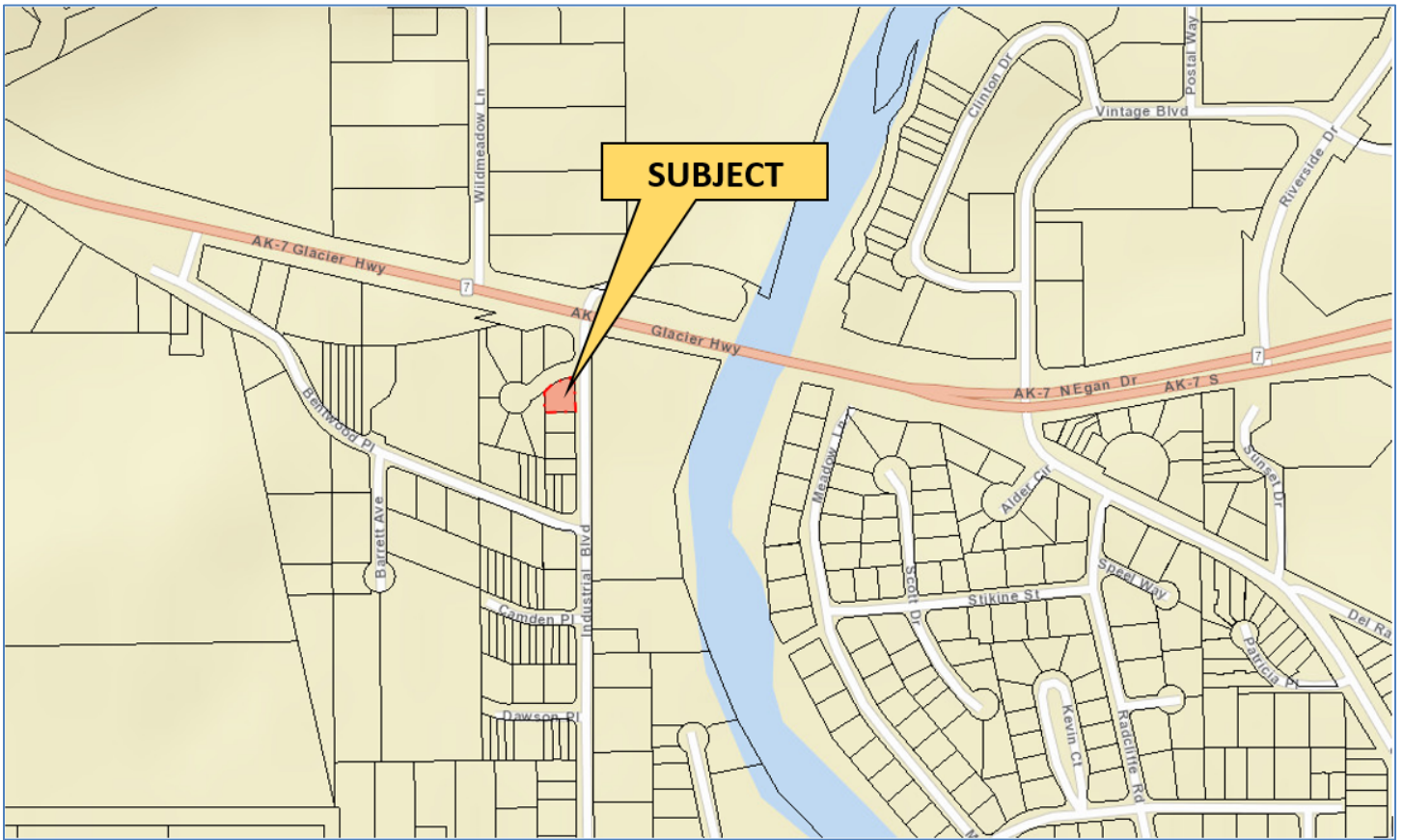
- Land
 - 9,067 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

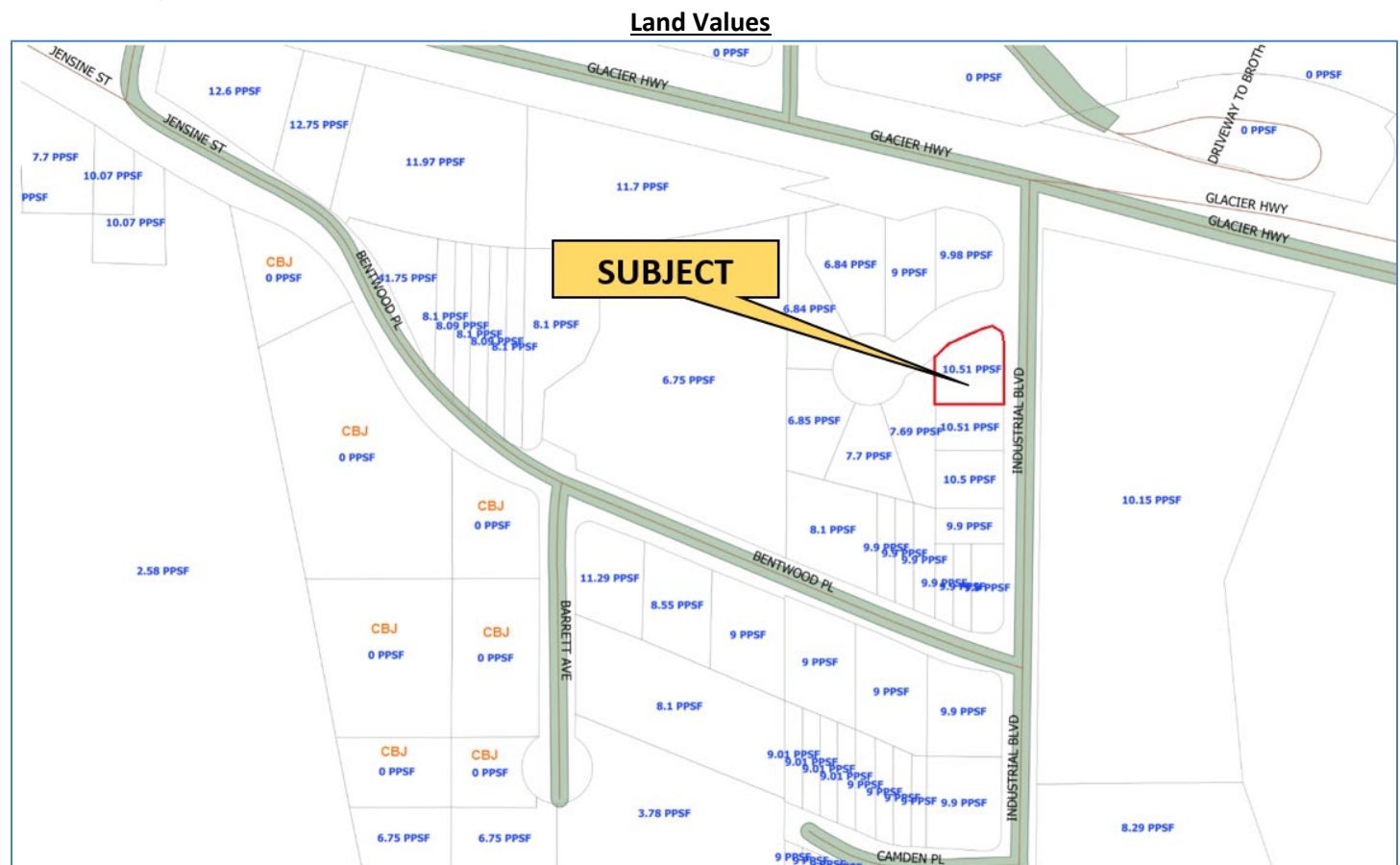
LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 9,067 SF lot
- Level, vacant lot



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030160
KEN WILLIAMSON
INDUSTRIAL BLVD
MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 14

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$95,250.00			\$95,250.00
2020	\$68,500.00			\$68,500.00
2019	\$68,500.00			\$68,500.00
2018	\$63,500.00			\$63,500.00
2017	\$54,400.00			\$54,400.00
2016	\$49,000.00			\$49,000.00
2015	\$49,000.00			\$49,000.00
2014	\$49,000.00			\$49,000.00
2013	\$49,000.00			\$49,000.00
2012	\$49,000.00	\$0.00	\$0.00	\$49,000.00
2011	\$49,000.00	\$0.00	\$0.00	\$49,000.00
2010	\$50,000.00	\$0.00	\$0.00	\$50,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 39.1%.

We find that no change to the 2021 assessed value of \$95,250 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$129,750.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

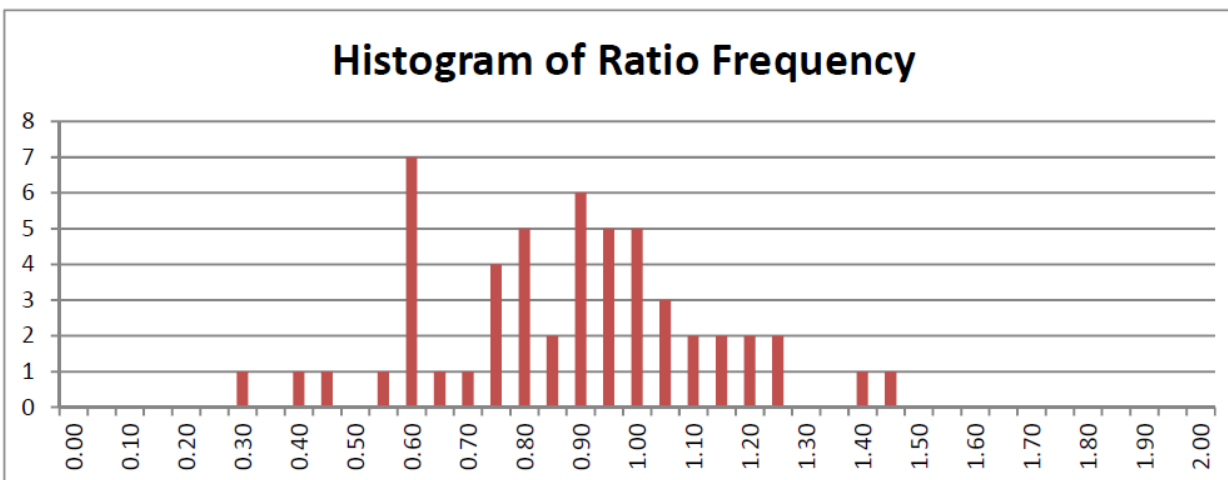
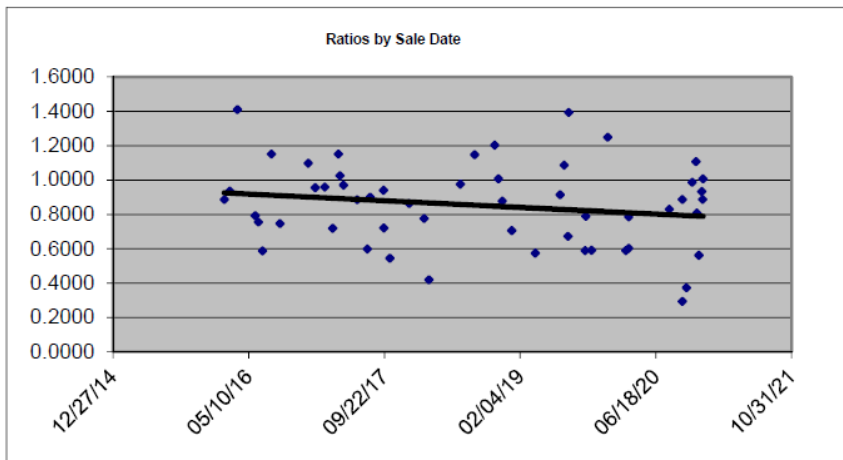
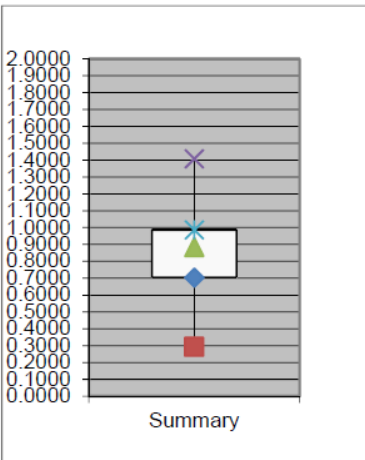
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030160
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030160
PHYSICAL LOCATION: Industrial Blvd

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030160**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$95,250
2021 Owner estimate of value:	\$68,500
2021 Final determination:	\$95,250

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KENNETH WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 1362
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030170
Property Location	INDUSTRIAL BLVD
Appeal No.	APL20210439
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0439

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Industrial Blvd

Parcel No.: 4B1701030170

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 64,800	\$ 64,800
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 46,600	\$ 64,800	\$ 64,800

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

- Land
 - 6,165 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 6,165 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030170
KENNETH WILLIAMSON
INDUSTRIAL BLVD
MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 13

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$64,800.00			\$64,800.00
2020	\$46,600.00			\$46,600.00
2019	\$46,600.00			\$46,600.00
2018	\$43,200.00			\$43,200.00
2017	\$37,000.00			\$37,000.00
2016	\$33,300.00			\$33,300.00
2015	\$33,300.00			\$33,300.00
2014	\$33,300.00			\$33,300.00
2013	\$33,300.00			\$33,300.00
2012	\$33,300.00	\$0.00	\$0.00	\$33,300.00
2011	\$33,300.00	\$0.00	\$0.00	\$33,300.00
2010	\$35,000.00	\$0.00	\$0.00	\$35,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 39.1%.

We find that no change to the 2021 assessed value of \$64,800 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$108,000.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

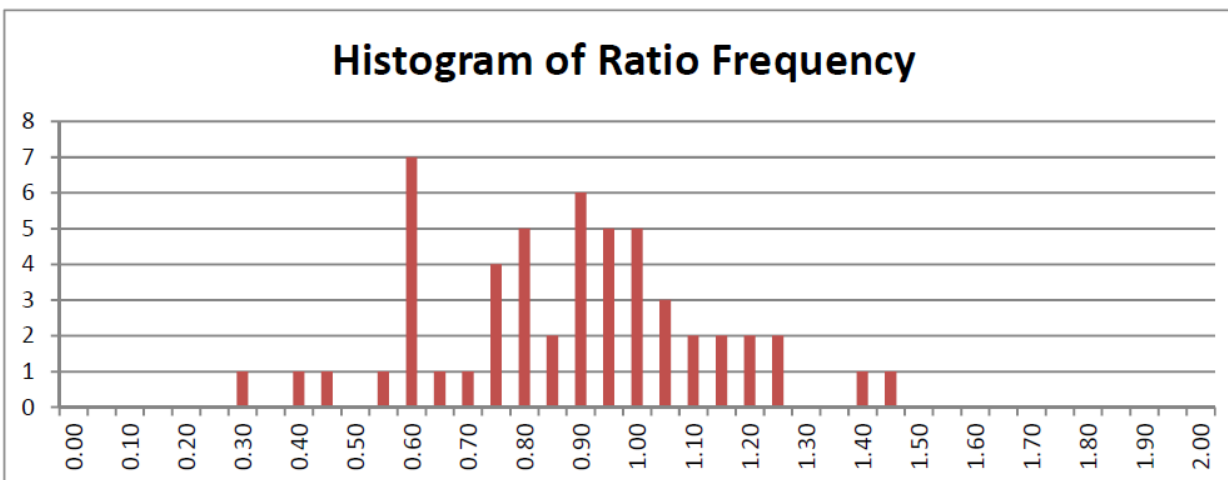
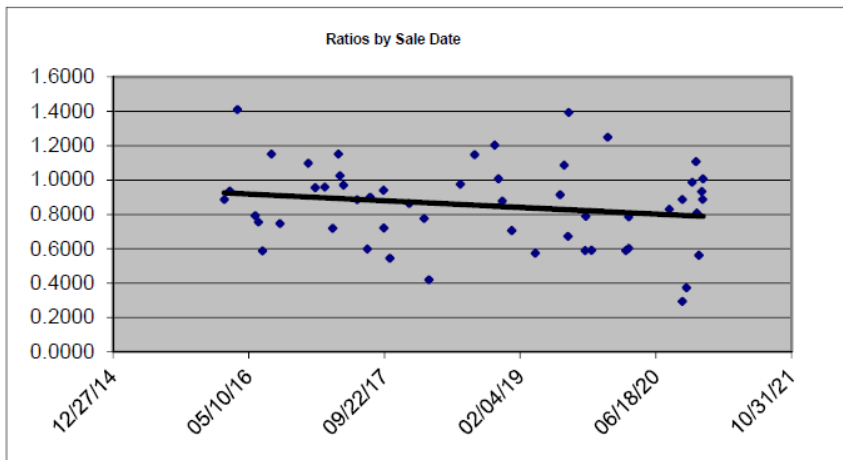
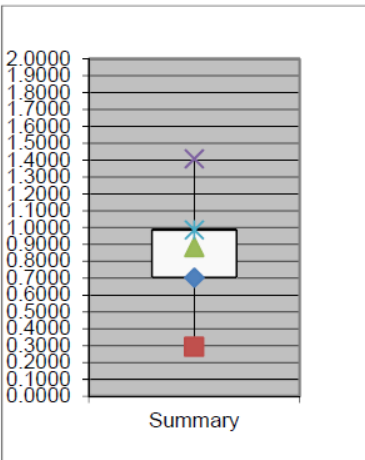
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030170
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030170
PHYSICAL LOCATION: Industrial Blvd

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030170**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$64,800
2021 Owner estimate of value:	\$46,600
2021 Final determination:	\$64,800

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

KENNETH WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801

Page: 1385
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	4B1701030180
Property Location	INDUSTRIAL BLVD
Appeal No.	APL20210440
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0440

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Industrial Blvd

Parcel No.: 4B1701030180

Property Type: Commercial-Vacant

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 79,800	\$ 79,800
Buildings:	Not provided	\$ 0	\$ 0
Total:	\$ 57,500	\$ 79,800	\$ 79,800

Subject Photo



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OVERVIEW

The subject is a level, developable lot located in close proximity to the Mendenhall Valley commercial area. Currently it sits vacant.

Subject Characteristics:

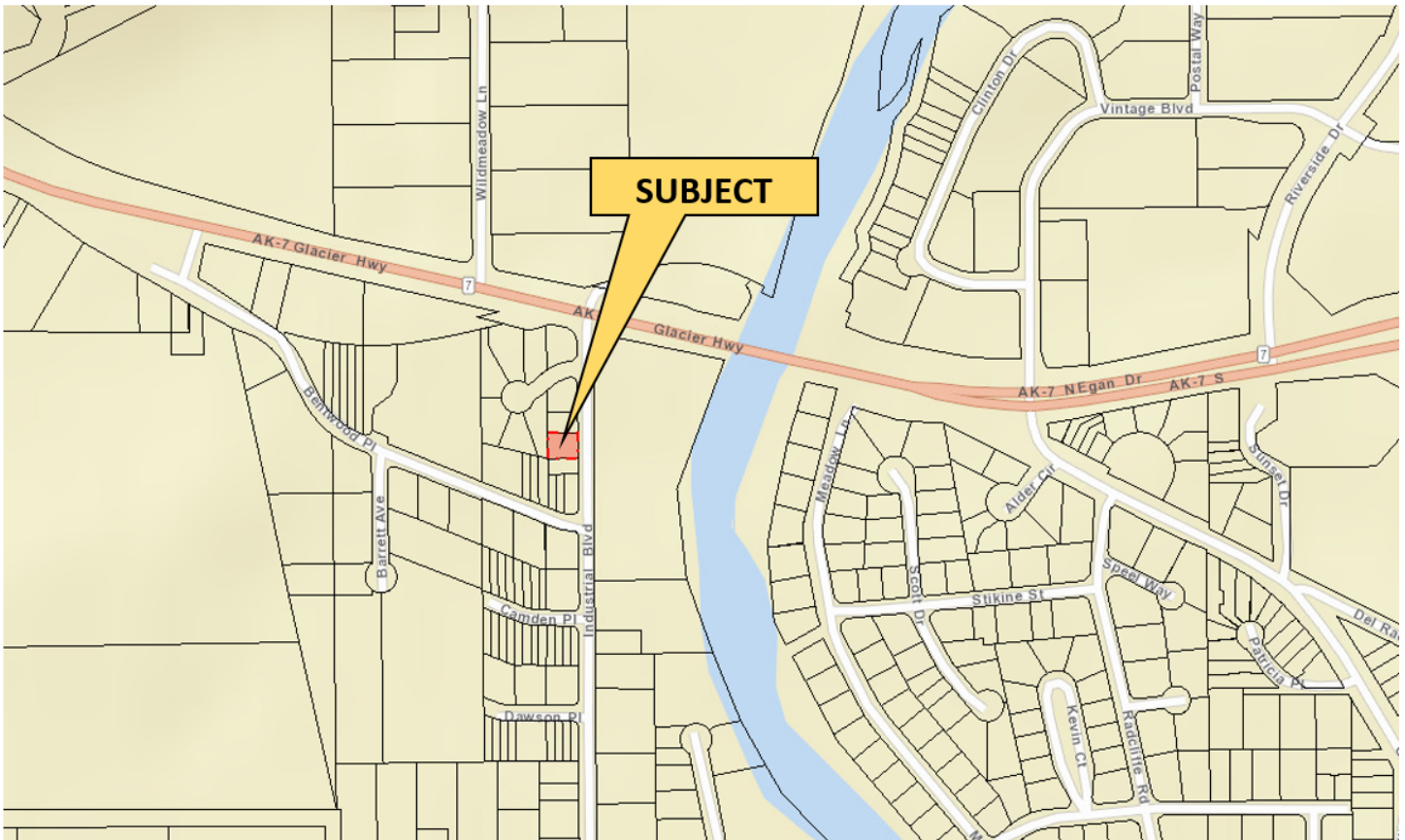
- Land
 - 7,600 SF lot
 - Level, vacant lot
- Building
 - None

SUBJECT PHOTOS



Vacant

AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

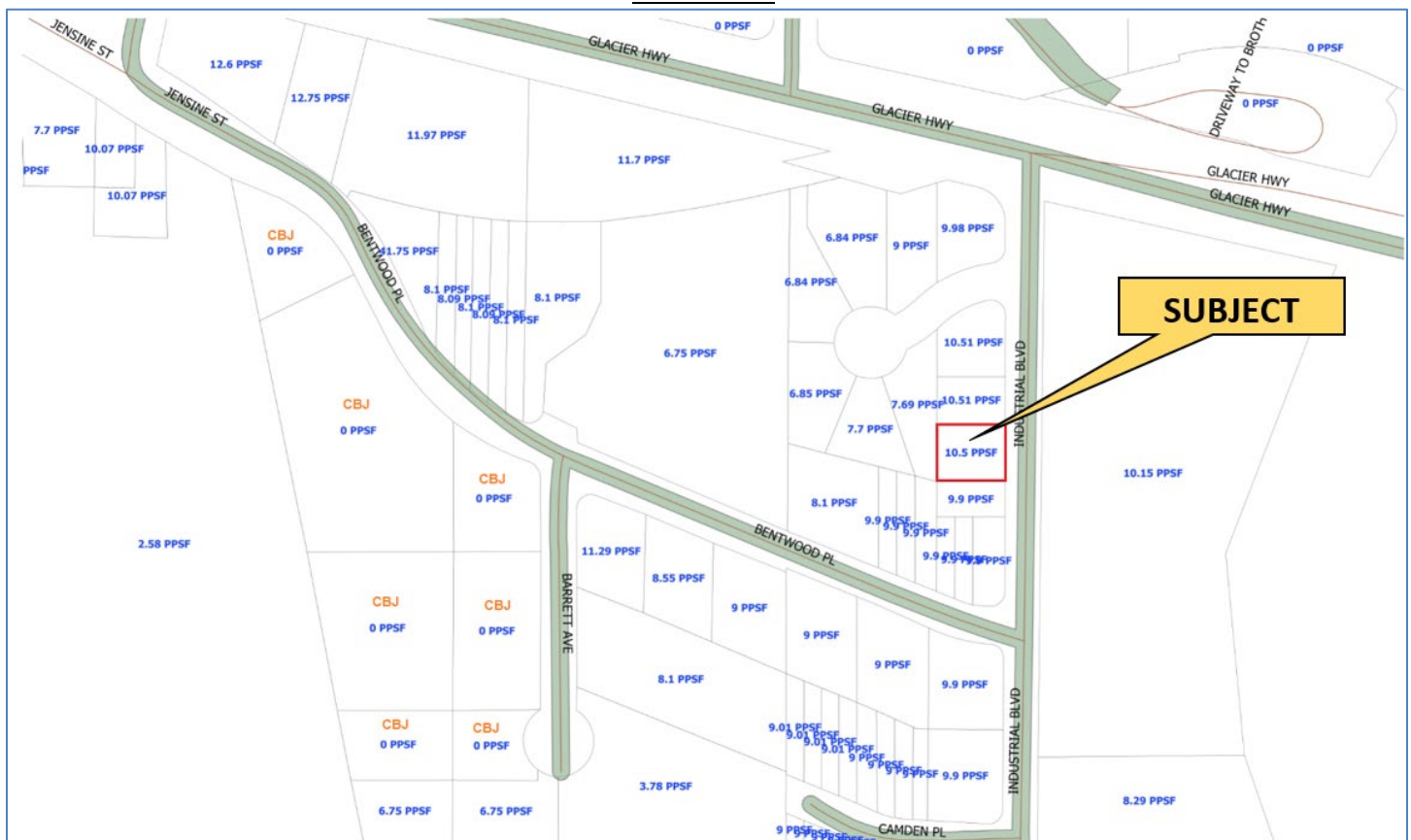
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are a level, developable lot located in close proximity to the Mendenhall Valley commercial area. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 7,600 SF lot
- Level, vacant lot

Land Values



BUILDING(S)

The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- None

COST REPORT

A cost report was not done for this appeal because there are no buildings located on the parcel.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

4B1701030180
KENNETH WILLIAMSON
INDUSTRIAL BLVD
MENDENHALL VALLEY INDUSTRIAL PARK 2 BL 1 LT 12

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$79,800.00			\$79,800.00
2020	\$57,500.00			\$57,500.00
2019	\$57,500.00			\$57,500.00
2018	\$53,200.00			\$53,200.00
2017	\$45,600.00			\$45,600.00
2016	\$41,000.00			\$41,000.00
2015	\$41,000.00			\$41,000.00
2014	\$41,000.00			\$41,000.00
2013	\$41,000.00			\$41,000.00
2012	\$41,000.00	\$0.00	\$0.00	\$41,000.00
2011	\$41,000.00	\$0.00	\$0.00	\$41,000.00
2010	\$40,000.00	\$0.00	\$0.00	\$40,000.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find the value for each of these parcels is equitable and not excessive.
- The appellant states that the land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I’m asking the City to provide the basis for their calculation and for the values to be returned to their prior year values.
 - The basis for change is a market analysis based upon available sales data, which adhered to assessment standards.
 - These parcels were off of override for a few years and thus in 2020 received a neighborhood adjustment. They were put back on override for 2021 at the base land value without the override and then received the normal trending of 50%.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.8%.

We find that no change to the 2021 assessed value of \$79,800 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for vacant commercial properties is at 60%. Based on that, the indicated market value for this property is around \$133,000.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

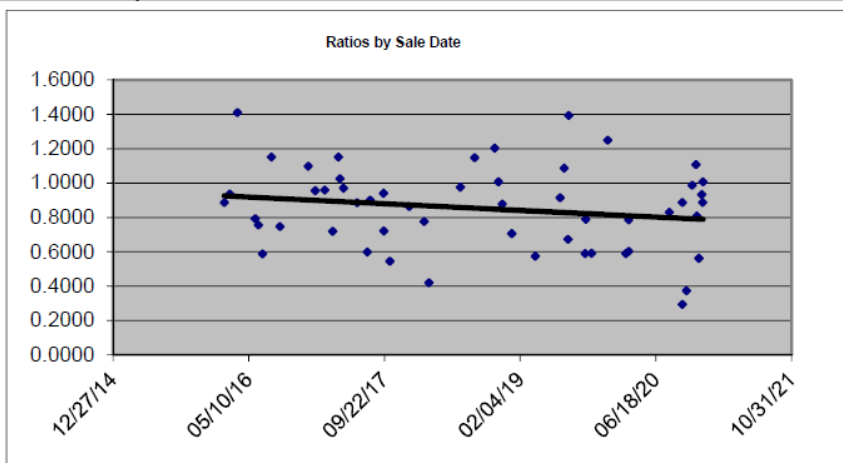
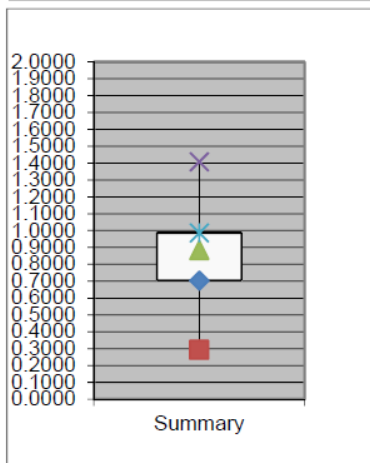
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

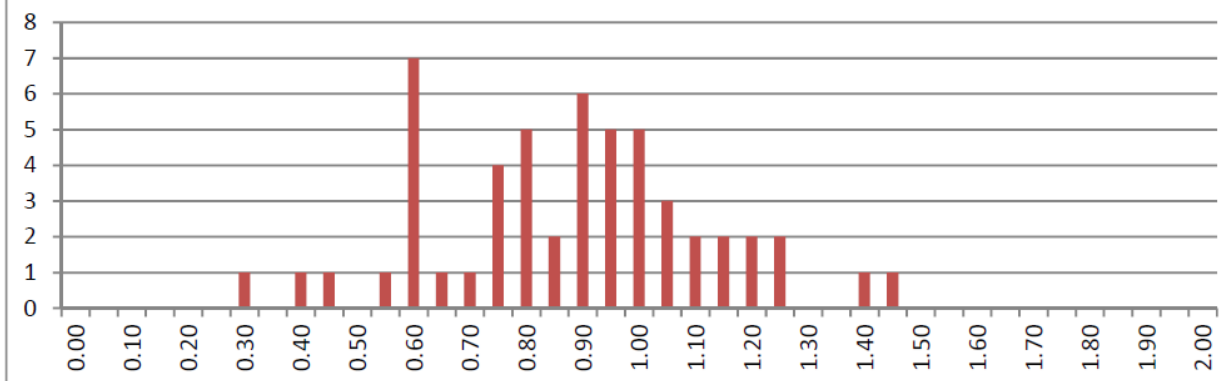
0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



Histogram of Ratio Frequency



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 4B1701030180
RESPONSE DEADLINE: 9/15/2021

PARCEL: 4B1701030180
PHYSICAL LOCATION: Industrial Blvd

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **4B1701030180**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$79,800
2021 Owner estimate of value:	\$57,500
2021 Final determination:	\$79,800

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary:

I've consolidated my appeals for the Board of Equalization's convenience. The City's 2021 property assessment is arbitrary and is not supported by comparable sales or an income based analysis. The land values of these tracts have been arbitrarily increased by a factor of 1.39 without regard for actual value. I'm asking the City to provide the basis for their calculation and for the values be returned to their prior year values.

Parcel	Description	2021	S/B reduced to:
4B1701030081	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$781,350.00	\$562,500.00
4B1701030110	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$98,250.00	\$70,700.00
4B1701030160	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$95,250.00	\$68,500.00
4B1701030170	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$64,800.00	\$46,600.00
4B1701030180	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$79,800.00	\$57,500.00
4B1701030120	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,750.00	\$78,300.00
4B1701030130	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,100.00	\$55,500.00
4B1701030100	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$108,900.00	\$78,400.00
4B1701030090	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,050.00	\$54,700.00
4B1701030140	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$76,350.00	\$55,000.00
4B1701030150	MENDENHALL VALLEY INDUSTRIAL PARK 2	\$77,850.00	\$56,100.00
Total reduction			<u>\$460,650.00</u>

Thanks for taking the time to review this.

Ken Williamson
Email: deltaak@ptialaska.net
Cell/Text: (503) 789-9630
Landline: (907) 789-0301



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>			Date		

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary Hammond

From: Mary Hammond
Sent: Tuesday, August 24, 2021 1:54 PM
To: 'Ken'
Subject: RE: Phone conversation Aug 19
Attachments: AY2021- Com Sales List 20210823a.pdf

Ken,

I understand your frustration regarding the release of sale prices, this office has always been proactive in advocating for that information to be public. The way the ordinance is written, actual sale prices are confidential and under the direction of the law department we are not to release them. I can, however, gladly provide the values for each parcel, which is public information, and have done so in the attachment.

To clarify, the summary report was created using data extracted from Govern, which is a product of Harris. We are looking forward to upgrading to their newest version of Govern but that has not been implemented yet.

My office works diligently to collect accurate verifiable sales information which can be used in analysis. To use false or misleading data to conduct our studies goes against our ethics and our mission, which is to value all taxable properties fairly and equitably, regardless of political pressure or threats of legal action.

We did not create a false assessed value for the former Mental Health Trust parcel (1C060K010031). The assessed value prior to the 2021 trending was determined based on the same land model that was used to value all of the surrounding parcels. If there were no increase to commercial property values, this parcel would have been valued at \$5,016,200. After trending, this parcel has an A/S ratio of less than 40%. This individual sale was not the basis for increasing commercial land values for 2021, rather, all known and verifiable sales information from January, 2016 through December 2020 were considered.

I'm sorry that you feel that commercial properties have been concealed and manipulated, however, we have been very open with the processes and changes. I hope that in the future our hands will not be tied in regards to the disclosure of sales prices. I encourage you to provide any substantive information regarding arm's length sales so that our office can continue in the pursuit of fair and equitable valuation of all properties.

Mary Hammond she/ her

Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Saturday, August 21, 2021 3:22 PM
To: Mary Hammond
Subject: Phone conversation Aug 19

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

Thanks for getting back to me. I hadn't heard anything and was starting to be concerned. I did receive a copy of the City's *List of 57* properties from another party; however, it's useless until the City releases the values it applied to each tract.

I understand some of the confusion about releasing sales prices which the City obtained solely under authority of the new disclosure ordinance. There may be broader problems with the ordinance but, in this instance, only three sales occurred after its effective date. Those sales were business condos which have token land values of \$5K or \$0.

Double-check with the Law Dept. and then email me the *List of 57* with the sales price and assessed value for each parcel. Omit the sales prices for the three transactions after the effective date of CBJ 15.05.105.

On the phone, you indicated the Summary Study was generated in-house using Govern's CAMA software. I didn't realize the City had upgraded. Which Harris/Govern CAMA package did the City purchase: RealWare, OpenForms or PACS? Please confirm that the charts, graphs and calculations included in the Summary Study were generated by the version of Govern you use.

I've found a number of errors in the Summary Study. Some appear to go beyond accidental misrepresentations. One you and I discussed – the Mental Health Trust land sale to Norwegian Cruise Lines – had no prior assessed value. You cannot create a false assessed value and use it in a ratio value comparison.

A ratio value calculation, as used for real property assessment, is a comparison of the assessed value of the parcel at the time of the sale compared to the actual sales price. It is Assessed value divided by Sales price; often abbreviated: A/S or ASR. You cannot falsify the assessed value for the purpose of creating a ratio value.

Why didn't the Assessor's Office create a value which matches the sales price exactly? Then, the ratio study will *prove* the Assessor's Office is doing a great job since the property sold for the exact amount of the fake assessment. On the other hand, if you create a fake assessed value of one-half of the sales price, that ratio calculation will *prove* assessed values are low – about 50% of what they should be. You can imagine the pandemonium that will follow if the faulty ratio is used as justification to increase land value on hundreds of tracts of property.

I'm bummed. I supported you for the Assessor position when Robin retired. It was good timing for your career and, to the best of my knowledge, you've done a good job. Unfortunately, for the last two years, commercial assessments have been concealed and manipulated. Taxpayers only get to see *Smoke and Mirrors*. I'm not sure the extent you were deceived, but I'm an eternal optimist. There may be some possible solutions.

I've found a number of problems with both the method and the data used for 2021. Apparently an expert on mass assessment techniques will be reviewing the information. He will probably find more problems. It may be a good time to take another look and share any errors you find with the Law Dept.

Let me know if there's anything I can do.

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

CBJ Assessor's Office
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Grant

2, Aug, 2021

Mary:

I've sent several emails requesting information about how the Assessor's Office produced 2021 commercial land values. To date, I've received one item: an analysis without any supporting data: 2021 Summary Report- Commercial 20210526a.pdf. The report appears to be an attempt at using ratio valuation but it's hard to tell what method is actually used. I will assume it is a ratio value study unless you notify me that it is based on some other method.

To the extent the calculation is being concealed, is nonstandard or arbitrary; a property owner is prevented from challenging 2021 assessed values. It's similar to a driver trying to challenge a speeding ticket if the state will not release any information about the speed limit, the vehicle's speed or when and where the violation occurred.

If 2021 assessments are based on an arbitrary factor, please release that information. If the increase was not arbitrary, reveal the method and data the Assessor's Office used so I have an opportunity to challenge it.

Sincerely yours,



Ken Williamson

[Handwritten signature]

From: [Mary Hammond](#)
To: ["Ken"](#)
Subject: RE: Appeals to BOE
Date: Thursday, September 16, 2021 4:23:04 PM
Attachments: [AY2021- Com Sales List 20210823a.pdf](#)

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her

Assessor

City & Borough of Juneau

(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken

Sent: Wednesday, September 15, 2021 4:03 PM

To: Mary Hammond

Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021

155 S. Seward Street

Juneau, Alaska 99801

Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the

Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson

Cell/Text: (503) 789-9630

cc: Jillian Olson

Mary Hammond

From: Mary Hammond
Sent: Friday, September 24, 2021 4:28 PM
To: 'Ken'
Subject: RE: Appeals to BOE
Attachments: Reveiw of 74 Sales provided by Ken Williamson.pdf; AY2021- Com Sales List 20210923a.pdf

Ken,

The law department has interpreted the disclosure provision in CBJ 15.05.105 to mean that the only thing that is confidential is the information disclosed from the buyer directly to the Assessor. I have attached an update list of sales with prices for sales that were discovered or provided in any way other than buyer disclosure.

I'm not certain where the list you provided was published but I have identified which sales were included in the final analysis and which were not. For those sales that were not included in the final analysis, the reason is listed.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Thursday, September 16, 2021 5:06 PM
To: Mary Hammond
Subject: RE: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

The Assessor's office must release the values it used in its Ratio Value calculation(s). Send both the assessed value and the sales price which were used for the 54 properties on the original list that sold prior to 26 November, 2020. Also, provide a copy of the values for the "list of 74" commercial transactions on which the Summary Report was originally based. I've attached the parcel IDs below, for your convenience.

Have you taken a look at all the extent of the falsifications which your office is producing? Please stop and take a look!

Sincerely yours,
Ken Williamson

12/09/20	1C070A050001	230 SEWARD ST
12/07/20	5B15011107E0	2221 JORDAN AVE
12/04/20	4B1701090218	10011 CRAZY HORSE DR
11/23/20	5B1201060260	5719 CONCRETE WAY

11/17/20	4B1701020020	10011 GLACIER HWY
11/13/20	1D060L030011	201 CORDOVA ST
10/30/20	1C060K660110	711 W WILLOUGHBY AVE
10/09/20	1C060K010031	0 EGAN DR
09/24/20	5B1201060160	5740 CONCRETE WAY
09/24/20	5B1201300110	1783 Anka St
08/07/20	5B1501010001	1880 CREST ST
06/23/20	1C020K01E300	1435 Harbor Way
03/10/20	1C110K120051	0 Eastaugh W ay
03/10/20	1C110K120140	0 MILL ST
02/28/20	4B1701090056	10009 CRAZY HORSE DR
02/23/20	4B1701080020	10012 Crazy Horse
12/31/19	4b1701104000	2771 Sherwood ln
12/31/19	1c070k810090	170 S Franklin
12/24/19	5B1201300110	1783 Anka St
10/25/19	1C110K120130	190 MILL ST
10/04/19	5B1201000060	5245 GLACIER HWY
10/02/19	1C110K120120	0 MILL ST
09/03/19	5b1201010010	1610 Anka
08/02/19	5B1201020100	5452 SHAUNE DR
07/30/19	4B1601050160	2276 INDUSTRIAL BLVD
07/16/19	5B1601140043	9309 GLACIER HWY
07/01/19	1C070B0N0011	259 S FRANKLIN ST
06/28/19	1C020K01G280	1435 HARBOR WAY
04/01/19	1C110K120150	0 MILL ST
03/26/19	4b2801050030	3845 Lee Court
02/28/19	1C020K01G290	1435 HARBOR WAY
01/04/19	5B2401610150	4045 DELTA DR
11/30/18	3B1501040120	1544 CREST ST
11/16/18	5B1501040030	8825 MALLARD ST
11/02/18	1C070B0J0020	195 S FRANKLIN ST
10/29/18	4B1601090040	Crazy Horse
08/21/18	5B1601140070	9309 GLACIER HWY
07/25/18	1C020K01G200	1435 HARBOR WAY
07/20/18	1C060U050022	1108 F ST
06/29/18	4B2901020010	10200 MENDENHALL RD
03/05/18	4B1601080070	2278 INDUSTRIAL BLVD
02/15/18	5B1601000023	9151 GLACIER HWY
01/29/18	5B1201450050	5410 Bent Ct
01/09/18	1C100I070050	549 S Franklin
12/22/17	5B15011109B0	2231 JORDAN AVE
10/12/17	3B1501020030	1669 CREST ST
09/20/17	4B1701103003	2769 SHERWOOD LN
09/19/17	4B1601010040	2450 INDUSTRIAL BLVD
09/07/17	1C020K01E230	Aurora Harbor
09/07/17	1C020K01E220	Aurora Harbor
07/31/17	4B1601120130	2270 BRANDY LN
07/21/17	5B1201330160	2005 ANKA ST
06/13/17	4B1601050030	2274 INDUSTRIAL BLVD

04/24/17	4B1701090226	10011 CRAZY HORSE DR
04/11/17	7B0901030071	3161 CHANNEL DR
04/05/17	5B1201040052	1721 ANKA ST
03/16/17	1C110K120101	170 MILL ST
02/14/17	4B1701090223	10011 CRAZY HORSE DR
01/30/17	1c030c280080	712 W 12th
01/27/17	6D0701000020	4755 N Douglas Hiway
01/18/17	5b1201060140	5720 Concrete Way
01/10/17	4B1701090228	10011 CRAZY HORSE DR
12/30/16	7B0901040070	1050 Salmon Creek ln
12/15/16	1C060U040040	800 GLACIER AVE
09/23/16	1C060C000080	3610 Diston
09/02/16	5B1501020170	8401 AIRPORT BLVD
08/10/16	5b160144000	3039 Clinton
08/02/16	5B1201060061	5631 GLACIER HWY
06/30/16	4B1701100146	2789 SHERWOOD LN
06/15/16	5B1501000002	8251 GLACIER HWY
06/03/16	5B1201450110	1731 RALPH'S W AY
03/30/16	1C070A030040	100 N FRANKLIN ST
03/01/16	4B1701100170	10221 GLACIER HWY
02/10/16	5B15011107EO	2221 Jordan

From: Mary Hammond [<mailto:mary.hammond@juneau.org>]
Sent: Thursday, September 16, 2021 4:23 PM
To: 'Ken'
Subject: RE: Appeals to BOE

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken <deltaak@ptialaska.net>
Sent: Wednesday, September 15, 2021 4:03 PM
To: Mary Hammond <mary.hammond@juneau.org>
Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

cc: Jillian Olson



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1418
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	1C070A090040
Property Location	350 N FRANKLIN ST
Appeal No.	APL20210447
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.
If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0447

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 227 Fourth St/229 Fourth St/350 N Franklin St

Parcel No.: 1C070A090040

Property Type: Commercial – Office Building

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 367,500	\$ 367,500
Buildings:	Not provided	\$ 541,500	\$ 541,500
Total:	\$ 1,023,000 combined w/ 1C070A090050	\$ 909,000	\$ 909,000

Subject Photo



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OVERVIEW

The subject is a two-story office building located in close proximity to the core business district, records indicate was the building was constructed in 1900.

Subject Characteristics:

- Land
 - 4,893 sf lot
 - Largely level, developed lot
 - Close proximity to State Legislature and State of Alaska Court building
- Building
 - 7,643 SF GBA including the basement
 - 440 SF Attic area

SUBJECT PHOTOS



Front

Facing Fourth St



Rear



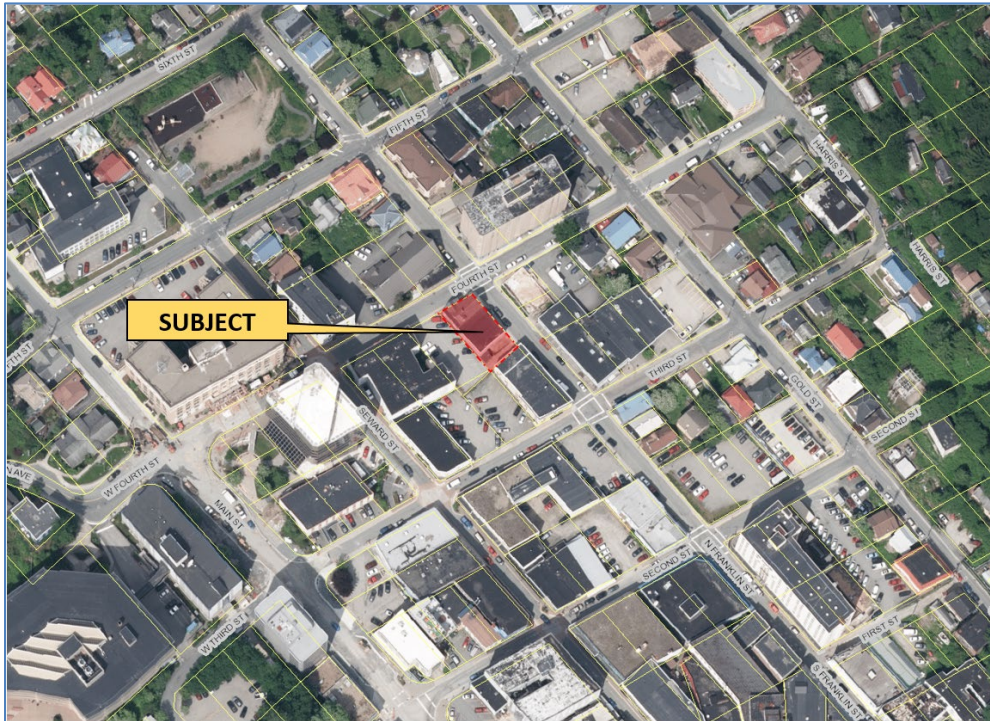
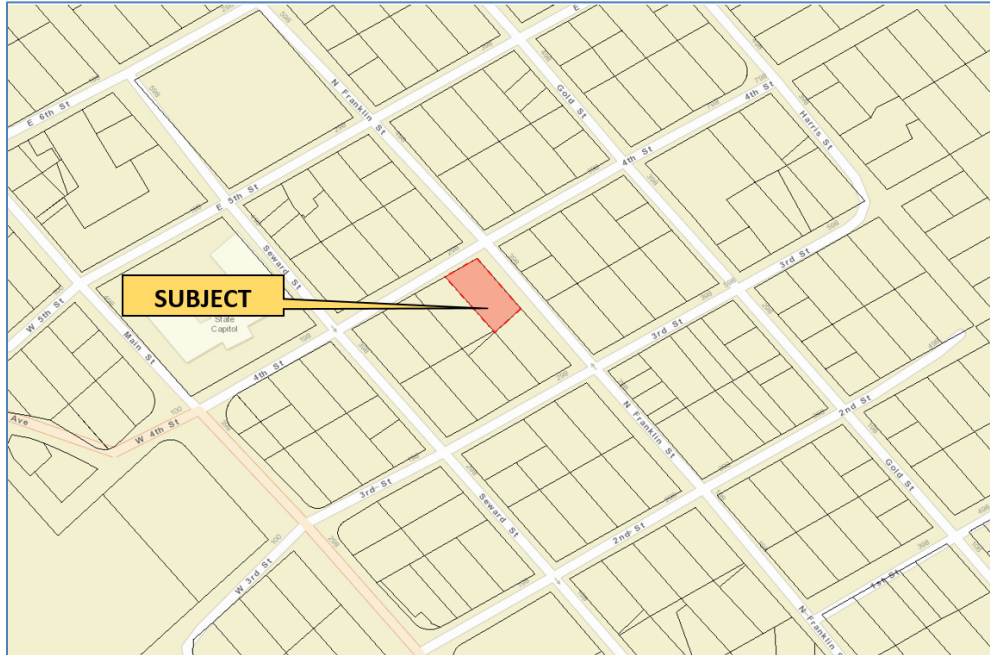
Rear



Facing N Franklin St



AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

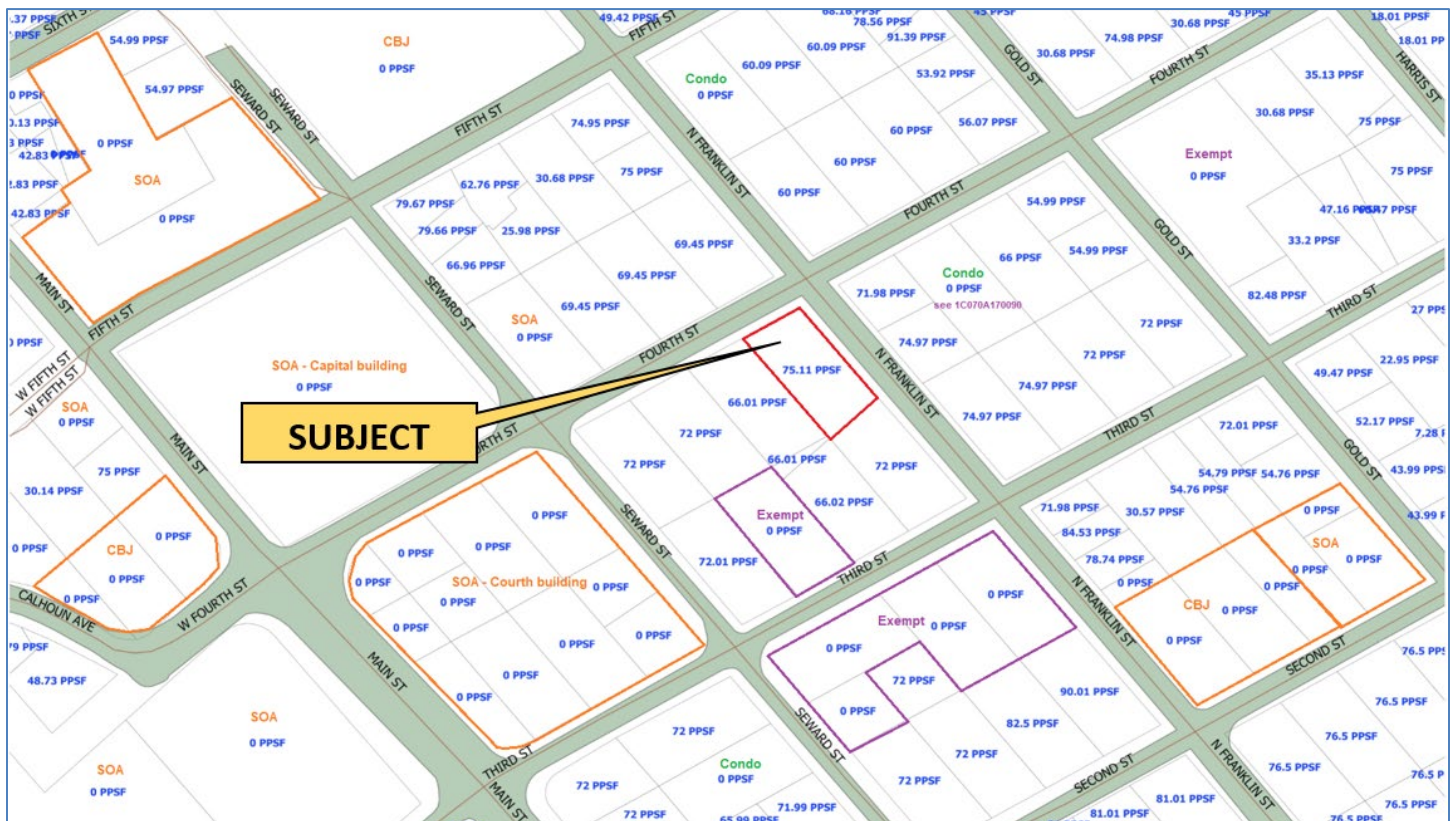
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are level, developed lot that is in close proximity to the core business area of Downtown Juneau in addition to government services and can be considered typical of the neighborhood. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 4,893 SF lot
- Largely level, developed lot
- Close proximity to State Legislature and State of Alaska Court building

Land Values



BUILDING(S)

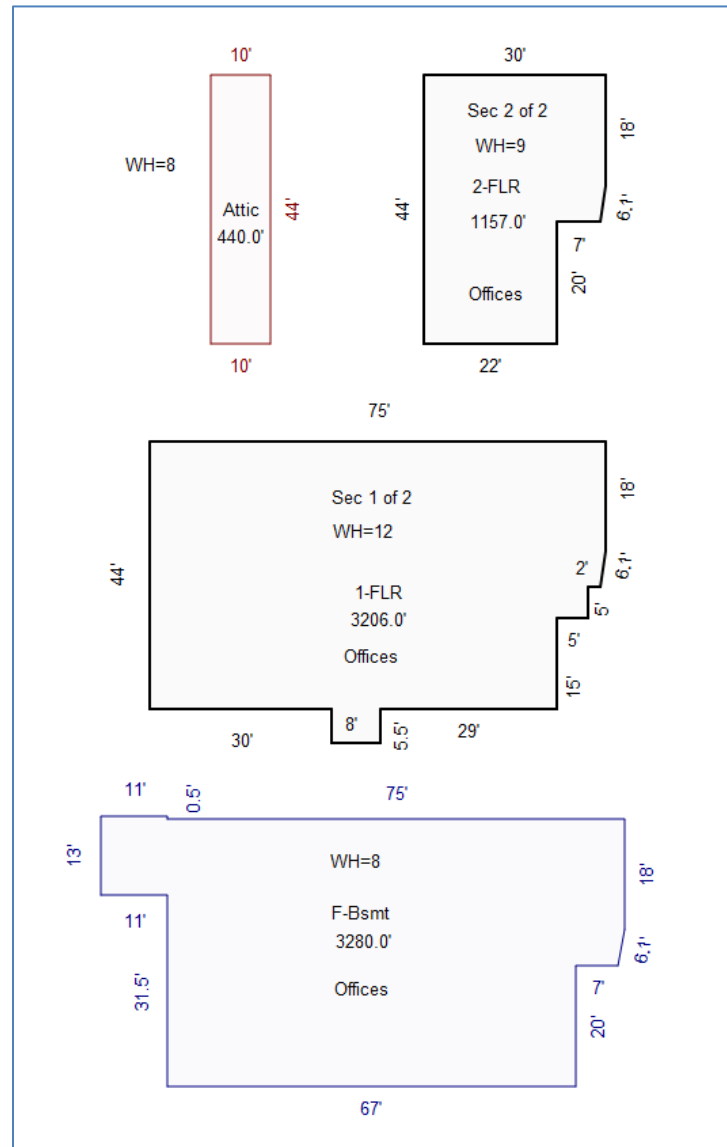
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- 7,643 SF GBA including the basement
- 440 SF Attic area

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

1329		Record		1	
Parcel Code Number	1C070A090040	Number of Stories (Building)		02	
Owner Name	WILLIAMSON KEN	Number of Sections		1	
Parcel Address	350 N FRANKLIN ST	Perimeter		248	
Effective Year Built	2001	Class		D	
Year Built	1900	Height			
Building Model	C- 15 Offices, Medical, Public Buildings	Rank		Average	
Building Type	Office Building	Total Area		4,363.00	
Base Cost		4363	94.50	412,304	
Exterior Wall	Stud Walls-Wood Siding	4363	100%	16.30	71,117
Heating & Cooling	Heating & Cooling	4363		603.00	603
Heating & Cooling	Hot Water	4363	100%	13.00	56,719
Architect Fee		4363		6.80	29,668
Basement	Finished	3280		75.00	246,000
Sub Total					\$816,410.80
Local Multiplier			1.43	[X]	\$1,167,467.00
Current Multiplier			1.03	[X]	\$1,202,491.00
Neighborhood Multiplier				[X]	\$1,202,491.00
Depreciation - Physical			23.00	[-]	\$276,573.00
Depreciation - Functional			10.00	[-]	\$120,249.00
Depreciation - Economic				[-]	\$0.00
Percent Complete			100.00	[-]	\$805,669.00
Cost to Cure					
Neighborhood Adjustment					
Replacement Cost less Depreciation					\$805,669
Extra	Enclosed Porch			[+]	
Extra	Finished attic			[+]	
Total Improvement Value					\$805,700

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report 1C070A090040 KEN WILLIAMSON 350 N FRANKLIN ST JUNEAU TOWNSITE BL 9 LTS 4 FR & 5 FR				
<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$367,500.00		\$541,500.00	\$909,000.00
2020	\$245,000.00		\$541,500.00	\$786,500.00
2019	\$245,000.00		\$541,500.00	\$786,500.00
2018	\$245,000.00		\$541,500.00	\$786,500.00
2017	\$245,000.00		\$549,300.00	\$794,300.00
2016	\$245,000.00		\$549,300.00	\$794,300.00
2015	\$245,000.00		\$549,300.00	\$794,300.00
2014	\$245,000.00		\$549,300.00	\$794,300.00
2013	\$245,000.00		\$549,300.00	\$794,300.00
2012	\$245,000.00	\$0.00	\$549,300.00	\$794,300.00
2011	\$245,000.00	\$0.00	\$549,300.00	\$794,300.00
2010	\$245,000.00	\$0.00	\$549,300.00	\$794,300.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find that the assessed value is equitable and is not excessive.
- The appellant states that 2021 assessment is not current market value. Assessment disregards comparable sales of adjacent like kind property: Assembly Building on Fourth St
 - We have considered the Assembly Building.
 - We do not set values off of one sale.
 - The Assembly Building and the subject are not like properties. Significant adjustments would need to be applied to do a direct comparison.
 - We looked at these same issues for last year’s appeal.
 - Looking at the broader market sales, rather than focusing on just one property, we find the assessment not to be excessive.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 15.57%.

We find that no change to the 2021 assessed value of \$909,000 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$998,901.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

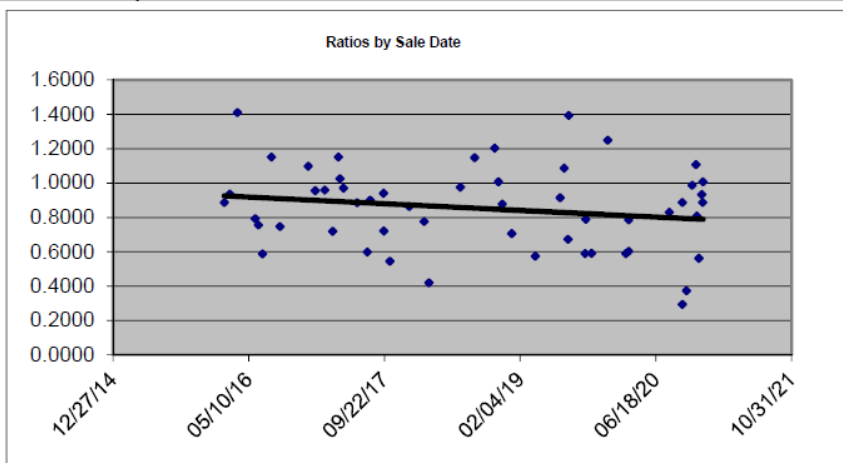
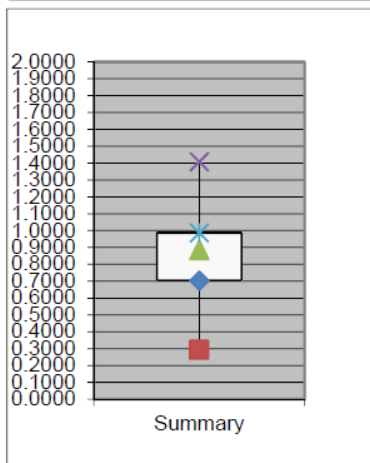
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

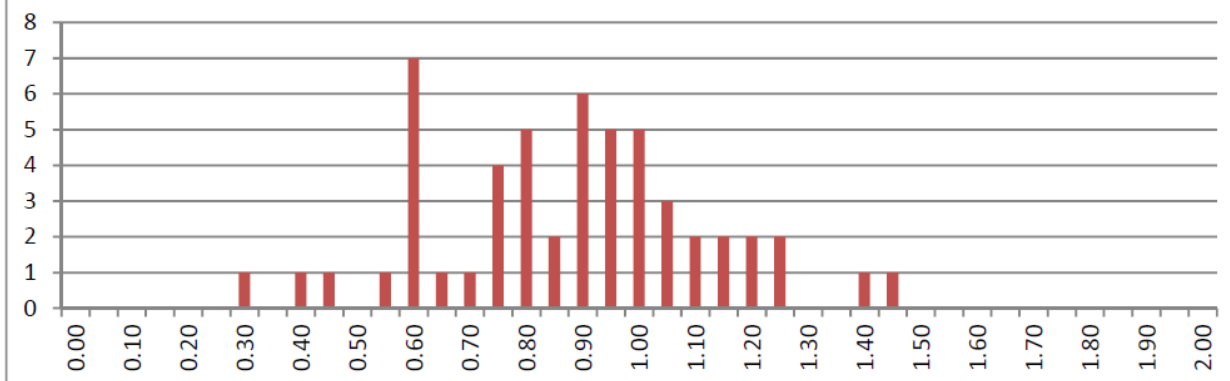
0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



Histogram of Ratio Frequency



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MELENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MELENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MELENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MELENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MELENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C - Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 1C070A090040
RESPONSE DEADLINE: 9/15/2021

PARCEL: 1C070A090040
PHYSICAL LOCATION: 350 N Franklin St

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **1C070A090040**:

VALUE DETERMINATION

Recommended Action:	No Change
2021 Initial valuation:	\$909,000
2021 Owner estimate of value:	\$1,023,051 (combined parcel 1C070A090040,50)
2021 Final determination:	\$909,000

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)					
Certification:					
I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature			Date		
Ken Williamson					

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131				
Owner Name	Ken Williamson		Name of Applicant		
Primary Phone #	(907) 789-0301		Email Address	deltaak@ptialaska.net	
Physical Address	2425 Industrial Blvd		Mailing Address	Same	
	Juneau, Ak 99801				
Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.					
☐ My property value is excessive/overvalued ☐ My property value is unequal to similar properties ☐ My property was valued improperly/incorrectly ☐ My property has been undervalued ☐ My exemption(s) was not applied			THE FOLLOWING ARE <u>NOT</u> GROUNDS FOR APPEAL • Your taxes are too high • Your value changed too much in one year. • You can't afford the taxes		
Provide specific reasons and provide evidence supporting the item(s) checked above:					
See attached note to Assessor's Office					
Have you attached additional information or documentation?			☐ Yes ☐ No		
Values on Assessment Notice:					
Site	\$	Building	\$	Total	\$
Owner's Estimate of Value:					
Site	\$	Building	\$	Total	\$
Purchase Price of Property:					
Price	\$	Purchase Date			
Has the property been listed for sale? ☐ Yes ☐ No <i>(if yes complete next line)</i>					
Listing Price	\$	Days on Market			
Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No <i>(if yes provide copy of appraisal)</i>					
Certification: I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.					
Signature <i>Ken Williamson</i>				Date	

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out			
Appraiser		Date of Review	
Comments:			
Post Review Assessment			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		
APPELLANT RESPONSE TO ACTION BY ASSESSOR My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below. ☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear. Appellant's Signature _____ Date: _____			

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION			
Scheduled BOE Date	☐ Yes ☐ No		
10-Day Letter Sent	☐ Yes ☐ No		
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued. Notes:			
Site	\$	Building	\$
Exemptions	\$		
Total Taxable Value	\$		

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Steet
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1445
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	1C070A090050
Property Location	FOURTH ST
Appeal No.	APL20210448
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0448

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: NBN Fourth St

Parcel No.: 1C070A090050

Property Type: Commercial – Parking lot

Appellant's basis for appeal: My property value is excessive/overvalued.

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 354,750	\$ 354,750
Buildings:	Not provided	None	None
Total:	\$ 1,023,000 combined w/ 1C070A090050	\$ 354,750	\$ 354,750

Subject Photo



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OVERVIEW

The subject is downtown commercial land approximately one block from the Capitol Building. For market purposes, this property has been classified as downtown commercial land. The land is currently used as a parking lot primarily serving the Ebner Building which is contiguous and is owned by the same owner.

Subject Characteristics:

- Land
 - 5,374 SF lot
 - Largely level, developed lot
 - Close proximity to State Legislature and State of Alaska Court building
- Building
 - None

SUBJECT PHOTOS

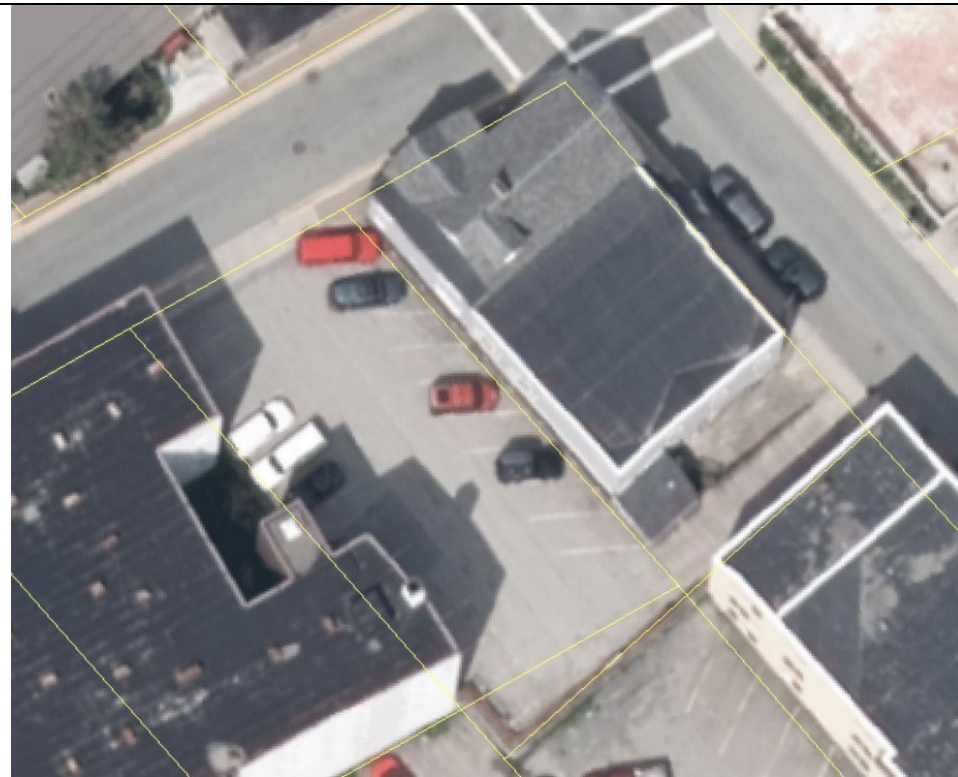


From Fourth St

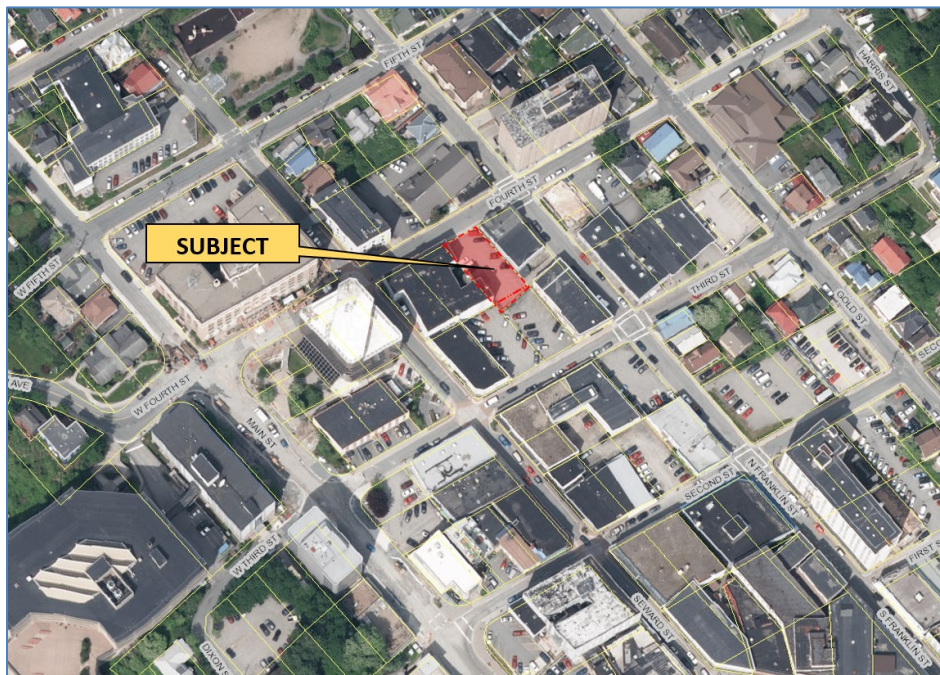
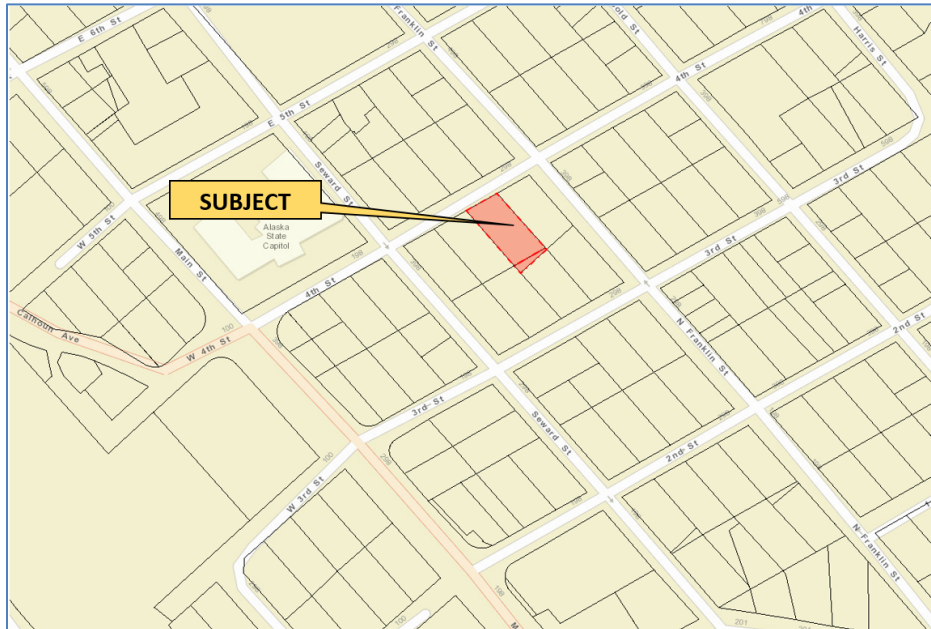
From Back



Aerial of Parking



AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

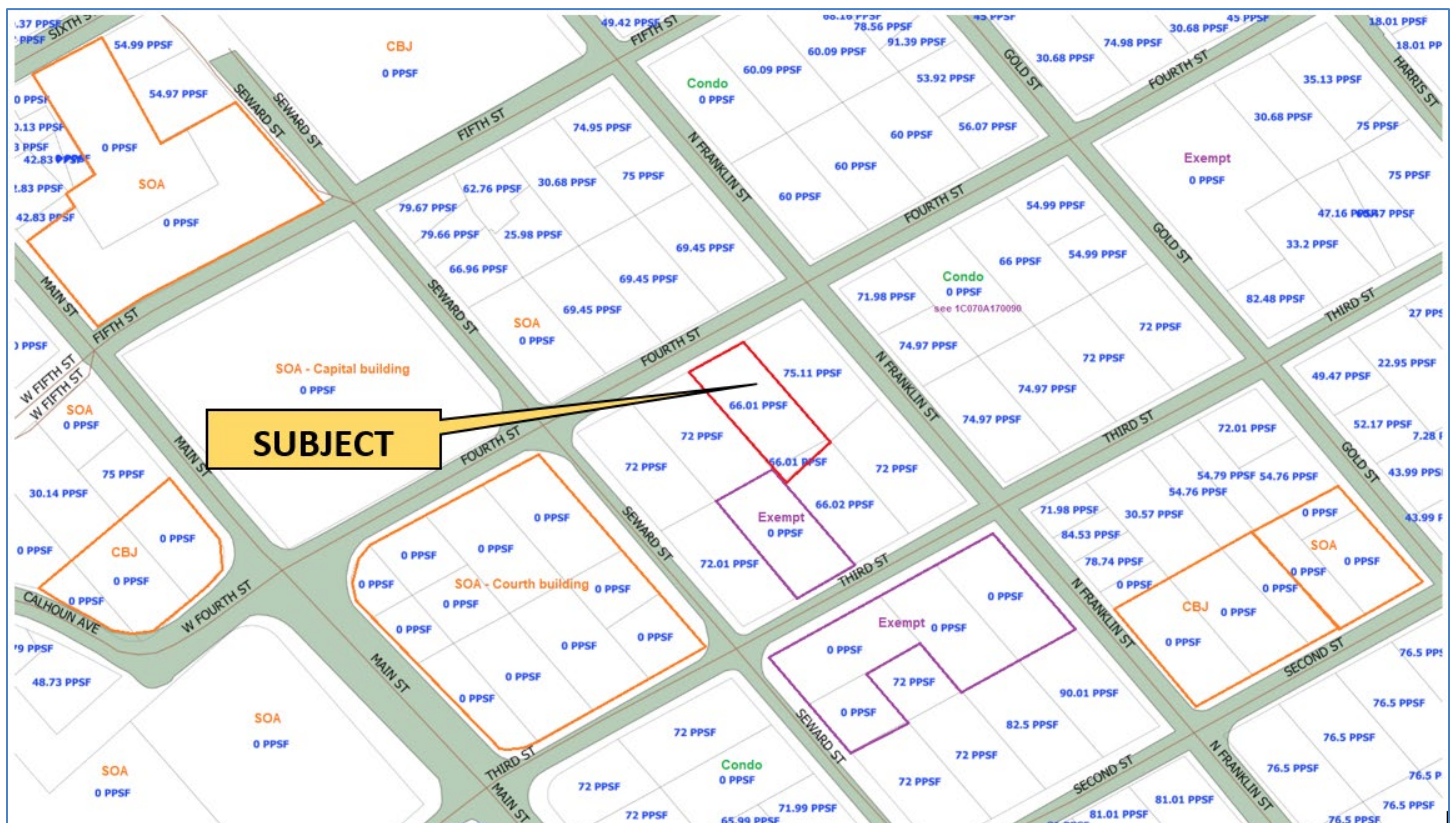
Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are flat, developed lot that is in close proximity to the core business area of Downtown Juneau in addition to government services and can be considered typical of the neighborhood. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 5,374 SF lot
- Largely level, developed lot
- Close proximity to State Legislature and State of Alaska Court building

Land Values



BUILDING(S)

There is no building as this is a vacant lot, however, it serves as parking for and is contingent to the Ebner Building, 1C070A090040. There is value to the blacktop surface of the parking lot.

COST REPORT

The cost report was not applicable although there is a value to the blacktop finish of the parking lot.

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

1C070A090050
KEN WILLIAMSON
FOURTH ST
JUNEAU TOWNSITE BL 9 LTS 3 & 6 FR

<u>YEAR_ID</u>	<u>LAND_VALUE</u>	<u>MISC_VALUE</u>	<u>BLDG_VALUE</u>	<u>CAMA_VALUE</u>
2021	\$354,750.00			\$354,750.00
2020	\$236,500.00			\$236,500.00
2019	\$268,700.00			\$268,700.00
2018	\$268,700.00			\$268,700.00
2017	\$268,700.00			\$268,700.00
2016	\$268,700.00			\$268,700.00
2015	\$268,700.00			\$268,700.00
2014	\$268,700.00			\$268,700.00
2013	\$268,700.00			\$268,700.00
2012	\$268,700.00	\$0.00	\$0.00	\$268,700.00
2011	\$268,700.00	\$0.00	\$0.00	\$268,700.00
2010	\$268,700.00	\$0.00	\$0.00	\$268,700.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find that the assessed value is equitable and is not excessive.
- The appellant states that the 2021 assessment is not current market value. Assessment disregards comparable sales of adjacent like kind property: Assembly Building on Fourth St
 - We have considered the Assembly Building.
 - We do not set values off of one sale.
 - The Assembly Building and the subject are not like properties. Significant adjustments would need to be applied to do a direct comparison.
 - We looked at these same issues for last year’s appeal.
 - Looking at the broader market sales, rather than focusing on just one property, we find the assessment not to be excessive.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 50%, similar to other vacant land.

We find that no change to the 2021 assessed value of \$354,750 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$389,835.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

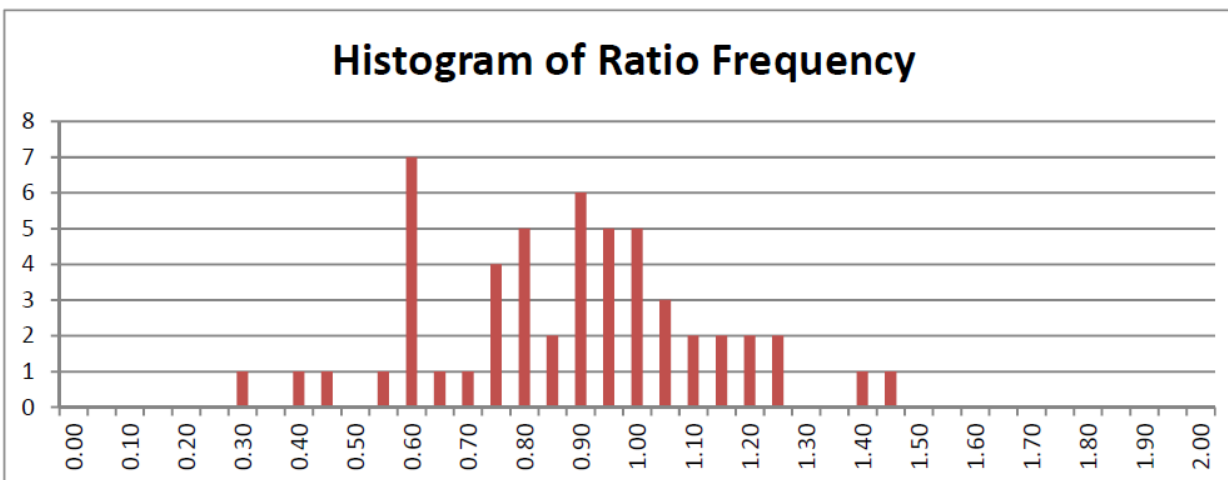
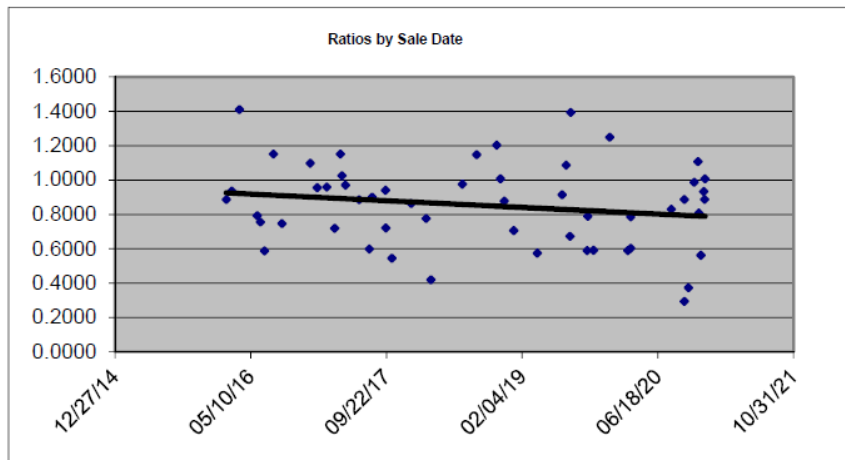
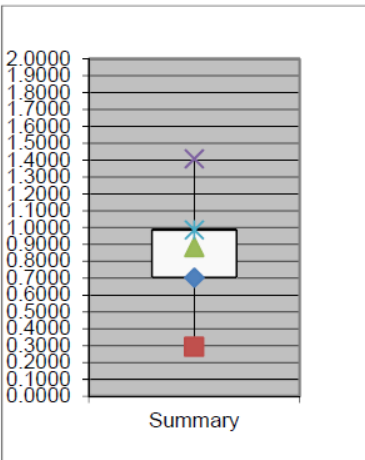
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85	Target Level
0.9969	Factor on Mean
0.9601	Factor on Median
1.2176	Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327	Differential Mean to Median
24	Number of data points below the mean.
29	Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.	



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communications

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 1C070A090050
RESPONSE DEADLINE: 9/15/2021

PARCEL: 1C070A090050
PHYSICAL LOCATION: Fourth St

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **1C070A090050**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation: **\$354,750**
2021 Owner estimate of value: **\$1,023,051 (combined parcel 1C070A090040,50)**
2021 Final determination: **\$354,750**

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau

Mary Hammond

From: Mary Hammond
Sent: Tuesday, August 24, 2021 1:54 PM
To: 'Ken'
Subject: RE: Phone conversation Aug 19
Attachments: AY2021- Com Sales List 20210823a.pdf

Ken,

I understand your frustration regarding the release of sale prices, this office has always been proactive in advocating for that information to be public. The way the ordinance is written, actual sale prices are confidential and under the direction of the law department we are not to release them. I can, however, gladly provide the values for each parcel, which is public information, and have done so in the attachment.

To clarify, the summary report was created using data extracted from Govern, which is a product of Harris. We are looking forward to upgrading to their newest version of Govern but that has not been implemented yet.

My office works diligently to collect accurate verifiable sales information which can be used in analysis. To use false or misleading data to conduct our studies goes against our ethics and our mission, which is to value all taxable properties fairly and equitably, regardless of political pressure or threats of legal action.

We did not create a false assessed value for the former Mental Health Trust parcel (1C060K010031). The assessed value prior to the 2021 trending was determined based on the same land model that was used to value all of the surrounding parcels. If there were no increase to commercial property values, this parcel would have been valued at \$5,016,200. After trending, this parcel has an A/S ratio of less than 40%. This individual sale was not the basis for increasing commercial land values for 2021, rather, all known and verifiable sales information from January, 2016 through December 2020 were considered.

I'm sorry that you feel that commercial properties have been concealed and manipulated, however, we have been very open with the processes and changes. I hope that in the future our hands will not be tied in regards to the disclosure of sales prices. I encourage you to provide any substantive information regarding arm's length sales so that our office can continue in the pursuit of fair and equitable valuation of all properties.

Mary Hammond she/ her

Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Saturday, August 21, 2021 3:22 PM
To: Mary Hammond
Subject: Phone conversation Aug 19

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

Thanks for getting back to me. I hadn't heard anything and was starting to be concerned. I did receive a copy of the City's *List of 57* properties from another party; however, it's useless until the City releases the values it applied to each tract.

I understand some of the confusion about releasing sales prices which the City obtained solely under authority of the new disclosure ordinance. There may be broader problems with the ordinance but, in this instance, only three sales occurred after its effective date. Those sales were business condos which have token land values of \$5K or \$0.

Double-check with the Law Dept. and then email me the *List of 57* with the sales price and assessed value for each parcel. Omit the sales prices for the three transactions after the effective date of CBJ 15.05.105.

On the phone, you indicated the Summary Study was generated in-house using Govern's CAMA software. I didn't realize the City had upgraded. Which Harris/Govern CAMA package did the City purchase: RealWare, OpenForms or PACS? Please confirm that the charts, graphs and calculations included in the Summary Study were generated by the version of Govern you use.

I've found a number of errors in the Summary Study. Some appear to go beyond accidental misrepresentations. One you and I discussed – the Mental Health Trust land sale to Norwegian Cruise Lines – had no prior assessed value. You cannot create a false assessed value and use it in a ratio value comparison.

A ratio value calculation, as used for real property assessment, is a comparison of the assessed value of the parcel at the time of the sale compared to the actual sales price. It is Assessed value divided by Sales price; often abbreviated: A/S or ASR. You cannot falsify the assessed value for the purpose of creating a ratio value.

Why didn't the Assessor's Office create a value which matches the sales price exactly? Then, the ratio study will *prove* the Assessor's Office is doing a great job since the property sold for the exact amount of the fake assessment. On the other hand, if you create a fake assessed value of one-half of the sales price, that ratio calculation will *prove* assessed values are low – about 50% of what they should be. You can imagine the pandemonium that will follow if the faulty ratio is used as justification to increase land value on hundreds of tracts of property.

I'm bummed. I supported you for the Assessor position when Robin retired. It was good timing for your career and, to the best of my knowledge, you've done a good job. Unfortunately, for the last two years, commercial assessments have been concealed and manipulated. Taxpayers only get to see *Smoke and Mirrors*. I'm not sure the extent you were deceived, but I'm an eternal optimist. There may be some possible solutions.

I've found a number of problems with both the method and the data used for 2021. Apparently an expert on mass assessment techniques will be reviewing the information. He will probably find more problems. It may be a good time to take another look and share any errors you find with the Law Dept.

Let me know if there's anything I can do.

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

CBJ Assessor's Office
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Grant

2, Aug, 2021

Mary:

I've sent several emails requesting information about how the Assessor's Office produced 2021 commercial land values. To date, I've received one item: an analysis without any supporting data: 2021 Summary Report- Commercial 20210526a.pdf. The report appears to be an attempt at using ratio valuation but it's hard to tell what method is actually used. I will assume it is a ratio value study unless you notify me that it is based on some other method.

To the extent the calculation is being concealed, is nonstandard or arbitrary; a property owner is prevented from challenging 2021 assessed values. It's similar to a driver trying to challenge a speeding ticket if the state will not release any information about the speed limit, the vehicle's speed or when and where the violation occurred.

If 2021 assessments are based on an arbitrary factor, please release that information. If the increase was not arbitrary, reveal the method and data the Assessor's Office used so I have an opportunity to challenge it.

Sincerely yours,



Ken Williamson

[Handwritten signature]

From: [Mary Hammond](#)
To: ["Ken"](#)
Subject: RE: Appeals to BOE
Date: Thursday, September 16, 2021 4:23:04 PM
Attachments: [AY2021- Com Sales List 20210823a.pdf](#)

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her

Assessor

City & Borough of Juneau

(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken

Sent: Wednesday, September 15, 2021 4:03 PM

To: Mary Hammond

Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021

155 S. Seward Street

Juneau, Alaska 99801

Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the

Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson

Cell/Text: (503) 789-9630

cc: Jillian Olson

Mary Hammond

From: Mary Hammond
Sent: Friday, September 24, 2021 4:28 PM
To: 'Ken'
Subject: RE: Appeals to BOE
Attachments: Reveiw of 74 Sales provided by Ken Williamson.pdf; AY2021- Com Sales List 20210923a.pdf

Ken,

The law department has interpreted the disclosure provision in CBJ 15.05.105 to mean that the only thing that is confidential is the information disclosed from the buyer directly to the Assessor. I have attached an update list of sales with prices for sales that were discovered or provided in any way other than buyer disclosure.

I'm not certain where the list you provided was published but I have identified which sales were included in the final analysis and which were not. For those sales that were not included in the final analysis, the reason is listed.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Thursday, September 16, 2021 5:06 PM
To: Mary Hammond
Subject: RE: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

The Assessor's office must release the values it used in its Ratio Value calculation(s). Send both the assessed value and the sales price which were used for the 54 properties on the original list that sold prior to 26 November, 2020. Also, provide a copy of the values for the "list of 74" commercial transactions on which the Summary Report was originally based. I've attached the parcel IDs below, for your convenience.

Have you taken a look at all the extent of the falsifications which your office is producing? Please stop and take a look!

Sincerely yours,
Ken Williamson

12/09/20	1C070A050001	230 SEWARD ST
12/07/20	5B15011107E0	2221 JORDAN AVE
12/04/20	4B1701090218	10011 CRAZY HORSE DR
11/23/20	5B1201060260	5719 CONCRETE WAY

11/17/20	4B1701020020	10011 GLACIER HWY
11/13/20	1D060L030011	201 CORDOVA ST
10/30/20	1C060K660110	711 W WILLOUGHBY AVE
10/09/20	1C060K010031	0 EGAN DR
09/24/20	5B1201060160	5740 CONCRETE WAY
09/24/20	5B1201300110	1783 Anka St
08/07/20	5B1501010001	1880 CREST ST
06/23/20	1C020K01E300	1435 Harbor Way
03/10/20	1C110K120051	0 Eastaugh W ay
03/10/20	1C110K120140	0 MILL ST
02/28/20	4B1701090056	10009 CRAZY HORSE DR
02/23/20	4B1701080020	10012 Crazy Horse
12/31/19	4b1701104000	2771 Sherwood ln
12/31/19	1c070k810090	170 S Franklin
12/24/19	5B1201300110	1783 Anka St
10/25/19	1C110K120130	190 MILL ST
10/04/19	5B1201000060	5245 GLACIER HWY
10/02/19	1C110K120120	0 MILL ST
09/03/19	5b1201010010	1610 Anka
08/02/19	5B1201020100	5452 SHAUNE DR
07/30/19	4B1601050160	2276 INDUSTRIAL BLVD
07/16/19	5B1601140043	9309 GLACIER HWY
07/01/19	1C070B0N0011	259 S FRANKLIN ST
06/28/19	1C020K01G280	1435 HARBOR WAY
04/01/19	1C110K120150	0 MILL ST
03/26/19	4b2801050030	3845 Lee Court
02/28/19	1C020K01G290	1435 HARBOR WAY
01/04/19	5B2401610150	4045 DELTA DR
11/30/18	3B1501040120	1544 CREST ST
11/16/18	5B1501040030	8825 MALLARD ST
11/02/18	1C070B0J0020	195 S FRANKLIN ST
10/29/18	4B1601090040	Crazy Horse
08/21/18	5B1601140070	9309 GLACIER HWY
07/25/18	1C020K01G200	1435 HARBOR WAY
07/20/18	1C060U050022	1108 F ST
06/29/18	4B2901020010	10200 MENDENHALL RD
03/05/18	4B1601080070	2278 INDUSTRIAL BLVD
02/15/18	5B1601000023	9151 GLACIER HWY
01/29/18	5B1201450050	5410 Bent Ct
01/09/18	1C100I070050	549 S Franklin
12/22/17	5B15011109B0	2231 JORDAN AVE
10/12/17	3B1501020030	1669 CREST ST
09/20/17	4B1701103003	2769 SHERWOOD LN
09/19/17	4B1601010040	2450 INDUSTRIAL BLVD
09/07/17	1C020K01E230	Aurora Harbor
09/07/17	1C020K01E220	Aurora Harbor
07/31/17	4B1601120130	2270 BRANDY LN
07/21/17	5B1201330160	2005 ANKA ST
06/13/17	4B1601050030	2274 INDUSTRIAL BLVD

04/24/17	4B1701090226	10011 CRAZY HORSE DR
04/11/17	7B0901030071	3161 CHANNEL DR
04/05/17	5B1201040052	1721 ANKA ST
03/16/17	1C110K120101	170 MILL ST
02/14/17	4B1701090223	10011 CRAZY HORSE DR
01/30/17	1c030c280080	712 W 12th
01/27/17	6D0701000020	4755 N Douglas Hiway
01/18/17	5b1201060140	5720 Concrete Way
01/10/17	4B1701090228	10011 CRAZY HORSE DR
12/30/16	7B0901040070	1050 Salmon Creek ln
12/15/16	1C060U040040	800 GLACIER AVE
09/23/16	1C060C000080	3610 Diston
09/02/16	5B1501020170	8401 AIRPORT BLVD
08/10/16	5b160144000	3039 Clinton
08/02/16	5B1201060061	5631 GLACIER HWY
06/30/16	4B1701100146	2789 SHERWOOD LN
06/15/16	5B1501000002	8251 GLACIER HWY
06/03/16	5B1201450110	1731 RALPH'S W AY
03/30/16	1C070A030040	100 N FRANKLIN ST
03/01/16	4B1701100170	10221 GLACIER HWY
02/10/16	5B15011107EO	2221 Jordan

From: Mary Hammond [<mailto:mary.hammond@juneau.org>]
Sent: Thursday, September 16, 2021 4:23 PM
To: 'Ken'
Subject: RE: Appeals to BOE

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken <deltaak@ptialaska.net>
Sent: Wednesday, September 15, 2021 4:03 PM
To: Mary Hammond <mary.hammond@juneau.org>
Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

cc: Jillian Olson



**Office Of The Assessor
155 South Seward Street
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	1C070K820021
Property Location	245 MARINE WAY
Appeal No.	APL20210449
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0449

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 236, 238, 240/244 S Franklin St 245/251 Marine Way

Parcel No.: 1C070K820021

Property Type: Commercial Retail w/ Apartments

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 2,020,200	\$ 2,020,200
Buildings:	Not provided	\$ 412,200	\$ 412,200
Total:	\$ 2,963,100 combined w/ 1C070K820022	\$ 2,432,400	\$ 2,432,400

Subject Photo



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OVERVIEW

The subject is a mixed use building located in the tourism district, with commercial retail and residential apartments. It includes an off street parking lot accessed from S Franklin. Based upon observation of the exterior, the structure appears to be adequately maintained.

Subject Characteristics:

- Land
 - 17,179 SF lot
 - Level, developed lot
 - Located in the tourism area and is in close proximity to core business district
 - 43.5' frontage along S Franklin St
 - 85' frontage along Marine Way
- Building
 - Mixed use building with retail on the first level which abuts the street and residential apartments occupying the remainder
 - Records indicate this building was initially built in 1912 +/- but has been remodeled multiple times
 - 16,598 SF GBA
 - 9,595 SF GBA – 1st level Mixed retail/apartments
 - 3,658 SF GBA – 2nd level Apartments/Storage
 - 3,345 SF GBA – 3rd level Apartments
 - Approximately 75' store frontage along S Franklin St
 - Approximately 30' store frontage along Marine Way

SUBJECT PHOTOS



From Marine Way

From Marine Way



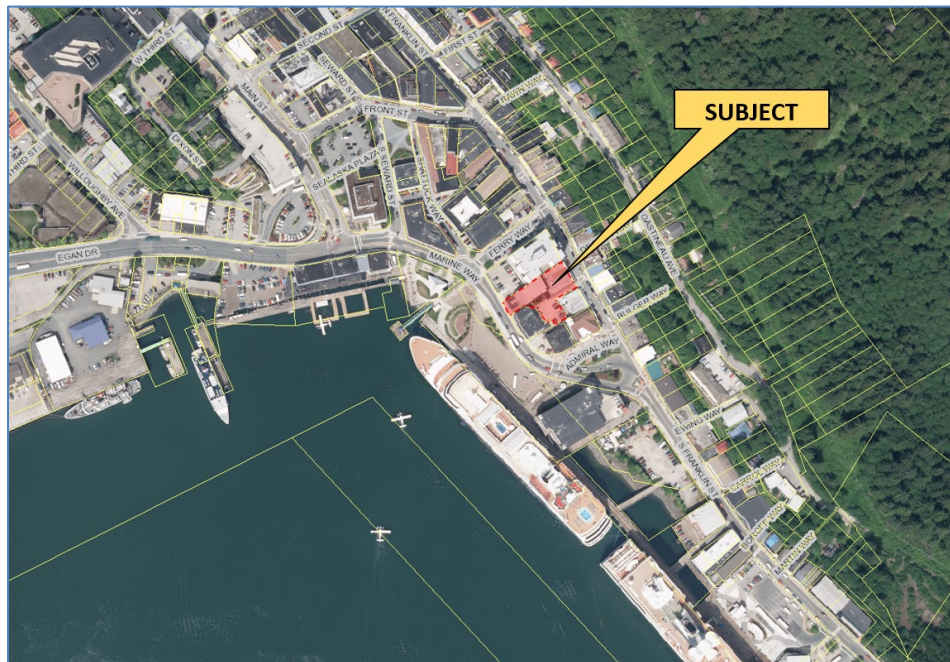
From S Franklin St



Side – Interior courtyard



AREA MAP & AERIAL



ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

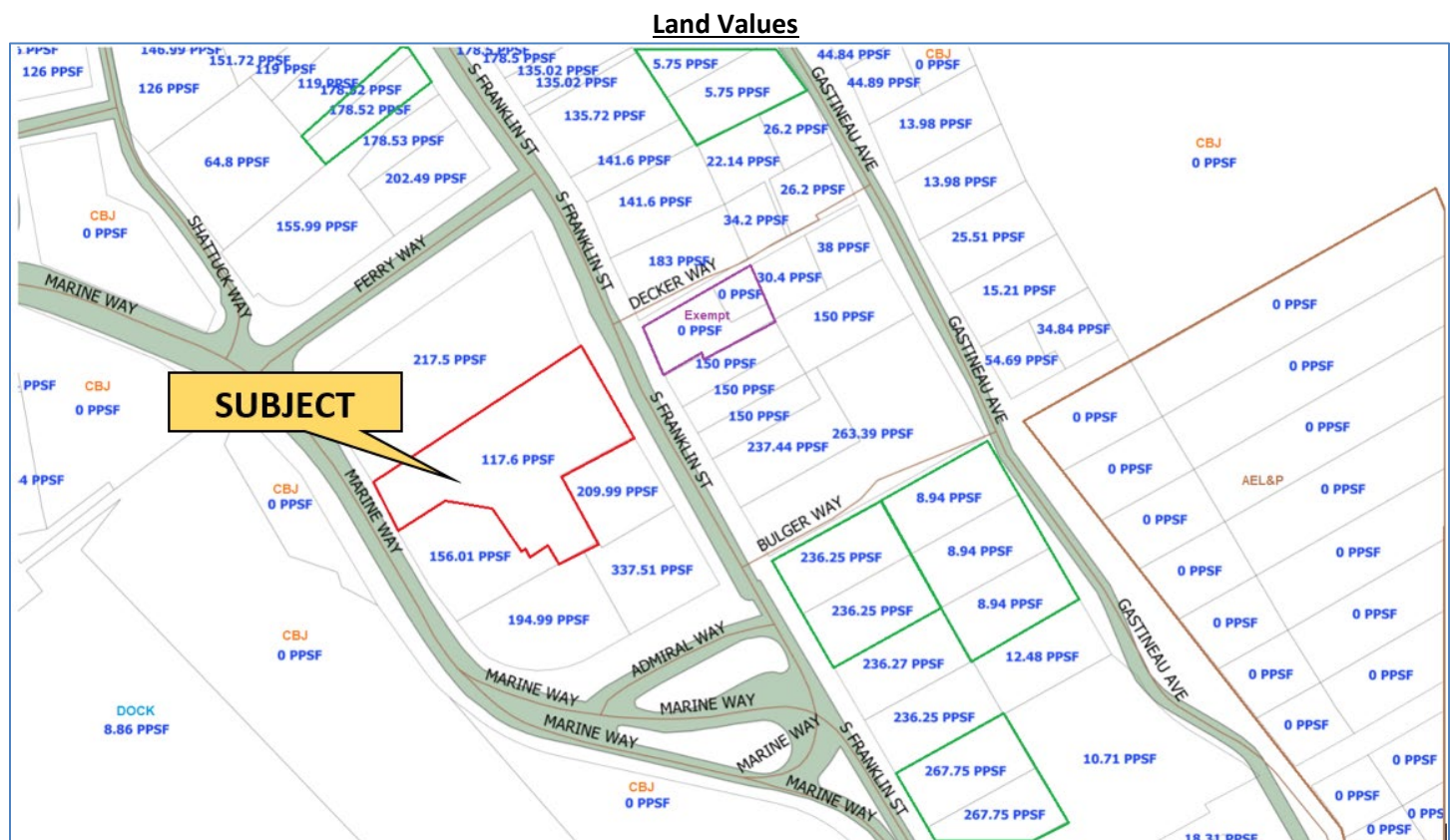
LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are its level, developed lot that offers frontage along both S Franklin St and Marine Way which is in close proximity to the core business district. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 17,179 SF lot
- Level, developed lot
- Located in the tourism area and is in close proximity to core business district
- 43.5' frontage along S Franklin St
- 85' frontage along Marine Way



BUILDING(S)

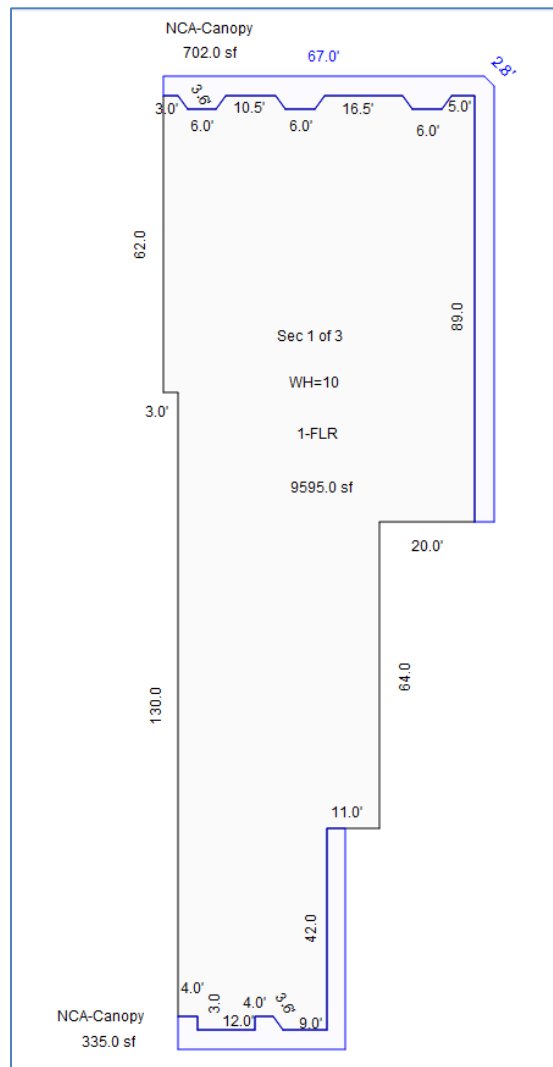
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

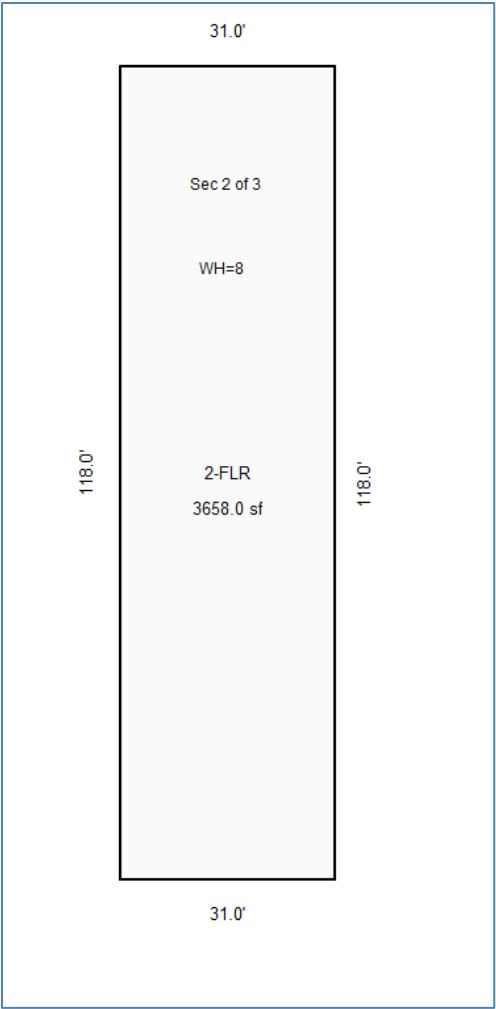
Ratio studies are performed to determine market adjustments.

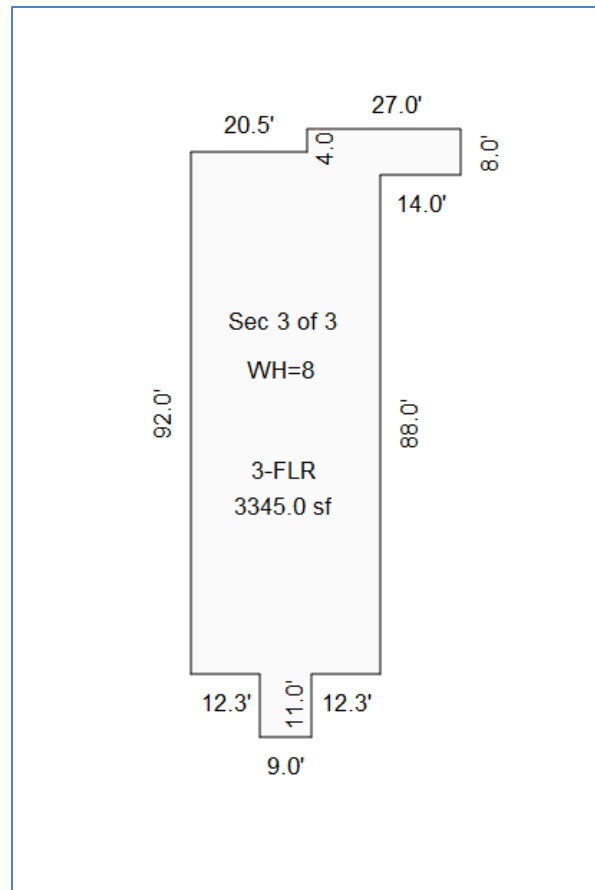
Building Characteristics:

- Mixed use building with retail on the first level which abuts the street and residential apartments occupying the remainder
- The amount of depreciation that has been applied in the Cost Report from the CAMA system is 71% for all three sections. 71% is an extremely high degree of depreciation.
- 16,598 SF GBA
 - 9,595 SF GBA – 1st level Mixed retail/apartments
 - 3,658 SF GBA – 2nd level Apartments/Storage
 - 3,345 SF GBA – 3rd level Apartments
- Approximately 75' store frontage along S Franklin St
- Approximately 30' store frontage along Marine Way

Sketch of Improvements:







COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

45099		Record		4
Parcel Code Number	1C070K820021	Number of Stories (Building)	01	
Owner Name	WILLIAMSON KEN	Number of Sections	1	
Parcel Address	245 MARINE WAY	Perimeter	534	
Effective Year Built	1986	Class	D	
Year Built	1912	Height	10	
Building Model	C- 13 Stores, Commercials	Rank	Low	
Building Type	Mixed Retail w/ Resid. Units	Total Area	9,595.00	
Base Cost		9595	58.00	556,510
Exterior Wall	Stud Walls-Wood Siding	9595	11.77	112,944
Heating & Cooling	Heating & Cooling	9595	603.00	603
Heating & Cooling	Hot Water	9595	8.28	79,447
Architect Fee		9595	6.40	61,408
Sprinklers	Sprinklers	9595	3.14	30,128
Sub Total				\$841,039.60
Local Multiplier			1.43	[X] \$1,202,687.00
Current Multiplier			1.03	[X] \$1,238,768.00
Neighborhood Multiplier				[X] \$1,238,768.00
Depreciation - Physical			71.00	[-] \$879,525.00
Depreciation - Functional				[-] \$0.00
Depreciation - Economic				[-] \$0.00
Percent Complete			100.00	[-] \$359,243.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$359,243
45099		Record		5
Parcel Code Number	1C070K820021	Number of Stories (Building)	01	
Owner Name	WILLIAMSON KEN	Number of Sections	1	
Parcel Address	245 MARINE WAY	Perimeter	0	
Effective Year Built	1986	Class	D	
Year Built	1912	Height	8	
Building Model	C- 13 Stores, Commercials	Rank	Low	
Building Type	Mixed Retail w/ Resid. Units	Total Area	3,658.00	
Base Cost		3658	58.00	212,164
Exterior Wall	Stud Walls-Wood Siding	3658	11.25	41,169
Heating & Cooling	Heating & Cooling	3658	603.00	603
Heating & Cooling	Hot Water	3658	8.28	30,288
Architect Fee		3658	6.40	23,411
Sprinklers	Sprinklers	3658	3.49	12,766
Fire Alarm System		3658	1.25	4,573
Sub Total				\$324,974.32
Local Multiplier			1.43	[X] \$464,713.00
Current Multiplier			1.03	[X] \$478,654.00
Neighborhood Multiplier				[X] \$478,654.00
Depreciation - Physical			71.00	[-] \$339,844.00
Depreciation - Functional				[-] \$0.00
Depreciation - Economic				[-] \$0.00
Percent Complete			100.00	[-] \$138,810.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$138,810

45099		Record		6
Parcel Code Number	1C070K820021	Number of Stories (Building)	01	
Owner Name	WILLIAMSON KEN	Number of Sections	1	
Parcel Address	245 MARINE WAY	Perimeter	0	
Effective Year Built	1986	Class	D	
Year Built	1912	Height	8	
Building Model	C- 13 Stores, Commercials	Rank	Low	
Building Type	Mixed Retail w/ Resid. Units	Total Area	3,345.00	
Base Cost		3345	58.00	194,010
Exterior Wall	Stud Walls-Wood Siding	3345	11.25	37,646
Heating & Cooling	Heating & Cooling	3345	603.00	603
Heating & Cooling	Hot Water	3345	8.28	27,697
Architect Fee		3345	6.40	21,408
Sprinklers	Sprinklers	3345	3.49	11,674
Fire Alarm System		3345	1.25	4,181
Sub Total				\$297,219.20
Local Multiplier			1.43 [X]	\$425,023.00
Current Multiplier			1.03 [X]	\$437,774.00
Neighborhood Multiplier			[X]	\$437,774.00
Depreciation - Physical			71.00 [-]	\$310,820.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete			100.00 [-]	\$126,954.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$126,954
Miscellaneous Improvement	Canopies John_Sahno		[+]	18,100
Total Improvement Value				\$614,400

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report 1C070K820021 KEN WILLIAMSON 245 MARINE WAY TIDELANDS ADDITION BL 82 LT 3A				
<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$2,020,200.00		\$412,200.00	\$2,432,400.00
2020	\$1,346,800.00		\$412,200.00	\$1,759,000.00
2019	\$1,340,000.00		\$412,200.00	\$1,752,200.00
2018	\$1,340,000.00		\$412,200.00	\$1,752,200.00
2017	\$1,392,000.00	\$27,200.00	(\$21,300.00)	\$1,397,900.00
2016	\$1,392,000.00		\$8,000.00	\$1,400,000.00
2015	\$1,511,800.00	\$42,700.00	\$236,600.00	\$1,791,100.00
2014	\$1,531,500.00		\$259,900.00	\$1,791,400.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find that the assessed value is equitable and is not excessive.
- The appellant states that Property value is not based on market value. Assessment disregards comparable sales of like kind property: Emporium Mall (Alaska Laundry Bldg).
 - We have considered the Emporium Mall sale.
 - We do not set values off of one sale.
 - Looking at the broader market sales, rather than focusing on just one property, we find the assessment not to be excessive.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 38.2%.

We find that no change to the 2021 assessed value of \$2,432,400 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$2,672,967.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

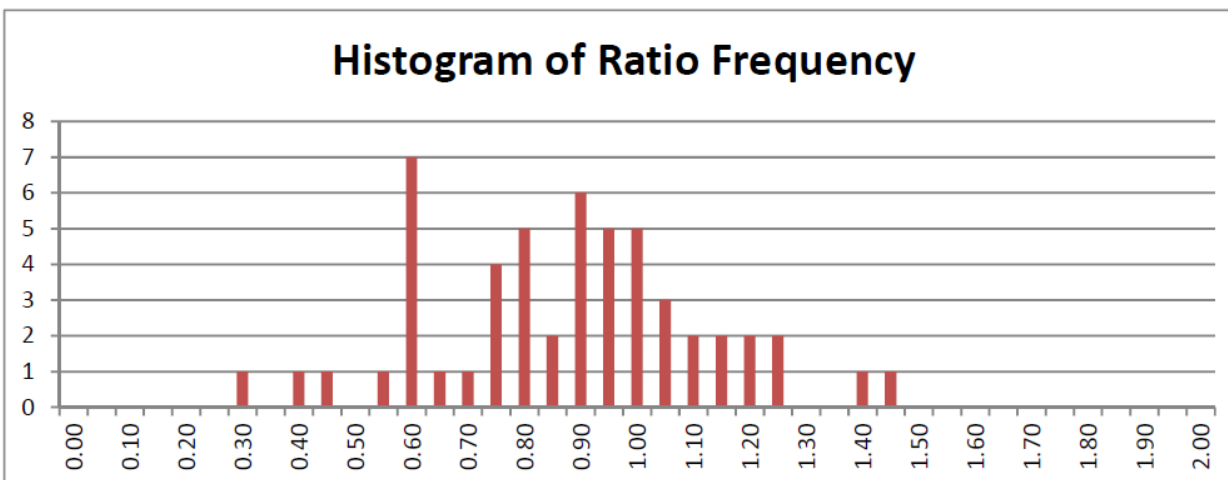
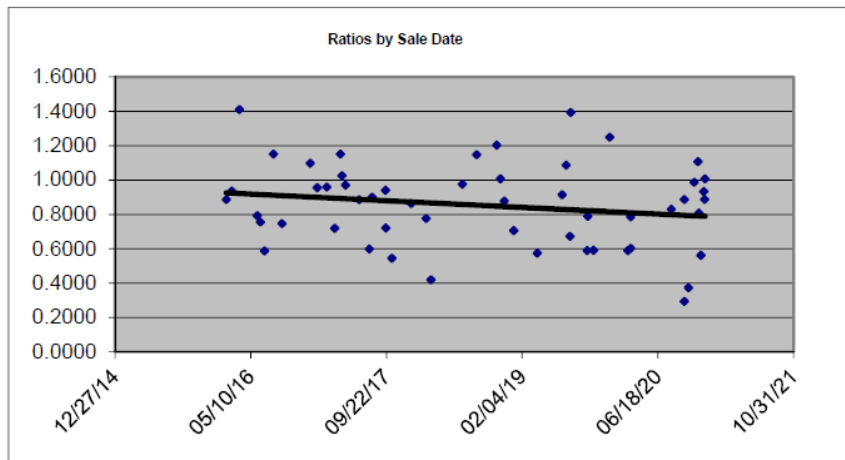
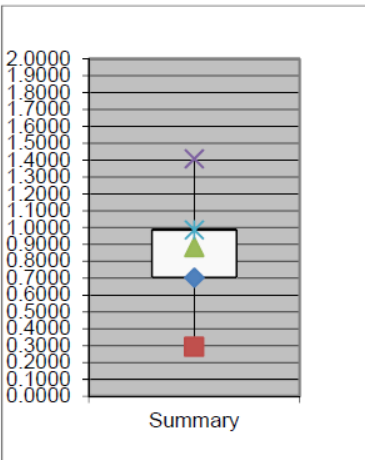
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<i>Review of Impact of Including and Excluding Particular Sales</i>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 1C070K820021
RESPONSE DEADLINE: 9/15/2021

PARCEL: 1C070K820021
PHYSICAL LOCATION: 245 Marine Way

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **1C070K820021**:

VALUE DETERMINATION

Recommended Action: **No Change**

2021 Initial valuation:	\$2,432,400
2021 Owner estimate of value:	\$2,963,123 (combined parcel 1C070K820021,22)
2021 Final determination:	\$2,432,400

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
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2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Purchase Price of Property:

Price	\$	Purchase Date	
-------	----	---------------	--

Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801



**Office Of The Assessor
155 South Seward Steet
Juneau, AK 99801**

**KEN WILLIAMSON
PO BOX 32801
JUNEAU AK 99803-2801**

Page: 1504
BOE Hearing 10-28-2021
**Meeting of Board of Equalization (BOE) and
Presentation of Real Property Appeal**

Date of BOE	Thursday, October 28, 2021
Location of BOE	Via ZOOM Webinar
Time of BOE	5:30 pm
Mailing Date of Notice	October 5, 2021
Parcel Identification	1C070K820022
Property Location	255 MARINE WAY
Appeal No.	APL20210450
Sent to Email Address:	deltaak@ptialaska.net

ATTENTION OWNER

Under Alaska Statutes and CBJ Code, you, as the appellant, bear the burden of proof. The only grounds for adjustment of an assessment are proof of unequal, excessive, improper, or under valuation based on facts that are stated in your written appeal or proven at the appeal hearing.

Any evidence or materials you would like to include in your appeal must be submitted to the City Clerk's Office {preferred method via email to city.clerk@juneau.org Attn.: Assessment Appeal} by **4:00 PM Wednesday, October 20, 2021** and will be included in the packets for the Board so the members have an opportunity to review the materials before the hearing.

Your Board of Equalization packet will be ready for you to pick up in the Clerk's office after **2:00 PM Thursday, October 21, 2021** or it will be emailed and/or mailed to the above address(es) on this notice.

You or your representative may be present at the hearing {via Zoom Webinar, participation/log in information will be listed on the agenda packet you receive for the hearing your appeal is scheduled for}. If you choose not to be present or be represented, the Board of Equalization will proceed in the absence of the appellant.

It should be noted that, between the date of this letter and the Board hearing date, your appeal may be resolved between you and the Assessor. If your appeal is resolved, you will not need to appear before the Board.

If you have any questions please contact the Assessor's Office.

Attachment: CBJ Law Department Memorandum April 19, 2013.

CONTACT US: CBJ Assessor's Office

Phone	Email	Website	Physical Location
Phone (907) 586-5215 Fax (907) 586-4520	assessor.office@juneau.org	http://www.juneau.org/finance/	155 South Seward St Room 114

PROPERTY TAX BILLS MAILED JULY 1

PROPERTY TAXES DUE SEPTEMBER 30



APPEAL #2021-0450

2021 REAL PROPERTY APPEAL PACKET

BOARD OF EQUALIZATION October 28, 2021

ASSESSOR OFFICE

Appellant: Ken Williamson

Location: 245/259/263 Marine Way

Parcel No.: 1C070K820022

Property Type: Commercial – Retail w/ Apartments

Appellant's basis for appeal: My property value is excessive/overvalued

	Appellant's Estimate of Value	Original Assessed Value	Recommended Value
Site:	Not provided	\$ 1,063,200	\$ 1,063,200
Buildings:	Not provided	\$ 495,300	\$ 495,300
Total:	\$ 2,963,100 combined w/ 1C070K820021	\$ 1,558,500	\$ 1,558,500

Subject Photo



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OVERVIEW

The subject is a mixed use building located in the tourism district, with commercial retail on the street level and residential apartments above.

Subject Characteristics:

- Land
 - 6,815 SF lot
 - Level, developed lot
 - Close proximity to core business district
 - 88.5' frontage along Marine Way
- Building
 - Mixed use building with retail on the first level and residential apartments above
 - 7,156 SF GBA
 - 3,536 SF GBA – 1st level retail
 - 3,620 SF GBA – 2nd level apartments
 - Approximately 70' store frontage along Marine Way

SUBJECT PHOTOS



Front left

Front



Front right

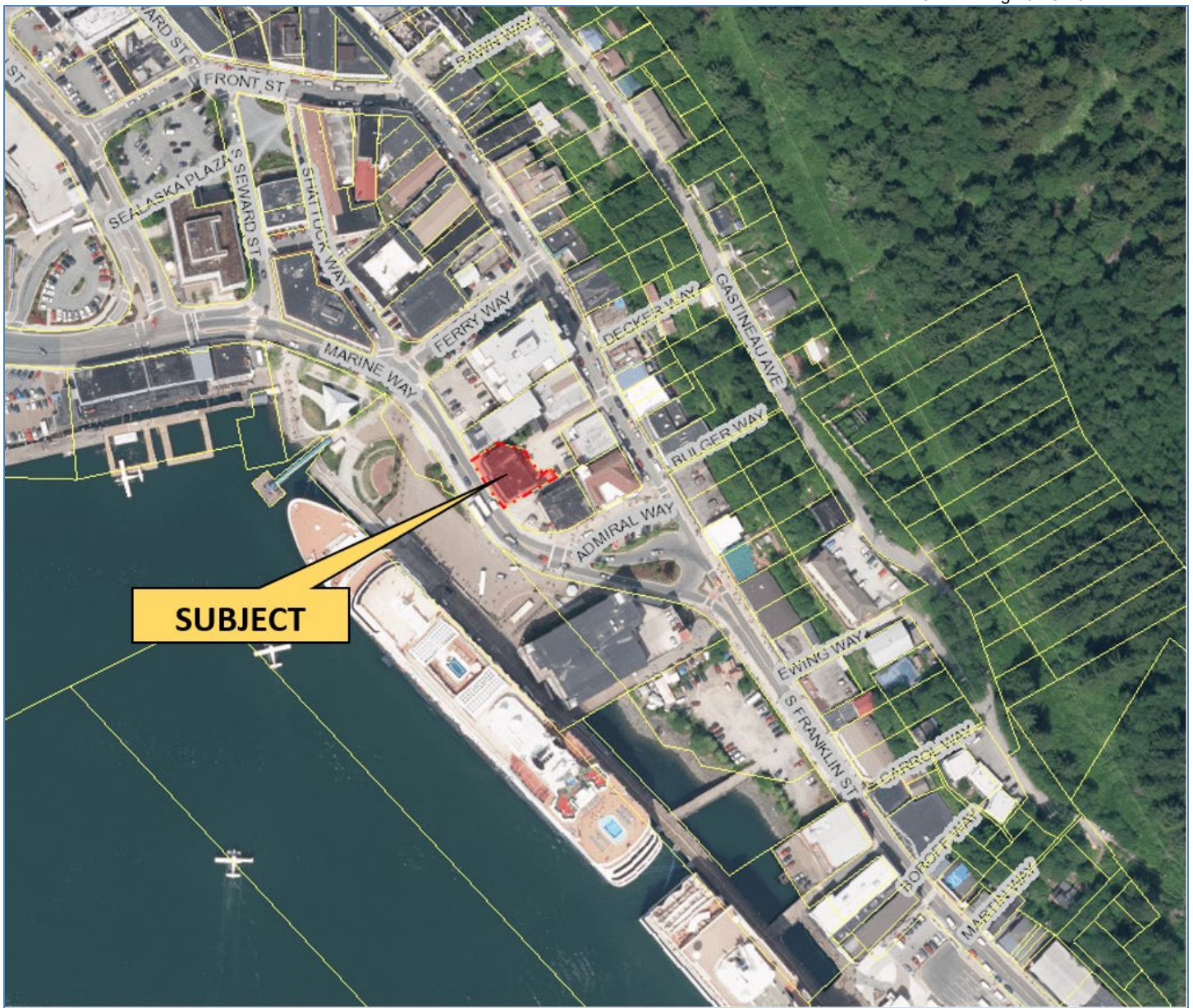


Back - 2014



AREA MAP & AERIAL





ASSESSED VALUES

Remember that the total assessed value is the primary test against market. The distribution of that value between the Land Component and the Building Component is secondary and can vary from one model to another. The total assessed value is tested against market indicators (sales, lease rates, etc.) and is adjusted to market value by application of market area and feature adjustments.

All three approaches to value (Cost, Sales Comparison and Income) are considered for commercial properties

LAND

Land values are developed on a market area basis. The land is examined to understand the typical land characteristics in the market area. These characteristics include size, slope, view, water frontage, significant wetlands and others. The characteristics are used to develop a market area land valuation model. This model is tested and refined in consideration of sales of both vacant and developed parcels. The resulting model is then applied to all of the land in the market area to establish assessed site values.

The subject site features are its level, developed lot that offers frontage along both S Franklin St and Marine Way which is in close proximity to the core business district. The subject parcel's land value is equitable and is not excessive.

Land Characteristics:

- 6,815 SF lot
- Level, developed lot
- Close proximity to core business district
- 88.5' frontage along Marine Way

Land Values



BUILDING(S)

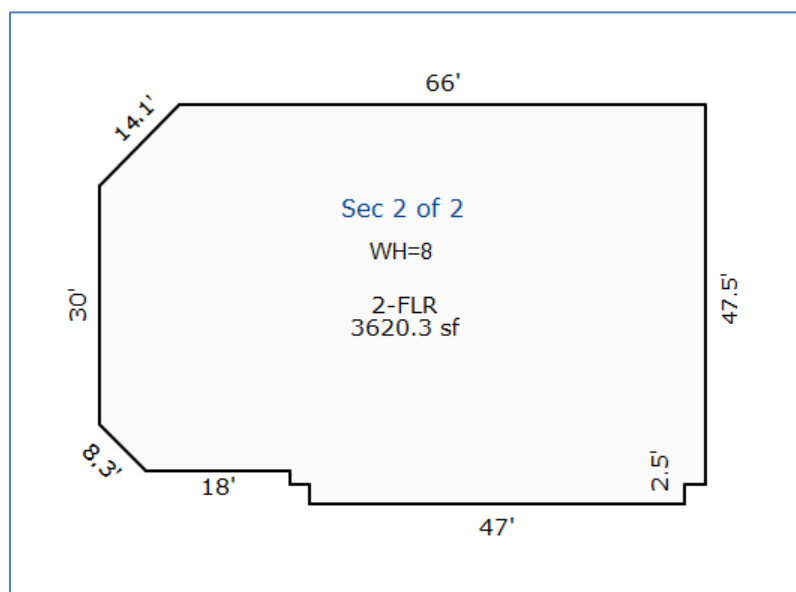
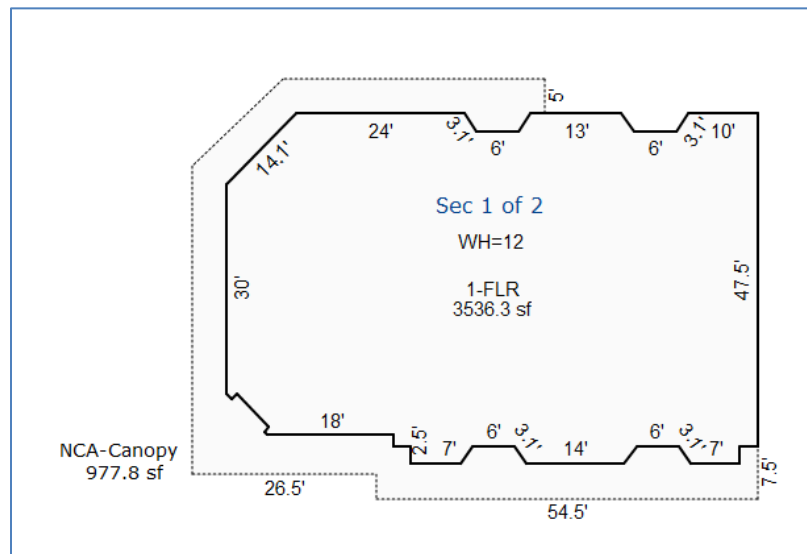
The building component may be based on market adjusted cost tables, residual from sales after extraction of the land value or other appropriate means.

Ratio studies are performed to determine market adjustments.

Building Characteristics:

- Mixed use building with retail on the first level and residential apartments above
- The amount of depreciation that has been applied to the Cost Report from the CAMA system is 80% to section 1. 80% is an extremely high degree of depreciation.
- 7,156 SF GBA
 - 3,536 SF GBA – 1st level retail
 - 3,620 SF GBA – 2nd level apartments
- Approximately 70' store frontage along Marine Way

Sketch of Improvements:



COST REPORT

The cost report below was utilized in the review process in response to the filing of the Petition for Review by the appellant. The cost report indicates that the building component is not overvalued.

45100		Record		2
Parcel Code Number	1C070K820022	Number of Stories (Building)	01	
Owner Name	WILLIAMSON KEN	Number of Sections	1	
Parcel Address	255 MARINE WAY	Perimeter	255	
Effective Year Built	2001	Class	D	
Year Built	1998	Height	12	
Building Model	C- 13 Stores, Commercials	Rank	Average	
Building Type	Mixed Retail w/ Resid. Units	Total Area	3,536.00	
Base Cost		3536	74.50	263,432
Exterior Wall	Stud -Cement Fiber Siding	3536	13.70	48,443
Heating & Cooling	Heating & Cooling	3536	611.00	611
Heating & Cooling	Hot Water Radiant	3536	8.24	29,137
Architect Fee		3536	6.60	23,338
Sub Total				\$364,960.44
Local Multiplier			1.43	[X] \$521,893.00
Current Multiplier			1.03	[X] \$537,550.00
Neighborhood Multiplier				[X] \$537,550.00
Depreciation - Physical			30.00	[-] \$161,265.00
Depreciation - Functional			50.00	[-] \$268,775.00
Depreciation - Economic				[-] \$0.00
Percent Complete			100.00	[-] \$107,510.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$107,510

45100		Record		3
Parcel Code Number	1C070K820022	Number of Stories (Building)		01
Owner Name	WILLIAMSON KEN	Number of Sections		1
Parcel Address	255 MARINE WAY	Perimeter		0
Effective Year Built	2001	Class		D
Year Built	1998	Height		8
Building Model	C- 13 Stores, Commercials	Rank		Average
Building Type	Mixed Retail w/ Resid. Units	Total Area		3,620.00
Base Cost		3620	74.50	269,690
Exterior Wall	Stud -Cement Fiber Siding	3620	12.54	45,379
Heating & Cooling	Heating & Cooling	3620	611.00	611
Heating & Cooling	Hot Water Radiant	3620	8.24	29,829
Architect Fee		3620	6.60	23,892
Sub Total				\$369,400.31
Local Multiplier		1.43	[X]	\$528,242.00
Current Multiplier		1.03	[X]	\$544,089.00
Neighborhood Multiplier			[X]	\$544,089.00
Depreciation - Physical		30.00	[-]	\$163,227.00
Depreciation - Functional			[-]	\$0.00
Depreciation - Economic			[-]	\$0.00
Percent Complete		100.00	[-]	\$380,862.00
Cost to Cure				
Neighborhood Adjustment				
Replacement Cost less Depreciation				\$380,862
Miscellaneous Improvement	Canopy		[+]	19,600
	John_Sahnow			
Miscellaneous Improvement	Apt Blt-in appliance		[+]	6,400
Total Improvement Value				\$514,400

INCOME APPROACH

The income approach was not the basis for setting the assessed value for 2021. The appellant did not submit P&L information for the Review process.

COMMERCIAL MARKET & ASSESSMENT ANALYSIS

The 2021 sales analysis for commercial properties included 57 qualified sales from 5 years of sales covering January 1, 2016 through December 31, 2020. The sales volume for the commercial market remained steady through 2020 and there was no indication of declining prices.

- Assessment Year 2021 Summary for Commercial Properties
 - Level of Assessment – 85% overall, 60% for vacant land, and 91% for improved properties
 - Coefficient of Dispersion (COD) – 22% for the combined group, 20% for vacant land, and 17% for improved properties (For these types of property groups the Standard that we work towards would be 20% or less for the subsets of land and improved properties. The combined set would be expected to have a higher COD.)
 - Applied Time Trend for Sales Analysis – 5% per year (0.42% per month)

SUBJECT ASSESSMENT HISTORY

City and Borough of Juneau Assessment History Report

1C070K820022
KEN WILLIAMSON
255 MARINE WAY
TIDELANDS ADDITION BL 82 LT 3B

<u>YEAR ID</u>	<u>LAND VALUE</u>	<u>MISC VALUE</u>	<u>BLDG VALUE</u>	<u>CAMA VALUE</u>
2021	\$1,063,200.00	\$26,000.00	\$469,300.00	\$1,558,500.00
2020	\$708,800.00	\$26,000.00	\$469,300.00	\$1,204,100.00
2019	\$654,200.00	\$26,000.00	\$469,300.00	\$1,149,500.00
2018	\$654,200.00	\$26,000.00	\$469,300.00	\$1,149,500.00
2017	\$681,500.00	\$26,000.00	\$469,300.00	\$1,176,800.00
2016	\$681,500.00	\$26,000.00	\$469,300.00	\$1,176,800.00
2015	\$681,500.00	\$26,000.00	\$488,400.00	\$1,195,900.00
2014	\$625,500.00		\$552,900.00	\$1,178,400.00

SUMMARY

State statute requires the Assessor to value property at “full and true value”. According to appraisal standards and practices set by the Alaska Association of Assessing Officers, the State of Alaska Office of the State Assessor, and the International Association of Assessing Officers, correct procedures of assessment were followed for the subject. These standards and practices include consideration of any market value increase or decrease as determined by analysis of sales.

The assessed value was reviewed in response to the Petition for Review. Our findings are as follows.

The land and buildings are valued using the same methods and standards as all other properties in the Borough.

Additional Details:

- The appellant states that their assessed value is excessive/overvalued.
 - We find that the assessed value is equitable and is not excessive.
- The appellant states that property value is not based on market value. Assessment disregards comparable sales of like kind property: Emporium Mall (Alaska Laundry Bldg).
 - We have considered the Emporium Mall sale.
 - We do not set values off of one sale.
 - Looking at the broader market sales, rather than focusing on just one property, we find the assessment not to be excessive.

CONCLUSION

The 2021 Assessed values were based on a simple methodology, analysis through ratio studies and subsequent trending of values based on the analysis findings. Underlying this standard compliant trending are the locational and feature influenced specific models that have been applied to Juneau commercial properties for many years. The ratio studies indicate that after our adjustments to values the level of assessment for commercial properties was 85% overall, 60% for vacant land, and 91% for improved properties.

For the subject property:

- The percentage change from 2020 to 2021 was an increase of 29.43%.

We find that no change to the 2021 assessed value of \$1,558,500 is warranted and ask that the BOE uphold the assessed value. The analysis and ratio studies indicate that our 2021 values for improved commercial properties is at 91%. Based on that, the indicated market value for this property is around \$1,712,637.

ADDENDUM A – General Information

General Information

1. Regardless of the number of sales, we are required to set assessed values each year.
2. We work with the best data that we have available at the time.
3. We strive to treat all properties equitably.
4. We have done our work with the highest of ethical standards.
5. We have followed the applicable assessment standards.
6. Accusations have been made against Michael Dahle, Deputy Assessor and the Assessor's Office so let us make a few very clear statements.
 - We did not cherry pick sales. We applied appropriate validation standards.
 - Nothing nefarious or underhanded was done.
 - We did not do anything fraudulent.
 - While people may not understand the assessment process, everything we did was within what is normal.
 - It is normal as you are going through the analysis process that additional information may come to light that changes validation and verification conclusions or data within the data set.
7. In response to a Petition for Review, we review the assessed values for each appeal and if there is an error or an indication of the property's assessed value being excessive, inequitable, and improper we make the appropriate corrections.
8. We welcome any new or additional market information, which will be applied with next year's analysis.
9. For any given year we typically get sales prices on 35 to 40 percent of the commercial property market sales. That leaves anywhere from more than half to up to two thirds of the sales prices unknown. If one wants to get into speculation, the majority of the sales for which we do not have sales prices likely indicate that our values are low, otherwise, it is probable that the sales prices would be being submitted to us in order to lower values.
10. A common thread in the Petitions for Review and the Appeals that we are seeing is that the appellants have focused on a few (one to three), particular, low sales and claim that their property should be valued off one or two of those specific sales. We see the same three, particular, low sales referenced over and over. One of the advantages of mass appraisal and of the analysis work that the Assessor's Office does is that we do not focus on one sale (low or high) but instead look at all of the sales. We then set values based off of the mean and median indicators for all of the sales. That way we are not isolating to the lowest sale or the highest sale in determining what the market value is. Within this process we look at the overall market as well as indicators for sub-groups such as locational factors, property features, types of property, etc. (Please see Addendum B for additional review of these sales.)
11. Others have focused on one sale that was a market sale (the NCL/sub-port sale), claiming it is inappropriately skewing the results. That is not true. It also does not even qualify as an outlier per IAAO standards. (Again, please see Addendum B for additional review.)
12. While the inclusions and exclusions that were made were appropriate, we analyzed whether or not changing the inclusion or exclusion of these sales would have had any impact on the valuations. Making those changes did not significantly change the ratios and would not have resulted in any different action in setting the assessed values. (See Addendum B.)
13. Maintaining standards in the sales validation process is critical. All of what we do in the area of valuations is dependent on the quality and accuracy of the sales data. Having good, clean, accurate sales data is critical.
14. There is no one set format when it comes to income approaches. It is common, when used for property tax assessment purposes, that the following expenses are excluded: property taxes, depreciation, debt service, income taxes, capital improvements, owner business expenses and replacement reserves. Those factors can vary considerably from one investor or property owner to another. Excluding them produces a more consistent

model that reflects the market overall. Note that items such as the cap rate need to be developed or calibrated for each specific model structure. Different models may arrive at different NOI amounts, different cap rates, different standard expense percentages, etc. due to what income or expenses are included or excluded.

15. Another common thread that we see is related to marketing time and price. Part of the definition or criteria for a sale being a market sale is that it has gotten market exposure for a reasonable amount of time. In The Appraisal Institutes Dictionary of Real Estate Appraisal part of the definition of the requirements for a sale to be considered a market sale is that there was “**reasonable exposure in a competitive market**, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.” [Emphasis added] If a property is sold under duress, which needing to sell quickly would fall under, it is to be considered not a market sale. Under the market sale guidelines a sale that occurs in less than usual market time is also suspect. So, one of the aspects that is to be inspected besides exposure is marketing time. It should be noted that the typical marketing time for commercial properties is substantially longer than for residential properties.
16. Some questions have been asked about Comparables in appraisal and assessed valuation work. First, in utilizing mass appraisal you do not have specifically identified comparables as you would in a classic sales comparison methodology, rather you are looking at all of the sales. That said, there is far more latitude in comparables than is being recognized. Comparable selection is highly subjective and each appraiser will have their own opinion as to which sales are the best comparables. Adjustments are then made to those comparables to “bring them” to the subject’s characteristics. While a residential appraisal for financing, which is the appraisal application that you are probably most familiar with, usually has fairly tight parameters, there actually can be great latitude in the comparable selection. There are many cases where, due to lack of sales, appraisers utilize different types of properties and properties from different neighborhoods, different cities and even different states. The adjustments become even more critical in these cases. Can a property from the valley be utilized in an appraisal for a downtown property? Absolutely, if the appraiser feels that that is the best comparable available. In such a case the locational adjustment would be more critical than if you have a comparable that is only a block away.
17. Due to the volume of appeals this is an unusual year. Some process alterations have been necessary to expedite the timely review of the appeals. One aspect to the appeals this year is that many were filed with no specific reason given for the value being challenged. A specific reason would be something such as, the foundation has failed and I received an engineer’s report that it is going to take \$750,000 to remedy the issue. Rather, many have general statements such as “you can’t raise my value that much in one year,” or “there was no justification for raising values.” As a result you may see appeals come before you where the review is quite generic. Please keep in mind that each of these appellants were encouraged to submit specific evidence of an incorrect value through initial phone calls early in the process, through a letter dated 06/18/2021 and through follow up phone calls to the letter as a minimum. Each appellant has been given opportunity to discuss our findings with the Assessor’s Office.

ADDENDUM B - Analysis

Analysis- Appraisal Summary

The following page includes a summary report for the 2021 Assessed Values based on the sales information at the time of the analysis. Because this is a dataset that includes all commercial types (vacant and improved) other than boathouses a COD of 21.5490 is a good COD that indicates good uniformity in the assessed values across the varied types and locations of the properties. The scatter diagram indicates that a more aggressive trending of sales prices would have been appropriate. If that had been applied it would result in an indication of the assessed value ratios being even lower than stated. These ratios and statistics are based on AY2021 values after the adjustments to values were made.

**AY2021- Comm- Set 2 Updated AVs Live1- 20210316- No 19- All, 5 Yr, 5% Trend
Summary Report**

Statistics

Current	Proposed		
53	53	Count	(Number of Records with Ratio)
0.2932	0.2932	Minimum Ratio	
1.4091	1.4091	Maximum Ratio	
1.1159	1.1159	Range	
0.8526	0.8526	Mean	(This is the average ratio for your sample.)
0.8853	0.8853	Median	(This is the mid-point value for your sample. Preferred measure of central tendency.)
0.6981	0.6981	Weighted Mean	
3.0313	3.0313	Sum of the Square of Deviations	
0.1908	0.1908	AAD	
0.2414	0.2414	Standard Deviation	
21.5490	21.5490	COD	(Good indicator of confidence level.)
28.3180	28.3180	COV	
1.2214	1.2214	PRD- Price-Related or Factor Differential	
			(PRD s/b between 0.98 & 1.03, IAAO)
			(PRD over 1=Regressive)

IAAO Standards for COD	
SFR	15.0 or less
SFR-newer/homog	10.0 or less
Income Properties	20.0 or less
Income-Urban area	15.0 or less
Vacant Land	20.0 or less

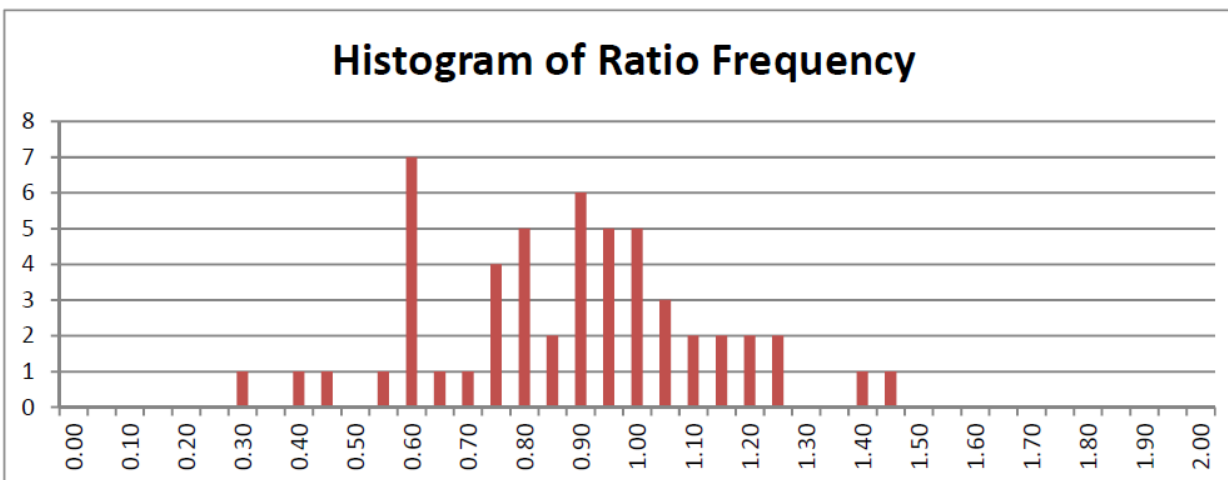
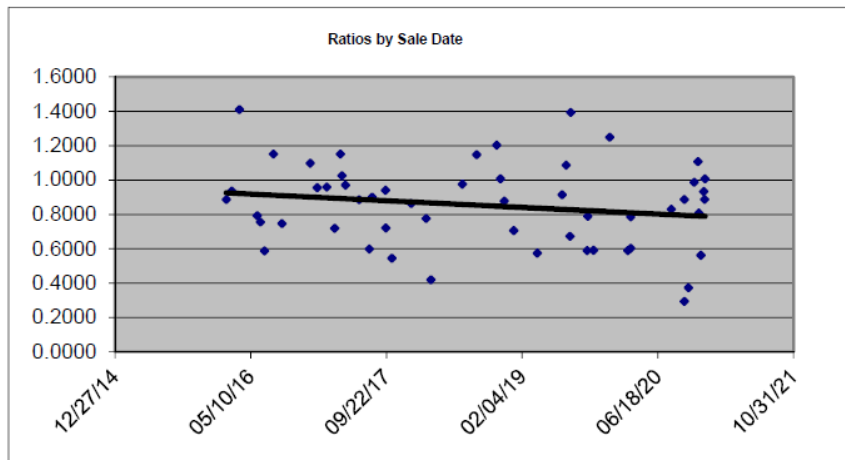
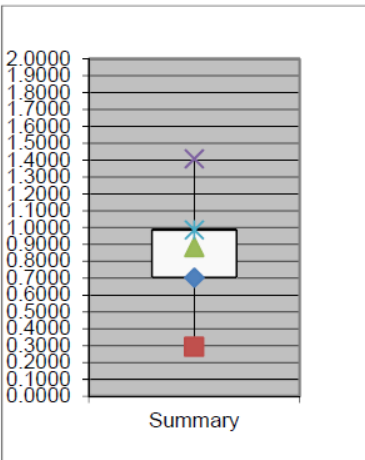
Coefficients (0=Normal Distribution)	
Kurtosis	-0.0245
Skewness	0.0181
Alt.Cyhelsky's Skew	-0.0943
Alt.Pearson's Skew	-0.4059

Trending Factors

0.85 Target Level
0.9969 Factor on Mean
0.9601 Factor on Median
1.2176 Factor on Weighted Mean

Normal / Skewed Distribution Evaluation

0.0327 Differential Mean to Median
24 Number of data points below the mean.
29 Number of data points above the mean.
*Note- # below/above works on data sets up to 5,000 pts.



4/6/2021 @ 8:23 AM

Sales List

This is a list of the market sales that we had available for our analysis data set.

AY2021 Analysis Sales List									
Sale Date	Sale Price	Trended SP	AVTotal	Main Parcel	Count	Number	Street	Condo	Neighborhood
07/25/18	27,500	30,930	27,200	1C020K01G200	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
06/28/19	25,000	26,936	27,200	1C020K01G280	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
02/28/19	25,000	27,356	27,200	1C020K01G290	1	1435	HARBOR WAY	NO	AURORA BASIN C 19
10/09/20	20,000,000	20,235,200	7,524,300	1C060K010031	1	0	EGAN DR	NO	DOWNTOWN C
10/30/20	1,400,000	1,412,348	1,394,150	1C060K660110	1	711	W WILLOUGHBY AV	NO	DOWNTOWN C
12/15/16	1,100,000	1,327,612	1,457,000	1C060U040040	1	800	GLACIER AVE	NO	DOWNTOWN C
03/30/16	550,000	683,826	963,600	1C070A030040	1	100	N FRANKLIN ST	NO	DOWNTOWN C
12/09/20	confidential	confidential	190,200	1C070A050001	1	230	SEWARD ST	5K	SOMMERS ON SEWARD_C_24
11/02/18	510,600	567,144	682,450	1C070B0J0020	1	195	S FRANKLIN ST	NO	DOWNTOWN C
07/01/19	2,200,000	2,369,400	2,164,900	1C070B0N0011	1	259	S FRANKLIN ST	NO	DOWNTOWN C
03/10/20	612,788	638,268	501,300	1C110K120051	1	0	Eastaugh Way	NO	DOWNTOWN C
03/16/17	716,000	855,033	613,650	1C110K120101	1	170	MILL ST	NO	DOWNTOWN C
10/02/19	378,818	403,055	237,150	1C110K120120	1	0	MILL ST	NO	DOWNTOWN C
10/25/19	378,818	401,835	237,150	1C110K120130	1	190	MILL ST	NO	DOWNTOWN C
03/10/20	378,818	394,569	237,150	1C110K120140	1	0	MILL ST	NO	DOWNTOWN C
04/01/19	597,938	651,597	374,400	1C110K120150	1	0	MILL ST	NO	DOWNTOWN C
11/13/20	400,000	402,744	445,400	1D060L030011	2	201	CORDOVA ST	NO	WEST JUNEAU C
10/12/17	65,000	75,711	41,200	3B1501020030	1	1669	CREST ST	NO	SOUTH VALLEY C
11/30/18	168,750	186,776	164,000	3B1501040120	1	1544	CREST ST	NO	SOUTH VALLEY C
09/19/17	750,000	876,000	823,100	4B1601010040	1	2450	INDUSTRIAL BLVD	NO	MENDE PENINSULA C
06/13/17	104,000	122,899	108,800	4B1601050030	1	2274	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
07/30/19	115,000	123,388	83,000	4B1601050160	1	2276	INDUSTRIAL BLVD	5K	RIVERVIEW YACHT C 24
03/05/18	73,000	83,557	35,000	4B1601080070	1	2278	INDUSTRIAL BLVD	5K	P & J BUSINESS C 24
07/31/17	112,500	132,188	119,000	4B1601120130	1	2270	BRANDY LN	5K	BRANDY LANE YACHT C 24
11/17/20	650,000	654,095	527,700	4B1701020020	1	10011	GLACIER HWY	NO	MENDE PENINSULA C
02/28/20	1,567,000	1,634,569	961,350	4B1701090056	1	10009	CRAZY HORSE DR	NO	MENDE PENINSULA C
12/04/20	confidential	confidential	145,000	4B1701090218	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
02/14/17	150,000	179,757	172,300	4B1701090223	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
04/24/17	130,000	154,534	149,800	4B1701090226	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
01/10/17	150,000	180,492	172,300	4B1701090228	1	10011	CRAZY HORSE DR	5K	SAFE HARBOR C 24
06/30/16	501,624	617,218	361,800	4B1701100146	1	2789	SHERWOOD LN	NO	MENDE PENINSULA C
03/01/16	697,000	869,424	813,000	4B1701100170	1	10221	GLACIER HWY	NO	MENDE PENINSULA C
09/20/17	400,000	467,144	336,200	4B1701103003	1	2769	SHERWOOD LN	5K	BEAR DEN YACHT CONDO C 24
06/29/18	950,000	1,071,961	1,045,750	4B2901020010	1	10200	MENDENHALL LOOP	NO	AUKE MOUNTAIN C
10/04/19	2,205,832	2,346,343	1,849,500	5B1201000060	1	5245	GLACIER HWY	NO	LEMON CREEK C
08/02/19	500,000	536,260	746,600	5B1201020100	1	5452	SHAUNE DR	NO	LEMON CREEK C
04/05/17	4,140,000	4,932,313	5,106,550	5B1201040052	2	1721	ANKA ST	NO	LEMON CREEK C
08/02/16	500,000	612,910	704,850	5B1201060061	2	5631	GLACIER HWY	NO	LEMON CREEK C
09/24/20	2,450,000	2,483,957	1,554,550	5B1201060160	2	5740	CONCRETE WAY	NO	LEMON CREEK C
11/23/20	486,000	488,654	274,300	5B1201060260	1	5719	CONCRETE WAY	APN	SEAGULLS EDGE C 24
09/24/20	300,000	304,158	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
12/24/19	205,000	215,734	269,550	5B1201300110	1	1783	Anka St	NO	LEMON CREEK C
07/21/17	900,000	1,058,760	632,250	5B1201330160	3	2005	ANKA ST	NO	LEMON CREEK C
06/03/16	1,060,000	1,308,273	1,036,450	5B1201450110	1	1731	RALPHS WAY	NO	LEMON CREEK C
06/15/16	637,500	785,744	593,500	5B1501000002	1	8251	GLACIER HWY	APN	SOUTHEAST INSURANCE C 24
08/07/20	700,000	714,406	591,700	5B1501010001	2	1880	CREST ST	APN	BUILDERS PLAZA C 24
09/02/16	1,300,000	1,587,924	1,183,050	5B1501020170	1	8401	AIRPORT BLVD	NO	SOUTH VALLEY C
11/16/18	750,000	831,585	837,600	5B1501040030	1	8825	MALLARD ST	NO	SOUTH VALLEY C
12/07/20	confidential	confidential	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
02/10/16	273,000	341,299	234,498	5B15011107E0	1	2221	JORDAN AVE	SEP	JORDAN CREEK C 24
12/22/17	300,000	346,452	230,384	5B15011109B0	1	2231	JORDAN AVE	SEP	JORDAN CREEK C 24
02/15/18	968,750	1,111,292	851,400	5B1601000023	1	9151	GLACIER HWY	NO	SOUTH VALLEY C
07/16/19	145,000	155,861	169,350	5B1601140043	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
08/21/18	240,100	269,142	308,850	5B1601140070	1	9309	GLACIER HWY	APN	PROFESSIONAL PLAZA C 24
01/04/19	672,000	740,490	521,900	5B2401610150	1	4045	DELTA DR	NO	NORTHEAST VALLEY C
04/11/17	1,540,000	1,833,432	1,877,700	7B0901030071	1	3161	CHANNEL DR	NO	TWIN LAKES C
(1) These were the sales available to us for our market analysis for assessment year 2021.									
(2) Some sales prices are confidential, specifically when the only sale source is the buyer.									
(3) Note that this list was updated 08/24/21 to add AV. The original list was 57 sales, however, through the analysis process one sale, 1C060U050022, was eliminated. It was further updated 09/23/21 when a change in directive from the law department allowed us to add some sales prices. Update 9/29/2021, only sales prior to 11/26/2020 confidential.									
(4) AV Adj for condition at time of sale - 1C060U040040, 1C070A030040, 4B1701100170, 1C110K120130, 1C110K120101, 4B1701100146, 5B1201060160, 5B1201000060, 7B0901030071									
(5) 5B1201020100 is included on this list, however, it has since been determined not to be a market sale; seller & buyer related. Removal of this sale would further lower the mean and median ratios.									
(6) Note- multi-parcel sales are normally considered non-market, however, with commercial sales they are sometimes included as an economic unit.									
(7) Note that the sale price used in the original study for 5B1201040052, which included 5B1201040051, was \$3,726,000 which was reported by the buyer, however, subsequent information showed the sale price to be \$4,140,000 with the cash distribution reduced for the value of 12 months of continued occupancy by the seller after the execution of the sale. Also, this sale was discovered to be a non-market sale due to duress of the seller. Removal of this sale would lower the mean and median ratios									
(8) The trending applied to bring the sales to 01/01/2021 was 5% per year. The analysis indicates that a trend of 7.5% would be appropriate but to be conservative we selected 5%.									
(9) Column added to identify condo parcels NO = not condo; APN= apportioned land value; 5K= place holder land value; SEP = land is valued under different parcel.									

Review of Particular Sales

In response to questions raised by appellants we did additional review regarding four sales and their inclusion in or exclusion from the ratio study. We found that the original inclusion or exclusions were appropriate. We then went one step further and analyzed the hypothetical assumptions regarding the inclusion and exclusion of these sales.

The sales were:

1. The Emporium Mall, 1C070K810090 & 0140 – This sale is a multi-parcel that does not qualify as a market sale.
2. The Assembly Building, 1C070A090060 – We did not and still do not have a verified sale price for this sale.
3. The Pacific Pier, 1C070K830040 – This may be a market sale, however, we did not have the sale price at the time of the analysis.
4. The AMHT/NCL land sale, 1C060K010031 – This is a market sale and was included in the analysis.

In regards to the NCL sale, two items of note. First, it does not meet the criteria to be considered to be an outlier. Second, it's inclusion in the analysis did not cause it to have undue influence on the results.

We have reviewed the assertions and find them to be without merit and find that the sales qualification designations are consistent with standards. The distinctions of what is and is not a market sale are important in keeping your data clean which leads to more accurate findings. In spite of there being no merit to the argument for changing which sales were included and which were excluded, just for review purposes, we looked during the review process at whether inclusion and exclusion of these sales would have made any substantial difference. The finding was that the changes in mean and median ratios was minimal and would not have led to any difference in our decisions in the setting of the assessed values and the bringing of the commercial values closer to market.

Again, I need to stress that the exclusion and inclusion, as done in the analysis, was proper and this was just done for comparative and informational purposes during the review process. The statistics below are for 3 sequential steps applying the hypothetical assumptions. The first step added the 2 sales, the next step then corrected an included sale and the third step then removed the NCL sale from consideration. You will see from the results below that even after applying these hypotheticals that after our changes to the assessed values that commercial properties remain undervalued. After applying the hypothetical assumptions the median changed by one thousandth of a percent and the mean increased by 3.2% but remained lower than the median.

<u>Review of Impact of Including and Excluding Particular Sales</u>				
	Original	2 Sales Added	Sale Correction	Remove NCL
Count	53	55	55	54
Minimum Ratio	0.2932	0.2932	0.3718	0.4189
Maximum Ratio	1.4091	1.4091	1.4091	1.4091
Range	1.1159	1.1159	1.0373	0.9903
Mean	0.8526	0.8692	0.8753	0.8846
Median	0.8853	0.8862	0.8862	0.8863
COD	21.5490	22.4051	21.6607	20.9181
COV	28.3180	29.0248	27.6491	26.4636
PRD- Price-Related or Factor Differential	1.2214	1.1463	1.1359	0.9396

In general, the median is the preferred measure unless your sample is skewed in which case the mean would be preferred. The COD is based on the median and the COV is based on the mean.

Beyond the above sales there were a number of sales that were included in early counts of possible qualified market sales that were not included in the analysis set due to legitimate questions not being able to be resolved by the time that the study was done. This would include things such as unresolved questions as to whether a sale was a market sale or not, questions as to the accuracy of the sales price, lack of information as to the value of personal property included in the sale and other questions. It is normal for the sales validation information to be refined during the analysis process. A ratio study done on these excluded sales shows a mean and median ratio virtually identical to the analysis set. A list of sales (provided by appellant Ken Williamson) and their status as to inclusion in the analysis follows.

For Audit/Review Purposes Only

This is a summary of a review of a list of sales provided by appellant Ken Williamson.

This summary reviews whether or not these sales were included as a qualified market sale in the AY2021 Analysis.

In cases where the sale was excluded the reason is indicated.

sale date	parcel number	address	Inclusion/Exclusion	Reason
9/7/2017	1C020K01E220	Aurora Harbor	not included	boat house- Question on price & what sold
9/7/2017	1C020K01E230	Aurora Harbor	not included	boat house- Question on price & what sold
6/23/2020	1C020K01E300	1435 Harbor Way	not included	boat house; excluded as an outlier
7/25/2018	1C020K01G200	1435 HARBOR WAY	Included In Separate Study	boat house
6/28/2019	1C020K01G280	1435 HARBOR WAY	Included In Separate Study	boat house
2/28/2019	1C020K01G290	1435 HARBOR WAY	Included In Separate Study	boat house
1/30/2017	1c030c280080	712 W 12th	not included	questionable data source sp and mtg same
9/23/2016	1C060C000080	3610 Diston	not included	questionable data source reonomy?
10/9/2020	1C060K010031	0 EGAN DR	Included	
10/30/2020	1C060K660110	711 W WILLOUGHBY AVE	Included	
12/15/2016	1C060U040040	800 GLACIER AVE	Included	
7/20/2018	1C060U050022	1108 F ST	not included	multi parcel sale/ not contiguous/ multiple sale price references
3/30/2016	1C070A030040	100 N FRANKLIN ST	Included	
12/9/2020	1C070A050001	230 SEWARD ST	Included	
11/2/2018	1C070B0J0020	195 S FRANKLIN ST	Included	
7/1/2019	1C070B0N0011	259 S FRANKLIN ST	Included	
12/31/2019	1c070k810090	170 S Franklin	not included	multi parcel sale outside of standards for inclusion
1/9/2018	1C100I070050	549 S Franklin	not included	multi parcel sale/ not enough data/ easement questions
3/10/2020	1C110K120051	0 Eastaugh W ay	Included	
3/16/2017	1C110K120101	170 MILL ST	Included	
10/2/2019	1C110K120120	0 MILL ST	Included	
10/25/2019	1C110K120130	190 MILL ST	Included	
3/10/2020	1C110K120140	0 MILL ST	Included	
4/1/2019	1C110K120150	0 MILL ST	Included	
11/13/2020	1D060L030011	201 CORDOVA ST	Included	
10/12/2017	3B1501020030	1669 CREST ST	Included	
11/30/2018	3B1501040120	1544 CREST ST	Included	
9/19/2017	4B1601010040	2450 INDUSTRIAL BLVD	Included	
6/13/2017	4B1601050030	2274 INDUSTRIAL BLVD	Included	
7/30/2019	4B1601050160	2276 INDUSTRIAL BLVD	Included	

3/5/2018	4B1601080070	2278 INDUSTRIAL BLVD	Included	
10/29/2018	4B1601090040	Crazy Horse	not included	multi parcel sale/ condo units and land portions
7/31/2017	4B1601120130	2270 BRANDY LN	Included	
11/17/2020	4B1701020020	10011 GLACIER HWY	Included	
2/23/2020	4B1701080020	10012 Crazy Horse	not included	personal property included in sale price; adjustment not determined
2/28/2020	4B1701090056	10009 CRAZY HORSE DR	Included	
12/4/2020	4B1701090218	10011 CRAZY HORSE DR	Included	
2/14/2017	4B1701090223	10011 CRAZY HORSE DR	Included	
4/24/2017	4B1701090226	10011 CRAZY HORSE DR	Included	
1/10/2017	4B1701090228	10011 CRAZY HORSE DR	Included	
6/30/2016	4B1701100146	2789 SHERWOOD LN	Included	
3/1/2016	4B1701100170	10221 GLACIER HWY	Included	
9/20/2017	4B1701103003	2769 SHERWOOD LN	Included	
12/31/2019	4b1701104000	2771 Sherwood ln	not included	personal property included in sale price; adjustment not determined
3/26/2019	4b2801050030	3845 Lee Court	not included	vacant land sale in a residential neighborhood, considered to not be commerical land.
6/29/2018	4B2901020010	10200 MENDENHALL RD	Included	
10/4/2019	5B1201000060	5245 GLACIER HWY	Included	
9/3/2019	5b1201010010	1610 Anka	not included	multi parcel sale, not enough info
8/2/2019	5B1201020100	5452 SHAUNE DR	Included	
4/5/2017	5B1201040052	1721 ANKA ST	Included	
8/2/2016	5B1201060061	5631 GLACIER HWY	Included	
1/18/2017	5b1201060140	5720 Concrete Way	not included	Sale price was in question. Further review identified the correct sales price. The sale will be included in the 2022 analysis with the corrected sale price.
9/24/2020	5B1201060160	5740 CONCRETE WAY	Included	
11/23/2020	5B1201060260	5719 CONCRETE WAY	Included	
9/24/2020	5B1201300110	1783 Anka St	Included	
12/24/2019	5B1201300110	1783 Anka St	Included	
7/21/2017	5B1201330160	2005 ANKA ST	Included	
1/29/2018	5B1201450050	5410 Bent Ct	not included	personal property included in sale price; adjustment not determined; questionable data source
6/3/2016	5B1201450110	1731 RALPH'S W AY	Included	
6/15/2016	5B1501000002	8251 GLACIER HWY	Included	
8/7/2020	5B1501010001	1880 CREST ST	Included	

9/2/2016	5B1501020170	8401 AIRPORT BLVD	Included	
11/16/2018	5B1501040030	8825 MALLARD ST	Included	
12/7/2020	5B15011107E0	2221 JORDAN AVE	Included	
2/10/2016	5B15011107EO	2221 Jordan	Included	
12/22/2017	5B15011109B0	2231 JORDAN AVE	Included	
2/15/2018	5B1601000023	9151 GLACIER HWY	Included	
7/16/2019	5B1601140043	9309 GLACIER HWY	Included	
8/21/2018	5B1601140070	9309 GLACIER HWY	Included	
8/10/2016	5b160144000	3039 Clinton	not included	questionable data source/ reonomy/ Low income senior housing
1/4/2019	5B2401610150	4045 DELTA DR	Included	
1/27/2017	6D0701000020	4755 N Douglas Hiway	not included	not enough info
4/11/2017	7B0901030071	3161 CHANNEL DR	Included	
12/30/2016	7B0901040070	1050 Salmon Creek ln	not included	questionable data source/ "allocated sale price" noted but meaning of the note was unknown/ low income housing

ADDENDUM C – Communication

Emails and Other Communications



155 S. Seward St. Rm. 114
Juneau, AK 99801
Phone: (907)586-5215
Fax: (907)586-4520

9/8/2021

Ken Williamson
2425 Industrial Blvd
Juneau AK 99801

RE: FINAL DETERMINATION -- 2021 Property value Petition for Review -- 1C070K820022
RESPONSE DEADLINE: 9/15/2021

PARCEL: 1C070K820022
PHYSICAL LOCATION: 255 Marine Way

Ken Williamson,

This letter is in response to the 2021 Petition for Review that you filed regarding the above indicated parcel. The basis for appealing as indicated on the Petition for Review form is: **My property value is excessive**

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

State statute requires that the burden of proof is upon the appellant to provide evidence that one of the above conditions has been met (AS 29.45.210).

Based upon the evidence that you provided we have made the following determination regarding 2021 assessment valuation of **1C070K820022**:

VALUE DETERMINATION

Recommended Action:	No Change
2021 Initial valuation:	\$1,558,500
2021 Owner estimate of value:	\$2,963,123 (combined parcel 1C070K820021,22)
2021 Final determination:	\$1,558,500

The basis for change is a market analysis based upon available sales data which adhered to IAAO assessment standards.

Appellant failed to provide any evidence which satisfies the appeal criteria as laid out above. The Assessor Office recommends NO CHANGE to the 2021 assessed value as the appellant failed to meet the burden of proof as required by state statute. The Assessor Office sees no basis for change.

APPELLANT RESPONSE FOR ASSESSMENT YEAR 2021 PETITION FOR REVIEW

Please indicate if you accept the recommended value or wish to have your Petition for Review heard by the Board of Equalization. (*INITIAL ONE*)

_____ **YES**, I accept the recommended value determination provided by the Assessor

_____ **NO**, I do not accept the recommended valuation provided by the Assessor.
Please schedule my Petition for Review for the Board of Equalization.

I understand that I will be expected to provide specific evidence to the Board which clearly illustrates that my parcel valuation is: excessive, unequal, valued with improper methodology or is less than market value.

Be advised that if you choose to proceed to the Board of Equalization, they may, in accordance with law, apply an increase of the assessed value to full market value.

Appellant signature

Date

If we do not receive a response from you by **9/15/2021**, the Petition for Review will be scheduled for the Board of Equalization where you will be expected to present **specific evidence** as to why your parcel valuation is not valued correctly.

Sincerely,



Mary Hammond
Assessor
City & Borough of Juneau



Office of the Assessor
155 S Seward Street
Juneau AK 99801

Petition for Review / Correction of Assessed Value Real Property

Assessment Year	2021
Parcel ID Number	Various

For Office Use:	Review #	Appeal #
-----------------	----------	----------

2021 Filing Deadline: MONDAY, MAY 3

Please attach all supporting documentation

ASSESSOR'S FILES ARE PUBLIC INFORMATION – DOCUMENTS FILED WITH AN APPEAL BECOME PUBLIC INFORMATION

Parcel ID Number	5B1201020010, 021, 022, 023, 030; 5B1201010050, 060; 5B1201390010, 020; 4B1701050091, 131		
Owner Name	Ken Williamson	Name of Applicant	
Primary Phone #	(907) 789-0301	Email Address	deltaak@ptialaska.net
Physical Address	2425 Industrial Blvd Juneau, Ak 99801	Mailing Address	Same

Why are you appealing your value? Check box and provide a detailed explanation below for your appeal to be valid.

- ☐ My property value is excessive/overvalued
☐ My property value is unequal to similar properties
☐ My property was valued improperly/incorrectly
☐ My property has been undervalued
☐ My exemption(s) was not applied

THE FOLLOWING ARE NOT GROUNDS FOR APPEAL

- Your taxes are too high
- Your value changed too much in one year.
- You can't afford the taxes

Provide specific reasons and provide evidence supporting the item(s) checked above:

See attached note to Assessor's Office

Have you attached additional information or documentation? ☐ Yes ☐ No

Values on Assessment Notice:

Site	\$	Building	\$	Total	\$
------	----	----------	----	-------	----

Owner's Estimate of Value:

Site	\$	Building	\$	Total	\$
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Purchase Price of Property:

Price	\$	Purchase Date	
-------	----	---------------	--

Has the property been listed for sale? ☐ Yes ☐ No (if yes complete next line)

Listing Price	\$	Days on Market	
---------------	----	----------------	--

Was the property appraised by a licensed appraiser within the last year? ☐ Yes ☐ No (if yes provide copy of appraisal)

Certification:

I hereby affirm that the foregoing information is true and correct, I understand that I bear the burden of proof and I must provide evidence supporting my appeal, and that I am the owner (or owner's authorized agent) of the property described above.

Signature <i>Ken Williamson</i>	Date
------------------------------------	------

Contact Us: CBJ Assessors Office

Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Step 1 – Administrative Review

Appraiser to fill out					
Appraiser				Date of Review	
Comments:					
Post Review Assessment					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				
APPELLANT RESPONSE TO ACTION BY ASSESSOR					
My acceptance or rejection of the assessment valuation in the amount of \$_____ is indicated below.					
☐ Accept New Assessed Value ☐ Close Review (Assessment Remains Unchanged) ☐ Reject and Appeal					
If appealed, appellant will be scheduled before the Board of Equalization and will be advised of the date & time to appear.					
Appellant's Signature _____ Date: _____					

Appellant Accept Value	☐ Yes ☐ No <i>(if no skip to Board of Equalization)</i>
Govern Updated	☐ Yes ☐ No
Spreadsheet Updated	☐ Yes ☐ No
Corrected Notice of Assessed Value Sent	☐ Yes ☐ No

Step 2 – Appeal

Appeal # _____

BOARD OF EQUALIZATION					
Scheduled BOE Date	☐ Yes ☐ No				
10-Day Letter Sent	☐ Yes ☐ No				
The Board of Equalization certifies its decision, based on the Findings of Fact and Conclusion of Law contained within the recorded hearing and record on appeal, and concludes that the appellant ☐ Met ☐ Did not meet the burden of proof that the assessment was unequal, excessive, improper or under/overvalued.					
Notes:					
Site	\$	Building	\$	Total	\$
Exemptions	\$				
Total Taxable Value	\$				

Contact Us: CBJ Assessors Office			
Phone/Fax	Email	Website	Mailing Address
Phone: (907)586-5215 Fax: (907)586-4520	Assessor.Office@juneau.org	http://www.juneau.org/finance	155 South Seward St. Juneau AK 99801

Mary Hammond

From: Mary Hammond
Sent: Tuesday, August 24, 2021 1:54 PM
To: 'Ken'
Subject: RE: Phone conversation Aug 19
Attachments: AY2021- Com Sales List 20210823a.pdf

Ken,

I understand your frustration regarding the release of sale prices, this office has always been proactive in advocating for that information to be public. The way the ordinance is written, actual sale prices are confidential and under the direction of the law department we are not to release them. I can, however, gladly provide the values for each parcel, which is public information, and have done so in the attachment.

To clarify, the summary report was created using data extracted from Govern, which is a product of Harris. We are looking forward to upgrading to their newest version of Govern but that has not been implemented yet.

My office works diligently to collect accurate verifiable sales information which can be used in analysis. To use false or misleading data to conduct our studies goes against our ethics and our mission, which is to value all taxable properties fairly and equitably, regardless of political pressure or threats of legal action.

We did not create a false assessed value for the former Mental Health Trust parcel (1C060K010031). The assessed value prior to the 2021 trending was determined based on the same land model that was used to value all of the surrounding parcels. If there were no increase to commercial property values, this parcel would have been valued at \$5,016,200. After trending, this parcel has an A/S ratio of less than 40%. This individual sale was not the basis for increasing commercial land values for 2021, rather, all known and verifiable sales information from January, 2016 through December 2020 were considered.

I'm sorry that you feel that commercial properties have been concealed and manipulated, however, we have been very open with the processes and changes. I hope that in the future our hands will not be tied in regards to the disclosure of sales prices. I encourage you to provide any substantive information regarding arm's length sales so that our office can continue in the pursuit of fair and equitable valuation of all properties.

Mary Hammond she/ her

Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken
Sent: Saturday, August 21, 2021 3:22 PM
To: Mary Hammond
Subject: Phone conversation Aug 19

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

Thanks for getting back to me. I hadn't heard anything and was starting to be concerned. I did receive a copy of the City's *List of 57* properties from another party; however, it's useless until the City releases the values it applied to each tract.

I understand some of the confusion about releasing sales prices which the City obtained solely under authority of the new disclosure ordinance. There may be broader problems with the ordinance but, in this instance, only three sales occurred after its effective date. Those sales were business condos which have token land values of \$5K or \$0.

Double-check with the Law Dept. and then email me the *List of 57* with the sales price and assessed value for each parcel. Omit the sales prices for the three transactions after the effective date of CBJ 15.05.105.

On the phone, you indicated the Summary Study was generated in-house using Govern's CAMA software. I didn't realize the City had upgraded. Which Harris/Govern CAMA package did the City purchase: RealWare, OpenForms or PACS? Please confirm that the charts, graphs and calculations included in the Summary Study were generated by the version of Govern you use.

I've found a number of errors in the Summary Study. Some appear to go beyond accidental misrepresentations. One you and I discussed – the Mental Health Trust land sale to Norwegian Cruise Lines – had no prior assessed value. You cannot create a false assessed value and use it in a ratio value comparison.

A ratio value calculation, as used for real property assessment, is a comparison of the assessed value of the parcel at the time of the sale compared to the actual sales price. It is Assessed value divided by Sales price; often abbreviated: A/S or ASR. You cannot falsify the assessed value for the purpose of creating a ratio value.

Why didn't the Assessor's Office create a value which matches the sales price exactly? Then, the ratio study will *prove* the Assessor's Office is doing a great job since the property sold for the exact amount of the fake assessment. On the other hand, if you create a fake assessed value of one-half of the sales price, that ratio calculation will *prove* assessed values are low – about 50% of what they should be. You can imagine the pandemonium that will follow if the faulty ratio is used as justification to increase land value on hundreds of tracts of property.

I'm bummed. I supported you for the Assessor position when Robin retired. It was good timing for your career and, to the best of my knowledge, you've done a good job. Unfortunately, for the last two years, commercial assessments have been concealed and manipulated. Taxpayers only get to see *Smoke and Mirrors*. I'm not sure the extent you were deceived, but I'm an eternal optimist. There may be some possible solutions.

I've found a number of problems with both the method and the data used for 2021. Apparently an expert on mass assessment techniques will be reviewing the information. He will probably find more problems. It may be a good time to take another look and share any errors you find with the Law Dept.

Let me know if there's anything I can do.

Sincerely yours,

Ken Williamson
Cell/Text: (503) 789-9630

CBJ Assessor's Office
155 S. Seward Street
Juneau, Alaska 99801
Attn: Mary Grant

2, Aug, 2021

Mary:

I've sent several emails requesting information about how the Assessor's Office produced 2021 commercial land values. To date, I've received one item: an analysis without any supporting data: 2021 Summary Report- Commercial 20210526a.pdf. The report appears to be an attempt at using ratio valuation but it's hard to tell what method is actually used. I will assume it is a ratio value study unless you notify me that it is based on some other method.

To the extent the calculation is being concealed, is nonstandard or arbitrary; a property owner is prevented from challenging 2021 assessed values. It's similar to a driver trying to challenge a speeding ticket if the state will not release any information about the speed limit, the vehicle's speed or when and where the violation occurred.

If 2021 assessments are based on an arbitrary factor, please release that information. If the increase was not arbitrary, reveal the method and data the Assessor's Office used so I have an opportunity to challenge it.

Sincerely yours,



Ken Williamson

[Handwritten signature]

From: [Mary Hammond](#)
To: ["Ken"](#)
Subject: RE: Appeals to BOE
Date: Thursday, September 16, 2021 4:23:04 PM
Attachments: [AY2021- Com Sales List 20210823a.pdf](#)

Ken,

Thank you for your email confirming your desire to have your appeals heard before the Board of Equalization. Due to the volume of commercial appeals filed for assessment year 2021 my office has determined that any appeals filed without evidence of the following, will be moved directly to the Board of Equalization:

- Excessive – grossly disproportionate when compared to other assessments
- Unequal – treated differently than other properties in the same property class
- Improper – valuation methodology was improper
- Undervalued – valued less than market or disproportionately lower than other assessments

In addition to requests by the Assessor's Office to you via phone and mail for evidence of the above mentioned, on August 19th, you and I discussed the valuation methodology as well as your concerns regarding the results of our sales ratio study. I stand by the work my office has done and your repeated and unfounded accusations of fake values and falsifications is not helpful.

For the second time, I am attaching the list of property sales, which were used in our sales ratio study. The list includes the transaction date, parcel number, the number of parcels involved, property address, neighborhood, and the current assessed value. As discussed, sale prices are confidential as required under CBJ 15.05.105, enacted by the CBJ Assembly under ordinance 2020-47(am) last year.

You will be notified when your appeals are scheduled to be presented at the Board of Equalization. I urge you to provide evidence of excessive, unequal, improper or undervaluation prior to the hearing so that it can be considered by my office.

Mary Hammond she/ her

Assessor

City & Borough of Juneau

(907) 586-5215 ext. 4033

Please notice that our phone number has changed. All finance department calls must go to (907)586-5215. My new phone number is 586-5215 ext. 4033

From: Ken

Sent: Wednesday, September 15, 2021 4:03 PM

To: Mary Hammond

Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021

155 S. Seward Street

Juneau, Alaska 99801

Attn: Mary Hammond

Dear Mary:

The Assessor's office has not contacted me to review any of the properties which I appealed (petition for review). I've attached the forms Jillian supplied to me for a hearing with the

Board of Equalization (BOE). These must be heard as four separate appeals; the same as they were grouped in the petitions for review.

I assume you're aware of the faked values and other falsifications which are being used in the calculation which creates the increase in commercial assessments. Once again, I encourage you to take a hard look at everything which has occurred and to disclose all the facts and your participation, if any, to the City Attorney.

The Summary Report was based on 57 properties; however, the city has refused to reveal the sales prices or assessed values which were used in the Ratio Value calculations. I do not believe I will have a meaningful opportunity to challenge unless the Law Department authorizes you to release the values and algorithm used in the calculation

Sincerely yours,

Ken Williamson

Cell/Text: (503) 789-9630

cc: Jillian Olson

Mary Hammond

From: Mary Hammond
Sent: Friday, September 24, 2021 4:28 PM
To: 'Ken'
Subject: RE: Appeals to BOE
Attachments: Reveiw of 74 Sales provided by Ken Williamson.pdf; AY2021- Com Sales List 20210923a.pdf

Ken,

The law department has interpreted the disclosure provision in CBJ 15.05.105 to mean that the only thing that is confidential is the information disclosed from the buyer directly to the Assessor. I have attached an update list of sales with prices for sales that were discovered or provided in any way other than buyer disclosure.

I'm not certain where the list you provided was published but I have identified which sales were included in the final analysis and which were not. For those sales that were not included in the final analysis, the reason is listed.

Mary Hammond she/ her
Assessor
City & Borough of Juneau
(907) 586-5215 ext. 4033

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From: Ken
Sent: Thursday, September 16, 2021 5:06 PM
To: Mary Hammond
Subject: RE: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Mary:

The Assessor's office must release the values it used in its Ratio Value calculation(s). Send both the assessed value and the sales price which were used for the 54 properties on the original list that sold prior to 26 November, 2020. Also, provide a copy of the values for the "list of 74" commercial transactions on which the Summary Report was originally based. I've attached the parcel IDs below, for your convenience.

Have you taken a look at all the extent of the falsifications which your office is producing? Please stop and take a look!

Sincerely yours,
Ken Williamson

12/09/20	1C070A050001	230 SEWARD ST
12/07/20	5B15011107E0	2221 JORDAN AVE
12/04/20	4B1701090218	10011 CRAZY HORSE DR
11/23/20	5B1201060260	5719 CONCRETE WAY

11/17/20	4B1701020020	10011 GLACIER HWY
11/13/20	1D060L030011	201 CORDOVA ST
10/30/20	1C060K660110	711 W WILLOUGHBY AVE
10/09/20	1C060K010031	0 EGAN DR
09/24/20	5B1201060160	5740 CONCRETE WAY
09/24/20	5B1201300110	1783 Anka St
08/07/20	5B1501010001	1880 CREST ST
06/23/20	1C020K01E300	1435 Harbor Way
03/10/20	1C110K120051	0 Eastaugh W ay
03/10/20	1C110K120140	0 MILL ST
02/28/20	4B1701090056	10009 CRAZY HORSE DR
02/23/20	4B1701080020	10012 Crazy Horse
12/31/19	4b1701104000	2771 Sherwood ln
12/31/19	1c070k810090	170 S Franklin
12/24/19	5B1201300110	1783 Anka St
10/25/19	1C110K120130	190 MILL ST
10/04/19	5B1201000060	5245 GLACIER HWY
10/02/19	1C110K120120	0 MILL ST
09/03/19	5b1201010010	1610 Anka
08/02/19	5B1201020100	5452 SHAUNE DR
07/30/19	4B1601050160	2276 INDUSTRIAL BLVD
07/16/19	5B1601140043	9309 GLACIER HWY
07/01/19	1C070B0N0011	259 S FRANKLIN ST
06/28/19	1C020K01G280	1435 HARBOR WAY
04/01/19	1C110K120150	0 MILL ST
03/26/19	4b2801050030	3845 Lee Court
02/28/19	1C020K01G290	1435 HARBOR WAY
01/04/19	5B2401610150	4045 DELTA DR
11/30/18	3B1501040120	1544 CREST ST
11/16/18	5B1501040030	8825 MALLARD ST
11/02/18	1C070B0J0020	195 S FRANKLIN ST
10/29/18	4B1601090040	Crazy Horse
08/21/18	5B1601140070	9309 GLACIER HWY
07/25/18	1C020K01G200	1435 HARBOR WAY
07/20/18	1C060U050022	1108 F ST
06/29/18	4B2901020010	10200 MENDENHALL RD
03/05/18	4B1601080070	2278 INDUSTRIAL BLVD
02/15/18	5B1601000023	9151 GLACIER HWY
01/29/18	5B1201450050	5410 Bent Ct
01/09/18	1C100I070050	549 S Franklin
12/22/17	5B15011109B0	2231 JORDAN AVE
10/12/17	3B1501020030	1669 CREST ST
09/20/17	4B1701103003	2769 SHERWOOD LN
09/19/17	4B1601010040	2450 INDUSTRIAL BLVD
09/07/17	1C020K01E230	Aurora Harbor
09/07/17	1C020K01E220	Aurora Harbor
07/31/17	4B1601120130	2270 BRANDY LN
07/21/17	5B1201330160	2005 ANKA ST
06/13/17	4B1601050030	2274 INDUSTRIAL BLVD

04/24/17	4B1701090226	10011 CRAZY HORSE DR
04/11/17	7B0901030071	3161 CHANNEL DR
04/05/17	5B1201040052	1721 ANKA ST
03/16/17	1C110K120101	170 MILL ST
02/14/17	4B1701090223	10011 CRAZY HORSE DR
01/30/17	1c030c280080	712 W 12th
01/27/17	6D0701000020	4755 N Douglas Hiway
01/18/17	5b1201060140	5720 Concrete Way
01/10/17	4B1701090228	10011 CRAZY HORSE DR
12/30/16	7B0901040070	1050 Salmon Creek ln
12/15/16	1C060U040040	800 GLACIER AVE
09/23/16	1C060C000080	3610 Diston
09/02/16	5B1501020170	8401 AIRPORT BLVD
08/10/16	5b160144000	3039 Clinton
08/02/16	5B1201060061	5631 GLACIER HWY
06/30/16	4B1701100146	2789 SHERWOOD LN
06/15/16	5B1501000002	8251 GLACIER HWY
06/03/16	5B1201450110	1731 RALPH'S W AY
03/30/16	1C070A030040	100 N FRANKLIN ST
03/01/16	4B1701100170	10221 GLACIER HWY
02/10/16	5B15011107EO	2221 Jordan

From: Mary Hammond [<mailto:mary.hammond@juneau.org>]
Sent: Thursday, September 16, 2021 4:23 PM
To: 'Ken'
Subject: RE: Appeals to BOE

Ken,

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City & Borough of Juneau
(907) 586-5215 ext. 4033

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From: Ken <deltaak@ptialaska.net>
Sent: Wednesday, September 15, 2021 4:03 PM
To: Mary Hammond <mary.hammond@juneau.org>
Subject: Appeals to BOE

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

CBJ Assessor's Office 15, Sept, 2021
155 S. Seward Street
Juneau, Alaska 99801
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