

**ASSEMBLY STANDING COMMITTEE
PUBLIC WORKS AND FACILITIES COMMITTEE
THE CITY AND BOROUGH OF JUNEAU, ALASKA**
August 29, 2016 12:00 PM
Municipal Building - Assembly Chambers

I. CALL TO ORDER

II. APPROVAL OF MINUTES

- A. August 15, 2016 - Regular Meeting

III. PUBLIC PARTICIPATION on NON-AGENDA ITEMS

IV. ITEMS FOR ACTION

- A. BRH Rotary Uninterruptible Power System (UPS) Appropriation

V. INFORMATION ITEMS

- A. Meander Way Erosion
- B. West Douglas Road Update
- C. Willoughby Parking Study
- D. RecycleWorks Program Update

VI. CONTRACTS DIVISION ACTIVITY REPORT

- A. August 12, 2016 through August 25, 2016

VII. ADJOURNMENT

ADA accommodations available upon request: Please contact the Clerk's office 72 hours prior to any meeting so arrangements can be made to have a sign language interpreter present or an audiotape containing the Assembly's agenda made available. The Clerk's office telephone number is 586-5278, TDD 586-5351, e-mail: city.clerk@juneau.org

DRAFT
PUBLIC WORKS & FACILITIES COMMITTEE
Regular Meeting – August 15, 2016
12:00 – 1:00 PM – City Hall Assembly Chambers
MINUTES

I. ROLL CALL

Meeting was called to order at 12:00 p.m.

Members Present: Ms. Gladziszewski (Chair), Ms. Becker, Mr. Jones, Ms. Bursell

Staff Present: Roger Healy, Tina Brown, John Bohan, Michele Elfers, Rob Steedle, Beth McKibben, Samantha Stoughtenger

II. APPROVAL OF AGENDA

Agenda approved.

III. APPROVAL OF MINUTES

Approval of minutes for June 27, 2016, approved.

IV. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

None.

V. INFORMATION ITEMS

Staff provided information on the following topics:

- A. On-Site Wastewater Treatment Systems Emergency Regulations Implementation
- B. Local Improvement Districts

Discussion ensued.

VII. CONTRACTS DIVISION ACTIVITY REPORT

Discussion ensued.

VIII. ADJOURNMENT – NEXT MEETING IS SCHEDULED FOR

Next meeting will be August 29, 2016. Meeting adjourned at 12:50 PM.

BARTLETT REGIONAL HOSPITAL

3260 HOSPITAL DRIVE JUNEAU, ALASKA 99801 (907) 796-8900

DATE: August 25, 2016

TO: Roger Healy, Director
Engineering and Public Works

FROM: Alan Ulrich, Chief Financial Officer
Bartlett Regional Hospital



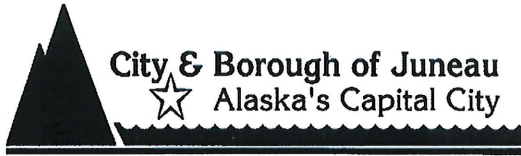
RE: Proposed Bartlett Regional Hospital Rotary UPS Appropriation.

BRH requests an appropriation of \$1.2M from the FY17 BRH operational budget for the purposes of creating a new capital project titled 'Rotary Uninterruptible Power System'(UPS) The Rotary UPS system will support critical operational components during transition from the local power grid to backup power generation. This project is estimated to cost \$1,200,000.

I recommend that you forward the following to the full Assembly for approval:

Appropriate \$1,200,000 from Bartlett Regional Hospital into a new CIP fund for FY 17.

Cc: Charles Bill, Chief Executive Officer
Marc Walker, Director of Facilities



Engineering and Public Works Department
 155 South Seward Street
 Juneau, Alaska 99801
 Telephone: 586-0800 Facsimile: 463-2606

TO: Maria Gladziszewski
 Chairperson, Public Works and Facilities Committee

FROM: Roger K. Healy, P.E.
 Engineering and Public Works Director

SUBJECT: Meander Way Erosion

DATE: August 29, 2016

The Mendenhall River's banks and channels are constantly changing. Glacial rebound combined with recent *jokalhaups* has accelerated channel incision and neighbor concern. In recent years, the river has consumed much of the backyards of several homes along Meander Way and if left untouched will probably undermine and potentially destroy one or more houses. Containment of river erosion or other natural disasters (i.e., avalanches and landslides) are difficult issues. In summary, the river is the 'property' of the Alaska Department of Natural Resources (ADNR) and the homeowners property abut the river: protection of private landowner's land from natural erosion is not the CBJ's responsibility, nor the State of Alaska. The CBJ has not, with some limited exceptions (Airport dike protection), constructed or sponsored projects that have contained the natural meandering of the Mendenhall River.

There are federal programs available to fund and/or construct bank protection projects. Local match is required. Over the last year, eight Meander Way homeowners and the CBJ have been in communication with both the U.S. Army Corps of Engineers and the U.S. Natural Resources Conservation Service (formerly the U.S. Soil Conservation Service) regarding program opportunities and requirements. For a variety of reasons, mostly schedule and match requirements, the NRCS program looks more advantageous to constructing bank protection in this area. The NRCS will contribute 75% of construction costs to the project, leaving 25% and other pre-construction activities (permitting, land rights, etc.) to be funded by others.

The NRCS requires a local sponsor, specifically the local government agency. The CBJ approaches involvement with Mendenhall River bank protection with trepidation and a great concern over liability. However, the imminent danger to resident homes has formulated staff's position to the following:

- The CBJ will participate as the local sponsor for the purposes of channeling federal funding;
- The CBJ will not contribute funding to the project;
- The CBJ staff will forward a Local Improvement District (LID) to PWFC and the Assembly for consideration and formulation;
- The CBJ will assume maintenance responsibilities on the constructed bank protection for a period of ten years;
- The CBJ will actively monitor, comment, and participate in the planning, design, and construction of the project and will charge costs to the project.

Costs for the total project are conceptual; subject to change. Early estimates of cost distribution to the eight homeowners are roughly \$125,000 per property. In mid-August, the CBJ distributed an informal poll to the eight homeowners requesting their interest in forming an LID with the \$125,000 cost identified. To date, we have 7 out of 8 homeowners signatures with the remaining homeowner unable to

To: Maria Gladziszewski, Chairperson – PWFC
Subject: Meander Way Erosion
August 29, 2016
Page 2 of 2

sign because of travel. The scope of the NRCS design and construction project may expand the number of Meander Way homeowners who are affected by, and benefit from, this river stabilization project.

The CBJ will continue to coordinate with the Meander Way neighborhood and the NRCS to assist the construction of a project. If project/program conditions change substantially from our current expectations, the CBJ will reconsider the previously listed position points.

Attached are the NRCS report and a copy of the petition.

cc: Rorie Watt, City Manager
John Bohan, Capital Projects Engineer
Tom Mattice, Emergency Program Manager

**Design Concept
for
Streambank and Shoreline Protection
for the Meander Way bend of the
Mendenhall River
near
Juneau, Alaska**

Prepared by the
Natural Resources Conservation Service
US Department of Agriculture
Palmer, Alaska

July 2015



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An Equal Opportunity Provider and Employer



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UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
Palmer, Alaska
July 2015

CONCEPTUAL DESIGN REPORT

Job: Juneau Streambank and Shoreline Protection
Location: Juneau, Alaska
Phase: Conceptual Design

Introduction

In the winter of 2015, the City and Borough of Juneau contacted NRCS regarding flooding and streambank erosion on the Mendenhall River caused by high flows during the past few years. At the current rate of erosion, at least several homes will be at imminent risk with only a few more flood events. A site investigation and survey was conducted in early March 2015, as soon as winter conditions thawed enough to allow adequate inspection and surveying. The city requested that NRCS provide assistance with a conceptual design, cost estimates, and potential funding opportunities. This report attempts to evaluate alternatives for remedies to streambank erosion. It does not address flooding concerns.

History

In 2011, significant glacial outburst flooding (or Jökulhlaup) began to impact the Mendenhall River and Juneau residents. Glacier retreat has progressed to the point where glacial meltwater from Suicide Glacier is continually dammed up behind the Mendenhall Glacier (see Figure 1). When adequate head is developed in Suicide Basin, meltwater is forced under and through the Mendenhall Glacier, and released into Mendenhall Lake and the Mendenhall River. Agencies including the University of Alaska, National Weather Service, and US Geological Survey have cooperated with the City and Borough to install instrumentation to monitor Suicide Basin water levels, in order to provide warning of impending flooding once lake levels begin to drop. Glacial outbursts since 2011 have typically occurred in July. Stream gauging has shown that outburst flows can increase river flows from a July monthly mean of approximately 3,000 cfs, to flows exceeding 16,000 cfs. These flow increases occur in a matter of hours, with a duration of several days. Such magnitude of flows, combined with their rapid rate of rise and fall, have caused significant bank erosion in some areas.



Figure 1: Mendenhall River Overview (Google Earth Image)

Field Investigation

Field activities were conducted from March 3-4, 2015. City and Borough employees, as well as some affected residents, showed NRCS personnel the sites where significant erosion occurred, as well as areas of past inundation. High water lines were noted, at flooding areas as well as streambank erosion sites.

Some streambank stabilization measures have been constructed in the past on the Mendenhall River. A riprap revetment has been installed at a sharp river bend near Postal Way and Riverbend Elementary School (see Figure 2 and Figure 3). This measure appears to have been effective in protecting the streambank from significant erosion. There is a possibility that streambank incision (downcutting of the stream bottom) has or will jeopardize the toe of this rock revetment, but no surveying or investigation was performed to evaluate the rock toe integrity.



Figure 2: Existing streambank protection and area of concern near Postal Way and Clinton Drive

Figure 3 shows the existing riprap revetment on the Postal Way river bend. Other, similar riprap revetments have also been constructed at other sites on the river.



Figure 3: Existing riprap near Postal Way

Also shown in Figure 2 is a narrow area vulnerable to breaching. This area is as narrow as 12' wide at one location, and is expected to breach in the very near future. Such breach could allow river flows to bypass the river bend adjacent to Postal Way, creating a new flow path with a steeper grade. Such breach would likely also cause river flows to then be directed toward the streambank adjacent to Clinton Drive. This could potentially result in bank erosion near Clinton Drive, and also initiate further incision of the river bed due to the loss of stream length. Over time, the incision would travel upstream, with the potential to jeopardize upstream sites.

However, this erosion has progressed to the point where it may be difficult to prevent the eventual meander breach. At this point in time, the only real option may be to address the effects of the breach after it occurs. There is a possibility that, with quick action, sheet pile and riprap could be installed at the point of impending breach to prevent or forestall the breach. Such action would be best suited for a design-build situation, in order to facilitate the required timeframe. It may prove to be far less costly to prevent the meander breach than it would be to address upstream and downstream erosion that could result from the breach. However, with shrinking budgets at all levels of government, it can be difficult to convince budget managers to allocate funds to prevent future problems, when even immediate needs cannot be met.

Upstream, the river bend near Meander Way has suffered significant erosion. Some limited areas of riprap protection have been constructed at this location (see Figure 4). This riprap has slowed erosion, but as it is installed in very limited sections to provide protection for a specific home or homes, the rock riprap has been subject to some

degradation/dislodging near the beginning and end of the riprap extents. Streambank protection measures can prove difficult to maintain on such a small scale, and projects typically need to span at least several hundred feet to be effective. Still, the localized treatment appears to have provided a good degree of streambank protection for specific homes. Nevertheless, a significant section of the river bend streambank has been eroded, and the majority of the Meander Way bend is extremely vulnerable to further erosion.

After evaluating damage and threatened infrastructure, NRCS immediately assessed how the situation fit with existing NRCS programs and funding opportunities. While many sites have legitimate flooding and erosion concerns, there are nevertheless limitations to what NRCS has the authority and programs to address. One site, namely the outer bank of the Mendenhall River adjacent to Meander Way, was determined to be potentially eligible for NRCS assistance, based on the proximity to homes, erosion rate, and funding criteria. While there is no guarantee of funds availability, the City and NRCS are taking prudent steps to seek solutions to the erosion, before streambank loss has progressed to the point where homes, infrastructure, and properties are considered a total loss.



Figure 4: Streambank erosion of the Meander Way bend of the Mendenhall River, March 2015

NRCS conducted a topographic survey of the Meander Way bend of the Mendenhall River (Figure 5). The site was surveyed using survey-grade GPS equipment. Survey points were collected of the eroded bank, river bottom, and structure locations. Using this data, topography was determined for use in evaluating alternatives. Two samples of bank materials were collected for potential analysis of geotechnical/engineering properties, in determining slope stability, compaction, unit weights, etc.



Figure 5: Plan view of Meander Way bend of the Mendenhall River streambank erosion site

Conditions affecting design alternatives

From the site investigation and review of applicable literature, the following points were important considerations affecting design alternatives:

1. Comparing past aerial photography to current photos, the planform or lateral stability of the river appears to be relatively static. This is a positive trend from an erosion treatment standpoint. However, this trend may not continue with further changes in glacier conditions and peak flows, incision, and the potential of meander cutoff near Postal Way.
2. Channel incision on the Mendenhall River is occurring, as a result of land surface uplift due to deglaciation and/or tectonics, as well as the removal of sediment from flows by Mendenhall Lake (Neal 2009). Incision rates of 0.1 feet per year have been estimated (Neal 2007). In addition, the recent hydrologic changes brought about by glacial outbursts is likely accelerating the channel incision.
3. A mat of peat with roots and tree trunks is present near the stream bottom (see Figure 6). This layer has been eroded downstream of the Meander Way bend, but is still mostly intact upstream, covered with alluvial gravels and boulders. In the Meander Way area, this peat layer is exposed, and is decomposing and eroding, resulting in channel incision. A significant 6.5' head cut exists where this mat is

exposed, as shown in Figure 6. This head cut is likely to continue upstream as the peat degrades and erodes.



Figure 6: Peat mat at Meander Way bend of Mendenhall River

4. As the channel incision progresses, from uplift, moss mat deterioration, glacial outbursts, or other causes, erosion at the toe of the streambank will continue. Without the implementation of some type of streambank protection measures, property and infrastructure near specific portions of the river will eventually be threatened or destroyed. The Meander Way bend appears to be the area with the most immediate need of attention.
5. There is a practical limit to the amount of overall channel incision that will occur, as the base level of the river, which is sea level, limits the elevation to which the river may incise. Nevertheless, the limit of incision, as well as vertical channel stability, has apparently not yet been reached.
6. Further incision combined with surrounding uplift will serve to further disconnect the river from its floodplain, likely exacerbating streambank erosion.
7. Topographic survey and assessment of 800 feet of streambank near Meander Way was completed. Approximately 300 feet of streambank was badly eroded and in need of immediate protection. In order to effectively install measures that would address the erosion, at least an additional 350 feet of streambank would likely need to be included, for a total of 650 feet of treatment. These are preliminary estimates, and would likely need to be adjusted as additional data collection and design work is completed.
8. There are up to 8 homes that could be affected by the erosion on the outer streambank of the Meander Way bend of the Mendenhall River. A cursory review of Borough assessment records show that individual residential property values along Meander Way likely exceed \$300,000. Therefore, there is conservatively \$2.4 million worth of property at risk, not including the

infrastructure beyond the homes that could eventually be compromised, such as streets, water, sewer, etc.

The recent glacial outbursts, and the likelihood of further changes to Mendenhall River hydrology have created a very dynamic situation in the river. This supports the adoption of a “do-nothing” alternative. Until some equilibrium and stability is observed in the system, there are many unknowns. Treatment designs will require estimations regarding flow rates, flood levels, incision, etc. Design and construction based on unpredicted or under-predicted changes in stream conditions could result in inadequate treatment or failure of installed practices.

Nevertheless, a number of homes, and if left untreated, other critical infrastructure and businesses, are currently threatened. As such, a do-nothing alternative, while possibly a prudent option, will not be a “no cost” alternative. Therefore, information shown below attempts to explain some erosion treatment alternatives, and analyze the merits, shortcomings, and cost of each.

Design Alternatives

The following design concepts were considered as alternatives to address the erosion at the Meander Way site:

1. Bioengineered streambank
2. Sheet pile wall
3. Riprap revetment
4. Sheet pile wall/riprap revetment combination
5. No action

Each alternative is discussed below.

1. Bioengineered streambank – log crib

A log cribs typically uses a rock toe, overlain with logs or timbers, and infilled with soil, gravel, cobbles, etc. (see Figure 7). Willows and other water-loving vegetation are established in the log crib. A significant rock toe would be imperative to the success of such an installation on the Mendenhall River.

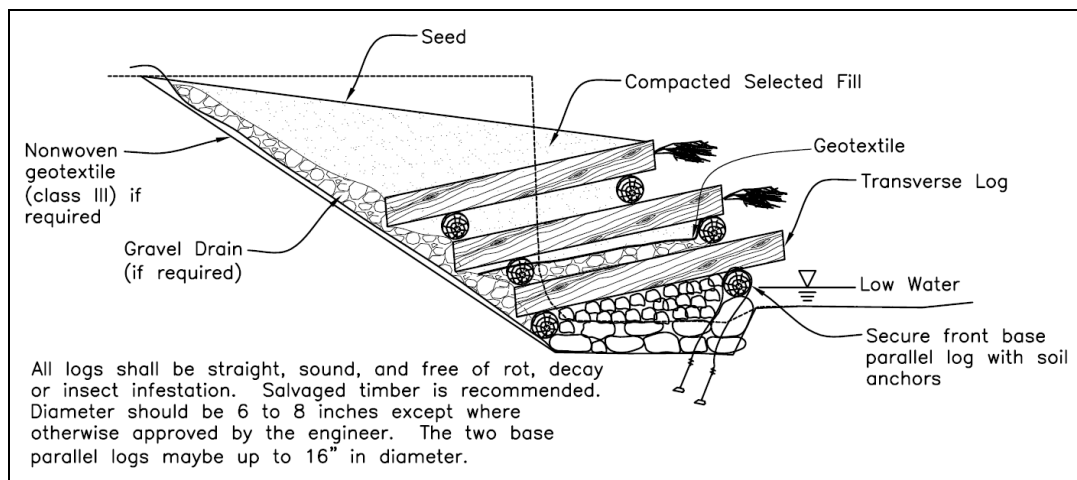


Figure 7: Cross-section of log crib streambank treatment concept (NRCS)

Advantages:

- habitat provided is usually fish-friendly
- treatment can be more natural-like in appearance and aesthetically pleasing

Disadvantages:

- treatment is not as resistant to high flow velocities as other treatment techniques
- practice lifespan can be relatively short when timber or woody debris or rootwads are incorporated

Recommendation: This option is not recommended, as the nearly annual occurrence of extreme flows due to glacial outbursts since 2011 would subject the treatment to high velocities and shears. Such treatment would not likely survive recurrence of such conditions on an annual basis. This treatment approach is also not commonly used with bank heights of 25' or more that exist in the Meander Way bend. The treatment method typically require flatter bank slopes than could be tolerated, given the limited distance between the eroded streambank and the existing homes. This treatment option, however, may have merit at other sites on the Mendenhall River.

Cost Estimate: Costs can vary widely depending on the exact type of bioengineered treatment installed. Material would be relatively inexpensive, but labor costs would be significant. As the treatment option is not recommended, no cost estimate for this option was developed.

2. Bioengineered streambank – mechanically stabilized earth (MSE) wall

This alternative would consist of layers of polyethylene geogrid overlain with compacted soil backfill. Each layer is wrapped at the slope edge to retain the soil. A wall face of hard material such as rock is required to protect the soil and geogrid from damage and erosion by debris impact and river flow. Due to their short lifespan in flowing water, gabions is not recommended as a facing material.

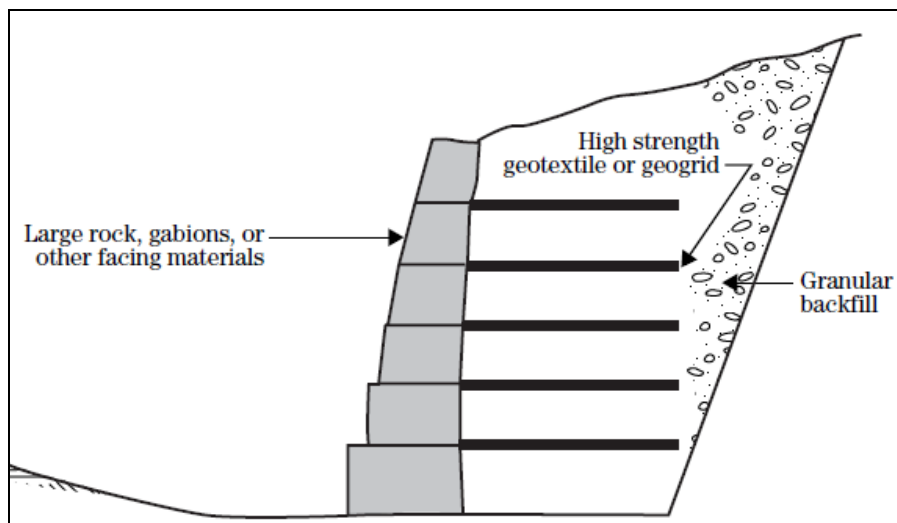


Figure 8: Cross-section of MSE streambank treatment concept (NRCS)

Advantages:

- Treatment is resistant to high flow velocities
- Steep streambank slopes are possible, conserving lot space
- Life-span of practice is usually significant, and can be prolonged with proper maintenance

Disadvantages:

- Though stability of the bank is achieved with stabilized earthfill, some type of hard facing would be necessary to protect the soil from debris and erosion. Such facing alone can be as expensive as other treatment methods, even without considering the cost of installing the mechanically stabilized earthfill.
- Installation of the mechanically stabilized earthfill could prove difficult near the toe, as river levels and saturated conditions could be problematic. Scheduling and completion of work would be critical. Though these challenges can also exist with other alternatives, they are somewhat more critical with this alternative.
- Treatment is often not viewed as aesthetically pleasing, due to the hard facing
- The hard facing typically has a lower habitat value for desired species such as salmon

Recommendation: This option is not recommended, due to its high relative cost. The annual high water levels experienced since glacial outbursts began would require the facing of the MSE wall to be extended to nearly the top of the streambank. This would likely increase costs above other acceptable alternatives.

Cost Estimate: As the treatment option is not recommended, no cost estimate for this option was developed.

3. Sheet pile wall

This alternative consists of driving steel sheet pile at the bank toe. Piles would be driven to a depth well below the stream bottom, and would act as a cantilever retaining wall. Due to the relatively high stream bank, two offset cantilever sheet pile walls would likely be necessary, with considerable distance between the walls (see Figure 9). Riprap would be placed on the portion of streambank between the two walls to prevent erosion. With proper placement and sheet pile selection, tie-back anchors could possibly be avoided, to achieve lower costs. Further investigation of subsurface conditions would be necessary in order to determine the potential presence of large rocks and boulders that could prevent or hinder pile driving. In addition, some existing rock on the stream bank and/or stream bed would likely need to be removed and/or relocated to allow pile driving.

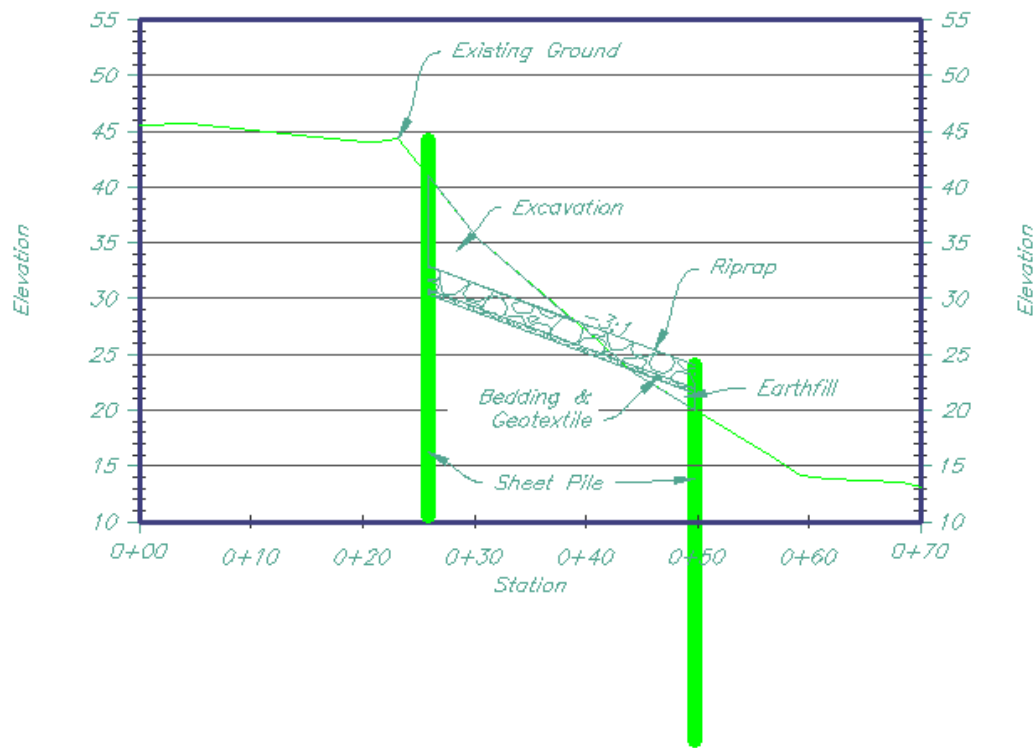


Figure 9: Cross-section of sheet pile wall streambank treatment concept

Advantages:

- Treatment is resistant to high flow velocities
- Vertical walls conserve lot/property space
- Life-span of practice is usually significant, and can be prolonged with proper maintenance

Disadvantages:

- Vibration or driving of piles can be a nuisance to neighboring properties
- Treatment is often not viewed as aesthetically pleasing
- The sheet pile typically has a lower habitat value for desired species such as salmon
- Two sheet pile walls plus riprap would be quite costly, in comparison to other alternatives.

Recommendation: This option is not recommended, due to its high relative cost.

Cost Estimate: This treatment option, though not recommended, is estimated to cost \$3.0 million.

4. Riprap Revetment

This alternative would consist of grading the streambank to a stable slope, and placing geotextile, bedding, and rock riprap on the bank. The lower extents of the rock placement would need to be to at least the stream bottom, and likely lower to account for potential scour (see Figure 10). This is a proven method of streambank protection, and has been used in many instances in Alaska, as well as on the Mendenhall River both upstream and downstream of the Meander Way site.

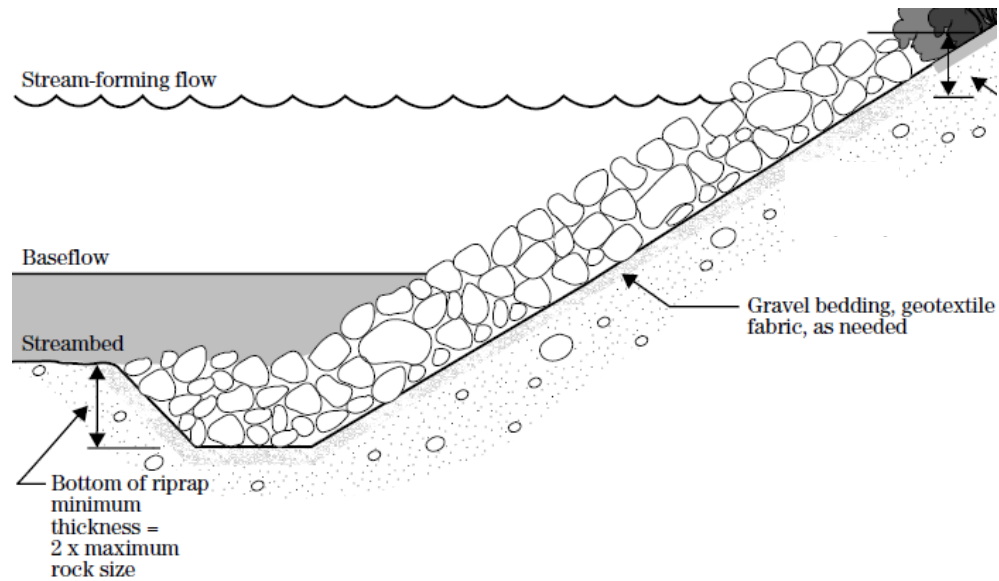


Figure 10: Cross-section of riprap streambank treatment concept (NRCS)

Advantages:

- Proven, effective method for addressing streambank erosion, and has been utilized on other reaches of the Mendenhall River
- With proper rock sizing, riprap can withstand extreme flow velocities and high shear stress
- Life-span of rock riprap is usually significant, and can be prolonged with proper maintenance

Disadvantages:

- High cost of hauling and placing rock, considering the bank geometry and scour hole present
- In order to achieve a stable slope on which to place rock, additional property will be impacted (loss of portions of back yards), which will likely be viewed as a negative by property owners. Near the deepest scour hole, the top of riprap placement will likely be extremely close to a few homes.
- Treatment is often not viewed as aesthetically pleasing
- Riprap typically has a lower habitat value for desired species such as salmon

Cost Estimate: Assuming there are local quarries that can provide adequately sized rock, a total project cost of \$1.5 million could be expected.

Recommendation: Due to the steepness of the eroded bank, close proximity to existing homes, and significant scour at the streambank toe, a considerable volume of rock will be required with this option. The volume of rock placed in the streambed, to protect from scour and provide a launchable toe, may be problematic regarding fish habitat permitting. Several homes in the treatment area would have rock riprap placed very near to their foundations. While the option is potentially feasible, a riprap/sheet pile combination as discussed below

may be a better alternative, though at a somewhat higher cost. Nevertheless, the riprap alternative appears to be a viable option.

5. Sheet pile wall/riprap revetment combination

This alternative could consist of a combination of the riprap and sheet pile alternatives. A steel sheet pile wall would be placed at the toe of the bank, followed by placing rock riprap protection on the slope. This option requires significantly less rock than the riprap-only option, and possibly avoids the use of a costly tie-back system in the sheet pile wall.

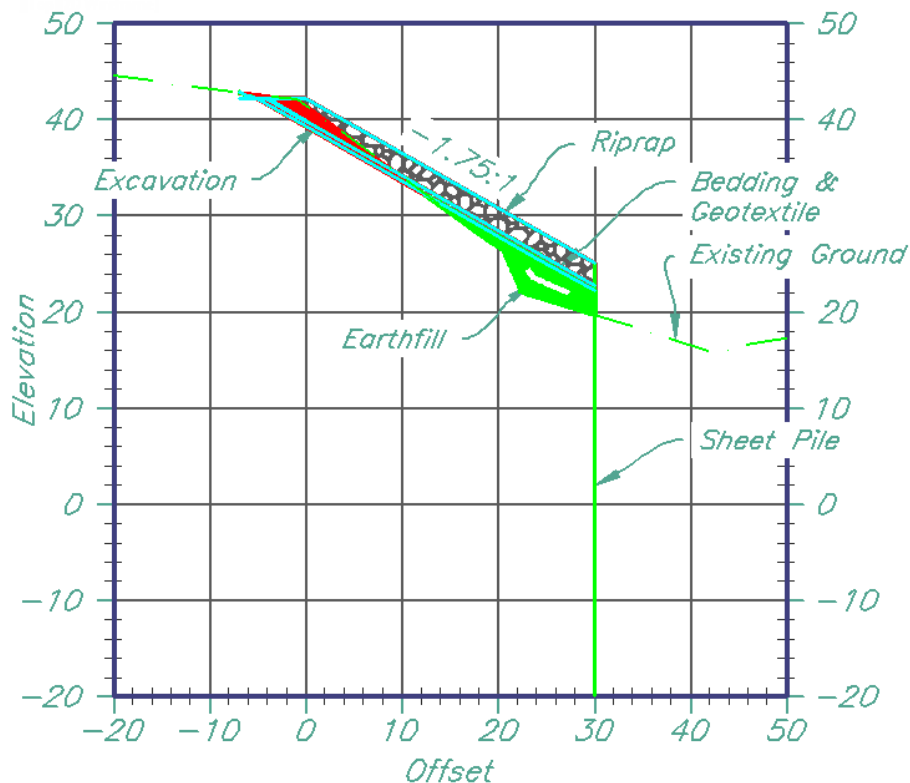


Figure 11: Cross-section of sheet pile/riprap combination treatment concept

Advantages:

- Proven, effective method for addressing streambank erosion
- With proper rock sizing, sheet pile and riprap can withstand extreme flow velocities and high shear stress
- Life-span of treatment is usually significant, and can be prolonged with proper maintenance
- Somewhat less property is likely impacted with this method versus using riprap alone

Disadvantages:

- High cost of driving piles and hauling and placing rock
- Vibration or driving of piles can be a nuisance to neighboring properties
- Treatment is often not viewed as aesthetically pleasing
- Riprap typically has a lower habitat value for desired species such as salmon

Cost Estimate: This treatment option is estimated to cost \$2.1 million.

Recommendation: This option appears to be one of the most promising treatment methods to address the erosion on the Meander Way river bend of the Mendenhall River. The cost would be somewhat higher than the riprap-only option, but by placing sheet pile rather than riprap at the toe, there may be less chance of erosion and maintenance needs at the toe. In addition, there is less impact to the adjacent homes, with respect to placement of riprap near house foundations.

6. No action

This alternative would leave the streambank in its current condition, with no additional treatment installed. Continued erosion would almost certainly occur. Eventually, erosion would progress to the point where at least some homes on Meander Way would become unsafe for occupancy, and would need to be moved or condemned. While the rate of erosion is uncertain, it is conceivable that erosion could progress to such a point within 5 years. Given the nature of sharp outside river bends, the hydraulic energy present in glacial outburst flows, and the erodible insitu materials present in the streambank, the erosion in the Meander Way bend could progress to the point where even the street and municipal utilities are in jeopardy.

Conclusions

To protect homes and infrastructure near Meander Way, a combination system of sheet pile and rock riprap are suggested to address streambank erosion. There is admittedly some degree of risk associated with applying any type treatment to the streambank, given the apparent instability and continued evolution of the river. Such risk can be somewhat reduced by applying more conservative design assumptions. Conservative design assumptions typically result in increased project costs.

While fish-friendly alternatives were considered, the high shear stress that is likely experienced on this river bend warrants the installation of more traditional hardened treatment methods. Softer treatments could be considered and incorporated in other areas of the river with lower shear stresses, in order to continue to provide adequate habitat for important aquatic species. The occurrence of glacial outbursts since 2011 has subjected the river banks to an unprecedented frequency of high water levels, to the extent that at least the historic 50-year flood flow has been experienced on nearly an annual basis since 2011. Many soft bank treatments can withstand short intervals of high water if they are of low frequency, say five or ten years apart. However, given the recent hydrologic changes, the increased flood frequency is likely to be too severe to allow soft treatments to be effective against erosion, especially for high bank stress areas such as outer river bends.

Habitat permitting will be an important part of any proposed on the Mendenhall River, and buy-in from the Alaska Department of Fish and Game will be important to pursue during the planning stages of any project. Input from ADF&G regarding the permitting of any selected alternative should be sought before significant effort and expense is incurred developing proposals and designs. Should the city choose to pursue streambank stabilization suggested herein, this report could be provided to ADF&G to begin a dialogue regarding allowable approaches to addressing the erosion.

Cost estimates and values of affected infrastructure presented herein are admittedly of very preliminary nature, and were not analyzed in great detail. Nevertheless, at first glance, installation of streambank protection for a small group of homes appears to be only marginally justifiable from an economic standpoint. However, if left untreated, continued migration of the erosion, both laterally and longitudinally, could have much larger long-term economic impacts that could justify pursuit of the suggested alternative. Through leveraging of potential funding sources for the project, the City and Borough could potentially implement a project that would provide adequate protection to homes and infrastructure along Meander Way.

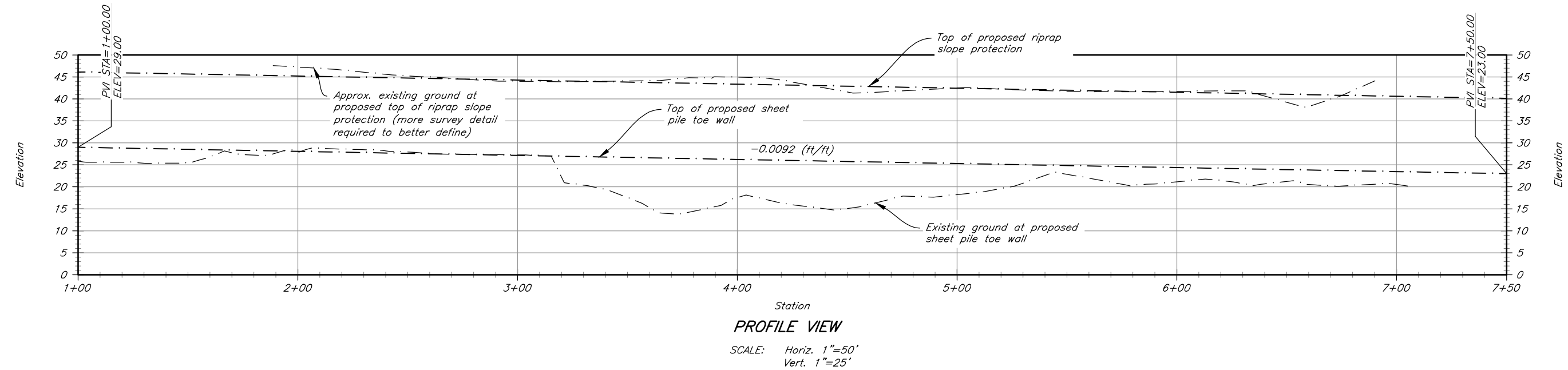
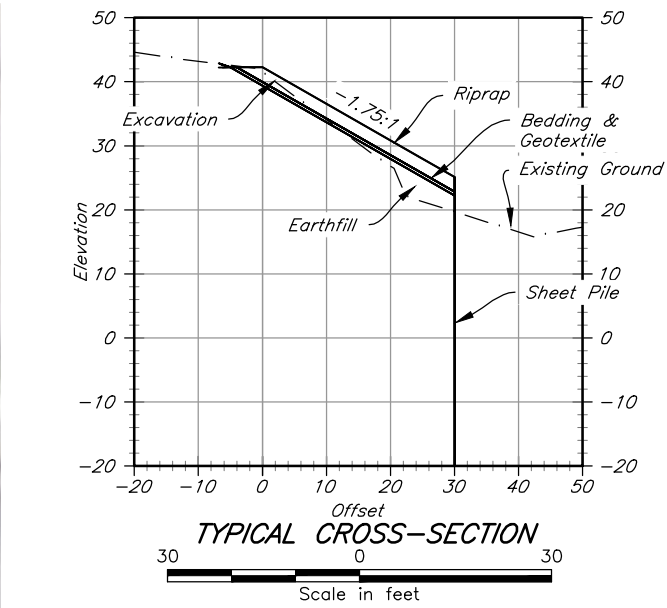
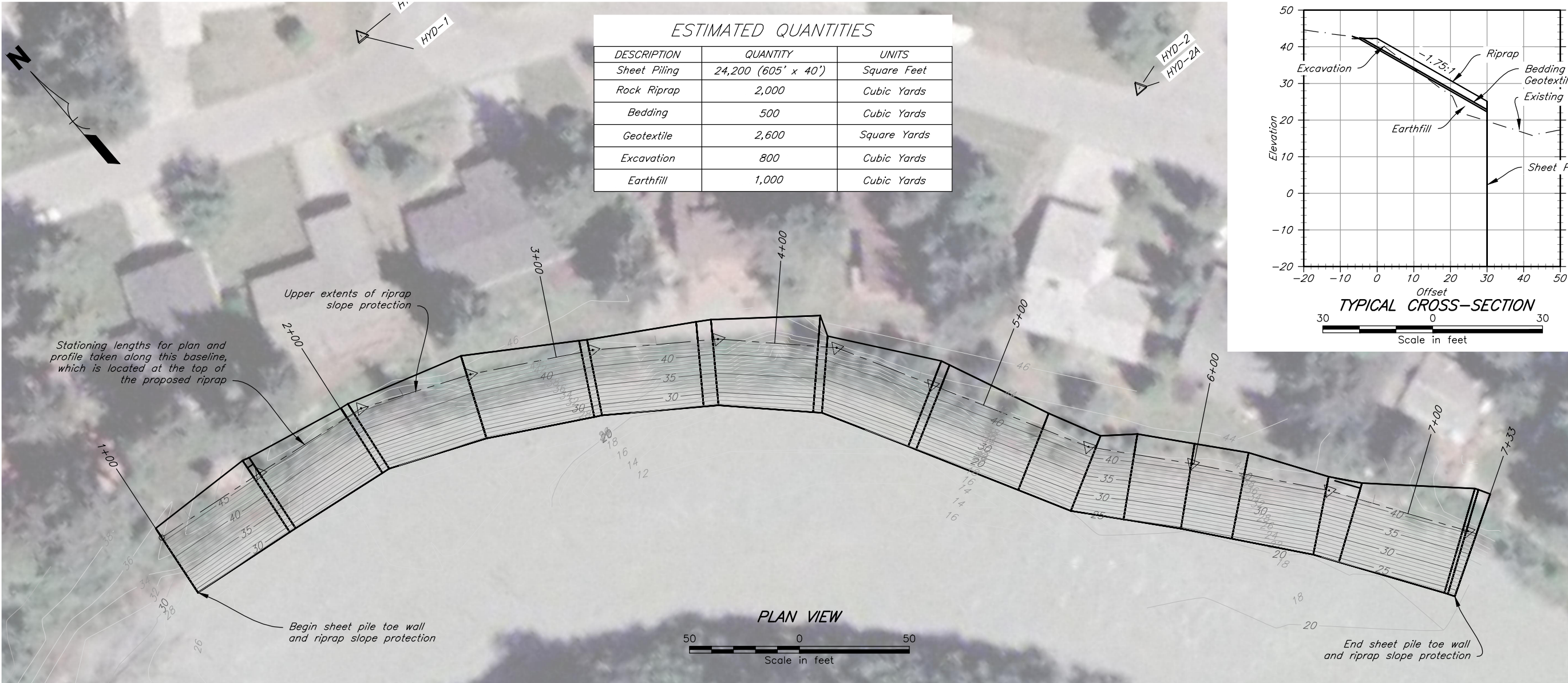
The Emergency Watershed Protection (EWP) program, which is a federal program managed by NRCS, is potentially applicable to the Meander Way erosion. The program provides both financial and technical assistance in design and construction of projects that reduce watershed impairment. There are a number of criteria that must be met in order to be eligible for the EWP program, but the information gathered in preparation of this report shows that the Meander Way site would likely fit the program. Funding is not guaranteed, and is typically more common for Presidentially-declared disasters. Nevertheless, projects similar in nature have been implemented in the past using the EWP program. Should the City and Borough of Juneau wish to pursue EWP funding in addressing the erosion problem, a request of that nature should be submitted in writing to NRCS, within 60 days after the next significant flood event or glacial outburst.

References

1. U.S. Department of Agriculture-Natural Resources Conservation Service, August 2007, Stream Restoration Design Handbook, National Engineering Handbook, Part 654, Washington, DC
2. U.S. Department of Agriculture-Natural Resources Conservation Service, April 2009, Stream Restoration Planning and Design, Fluvial System Stabilization and Restoration – Field Guide, Washington, D.C.
3. Neal, Edward G, 2009, Channel Incision and Water-Table Decline Along a Recently Formed Proglacial Stream, Mendenhall Valley, Southeastern Alaska, Studies by the US Geological Survey in Alaska, 2007: US Department of Interior-US Geological Survey, Professional Paper 1760-E
4. Neal, Edward G and Host, Randy H, Hydrology, 1999, Geomorphology, and Flood Profiles of the Mendenhall River, Juneau, Alaska, US Department of Interior-US Geological Survey, Water-Resources Investigations Report 99-4150, Anchorage, AK
5. Alaska Department of Fish and Game – Habitat and Restoration Division, September 1999, Guidelines for Bank Stabilization on the Mendenhall River, Technical Report No. 99-3, Douglas, AK

ATTACHMENT A – Conceptual Design Drawing and Cost Estimates

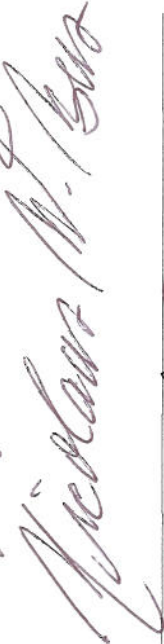
Mendenhall Prelim3_1_1_6392.s.dwg 2-PLAN AND PROFILE 7/30/2015 3:34PM



Juneau/Mendenhall River Meander Way Streambank Protection Cost Estimates (from conceptual design)											
Bid Item	Description	Units	Stepped Sheet Piling with Riprap			Riprap			Sheet Piling/Riprap Combination		
			Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
1	Mobilization/Demobilization	each	1.0	\$ 100,000.00	\$ 100,000	1.0	\$ 100,000.00	\$ 100,000	1.0	\$ 100,000.00	\$ 100,000
2	Pollution Control	lump sum	1.0	\$ 30,000.00	\$ 30,000	1.0	\$ 30,000.00	\$ 30,000	1.0	\$ 30,000.00	\$ 30,000
3	Critical Path Scheduling	lump sum	1.0	\$ 10,000.00	\$ 10,000	1.0	\$ 10,000.00	\$ 10,000	1.0	\$ 10,000.00	\$ 10,000
4	Contractor Quality Control	lump sum	1.0	\$ 15,000.00	\$ 15,000	1.0	\$ 15,000.00	\$ 15,000	1.0	\$ 15,000.00	\$ 15,000
5	Construction Surveys	lump sum	1.0	\$ 50,000.00	\$ 50,000	1.0	\$ 50,000.00	\$ 50,000	1.0	\$ 50,000.00	\$ 50,000
6	Clearing (existing rock and vegetation)	lump sum	1.0	\$ 25,000.00	\$ 25,000	1.0	\$ 25,000.00	\$ 25,000	1.0	\$ 25,000.00	\$ 25,000
7	Excavation, Unclassified	cubic yards	2,000.0	\$ 30.00	\$ 60,000	1,200.0	\$ 30.00	\$ 36,000	800.0	\$ 30.00	\$ 24,000
8	Earthfill, compacted	cubic yards	500.0	\$ 50.00	\$ 25,000	500.0	\$ 50.00	\$ 25,000	1,000.0	\$ 50.00	\$ 50,000
9	Sheet Piling	square feet	40,414.0	\$ 50.00	\$ 2,020,700	0.0	\$ -	\$ -	24,200.0	\$ 50.00	\$ 1,210,000
10	Riprap with Bedding and Geotextile	cubic yards	1,750.0	\$ 200.00	\$ 350,000	5,000.0	\$ 200.00	\$ 1,000,000	2,000.0	\$ 200.00	\$ 400,000
11	Testing, Rock Riprap and Bedding	each	4.0	\$ 4,000.00	\$ 16,000	8.0	\$ 4,000.00	\$ 32,000	4.0	\$ 4,000.00	\$ 16,000
12	Seeding	lump sum	1.0	\$ 10,000.00	\$ 10,000	1.0	\$ 10,000.00	\$ 10,000	1.0	\$ 10,000.00	\$ 10,000
					\$ -			\$ -			\$ -
				Subtotal:	\$ 2,711,700					Subtotal:	\$ 1,940,000
				Contingency:	\$ 271,170					Contingency:	\$ 194,000
				Grand Total:	\$ 2,982,870					Grand Total:	\$ 2,134,000

Petition of Interest for Meander Way Riverbank Erosion LID

We, the undersigned property owners, hereby petition the City and Borough Assembly to estimate the cost and propose cost apportion methods for a Local Improvement District to plan, design, and construct riverbank erosion protection improvements. The owners will be contributing a 25% match to a Federally funded project.

PARCEL	OWNER	OWNER SIGNATURE
582101210010 3429 MEANDER WAY LAKEWOOD II BL B LT 17A	RAY VIDIC & SHERI A VIDIC 3429 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	
582101210020 3433 MEANDER WAY LAKEWOOD II BL B LT 18A	NICOLAAS W BUS & SUSAN M BUS 3433 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	
582101210030 3437 MEANDER WAY LAKEWOOD II BL B LT 19	MARK S BUNESS & RHONDA L BUNESS 3437 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	
582101210040 3441 MEANDER WAY LAKEWOOD III BL B LT 20	GREGORY A WAGNER & SANDI N WAGNER PO BOX 241564 ANCHORAGE AK 99524 Assessment \$125,000.00	<i>out of state - will submit electronically</i>
582101210050 3445 MEANDER WAY LAKEWOOD III BL B LT 21	NORMAN E STATON & DONNA M STATON 3445 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	<i>out of state - will submit electronically</i>
582101210060 3451 MEANDER WAY LAKEWOOD III BL B LT 22	HOWARD R JAEGER & ROBERTA J JAEGER 3451 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	

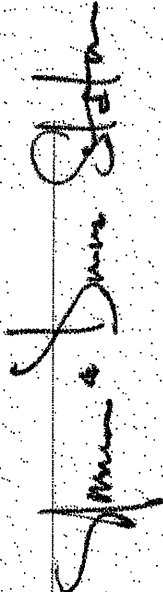
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PARCEL	OWNER	OWNER SIGNATURE
582101210070 3455 MEANDER WAY LAKEWOOD III BL B LT 23	JOSEPH FLORES 3455 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	
582101210080 3459 MEANDER WAY LAKEWOOD III BL B LT 24	JEFFREY M RUD & LORI L RUD 3459 MEANDER WAY JUNEAU AK 99801 Assessment \$125,000.00	

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22-Aug-16

1 of 2



City and Borough of Juneau
Engineering Department

155 South Seward Street
Juneau, Alaska 99801

Telephone: 586-0800 Facsimile: 463-2606

DATE: August 29, 2016

TO: Maria Gladziszewski, Chair Public Works and Facilities Committee

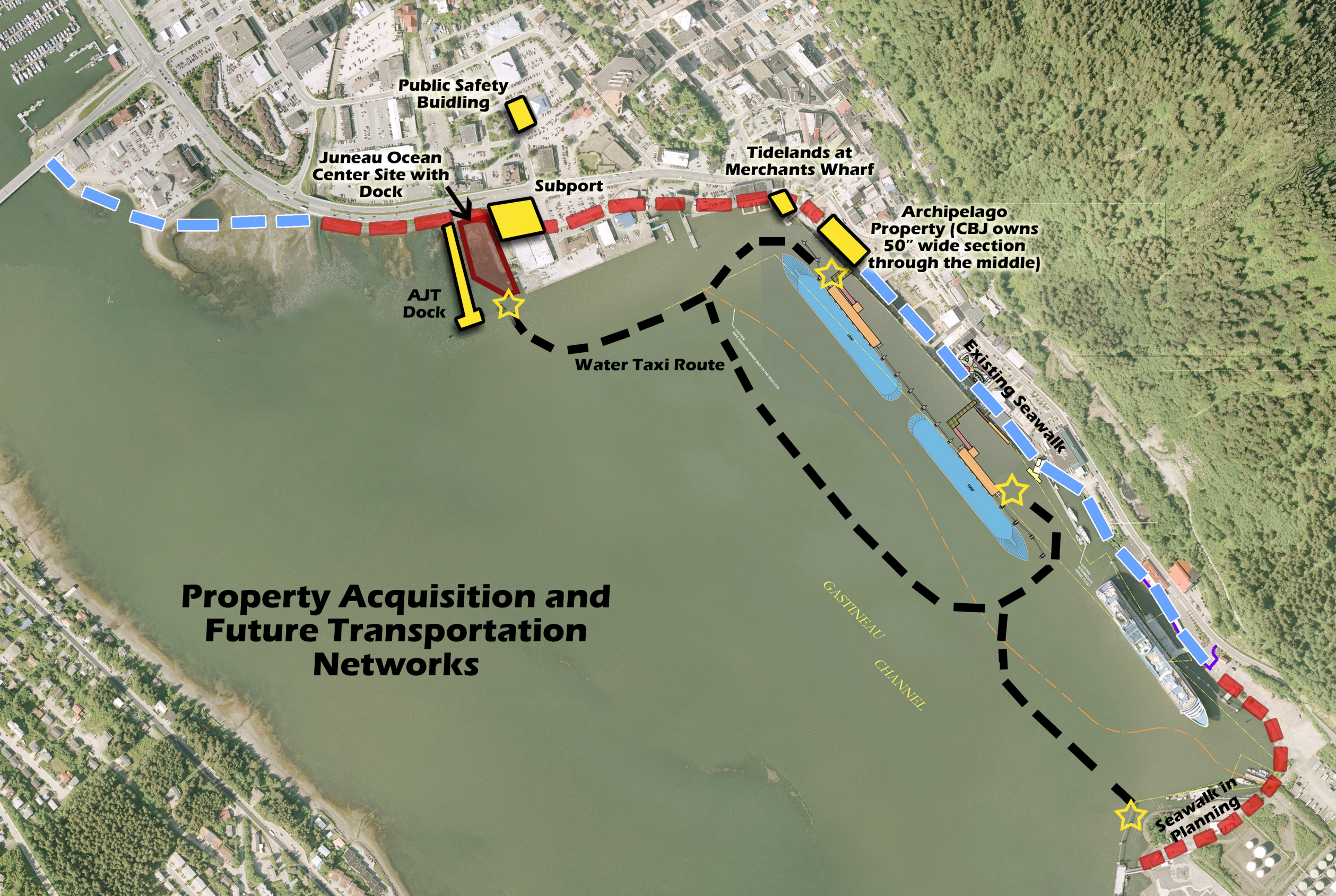
FROM: Michele Elfers, Chief Landscape Architect, Engineering and Public Works Department

RE: Willoughby District Parking

In September 2015, the Willoughby District (WD) Parking Plan was completed and presented to the Assembly Public Works and Facilities Committee (PWFC). The plan reported a loss of hundreds of spaces from recent development and land use changes in the WD. It identified the Federal Building Lot and the SOB North Garage as preferred sites for parking development. The recommendations made to the Assembly in September 2015 are listed below followed by an update on the recommendation.

1. Recommendation: Work with the Federal Government to encourage development of a parking structure on the current Federal Building Lot.
 - a. Update: Staff worked initially with local GSA staff to discuss a federal parking structure. The CBJ now needs make the request at a higher level. We will work with our federal lobbyist to request a congressional support letter to the headquarter GSA for funding to build a parking structure.
2. Recommendation: Coordinate with the State of Alaska, encourage reconstruction and build-out of the SOB North Parking Garage.
 - a. Update: The state had plans for structural repair of the north garage. With the current financial constraints, the timeline and plan for the garage is uncertain. The CBJ will continue to encourage the state to expand the garage if and when repair work is being done.
3. Recommendation: Consider acquisition of the Public Safety Building.
 - a. Update: It is likely that this building will be vacated in the next year. The Willoughby Arts Complex (WAC) concept design is being developed this month and should indicate the number of lost parking spaces as well as the number of required parking spaces. A discussion on how WAC affects the existing state parking lease should occur this fall.
4. Recommendation: Pursue consideration of Park and Ride options in the valley.
 - a. Update: Park and Ride is being considered with the development of the valley transit center.
5. Recommendation: Review designation of City streets in the WD plan.
 - a. Update: The creation of new city streets is intended to foster development, but will result in the additional loss of parking. There has not been any movement on this item.

In the past the subport parking lot provided downtown core commuter parking, tourism employee parking and Willoughby District parking. The removal of free public parking in the subport lot put additional pressure on downtown parking needs. With the recent changes in the WD include the completion of the SLAM, forward progress on the Willoughby Arts Complex (WAC), and planning for the Juneau Ocean Center parking needs will increase. As predicted, this district is growing and changing and the planning for parking to meet these needs may also connect with the parking needs for the downtown core.



**Public Safety
Buidling**

**Juneau Ocean
Center Site with
Dock**

Support

**Tidelands at
Merchants Wharf**

**Archipelago
Property (CBJ owns
50" wide section
through the middle)**

**AJT
Dock**

Water Taxi Route

Existing Seawalk

**Property Acquisition and
Future Transportation
Networks**

**GASTINEAU
CHANNEL**

**Seawalk in
Planning**



MHT

**State Lease
155 Spaces**

**Willoughby
Arts Complex
(takes 50
spaces)**

MHT

**CBJ Easement for
Access**

**Juneau
Ocean
Center**

**Mental
Health
Trust (MHT)
open to sell**

**Willoughby
District Parking
and Properties**

City and Borough of Juneau

**Willoughby District Parking Master Plan
Initial Evaluation of Options**

September 2015



TETRA TECH

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Tel 907.586.6400 Fax 907.463.3677 www.tetrattech.com

**City and Borough of Juneau
WILLOUGHBY DISTRICT PARKING MASTER PLAN
INITIAL EVALUATION OF OPTIONS**

SEPTEMBER 2015

Prepared for:
City and Borough of Juneau
Engineering Department
155 S. Seward Street
Juneau, AK 99801

Prepared by:



In Association With:
Walker Parking Consultants

Project #135-12554-15001

City and Borough of Juneau
WILLOUGHBY DISTRICT PARKING MASTER PLAN
INITIAL EVALUATION OF OPTIONS

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CHAPTER 1. INTRODUCTION

The Alaska State Legislature awarded funds to the City and Borough of Juneau (CBJ) to address the limited availability of parking in the Willoughby District of Juneau. After initial discussion with the State of Alaska and Federal Building, it became clear that the Willoughby District problem is also a spillover issue from the lack of downtown parking. Among other projects, the funding was used to produce this study led by Tetra Tech with assistance from Walker Parking Consultants and other sub-consultants. As sites are evaluated in more detail, Northwind Architects, Corvus Design, CTS traffic consultants and R&M Engineering will provide additional assistance.

The purpose of this study is to determine the location and magnitude of parking deficiencies, estimate current and future parking needs, and provide recommendations for improvements. The project will also look into alternative transportation improvements that could reduce the number of vehicles in the Willoughby District.

1.1 BACKGROUND

The Willoughby District is home to many small businesses, as well as federal and state offices. Parking in the area can often feel congested and overwhelming to employees, employers and those conducting business in the district. The CBJ has attempted to solve this problem by conducting several land use and parking studies since 1999. These reports have been essential to development of a plan for the future of the Willoughby District and improved parking and accessibility in the area.

1.2 HISTORICAL CONTEXT

What is now known as the Willoughby District was once known as Dzántik'i Héeni, the summer fishing grounds for the Auk-kwaan. Seasonal fishing was the sole use of this area until the end of the 19th century, when prospectors began to flood the region in search of gold. By 1880, Dzántik'i Héeni was developed into a permanent 160-acre community dubbed the Indian Village.

In 1913 and 1914, the Indian Village residential area was connected to the Juneau downtown commercial district by a waterfront boardwalk. This boardwalk was developed into Willoughby Avenue as it is known today. In the 1930s, the waterfront commercial area of the Willoughby District began to grow. The federal government constructed a deep water dock and the number of waterfront wharfs multiplied.

During the next 30 years, crushed rock from the Alaska Juneau Gold Mine was used as fill to develop flat, buildable land near the waterfront. The Federal Building was constructed in the early 1960s. In 1967, the 100-year anniversary of the purchase of Alaska was celebrated in communities across Alaska. During the years leading up to the centennial anniversary, the Willoughby District saw construction of the new Alaska State Museum. Continued growth in the area brought additional housing, office buildings and businesses. Today the district is home to the Arts and Culture Center, Centennial Hall, many commercial businesses, as well as federal and state offices. Over 130 years of growth and development have made the Willoughby District a center for arts, culture and commerce in Juneau.

1.3 DISTRICT GOALS

The goals for the Willoughby District were outlined in the CBJ Comprehensive Plan. In order to support growth in the District, the Plan indicates the City must do the following:

- Support the establishment of a Cultural Campus
- Seek to strengthen and enhance the Capitol Complex
- Provide for mixed-use development that integrates residential, retail and office uses.

To these ends, the City has worked with architects and planners to develop the Willoughby District Land Use Plan. This long-range plan has been adopted by the CBJ Assembly as a means to achieve these goals.

CHAPTER 2. RESEARCH

To begin the assessment of existing and future needs for parking in the Willoughby District, it was necessary to research past reports and studies. To supplement this background information with current public attitudes toward parking issues, an on-line survey of parking users was also conducted.

2.1 SUMMARY OF STUDIES REVIEWED

The studies summarized below addressed present and future development in the Willoughby District and accompanying parking needs. Review of these and other related studies and news reports provided insight into the past and present parking conditions in the district.

Juneau Parking Study

The Juneau Parking Study was prepared in 1999 by TRANSPRO Group, Inc. with MRV Architects. The notable conclusions of this report are as follows:

- Shortages of parking occur on weekdays throughout the year
- Shortages are greatest in the State Office Building (SOB) area
- SOB workers are the largest segment of the population contributing to the demand for parking
- Owing to the extent of the current parking shortfall, 300 to 500 spaces of new parking should be provided in the near future
- The following were identified as locations with the highest potential for a parking garage:
 - Telephone Hill
 - Armory Building
 - Tank Farm Site
 - Bill Ray Center
- The following were identified as other, optional locations for a parking garage:
 - Capital Park
 - State Office Building Parking North
 - State Capitol Building
 - Sealaska Corporation Surface Lot
 - Federal Building Parking Lot
 - Goldbelt Office Building.

Subport Vicinity Redevelopment Options

The Subport Vicinity Redevelopment Options report was prepared in 2000 by Sheinberg Associates/MRV Architects. The notable conclusion of this report is that eventual development of the Subport area will likely displace much of the surface parking in this area, impacting CBJ, State of Alaska and the general public.

Willoughby Parking District Feasibility Study

The Willoughby Parking District Feasibility Study was prepared in 2010 by Northwind Architects. This report identified community goals for the Willoughby District and four possible sites for new or expanded parking garages:

- State Office Building North
- Public Safety Building
- State Archive Building
- Library Archives Museum Site.

Willoughby District Land Use Plan

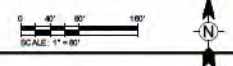
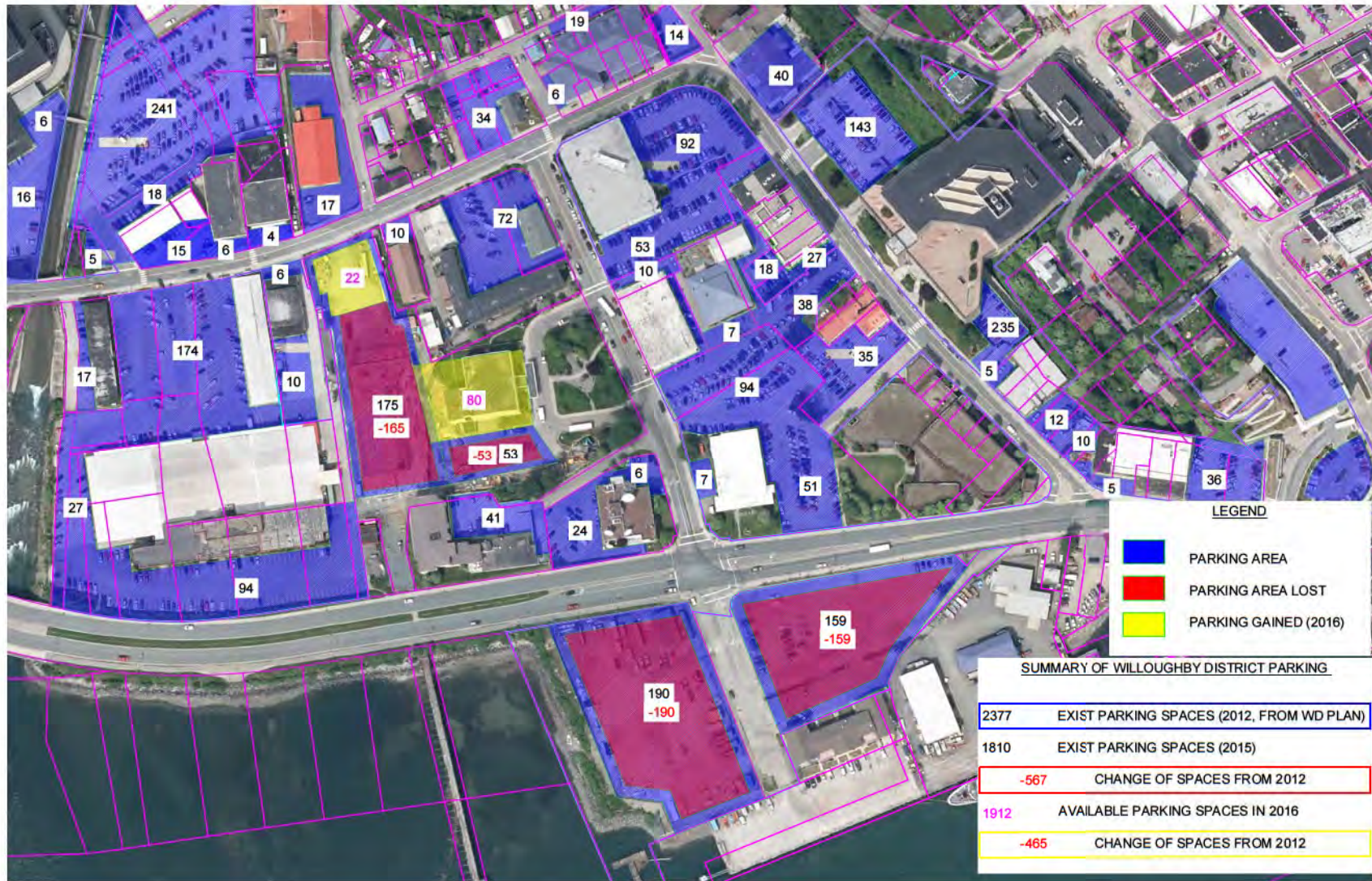
The Willoughby District Land Use Plan was prepared in 2012 by Sheinberg Associates. The report provided long-range planning of the Willoughby District and was adopted by the CBJ Assembly. It identified development themes and goals for the district. The notable conclusions of this report are as follows:

- Identified 1,797 existing parking spaces in the district and a future build-out requirement of 2,070 spaces.
- Proposed absorption of existing surface lot parking into a combination of private construction and parking structures.
- Identified actions to discourage single-occupancy-vehicle commuting and manage parking demand.
- Promoted mixed use development, integrating residential, retail and office uses with the goal of achieving 60 residential units per acre.

2.2 HISTORICAL PARKING PATTERNS

Figure 2.1 illustrates recent changes in parking inventory in the Willoughby District. Since the 2012 Willoughby District Land Use Plan was prepared, several relatively significant changes in parking have occurred:

- Table 1 of the 2012 Land Use Plan listed 1,797 existing spaces and a future build-out requirement of 2,070 spaces. However, adding the numbers shown on Figure 4 of the 2012 plan indicates that there are 2,377 existing spaces.
- Since the Mental Health Trust closed the Subport parking areas and construction began on the State Library Archives Museum project, 567 available parking spaces have been lost.
- The State Library Archives Museum project will add about 102 spaces when it is completed, bringing the inventory to about 1,912 spaces, which is still 158 spaces below the 2,070-space estimate for build-out conditions.
- Implementation of the 2012 Land Use Plan relies on the conversion of significant areas of surface parking to other uses, which will require incorporating the parking into buildings or elevated parking structures.
- The total parking inventories did not distinguish between the parking available to the general public and the parking restricted to specific employees or business patrons.



CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

Project No. 135-12554-15001
 Date: 06/26/2015
 Designed By: BPL
 FIGURE 2.1

PARKING INVENTORY

Bar Measures 1 inch

Copyright: Terra Tech

Based on the past, present and future parking needs of the District, as illustrated in Figure 2.1, it can be concluded that there is a current parking deficit and a larger deficit expected as the District develops. Our best estimates of those deficits are as follows:

- 350 spaces in the near-term, primarily representing losses at the Subport.
- 500 spaces in the longer-term representing future losses as surface parking areas are developed for other uses.

2.3 SURVEY FINDINGS

The working population of the Willoughby District and Downtown Juneau was invited to participate in an online survey on parking in the district. The survey goals were three-fold:

- To determine where and how workers park
- To determine the extent of parking provided by employers
- To determine workers' use and perception of alternate forms of transportation.

State, city, federal, and private workers were invited to complete the survey, which was made available on February 20, 2015. The survey contained a 15 questions and space for additional comments as well as a place to list contact information. For the purpose of the survey, downtown districts were defined as shown in Figure 2.2. As of July 10, 2015, there were 610 total responses, including 544 valid responses (responses from those who work downtown were deemed to be valid). Appendix A includes the complete survey.

Source: CBJ



Figure 2.2. Downtown Districts Map

Hypotheses

Initial meetings with CBJ led to the following hypotheses:

- The majority of employees park on the street.
- Employers provide guaranteed parking to a limited population.
- Workers prefer to drive to work alone, rather than use alternate forms of transportation.

These hypotheses provided a framework for developing the questions used in the survey. Questions 1 through 4 requested general information from the respondent. Questions 5 through 9 related to the parking habits and availability, while Questions 10 through 15 aimed to assess barriers or perceived barriers to use of alternative means of transportation.

Results

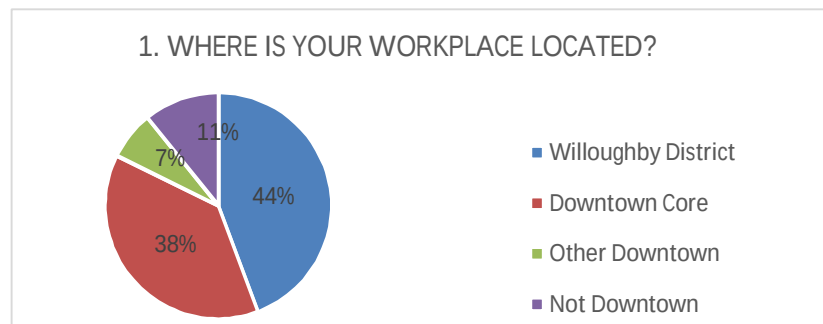
The results of the survey are highlighted in the following sections. All results are self-reported by employees who work in the Downtown Juneau area. The complete set of results is attached in Appendix A.

Survey Part 1—General Information

The first part of the survey was developed to assess workers' home and work locations, employer, and method of commuting.

Question 1. Where do you work?

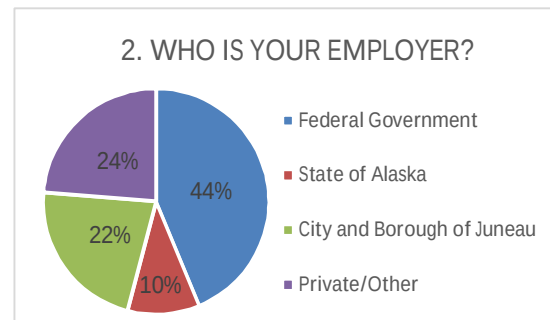
The majority of the respondents (270) indicated they work in the Willoughby District, while 232 employees stated they worked in the Downtown Core. Another 42 workers reported working elsewhere in Downtown.



Question 2. Who is your employer?

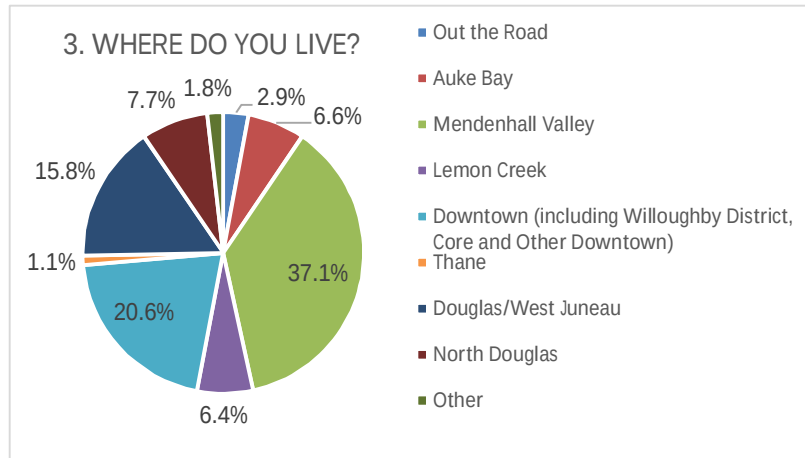
Of 544 respondents, the majority (238) were employed by the federal government, while 129 worked for private employers and 121 worked for the CBJ. Only 56 State of Alaska employees responded to the poll.

Currently, there are about 650 workers in the federal Building, 115 CBJ workers and 835 state workers in the Willoughby District and Downtown core. This would indicate that a significant number of federal and CBJ responses were received, while the state worker response may not be representative of the entire work force.



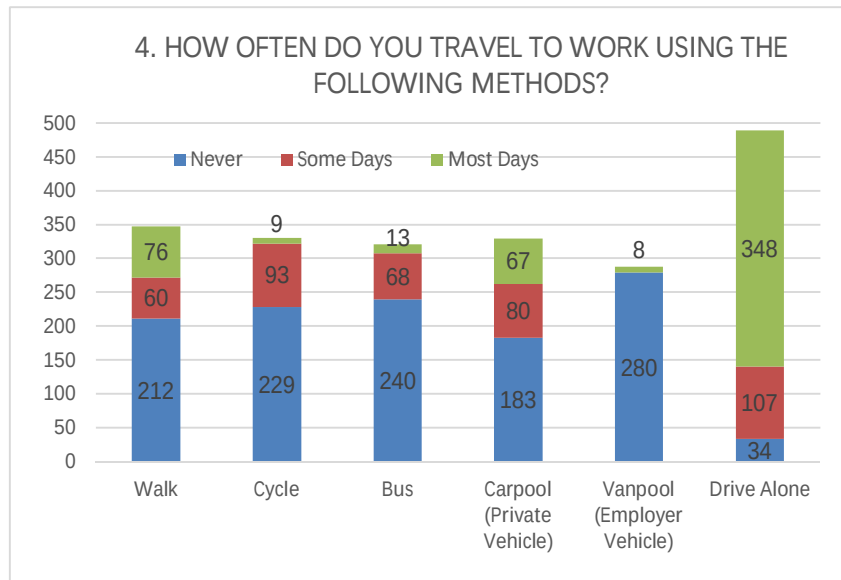
Question 3. Where do you live?

The majority of respondents (201) reported the Mendenhall Valley as their place of residence. In descending order, respondents reported living: Downtown (112), Douglas & West Juneau (86), North Douglas (42), Auke Bay (36), Lemon Creek (35), Out the Road (16), Other (10) and Thane (6).



Question 4. How often do you travel to work using the following methods?

Respondents were allowed to choose more than one method of transportation. Of 544 respondents, the majority of respondents reported driving alone most of the time (64%). Other most frequent means of transportation included walking to work (14%) and carpooling (12%).

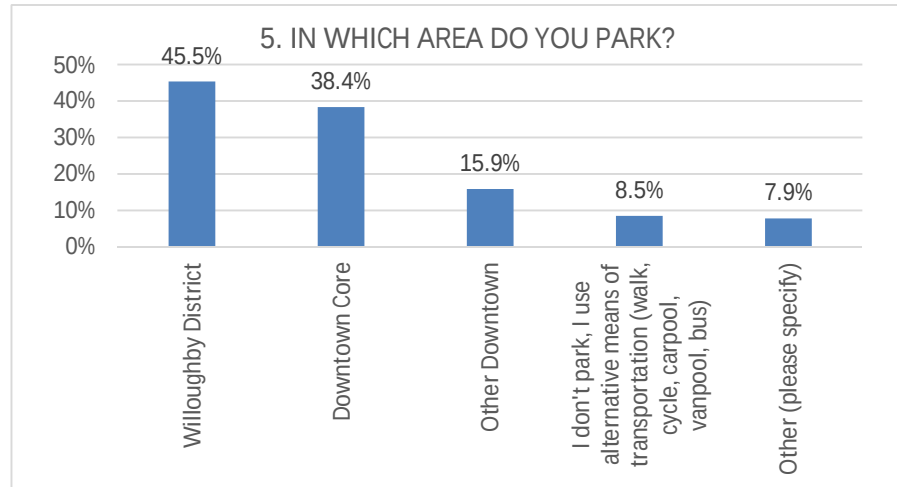


Survey Part 2—Current Parking Practices

The second part of the survey was developed to assess workers' current parking practices downtown and in the Willoughby District.

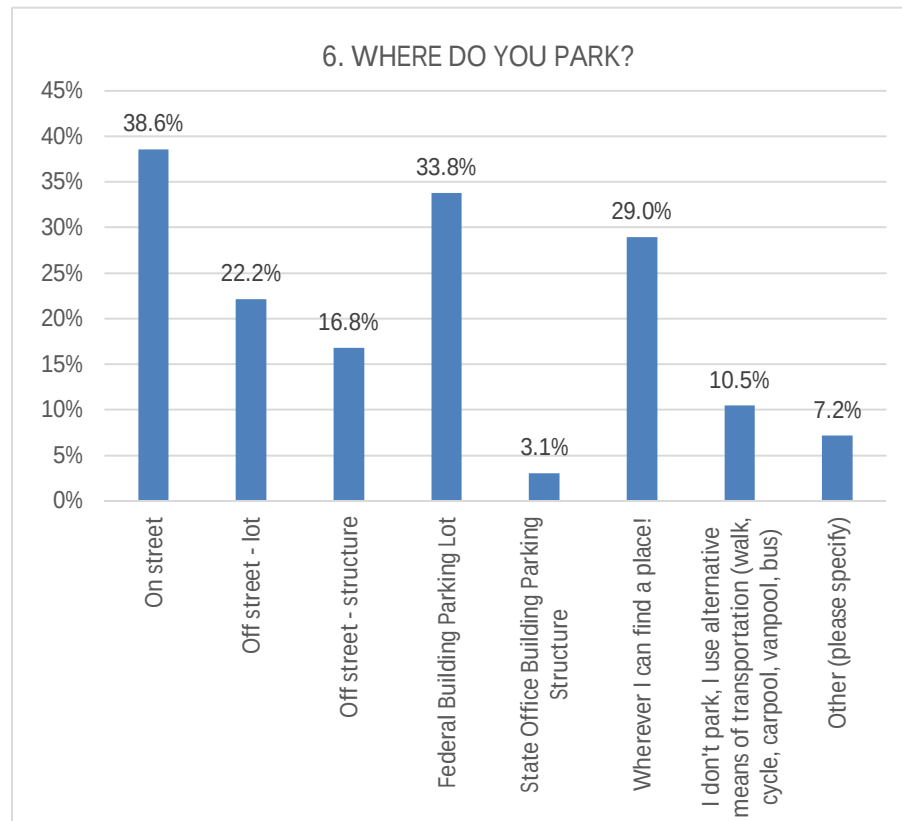
Question 5. In which area do you park?

Respondents were allowed to report more than one parking location for this question. Of 541 responses, 251 workers reported parking in the Willoughby District, while 211 reported parking in the downtown core. In addition, 98 respondents reported parking in other areas of downtown, while 47 reported using other means of transportation.



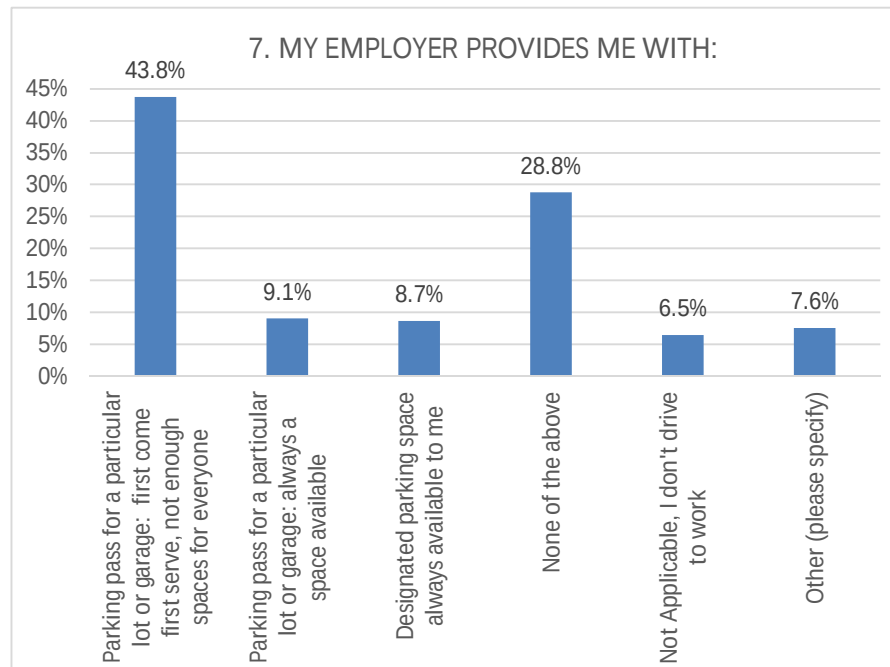
Question 6. Where do you park?

More than one answer was accepted for this question. Of 541 respondents, most workers (209) indicated they parked on street. The Federal Building Parking Lot was a close second with 183 workers reporting.

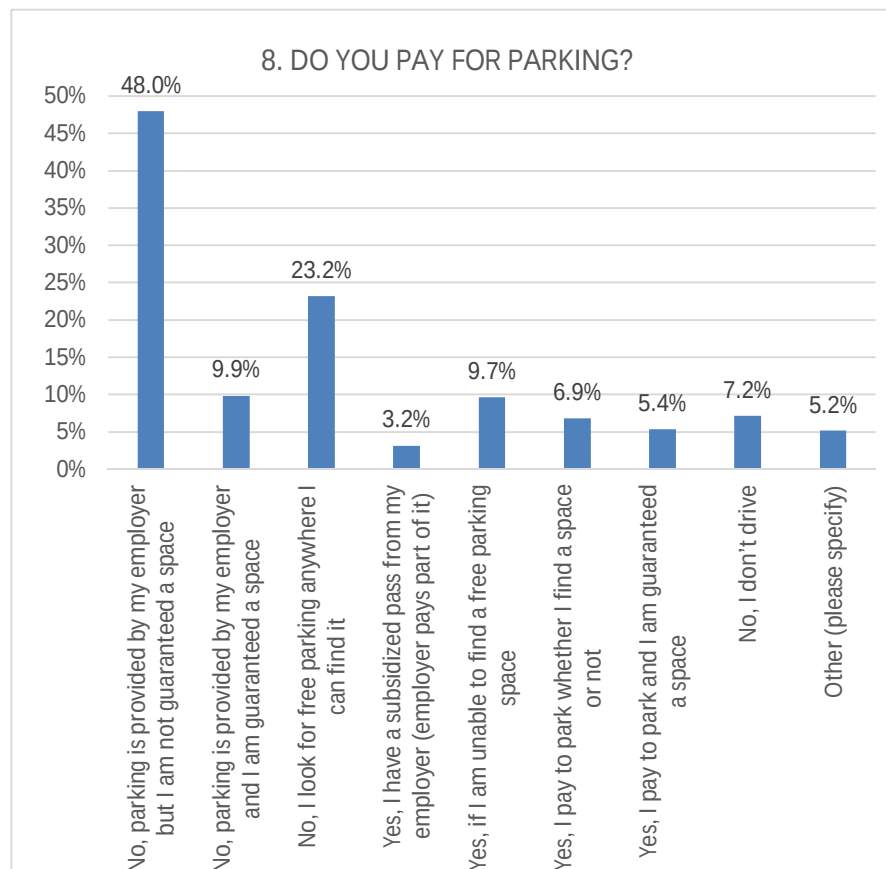


Question 7. My employer provides me with...

Nearly half of the 539 respondents (236) indicated their employer issues them a parking pass for a particular lot or garage, but spaces are available on a first-come-first-served basis. Interestingly, 155 respondents indicated they are not provided with any parking passes or other parking privileges.

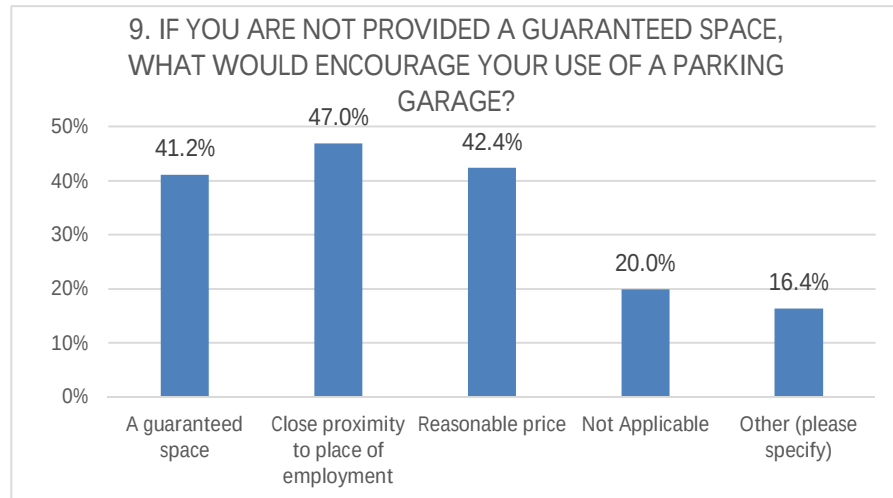
**Question 8. Do you pay for parking?**

Total of 538 respondents. More than one answer was accepted. The majority of respondents (258) indicated they do not pay for parking, it is provided by their employer, but they are not guaranteed a space. Nearly one quarter of the respondents (125) reported looking for free parking anywhere they can find it. A small number of workers reported their employer provides a guaranteed parking space.



Question 9. If you are not provided a guaranteed space, what would encourage your use of a parking garage?

A total of 536 workers responded to this question. More than one answer was accepted. Close proximity to place of employment (252), reasonable price (227) and a guaranteed space (221) topped the list for the workers who responded.

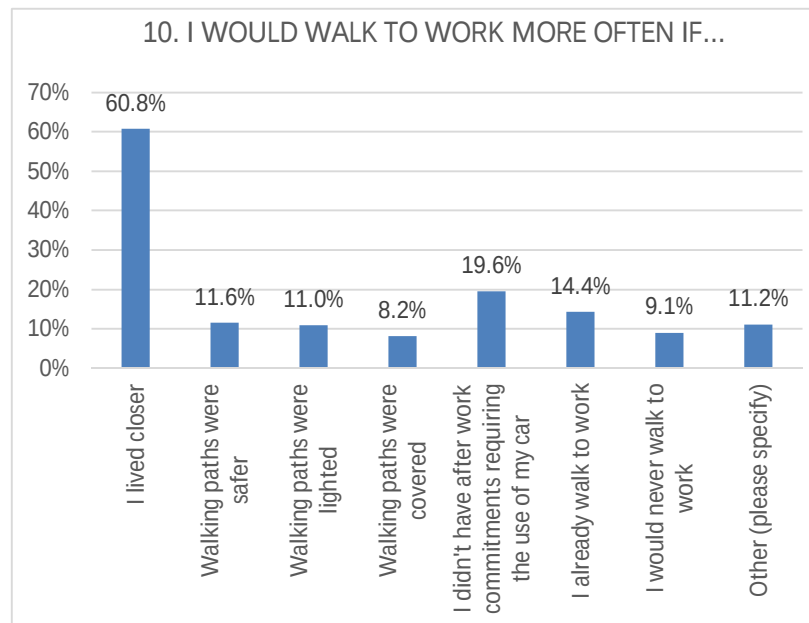


Survey Part 3—Changing Practices

The third part of the survey was developed in consideration of the third hypothesis. Workers were asked what it would take for them to change their current mode of transportation habits and utilize alternative forms of transportation.

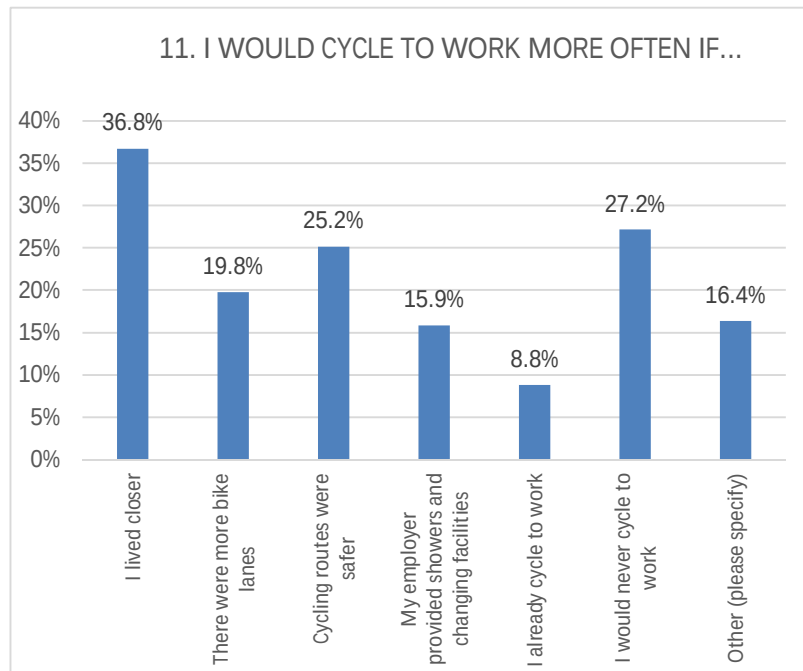
Question 10. I would walk to work more often if...

Multiple responses to this question were accepted. Of 536 total respondents, 326 reported they would walk to work more often if they lived closer. At 105 responses, after work commitments were the next top reason respondents do not walk to work. Seventy-seven respondents reported they already walk to work. Sixty respondents included additional comments. Of those sixty, 10 mentioned weather as the primary reason for not walking. An additional 10 respondents noted the lack of shoveled sidewalks by both the City and private residences as the reason they do not walk to work. Other issues preventing respondents from walking to work included shuttling of children to and from school and needing a vehicle for work.

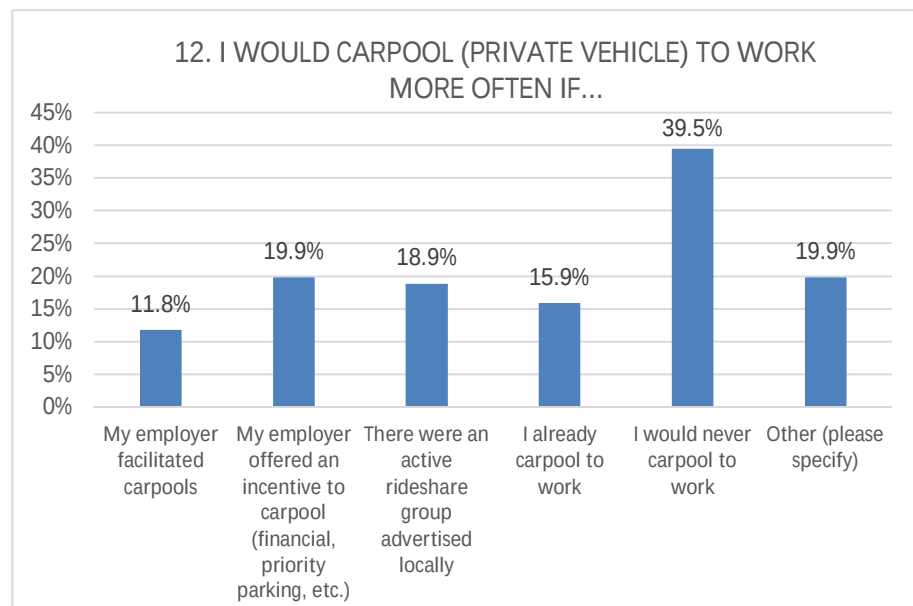


Question 11. I would cycle to work more often if...

Multiple responses to this question were accepted. Of 536 total respondents, 197 reported they would cycle if they lived closer. While 146 respondents reported they would never cycle to work. Many workers indicated they would cycle to work if routes were safer (135) and there were more bicycle lanes (106). Eighty-eight respondents included additional comments. Of those comments, 17 workers mentioned weather as a barrier to cycling to work, 15 again mentioned unsafe routes and lack of bike lanes, 10 mentioned the need for more bike racks and bike parking, while 10 others mentioned shuttling kids/family as a major reason they do not cycle to work.

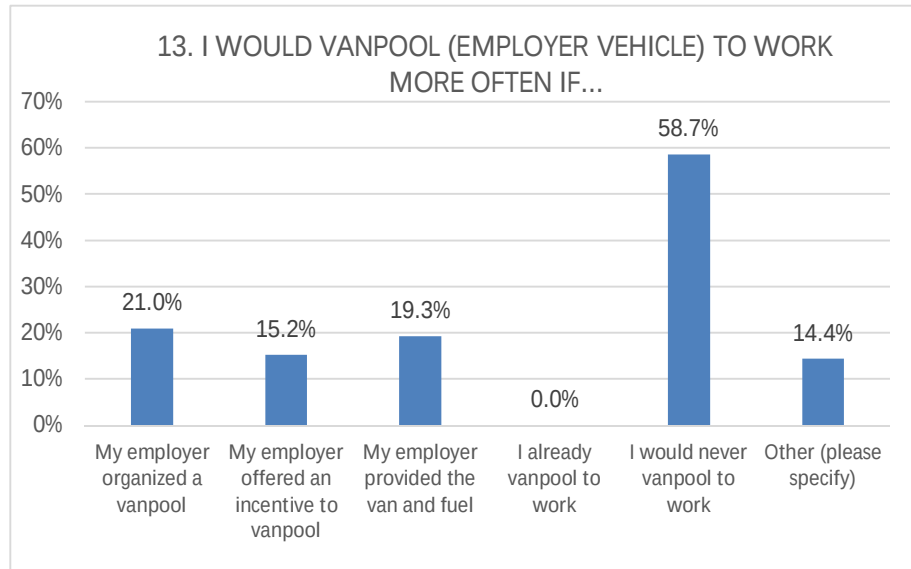
**Question 12. I would carpool to work more often if...**

Of 534 respondents, 211 reported they would never carpool to work, 85 indicated they already carpool to work, 106 would carpool if their employer offered incentive to carpool and 101 said they would carpool if there were an active rideshare group advertised. In addition, 63 respondents said they would carpool if carpools were facilitated by their employer. Over one hundred respondents added comments to the "other" section. Of these comments, 54 noted scheduling issues and after work commitments as barriers to carpooling.

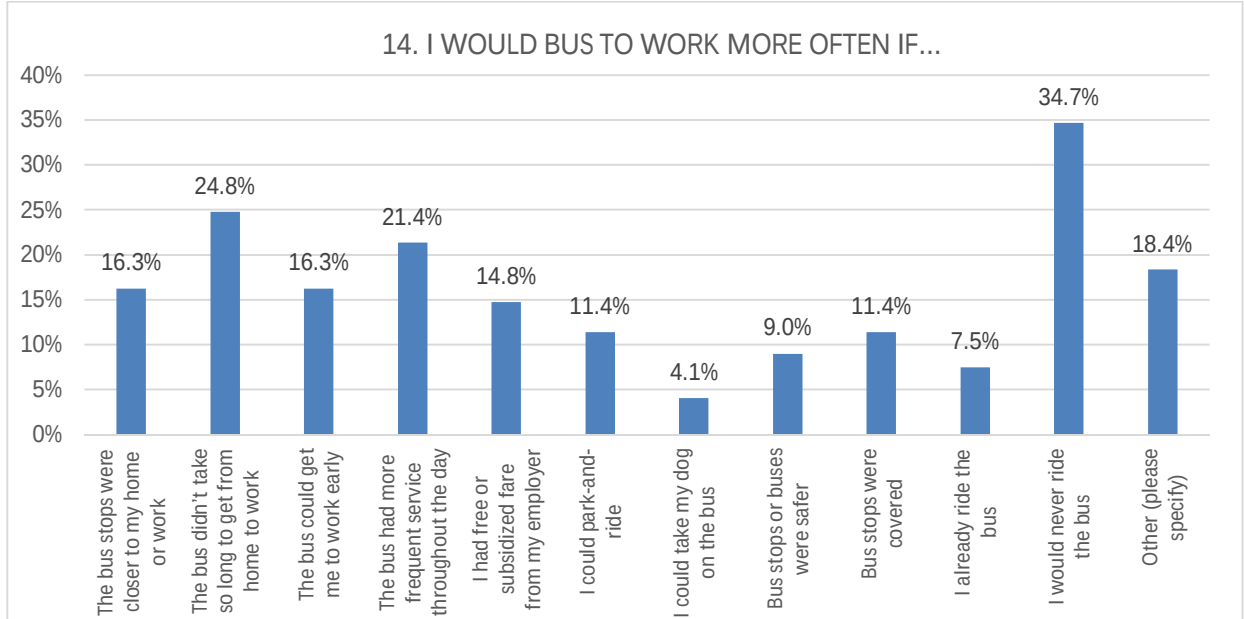


Question 13. I would vanpool to work more often if...

Of 533 respondents, 313 indicated they would never vanpool to work. If the employer organized a vanpool, 112 would consider using it while 103 respondents would use it if the employer provided the van and fuel. In addition, 81 respondents would choose to vanpool to work if their employer offered an incentive to vanpool.

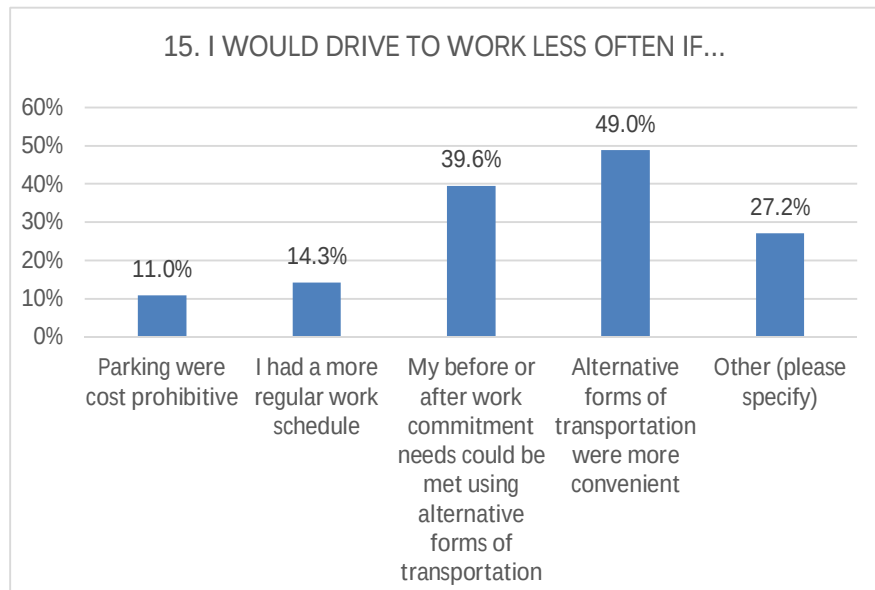
**Question 14. I would bus to work more often if...**

A total of 533 workers responded to this question. The largest number of respondents (185) reported they would never ride the bus. If the bus took less time between home and work, 132 workers might ride it. In addition, if the bus had more frequent service throughout the day, 114 workers would consider riding it.



Question 15. I would drive to work less often if...

Of 518 respondents, 254 indicated they would drive to work less often if alternative forms of transportation were more convenient. In addition, 205 respondents indicated they would drive less if before and after work commitment needs could be met by using alternative forms of transportation. Only 57 respondents said they would drive less if parking were cost prohibitive.

**Analysis**

The results of this survey have been analyzed to determine parking habits of workers and evaluate additional relationships among responses. Table 2-1 provides a summary of how and where different types of workers commute and park. As expected, the majority of employees park near their places of employment. The CBJ employs the highest percentage of workers who commute using alternative means of transportation, although the sample size of state workers may not be representative of the entire state worker force.

TABLE 2-1. PARKING HABITS OF WORKERS BY EMPLOYER				
	Percent of Respondents by Employer			
	City and Borough of Juneau	Federal Government	Private/Other	State of Alaska
Park in Downtown Core	58%	3%	59%	32%
Park in Willoughby District	7%	77%	5%	29%
Park in Other Downtown Areas	16%	5%	13%	25%
Use Alt Means of Transportation	14%	5%	4%	4%
Other	5%	10%	19%	10%

Table 2-2 provides a summary of respondents who reported they drive alone to work most days, organized by employer. Federal employees were the highest percentage (68%) of workers who drive alone most days, followed by CBJ, State of Alaska and private workers. The Federal Building houses approximately 650 employees and offers 263 parking spaces for commuters and federal vehicles. Therefore, the respondents who indicated they drive alone most days account for over 60% of the driving population at the Federal Building, with a little under 40% of the total employee base responding.

**TABLE 2-2.
PERCENT RESPONDENTS WHO DRIVE ALONE MOST DAYS, BY EMPLOYER**

	City and Borough of Juneau	Federal Government	Private/Other	State of Alaska
Drive Alone Most Days	80	162	71	35
Total Responses	122	238	129	56
% Respondents by Employer	66%	68%	55%	63%

Summary

The sample size of CBJ and federal workers appears to adequately represent their commuting and parking habits, while the sample size of state workers may not. Based on the survey results, the following general conclusions that can be drawn about Juneau commuters:

- Most workers regularly commute in single-occupancy vehicles.
- Most passenger-car commuters park near their place of employment in spaces provided or subsidized by their employer.
- More than half of the commuters would walk to work if they lived closer, but most will not walk when faced with existing geographic commuting distances.
- Over 1/3 of commuters say they would cycle to work if they lived closer, while more than 1/4 say that they would never cycle.
- Most commuters would carpool to work if they were offered incentives or it were more convenient, while just under half say they would never carpool.
- Many commuters would vanpool to work if they were offered incentives, but more than half say they would never vanpool.
- Many commuters would commute by bus if bus service were more convenient, but about 1/3 say they would never commute by bus.

CHAPTER 3. SITE OPTIONS

3.1 BACKGROUND AND APPROACH

The study of parking supply within the Willoughby District reveals a current shortage of approximately 350 spaces and future deficits of up to 500 spaces occur as planned projects are developed and the impacts of parking inventory reduction and demand generation are realized. To offset these shortages, the consultant team evaluated alternative sites for their suitability for development of parking to serve the needs of the Willoughby District. Following the identification of prospective sites, the team evaluated each on the basis of its capacity for net new parking supply, cost of development, proximity to parking demand generators, compatibility with each District's master planning goals, urban context and development risk factors. The evaluation included site visits and meetings with landowners, tenants and stakeholders to assess the viability of the sites, and the issues and concerns related to each.

Site Visits and Meetings

The initial site visits by the core team included meetings for establishing the site development opportunities, goals and constraints. The site visits and meetings were conducted December 8 – 10, 2014. These consisted of an initial meeting with CBJ staff to confirm the scope, goals and objectives for the project, review the Willoughby District Master Plan, discuss current and future development projects within the district and to review potential parking development opportunities. Site visits were then conducted for each potential site, and meetings held with landowners, tenants and stakeholders. Issues and concerns related to each prospective site were identified, and a plan for further analysis of each site was developed.

Workshops

The project included two workshops:

- 1st Workshop, after the consultants developed preliminary parking concepts at identified sites. Concepts with the preliminary site assessment were presented to CBJ staff and stakeholders for review and revision.
- 2nd Workshop, after the consultants incorporated the preliminary concept reviews into a revised plan utilizing the most feasible concepts. Similar to the concept review, CBJ staff and stakeholders reviewed the revised concepts, and concurred with or amended the concepts as a basis for the district master plan.

Public Presentations

The Willoughby District Parking Master Plan will be presented to the public for review of the parking development concepts and planning considerations. Consultants will be available to assist City staff in public presentations and discussions of site development opportunities and planning considerations.

3.2 PROSPECTIVE PARKING DEVELOPMENT SITES

A total of seven prospective parking development sites were considered, as shown on Figure 3.2.1. Each is discussed in the following sections.



**PROSPECTIVE
SITE OPTIONS:**

- 1 - Federal Building
- 2 - Juneau Business Center
- 3 - Public Safety/Zach Gordon Center
- 4 - State Office Building North Garage
- 5 - Downtown Transportation Center
- 6 - Second & Franklin
- 7 - Capital Park

Project No.: 135-12554-15001
Date: 06-20-2015
Designed By: DCK

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

**PARKING DEVELOPMENT SITE OPTIONS
PROSPECTIVE DEVELOPMENT SITES**



BAY MASSACHUSETTS, INC.

**FIGURE
3.2.1**

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Site Option 1 – Federal Building Site

Description

This site is located at the existing surface parking lot east of Gold Creek between West 7th and West 8th Streets. This site is level and approximately 85,000 square feet in area and currently has 241 parking spaces for the Federal Building employees. Access to the existing lot is either from Willoughby Avenue on the south or from West 9th and Glacier Way on the north and west. A pedestrian bridge connects the parking lot to the Federal Building located west of Gold Creek.

Issues & Opportunities

This site is well suited for parking development since it is currently used for parking, is flat and relatively large in plan dimension. The approximately 85,000-square-foot lot is not rectangular which results in slightly reduced efficiency. The site is adjacent to the Federal Building which has a large parking demand, but is somewhat removed from other Willoughby District venues. Walking distance to State Office Buildings or to downtown venues are long, making this site not well suited for those users.

Peak hour traffic to and from the site may require improvements to roadway intersections to handle the traffic associated with parking development on the site. This would, however, reduce traffic congestion on other intersections by concentrating the parking traffic into one large structure.

Conceptual Design

Parking development on this site includes either a 3, 4 or 5 level parking structure providing up to 1,072 new parking spaces, or 831 net new spaces. The structure would include an elevator core adjacent to the existing pedestrian bridge over Gold Creek to the Federal Building. A conceptual design for a 5 level structure at this site is shown on Figure 3.2.2.



0 100' 200'

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FIGURE 3.2.2

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

**PARKING DEVELOPMENT SITE OPTIONS
 FEDERAL BUILDING SITE**



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Site Option 2 – Juneau Business Center Site (DEC Building)

Description

This site is located at the southwest corner of Willoughby Avenue and Village Street. The site is privately owned and is currently used as a parking lot serving the Juneau Business Center offices which are leased by the State of Alaska, Department of Environmental Conservation. The site currently has 120 parking spaces and is irregular in shape, bordering Willoughby Avenue as it curves toward Glacier Avenue to the west. The usable area of the site is only about 30,000 square feet and a structure on this site will require fire separation setbacks from the office buildings on the south and west sides.

Issues and Opportunities

The site is currently privately owned, and land acquisition and entitlements for development could be problematic. However, the site is well situated to serve Willoughby District needs and is close enough to downtown to provide parking to some downtown venues. Traffic circulation to and from the site is good along Willoughby Avenue to either Egan Drive, Whittier or Glacier Avenues. Because of the relatively small area of the site available for constructing a parking structure and the parking that would be displaced by construction, this site is relatively inefficient on a net new space basis.

Conceptual Design

A conceptual design for a four level plus basement parking structure for the Juneau Business Center site is shown on Figure 3.2.3. The structure would include an elevator core adjacent to the office building and would include a total of 353 parking spaces, or 233 net new spaces on the site.



0 30' 60' 120'

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Designed By: DCK
FIGURE 3.2.3

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

PARKING DEVELOPMENT SITE OPTIONS
JUNEAU BUSINESS CENTER SITE



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Site Option 3 – Public Safety/Zach Gordon Center Site

Description

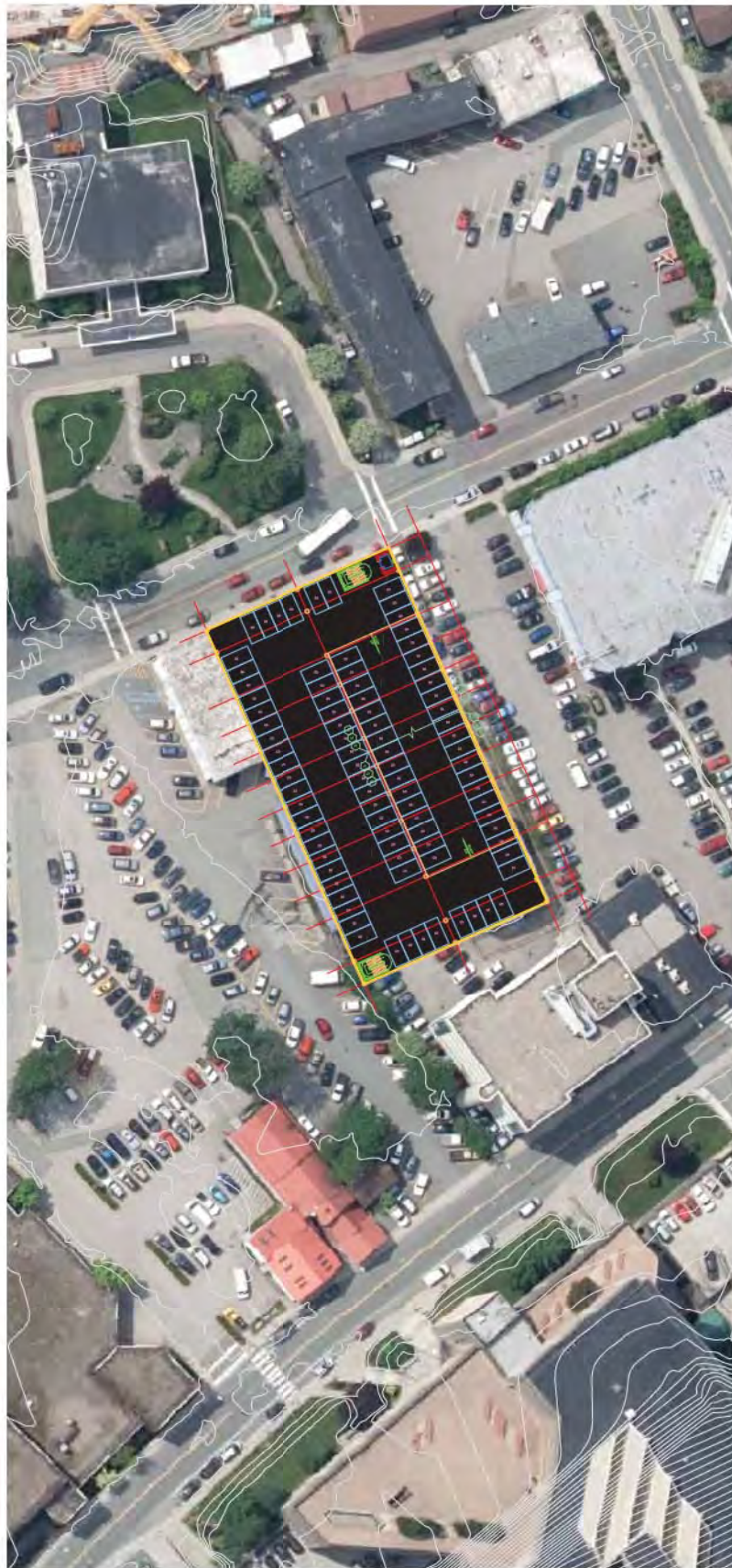
This site combines two parcels on Whittier Street currently occupied by the Public Safety Building on the west and the Zach Gordon Center on the east. The site could serve many of the existing district venues including state offices, the library, Centennial Hall and the Arts Center and would be central to the future development within the district. The combined site is approximately 250 ft. by 130 ft. in plan dimension and is centrally located within the district. The site allows for the design of a relatively efficient parking structure with good access from Whittier Avenue.

Issues and Opportunities

Development on the site would require relocation of the Zach Gordon Center. While this constraint is not insurmountable, it does present both public service and cost considerations that need to be addressed. Access to the site is convenient with a direct access route along Whittier to Egan Dr. or along Willoughby to/from Egan Dr. or Glacier Avenue. The site is central to the Willoughby District and would serve a variety of current and future venues within the district.

Conceptual Design

A conceptual design for a parking structure on this site is shown on Figure 3.2.4. A four level structure would provide a total of 423 parking spaces, netting 388 new spaces on the property. The structure would be accessed from Whittier Street, and would include an elevator core and pedestrian lobby along the Whittier frontage.



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FIGURE 3.2.4

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

PARKING DEVELOPMENT SITE OPTIONS
PUBLIC SAFETY / ZACH GORDON SITE

TETRA TECH
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WALKER
 PARKING CONSULTANTS

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Site Option 4 – State Office Building (SOB) North Garage Site

Description

This site is the existing SOB north garage site. The existing parking structure is in a deteriorated state and would either require extensive repair or restoration to make it suitable for expansion. Alternatively, the existing structure could be demolished, and a new larger, more efficient structure constructed in its place. The consultant team’s review of the existing structure and its design concludes that the prudent approach for parking development on this site should include demolition of the existing parking superstructure and replacing it with a 7 level garage to maximize the parking opportunity for the site. The existing deep foundations could be reused if load testing confirmed the integrity of existing piling. Because the site is adjacent to the steep embankment between Willoughby and Calhoun Avenue, additional excavation and retaining structures would need to be constructed.

Issues and Opportunities

The existing parking structure on this site is deteriorated so developing new parking would either require extensive restoration or demolition and reconstruction of the existing garage. A new structure would need to maintain existing vehicular connections to parking areas within the lower levels of the SOB, which places constraints on parking design options. The hillside site will also require some additional excavation, earth retention and waterproofing considerations. Maintaining openness of parking areas will be an important consideration in developing design solutions for the site.

The site is well suited to state office and employee parking needs and expanding the capacity of parking on this site would also serve other Willoughby District and Downtown venues. Shared parking opportunities on this site could benefit both CBJ and the State. A 7-level structure with elevator service from Willoughby to the SOB plaza and Calhoun Street level could serve as a pedestrian link from “the flats” within the Willoughby district to downtown core venues.

Conceptual Design

A conceptual design for a 7-level parking structure on the SOB north garage site is shown on Figure 3.2.5. The parking structure would yield a total of 466 spaces or 323 net new parking spaces. The design includes an entrance/exit at Willoughby Avenue on the bottom, and another entrance/exit at Calhoun at the top. This enables dispersion of traffic to and from the site, and helps mitigate congestion that might occur with a single access location.



0 30' 60' 120'

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 Designed By: DCK
FIGURE 3.2.5

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CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

PARKING DEVELOPMENT SITE OPTIONS
STATE OFFICE BUILDING NORTH GARAGE SITE



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Site Option 5a – Downtown Transportation Center (DTC) Garage Horizontal Expansion

Description

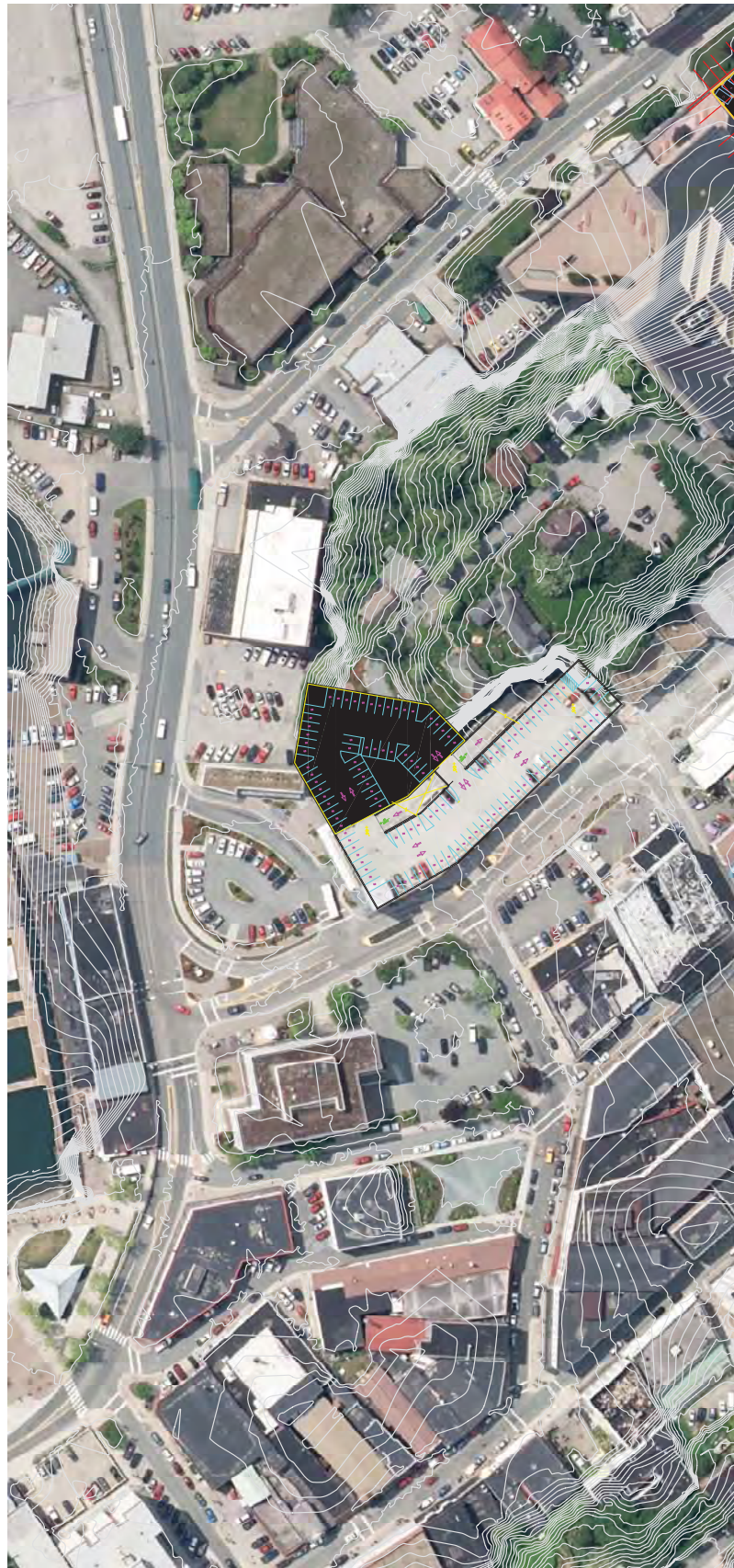
This site involves expanding the existing DTC garage toward the west and north. When the DTC garage was originally designed, an option was entertained for expanding it around Telephone Hill behind the Goldbelt Hotel. This option would entail some additional rock excavation to construct the expansion.

Issues and Opportunities

The development of parking at this site would likely require the demolition of one house on Dixon St., and additional excavation behind the existing transportation center. The site is well situated to serve the downtown core venues, but is somewhat remote from Willoughby District destinations. The site is convenient for access to and from Egan Drive, and would intercept traffic at the perimeter of the downtown core, easing congestion on downtown streets.

Conceptual Design

The conceptual design for the expansion of the DTC garage is shown on Figure 3.2.6a. The expansion provides a total of 160 net new parking spaces at the center. The expansion uses the existing vehicle ramping system within the garage and existing pedestrian elevators and stairs. New construction consists of grade plus three flat parking floor extensions.



0 100' 200'

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FIGURE 3.2.6a

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

PARKING DEVELOPMENT SITE OPTIONS
DOWNTOWN TRANSPORTATION CENTER HORIZONTAL EXPANSION



WALKER
PARKING CONSULTANT

Site Option 5b – Downtown Transportation Center (DTC) Garage Vertical Expansion

Description

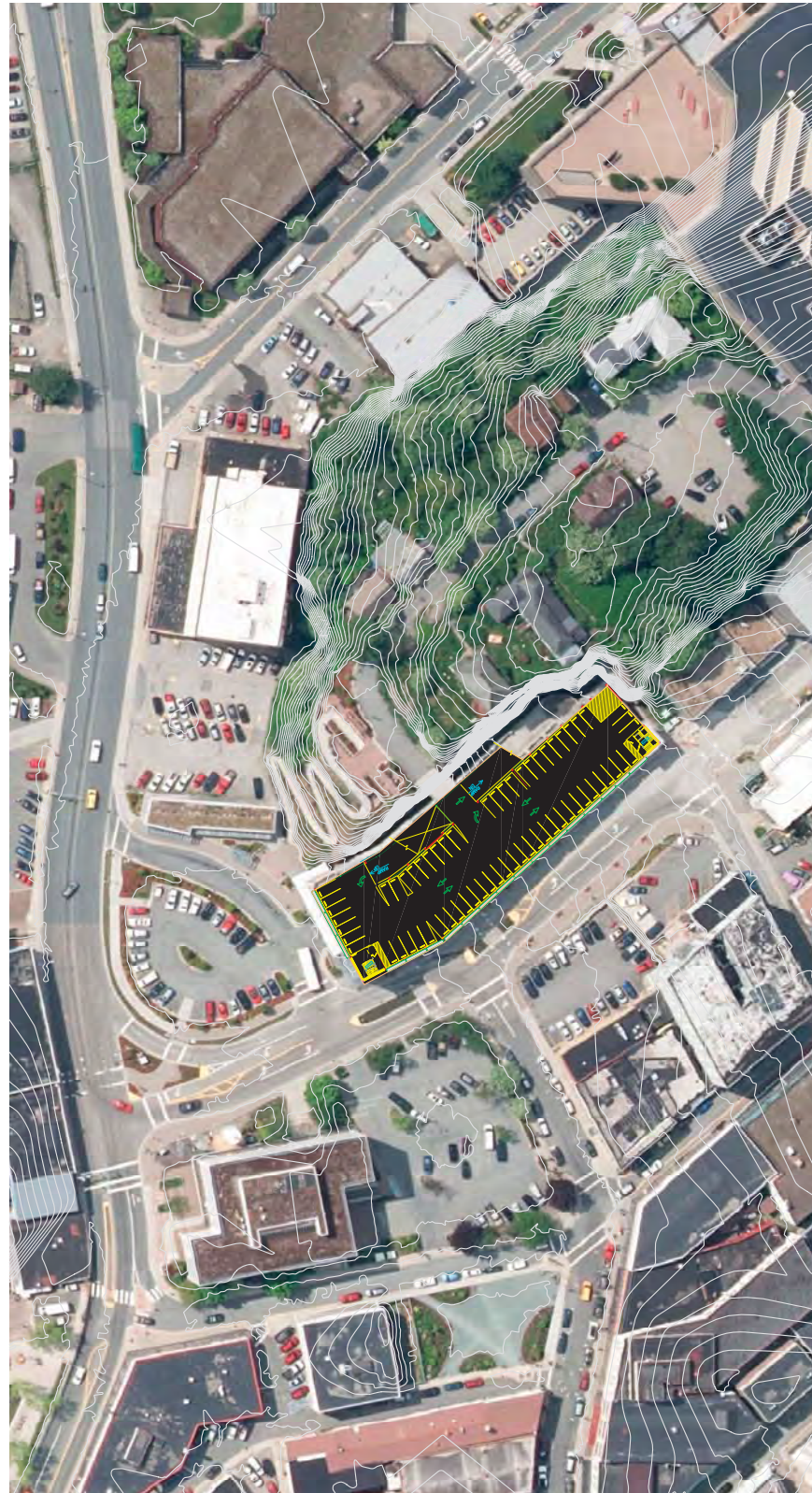
This site involves three additional levels to the existing DTC garage. When the DTC garage was originally constructed, foundations, columns and lateral load systems were designed to allow 3 additional levels of parking to be added in the future. This option would entail constructing the additional levels on the DTC garage.

Issues and Opportunities

The development of parking at this site would require some restriction of parking at the DTC while construction was underway. However, the site is currently owned and used by CBJ for parking and is well situated to serve the downtown core venues, but is somewhat remote from Willoughby District destinations. The site is convenient for access to and from Egan Drive, and would intercept traffic at the perimeter of the downtown core, easing congestion on downtown streets.

Conceptual Design

The conceptual design for vertical expansion of the DTC garage is shown on Figure 3.2.6b. The expansion provides a total of 183 net new parking spaces at the center. The expansion uses the existing vehicle ramping scheme within the garage and existing pedestrian elevators and stairs extended to the new levels. New construction consists of three flat parking floors of parking above the existing garage.



0 100' 200'

Bar Measures: 1 inch

Project No.: 135-12554-15001
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FIGURE 3.2.6b

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

PARKING DEVELOPMENT SITE OPTIONS
DOWNTOWN TRANSPORTATION CENTER VERTICAL EXPANSION



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Site Option 6 – 2nd and Franklin Site

Description

This site combines two parcels that are currently used for parking and consists of the existing State-owned parking structure at the corner of Second and Gold Street, and the City owned surface parking lot at the corner of Second and Franklin. The site is relatively narrow along Second Street, and will require a setback from the residential properties along the north side of the property. The site is central to the downtown core and serves numerous downtown retailers, the Baranof Hotel and other venues, as well as state offices and the Capitol. The site is distant from the Willoughby District and would likely not serve Willoughby parking needs.

Issues and Opportunities

This site is well situated for State Office Building and other state parking needs. As mentioned it also serves many downtown venues, but will bring additional traffic into the downtown core to park. The site is small and does not lend itself to an efficient parking garage design, hence the total number of spaces that can be developed is relatively low. Also, since the site is already used for parking, the net gain in parking is also low placing an added burden on the development cost.

Since the site is centrally located within the downtown, the opportunity exists for a public private partnership development for commercial or residential uses combined with parking. Depending on the nature of the development, the synergy of uses could share parking within the project for both public and private patrons.

Conceptual Design

A conceptual design for parking at the Second and Franklin site is shown on Figure 3.2.7. The concept consists of a tiered parking facility with a partial lower level at the elevation of the Franklin Street frontage, an intermediate level at midblock between Franklin and Gold streets, a third level at the Gold Street frontage and a podium level of parking above the level of Gold Street. Access to each level is directly from the adjacent street without internal ramping. The podium level of parking is accessed via an exterior ramp on the north side of the garage.

The conceptual design is intended to serve as the initial phase of a mixed-use project, or as the public portion of a public/private partnership development. In either of these scenarios, the podium parking would become the first level of commercial or residential uses above the lower three levels of parking. The conceptual design anticipates that the parking structure would need to accommodate commercial or residential uses above, and uses a structural and functional layout that can accommodate mixed uses.



0 30' 60' 120'

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 Date: 06-20-2015
 Designed By: DCK
FIGURE 3.2.7

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

**PARKING DEVELOPMENT SITE OPTIONS
 SECOND & FRANKLIN SITE**

TETRA TECH

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 PARKING CONSULTANTS

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Site Option 7 – Capital Park Site

Description

This site is located on the block bounded by Fifth, Sixth, Seward and Franklin streets in the north edge of the downtown Juneau district. The site is sloped steeply from north to south and is currently occupied by the Capital School Park. The site is situated close to State Office Buildings and the Capitol, and would provide convenient parking for state employees and for legislative staff when in session. The site would not easily serve the Willoughby District venues, other than by relieving some of the parking demand in the District from downtown patrons who currently park at Willoughby district facilities.

Issues and Opportunities

This site is well situated for State Office Building and other state parking needs and has the capacity for a significant number of parking spaces to serve the downtown parking needs. However, a parking facility at the Capital Park site will bring additional traffic into the downtown core and create congestion.

There is an opportunity to develop the top levels of a new parking structure as a landscaped park, and include park amenities for recreation and other outdoor activities. The completed renovation of the park could become an attractive amenity for the city and a convenient parking resource for state and downtown commercial venues.

Conceptual Design

A conceptual design for parking at the Capital Park site is shown on Figure 3.2.8. The parking structure at the Capital Park site would occupy the entire block bounded by Fifth, Sixth, Seward and Franklin streets. A garage on this site would provide up to 267 parking spaces on four levels, with the uppermost level covered by a landscaped park at the same approximate elevation as Sixth Street. The bottom level of parking will be at the same level as Fifth Street, with a separate entrance and exit directly to Fifth Street. The second, third and fourth levels will be accessed from Franklin Street, with an entry/exit drive on both the second and fourth levels. The street is sloped relatively steeply at the entries, possibly requiring additional snow and ice control measures in the design. Interior ramps will allow vehicles to travel between the second, third and fourth levels of parking.

The structure would be terraced into the sloping site to minimize the extent of excavation and earth retention needed to construct the garage and to reduce the overall mass of the structure. Landscape elements would be incorporated into the terraced slab edges, and on the park that would be constructed above the garage.

An elevator tower near the corner of Seward and Fifth Street and egress stairs at opposite corners of the structure would provide pedestrian access and circulation to parking and plaza levels.



Project No.: 135-12554-15001
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 Designed By: DCK
FIGURE 3.2.8

CITY AND BOROUGH OF JUNEAU - WILLOUGHBY DISTRICT PARKING MASTER PLAN

**PARKING DEVELOPMENT SITE OPTIONS
 CAPITAL PARK SITE**



3.3 PROSPECTIVE PARKING DEVELOPMENT SITE SUMMARY

Table 3-1 summarizes the prospective sites and projected construction costs for each. Since the estimates have been developed using an average cost for regional parking structure construction with premiums applied for site-specific items, they are intended only to be used for the relative comparison of options; they may not accurately reflect the cost to construct any of options. The costs of obtaining land, relocating existing users, design, project administration, and other non-construction costs have been included in these estimates.

TABLE 3-1. SUMMARY OF CBJ WILLOUGHBY DISTRICT PARKING DEVELOPMENT OPTIONS					
Option	Location	Existing Spaces	New Parking	Net New Parking	Project Cost ^a / Net Space
1	Federal Building Lot	241	1,072	831	\$50,568
2	Juneau Business Center	120	353	233	\$63,270
3	Public Safety/Zach Gordon Center	35	423	388	\$42,736
4	SOB North Garage	143	466	323	\$64,634
5a	DTC Garage Horizontal Expansion	229	389	160	\$44,800
5b	DTC Garage Vertical Expansion	229	412	183	\$47,126
6	2nd & Franklin	67	127	60	\$101,267
7	Capital Park	0	267	267	\$58,688 ^b
<i>a.</i> Project cost includes construction, design, construction management, inspection, testing, permits, fees, insurance and other Owner soft costs and contingencies. Land acquisition and entitlements are excluded. <i>b.</i> Capital Park net cost per space does not include the cost for the new park and plaza level on top of the parking structure. Capital Park cost estimate from 2004 study (Appendix B) escalated to current day at 2.5% per annum.					

CHAPTER 4. ANALYSIS

4.1 METHODOLOGY

The comparison of parking development site options used a weighted scoring matrix to compare the relative merits of each option against a set of goals and objectives established for the project. The goals and objectives for parking within the Willoughby District were developed by the consultant team in collaboration with CBJ, state and federal stakeholders in the study area, and in discussions with property owners, tenants, business interests and other stakeholders.

The evaluation criteria for the parking development options that were established for the study included:

- **Number of Net New Parking Spaces**—In order to satisfy parking deficits within the district, the number of net new parking spaces that could be developed on alternative sites was determined as a high priority goal for the project.
- **Cost of Parking Development**—The cost to develop parking on alternative sites was estimated using an average regional cost for construction of structured parking and applying premiums for site specific considerations such as site acquisition costs and entitlements, parking and structural efficiencies, hillside vs. level construction, economies of scale, etc. Development costs were evaluated on a total cost, cost per total space and per net space basis.
- **Site Location**—The location of the site relative to existing and planned parking demand generators within the Willoughby District. This takes into account reasonable walking distances and the impacts to traffic that may result from parking development at any site.
- **Traffic/Circulation**—The ability of a site to accommodate traffic and vehicular circulation to and from the site to the roadway system without creating congestion or contributing to congestion that already exists.
- **Site Ownership/Entitlements**—Whether the site is owned by public or private entities was considered in the evaluation of site alternatives. Privately owned sites would require acquisition cost and entitlements necessary for some sites could be complicated by adjacent property concerns, neighborhood issues or other considerations.
- **Urban Context**—The location of some sites could be impacted by parking structure construction. Whether or not parking is the highest and best use of a site is a consideration that is weighed in the evaluation of site alternatives to ensure that prudent urban planning goals are maintained.
- **Aesthetics**—The ability to accommodate an aesthetic design character into the design at a site was evaluated in the study. The goal is to ensure that compatibility of design is present at the site and that parking development will not detract from existing or planned future developments within the area.

4.2 ANALYSIS RESULTS

The evaluation criteria for site alternatives were ranked and weighted in terms of importance to the overall goals and objectives for development of parking within the district. Each site was then scored against the criteria based on how well the development of parking at that site met each of the criteria used in the study. Table 4-1 lists for each site the scoring applied to each of the weighted evaluation criteria used in the comparison of site options.

**TABLE 4-1.
PARKING DEVELOPMENT OPTION CRITERION-BASED EVALUATION**

Criterion	Importance	Weight	Evaluation Score							
			Option 1	Option 2	Option 3	Option 4	Option 5a	Option 5b	Option 6	Option 7
Net New Parking Spaces	High	7	10	5	6	6	4	5	2	7
Cost	High	9	7	6	9	6	8	8	3	7
Location	High	8	8	8	9	9	7	7	7	3
Traffic/Circulation	Moderate	5	7	7	7	8	7	7	5	6
Site Ownership/Entitlements	Moderate	6	7	2	4	8	9	10	8	9
Urban context	Moderate	6	8	6	8	9	8	8	8	7
Aesthetics	Moderate	5	6	5	6	8	7	7	8	9
Weighted Score			352	261	332	350	328	341	258	307
Rank			1	7	4	2	5	3	8	6
Option 1: Federal Building			Option 5a: DTC Garage Horizontal Expansion							
Option 2: Juneau Business Center			Option 5b: DTC Garage Vertical Expansion							
Option 3: Public Safety/Zach Gordon Center			Option 6: Second & Franklin							
Option 4: SOB North Garage			Option 7: Capital Park							

4.3 PREFERRED SITES

Based on the foregoing analysis, it appears that development of parking facilities at the Federal Building and State Office Building sites offer the most opportunities for meeting the needs of the Willoughby District. After review of this evaluation by the CBJ and other stakeholders, it may be determined that other sites may have opportunities that need additional consideration.

When consensus is reached on one or more preferred sites, it is recommended that plans for developing the site or sites be defined more fully and a master plan prepared for at least one site.

CHAPTER 5. FURTHER EVALUATION OF PREFERRED SITES

To be prepared after review of initial site evaluation and authorization to proceed by the CBJ.

City and Borough of Juneau
Willoughby District Parking Master Plan

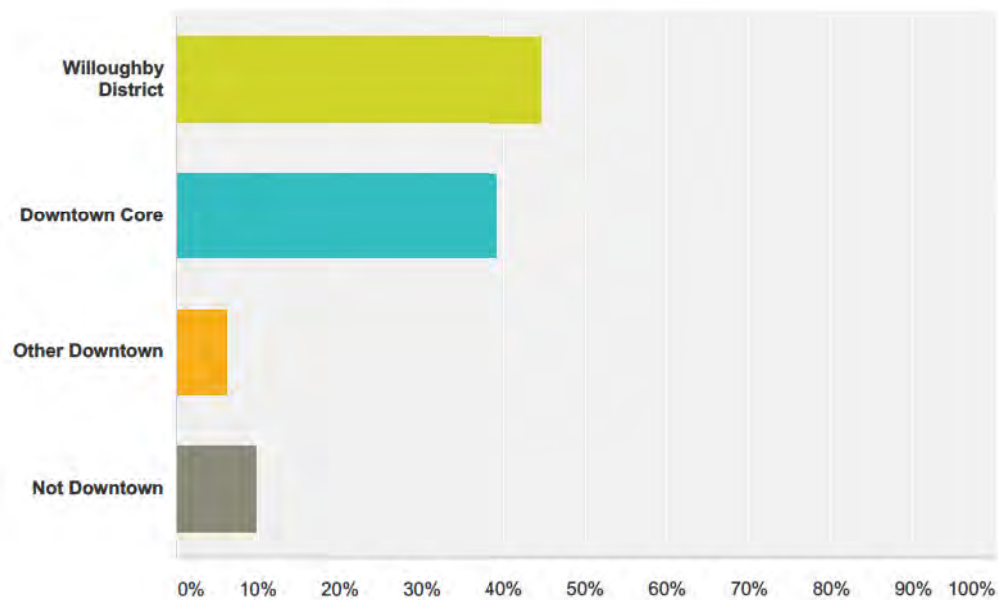
APPENDIX A.
PARKING SURVEY

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q1 Where is your workplace located?

Answered: 490 Skipped: 0



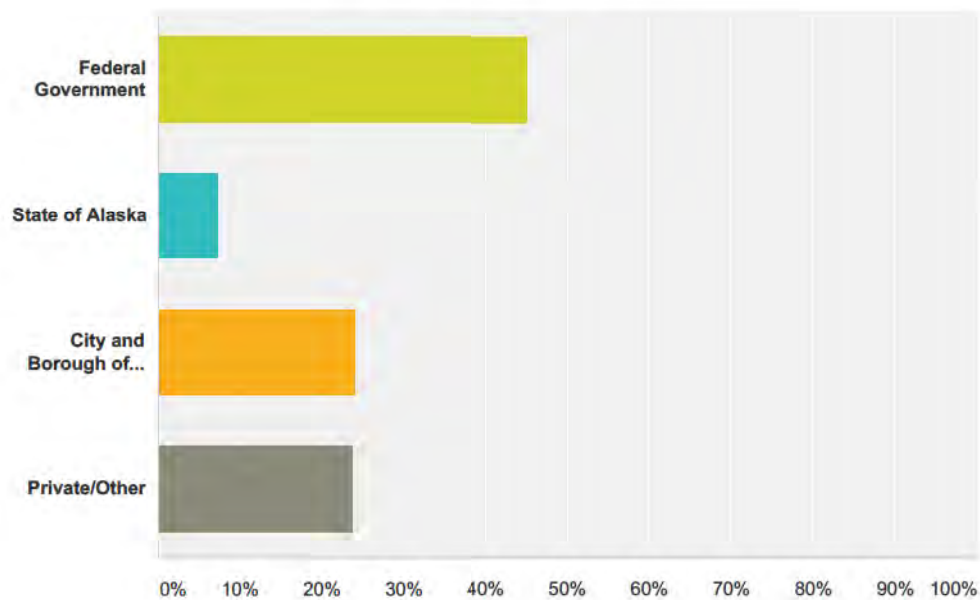
Answer Choices	Responses
Willoughby District	44.69% 219
Downtown Core	39.18% 192
Other Downtown	6.33% 31
Not Downtown	9.80% 48
Total	490

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q2 Who is your employer?

Answered: 442 Skipped: 48



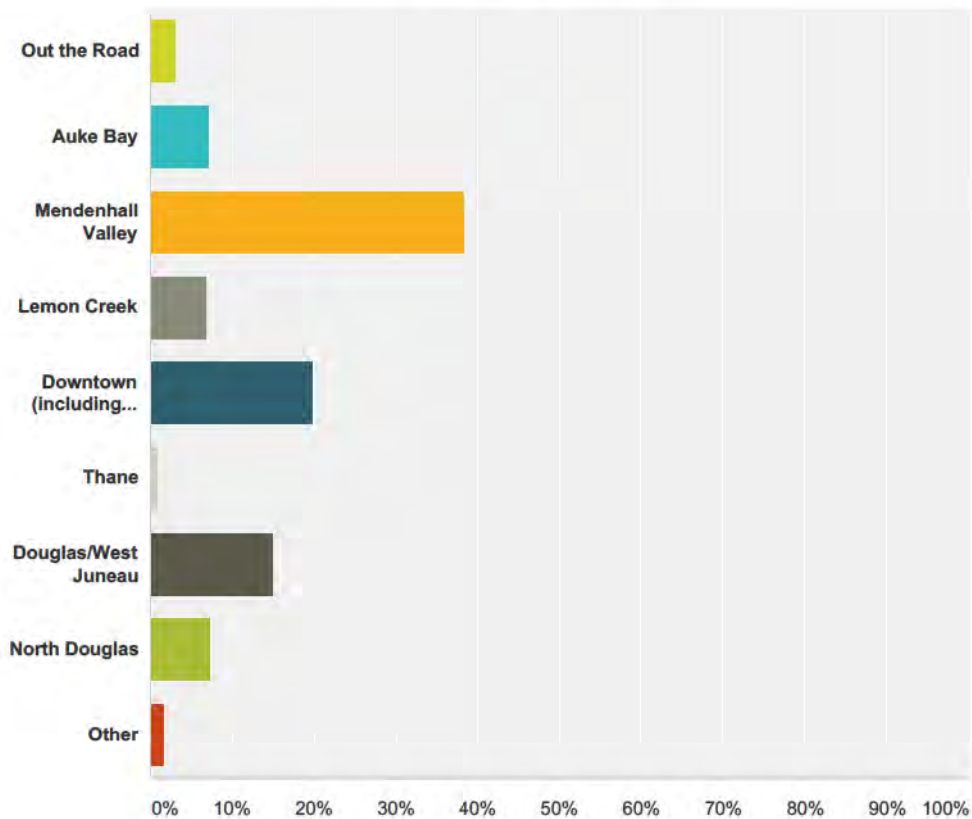
Answer Choices	Responses	
Federal Government	45.02%	199
State of Alaska	7.24%	32
City and Borough of Juneau	23.98%	106
Private/Other	23.76%	105
Total		442

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q3 Where do you live?

Answered: 442 Skipped: 48



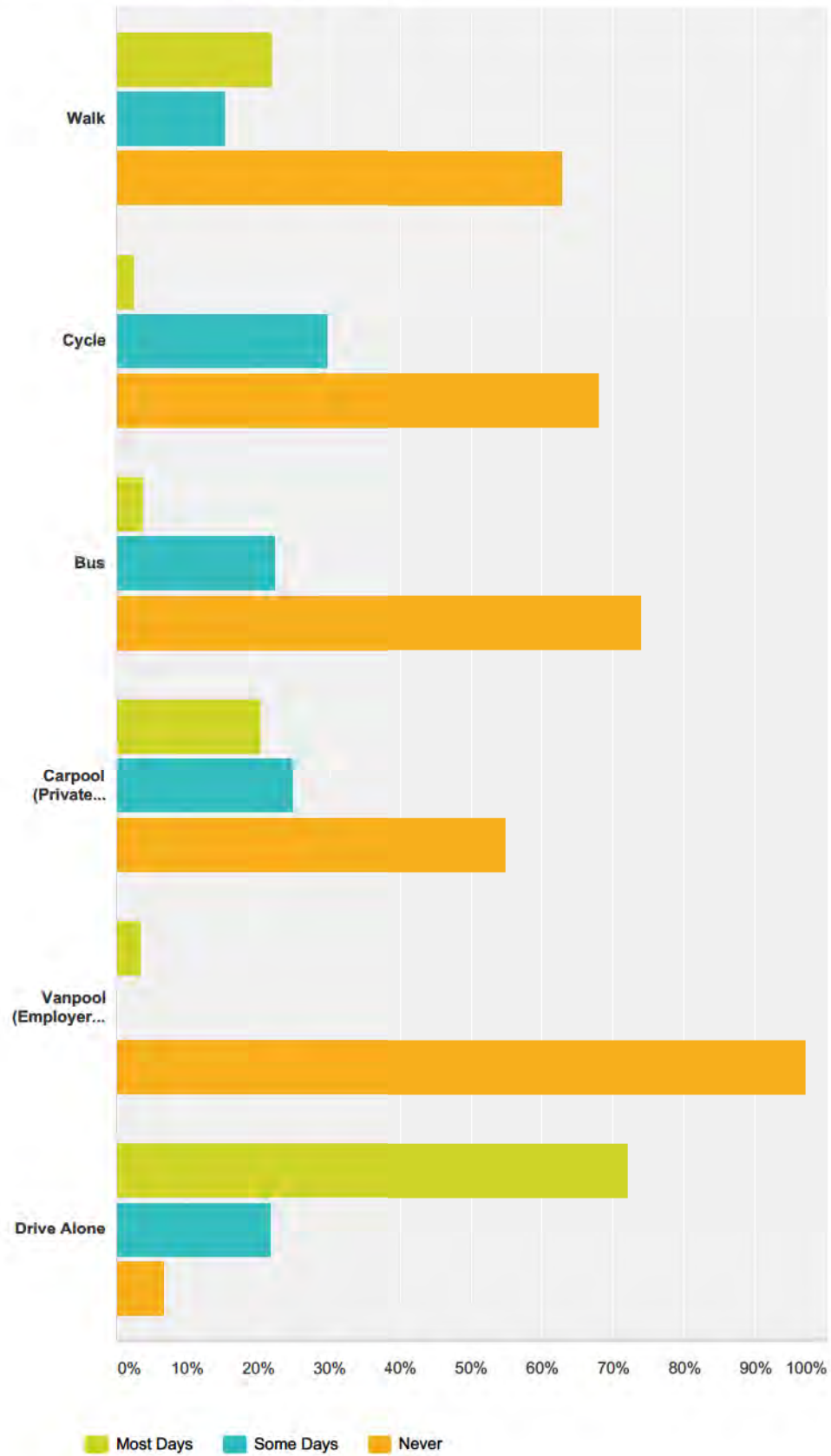
Answer Choices	Responses	
Out the Road	3.17%	14
Auke Bay	7.01%	31
Mendenhall Valley	38.46%	170
Lemon Creek	6.79%	30
Downtown (including Willoughby District, Core and Other Downtown)	19.91%	88
Thane	0.90%	4
Douglas/West Juneau	14.93%	66
North Douglas	7.24%	32
Other	1.58%	7
Total		442

Q4 How often do you travel to work using the following methods?

Answered: 441 Skipped: 49

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey



City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

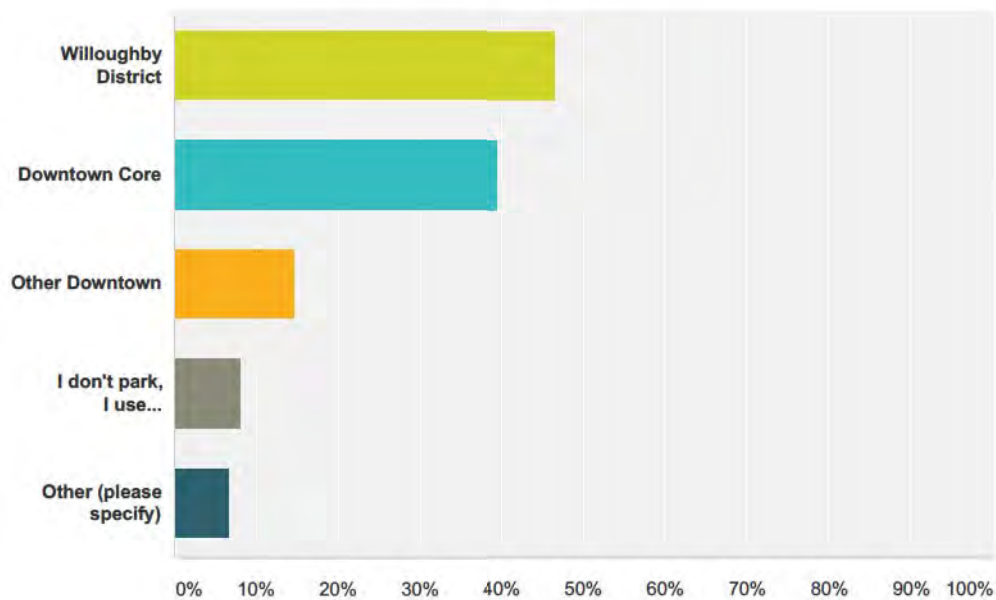
	Most Days	Some Days	Never	Total Respondents
Walk	21.99% 62	15.25% 43	62.77% 177	282
Cycle	2.59% 7	29.63% 80	68.15% 184	270
Bus	3.85% 10	22.31% 58	73.85% 192	260
Carpool (Private Vehicle)	20.30% 54	24.81% 66	54.89% 146	266
Vanpool (Employer Vehicle)	3.43% 8	0.00% 0	97.00% 226	233
Drive Alone	71.94% 282	21.68% 85	6.63% 26	392

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q5 In which area do you park?

Answered: 439 Skipped: 51



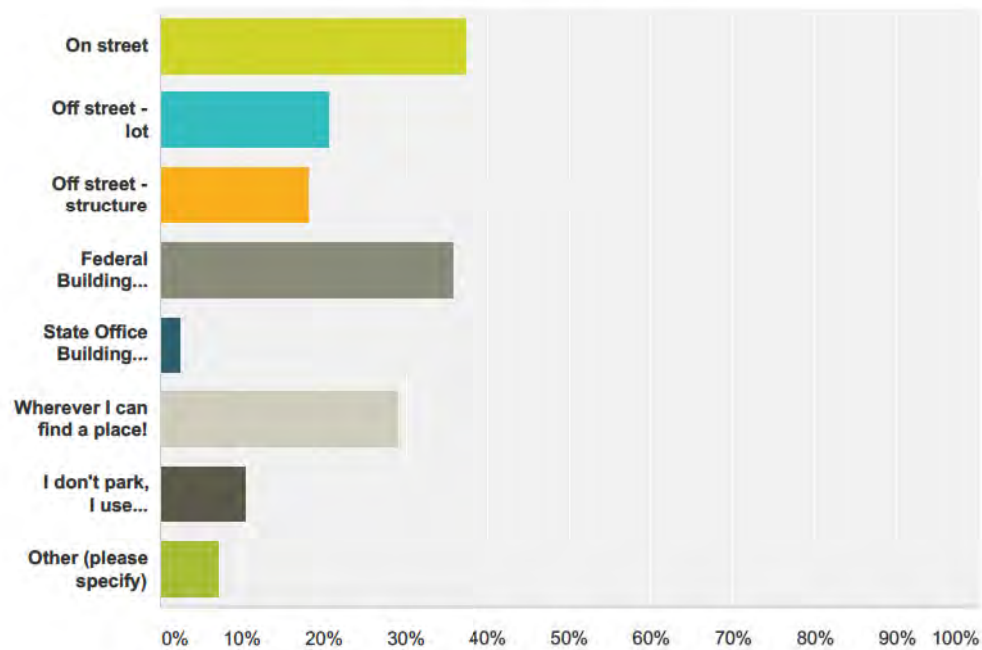
Answer Choices	Responses	
Willoughby District	46.47%	204
Downtown Core	39.41%	173
Other Downtown	14.58%	64
I don't park, I use alternative means of transportation (walk, cycle, carpool, vanpool, bus)	8.20%	36
Other (please specify)	6.61%	29
Total Respondents: 439		

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q6 Where do you park?

Answered: 439 Skipped: 51



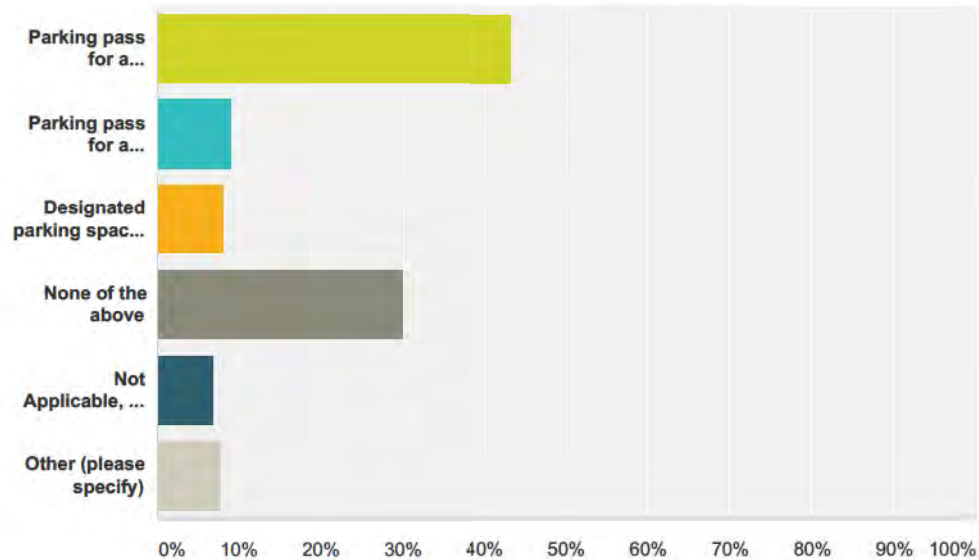
Answer Choices	Responses
On street	37.36% 164
Off street - lot	20.73% 91
Off street - structure	18.22% 80
Federal Building Parking Lot	35.76% 157
State Office Building Parking Structure	2.51% 11
Wherever I can find a place!	28.93% 127
I don't park, I use alternative means of transportation (walk, cycle, carpool, vanpool, bus)	10.48% 46
Other (please specify)	7.06% 31
Total Respondents: 439	

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q7 My employer provides me with:

Answered: 437 Skipped: 53



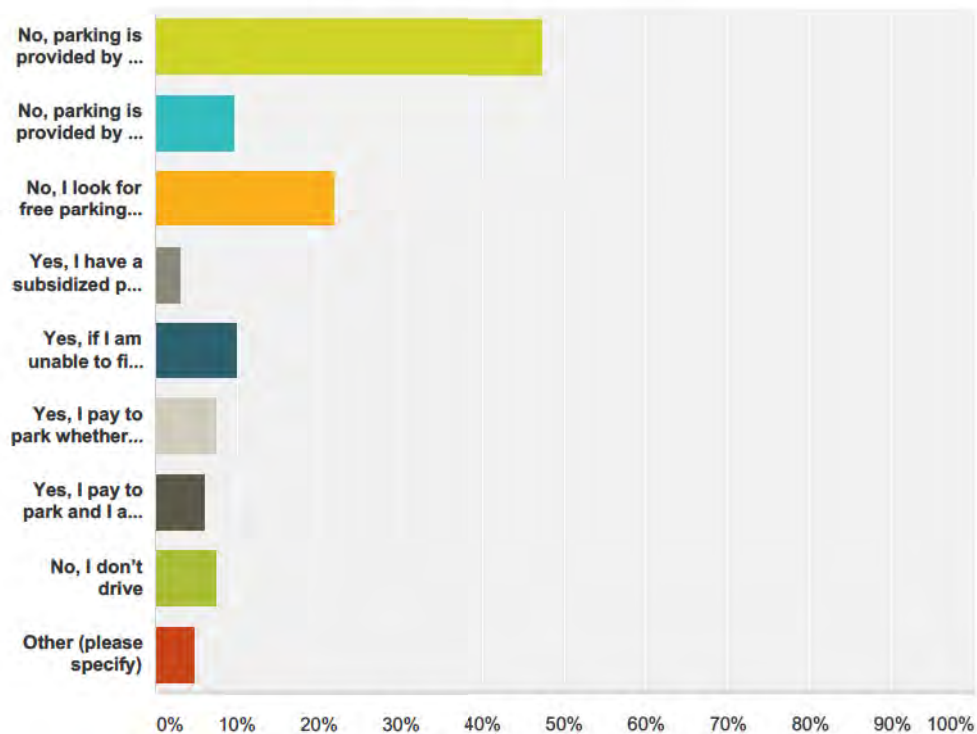
Answer Choices	Responses	
Parking pass for a particular lot or garage: first come first serve, not enough spaces for everyone	43.25%	189
Parking pass for a particular lot or garage: always a space available	8.92%	39
Designated parking space always available to me	8.24%	36
None of the above	29.98%	131
Not Applicable, I don't drive to work	6.86%	30
Other (please specify)	7.78%	34
Total Respondents: 437		

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q8 Do you pay for parking?

Answered: 436 Skipped: 54



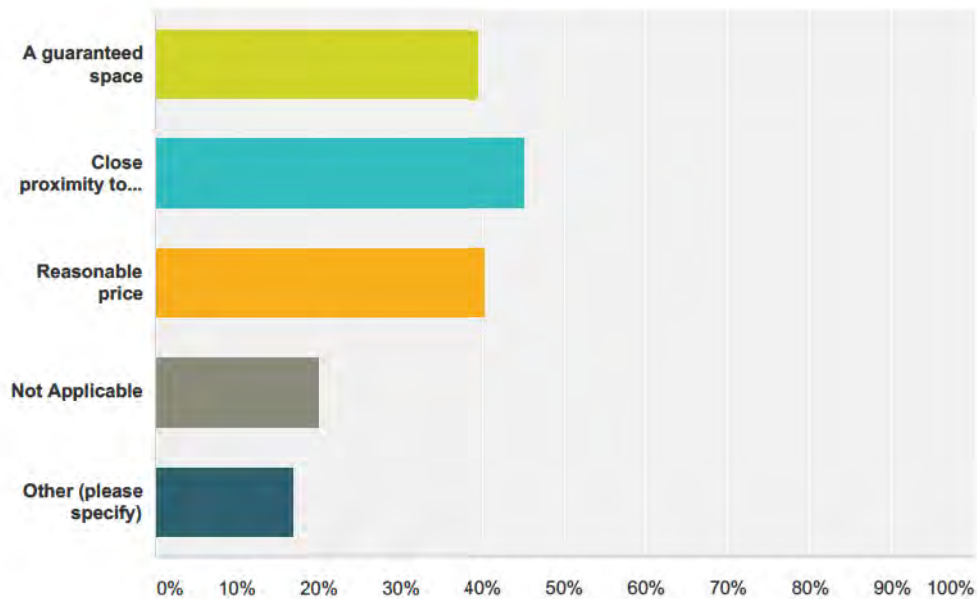
Answer Choices	Responses	
No, parking is provided by my employer but I am not guaranteed a space	47.48%	207
No, parking is provided by my employer and I am guaranteed a space	9.63%	42
No, I look for free parking anywhere I can find it	22.02%	96
Yes, I have a subsidized pass from my employer (employer pays part of it)	3.21%	14
Yes, if I am unable to find a free parking space	10.09%	44
Yes, I pay to park whether I find a space or not	7.57%	33
Yes, I pay to park and I am guaranteed a space	5.96%	26
No, I don't drive	7.57%	33
Other (please specify)	4.82%	21
Total Respondents: 436		

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q9 If you are not provided a guaranteed space, what would encourage your use of a parking garage?

Answered: 435 Skipped: 55



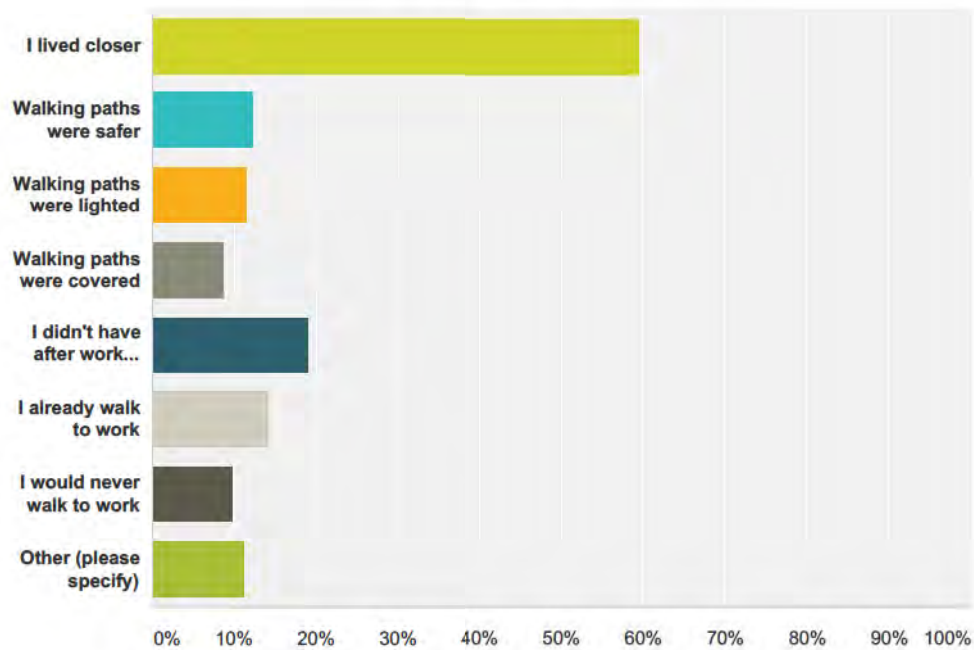
Answer Choices	Responses	
A guaranteed space	39.54%	172
Close proximity to place of employment	45.06%	196
Reasonable price	40.23%	175
Not Applicable	20.00%	87
Other (please specify)	17.01%	74
Total Respondents: 435		

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q10 I would walk to work more often if...

Answered: 435 Skipped: 55



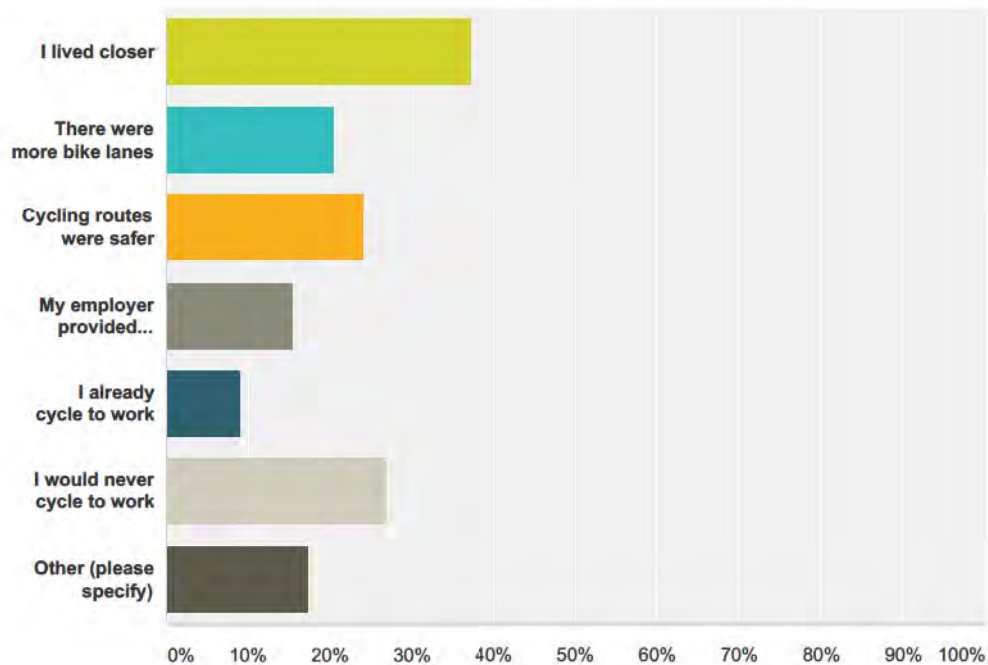
Answer Choices	Responses
I lived closer	59.54% 259
Walking paths were safer	12.41% 54
Walking paths were lighted	11.49% 50
Walking paths were covered	8.74% 38
I didn't have after work commitments requiring the use of my car	19.08% 83
I already walk to work	14.25% 62
I would never walk to work	9.89% 43
Other (please specify)	11.26% 49
Total Respondents: 435	

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q11 I would cycle to work more often if...

Answered: 435 Skipped: 55



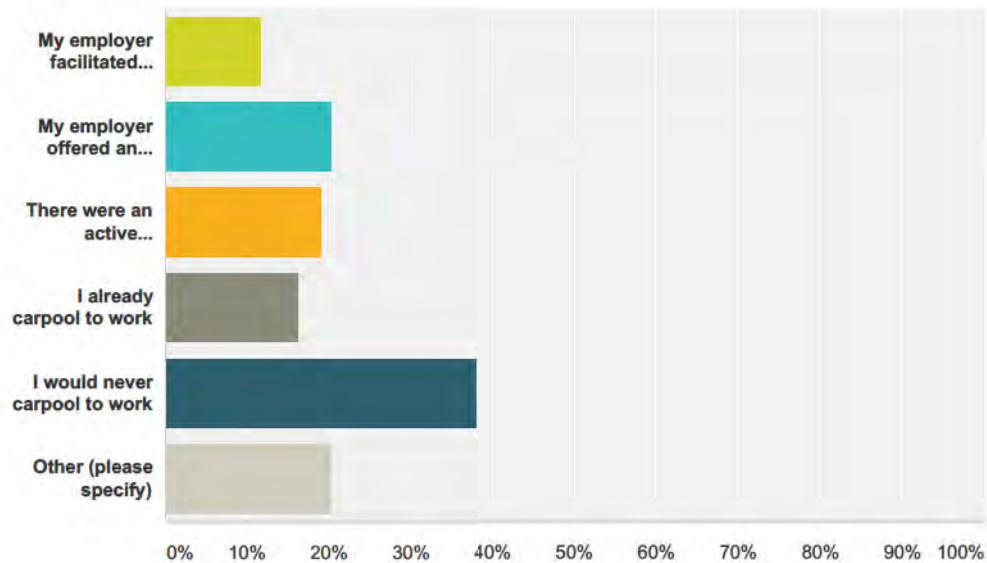
Answer Choices	Responses
I lived closer	37.24% 162
There were more bike lanes	20.46% 89
Cycling routes were safer	23.91% 104
My employer provided showers and changing facilities	15.40% 67
I already cycle to work	8.97% 39
I would never cycle to work	26.90% 117
Other (please specify)	17.24% 75
Total Respondents: 435	

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q12 I would carpool (private vehicle) to work more often if...

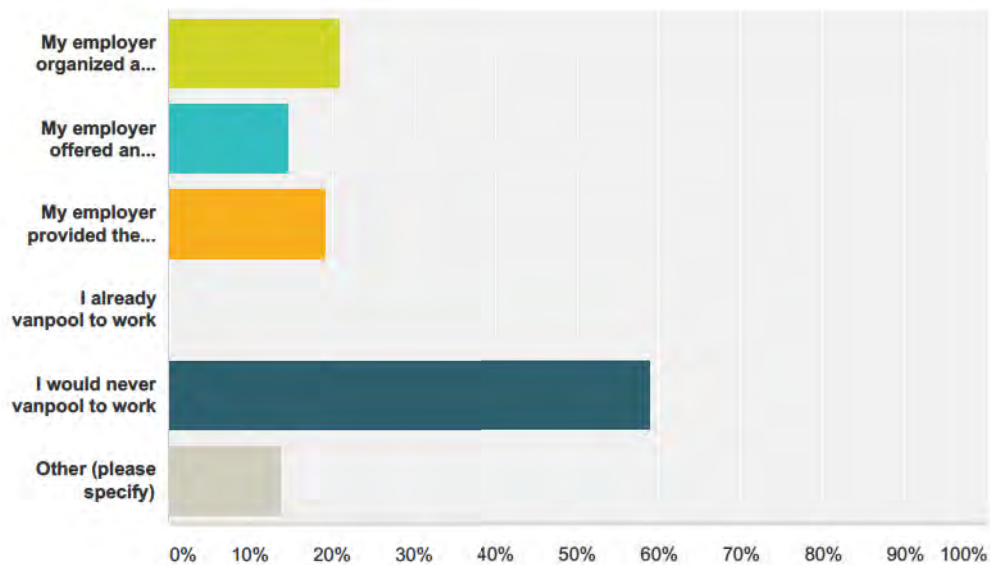
Answered: 434 Skipped: 56



Answer Choices	Responses
My employer facilitated carpools	11.75% 51
My employer offered an incentive to carpool (financial, priority parking, etc.)	20.28% 88
There were an active rideshare group advertised locally	18.89% 82
I already carpool to work	16.36% 71
I would never carpool to work	38.02% 165
Other (please specify)	20.28% 88
Total Respondents: 434	

Q13 I would vanpool (employer vehicle) to work more often if...

Answered: 433 Skipped: 57



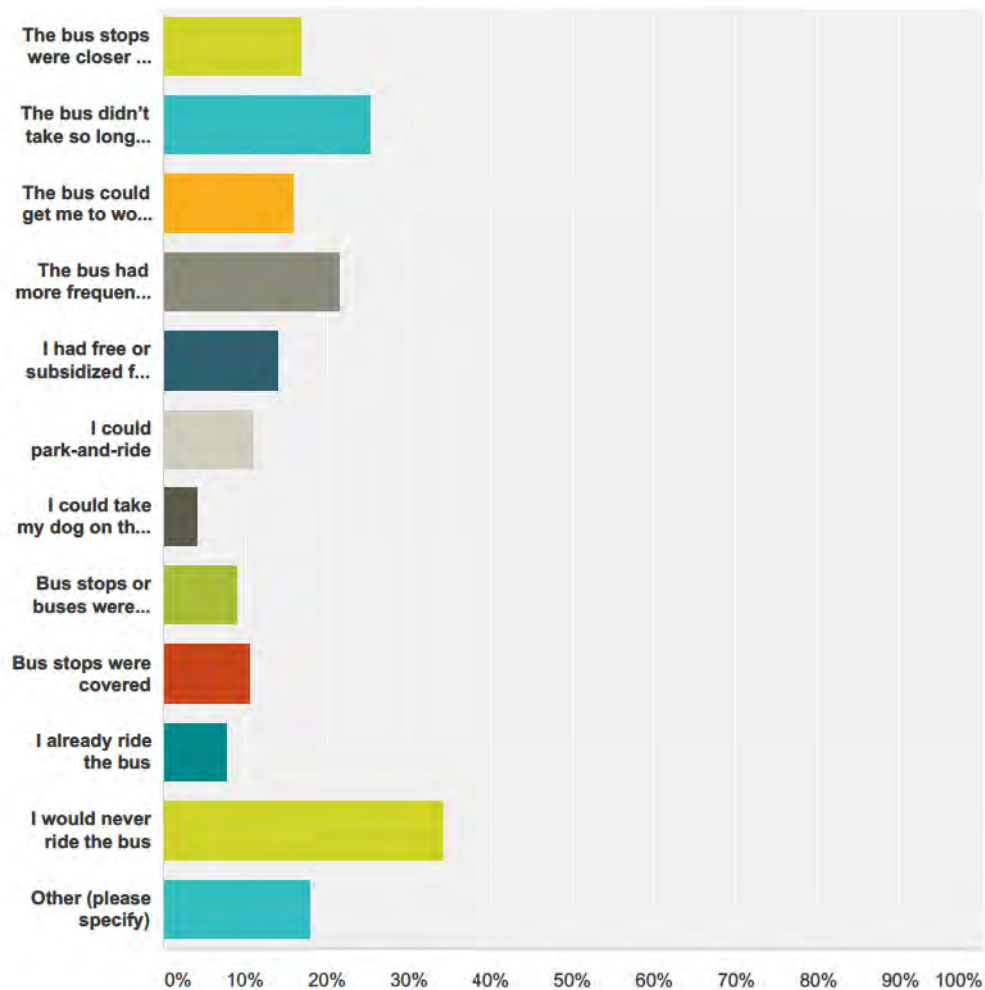
Answer Choices	Responses
My employer organized a vanpool	20.79% 90
My employer offered an incentive to vanpool	14.55% 63
My employer provided the van and fuel	19.17% 83
I already vanpool to work	0.00% 0
I would never vanpool to work	58.89% 255
Other (please specify)	13.86% 60
Total Respondents: 433	

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q14 I would bus to work more often if...

Answered: 433 Skipped: 57



Answer Choices	Responses
The bus stops were closer to my home or work	16.86% 73
The bus didn't take so long to get from home to work	25.17% 109
The bus could get me to work early	15.94% 69
The bus had more frequent service throughout the day	21.48% 93
I had free or subsidized fare from my employer	14.09% 61
I could park-and-ride	11.09% 48
I could take my dog on the bus	4.16% 18
Bus stops or buses were safer	9.01% 39
Bus stops were covered	10.62% 46

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

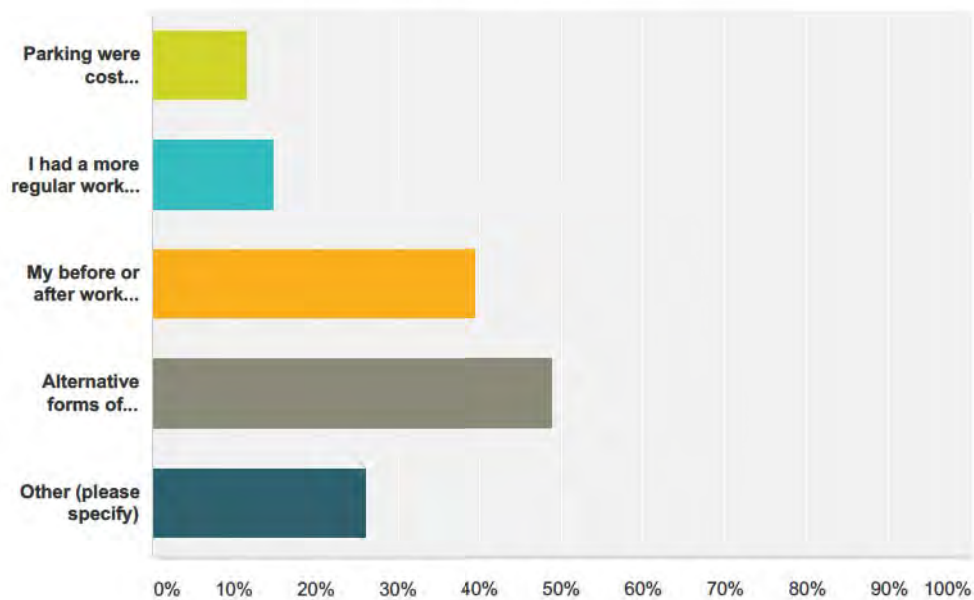
I already ride the bus	7.62%	33
I would never ride the bus	34.18%	148
Other (please specify)	18.01%	78
Total Respondents: 433		

City and Borough of Juneau Downtown Parking Survey

SurveyMonkey

Q15 I would drive to work less often if...

Answered: 418 Skipped: 72



Answer Choices	Responses	
Parking were cost prohibitive	11.48%	48
I had a more regular work schedule	14.83%	62
My before or after work commitment needs could be met using alternative forms of transportation	39.47%	165
Alternative forms of transportation were more convenient	48.80%	204
Other (please specify)	26.08%	109
Total Respondents: 418		

**Q16 Please feel free to include
additional comments or suggestions below.**

Answered: 171 Skipped: 319

**Q17 Would you like to be contacted
regarding this survey? If so, please leave
your contact information below.**

Answered: 52 Skipped: 438

Answer Choices	Responses	
Name	100.00%	52
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City / Town	0.00%	0
State / Province	0.00%	0
ZIP / Postal Code	0.00%	0
Country	0.00%	0
Email	94.23%	49
Phone	82.69%	43

City and Borough of Juneau
Willoughby District Parking Master Plan

APPENDIX B.
JUNEAU PARKING FACILITY CONCEPTUAL DESIGN
(CAPITAL SCHOOL PARK)

JUNEAU PARKING FACILITY CONCEPTUAL DESIGN

CONTRACT NO. RFP E04-179



**CITY AND BOROUGH
OF JUNEAU, ALASKA**

JUNE 2004

**TETRA TECH/KCM, INC.
JUNEAU, ALASKA
IN ASSOCIATION WITH
WALKER PARKING CONSULTANTS
JENSEN YORBA LOTT
WILSON ENGINEERING
TONER NORDLING AND ASSOC
SHANNON & WILSON**

JUNEAU PARKING FACILITY CONCEPTUAL DESIGN

DRAFT

JUNE 2004

Prepared for:
City and Borough of Juneau

Prepared by:



TETRA TECH/KCM

Tetra Tech/KCM, Inc.
230 South Franklin Street, Suite #212
Juneau, AK 99801-1364
(907)586-6400

Project #3310013

Juneau Parking Facility Conceptual Design TABLE OF CONTENTS

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Building Systems	3
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Project Cost	4
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Second and Franklin Site	6
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 A2.04 Fourth Level Plan
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A3.02 Building Elevations
A3.03 Building Sections
Existing Park Plan - Jensen Yorba Lott
Second and Franklin Garage Site
A2.01 Ground and Second Level Plans
A2.02 Third Level and Building Elevations
A2.03 Building Sections
Site Survey

B. Cost Estimates

~~C. Geotechnical Report~~

EXECUTIVE SUMMARY

The CBJ has identified the need for additional structured parking in the vicinity of the Capitol and Downtown core. Two sites were identified for study: the Capital Park site and the former JAMHI property at Second and Franklin Streets. A workshop was conducted with CBJ staff to enumerate design goals, contextual design limitations and to identify options for consideration.

Design goals for each site were identified as follows:

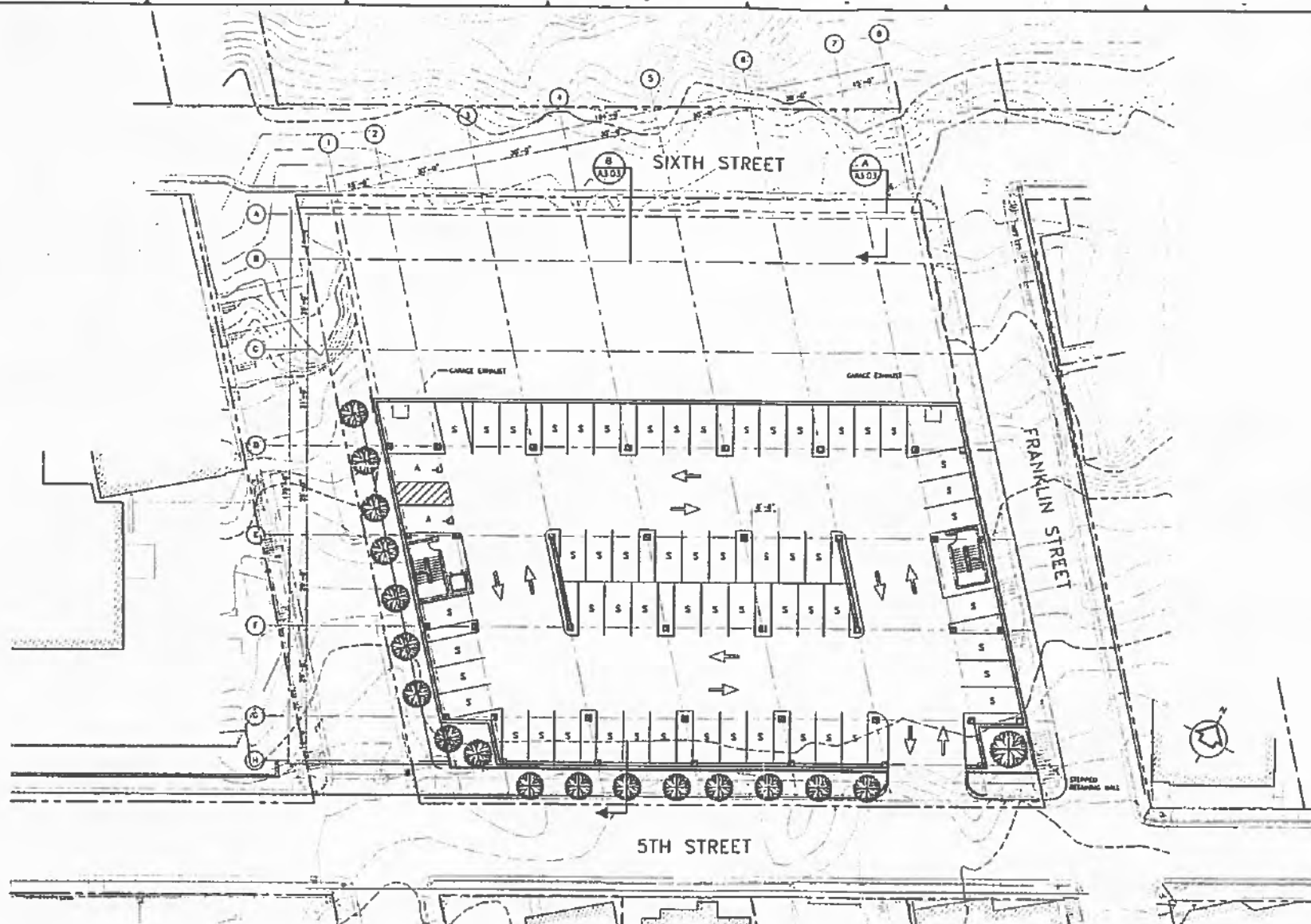
1. Capital Park Site:
 - a. Levels should be terraced back from Fifth and N. Franklin Streets to reduce visual and shade impacts on the surrounding neighborhood. This will reduce the number of spaces available significantly.
 - b. A park space providing facilities equivalent or better than the existing facilities should be included on the top levels.
 - c. Entries and exits may be shown along Fifth and N. Franklin, as appropriate. However, entries or exits on N. Franklin should consider possible closure during winter conditions because of the steepness of the street.
 - d. Snow removal should be feasible for any open upper decks to be used for wintertime parking.
2. Second and Franklin Site:
 - a. At least two levels of parking, with one accessed from the upper level of the existing state structure and one accessed from the lower level of the existing state structure.
 - b. If possible, a third level below accessed from either Franklin Street or Second Street should be included.
 - c. Any rehab costs necessary to use the state structure should be included in the construction cost estimates.
 - d. Possible street level retail space along Franklin Street should be considered.

One primary option was developed for each site, with several sub-alternates identified. Cost estimates have been developed which provide the basis for future planning. The design for the Second and Franklin site was based upon a new site survey, but the Capital Park design relied on existing available site data which will need to be verified.

Following a review of zoning requirements for the two sites, it was determined that the facility concept developed for each site would require allowable and conditional permits, variances or re-zones to be constructed as shown.

Costs for each site, as well as an approximate comparison with other parking projects in the downtown Juneau area, are included in Appendix B.

APPENDIX A. DRAWINGS



GROUND LEVEL
PLAN (0.00')
1/16" = 1'-0"



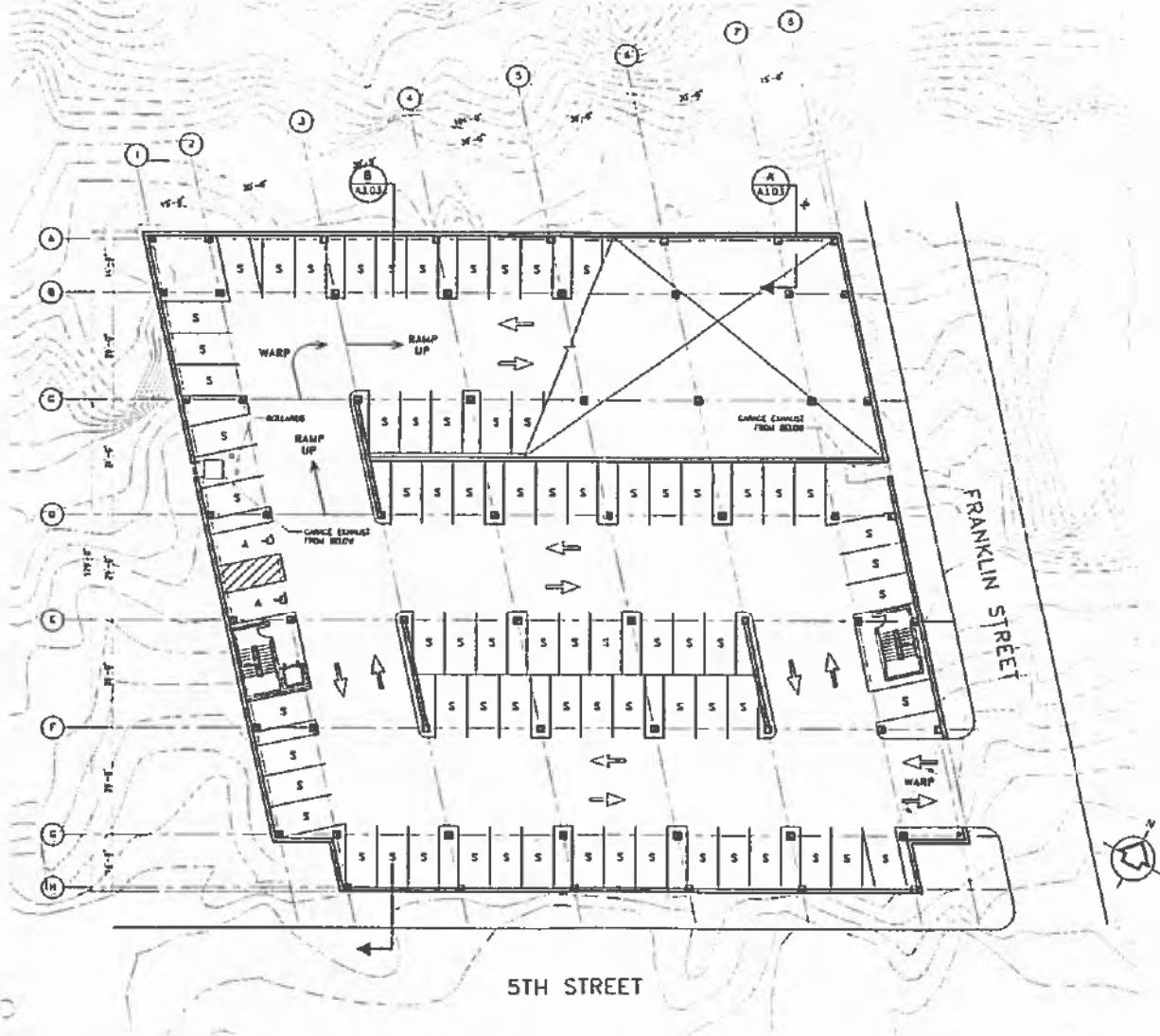
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Juneau, Alaska 99801-1364
907-586-6400 Fax: 907-481-3677



PARKING COUNT	
LEVEL	SPACES
0ND	58
2ND	78
3RD	83
4TH	42
TOTAL	238

DATE: 05/17/04	DESIGNED BY: JAC
REVIEWED BY: JAC	CHECKED BY: JAC
APPROVED BY: JAC	DATE: 05/17/04

CITY AND BOROUGH OF JUNEAU ALASKA JUNEAU PARKING GARAGE DESIGN STUDY CAPITAL PARK GARAGE GROUND LEVEL PLAN	
FILE NO: JAC09-17.00	PROJECT NO: 33100013
DWG NO: A2.01	SHEET: 01



SECOND LEVEL
PLAN (10.00')
1/16" = 1'-0"

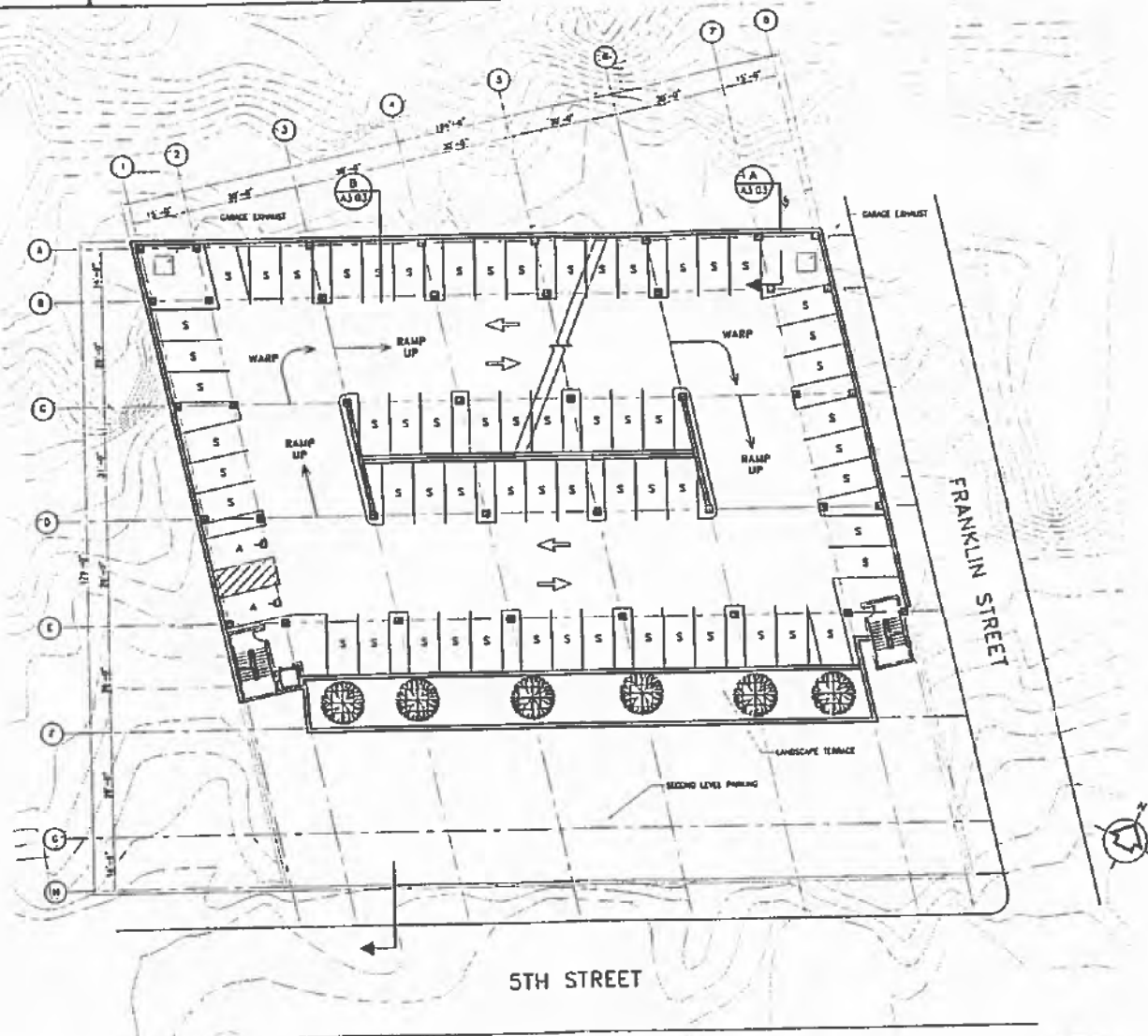


DATE: 05/11/04	DWG. NO.
DESIGNED BY:	1310013
CHECKED BY:	A2.02
APPROVED BY:	07

TETRA TECH/KCM
230 South Franklin Street, Suite #212
Juneau, Alaska 99801-1364
907-588-6400 Fax: 907-483-3877

CITY AND BOROUGH OF JUNEAU ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
CAPITAL PARK GARAGE
SECOND LEVEL PLAN

FILE NO.	JUN09-12.00
PROJECT NO.	1310013
DWG. NO.	A2.02
SHEET	07



THIRD LEVEL
PLAN (20.00')
1/16" = 1'-0"

12' 0" 6" 12" 24" 36"
SCALE: 1/16" = 1'-0"



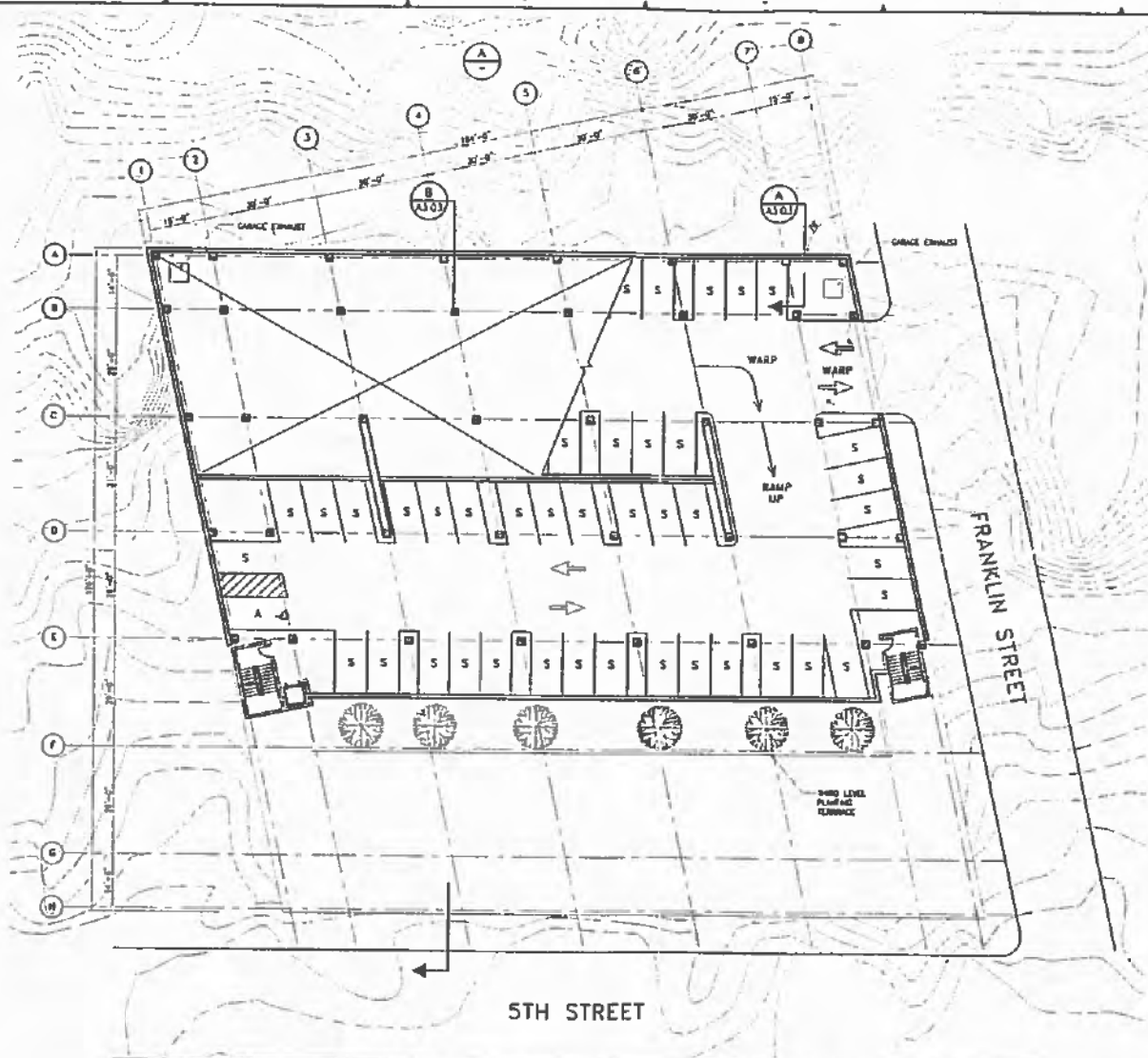
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Juneau, Alaska 99801-1364
907-586-6400 Fax: 907-463-3677

CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
CAPITAL PARK GARAGE
THIRD LEVEL PLAN

FILE NO: JACOS-42-00
PROJECT NO: 3310013
DWG NO: A2.03
SHEET: 07

DATE: 05/13/04	DWG NO: 3310013
DESIGNED: [Signature]	CHECKED: [Signature]
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DESIGNED: [Signature]	CHECKED: [Signature]

Notes: Dimensions in feet unless otherwise noted. 1/16" = 1'-0"



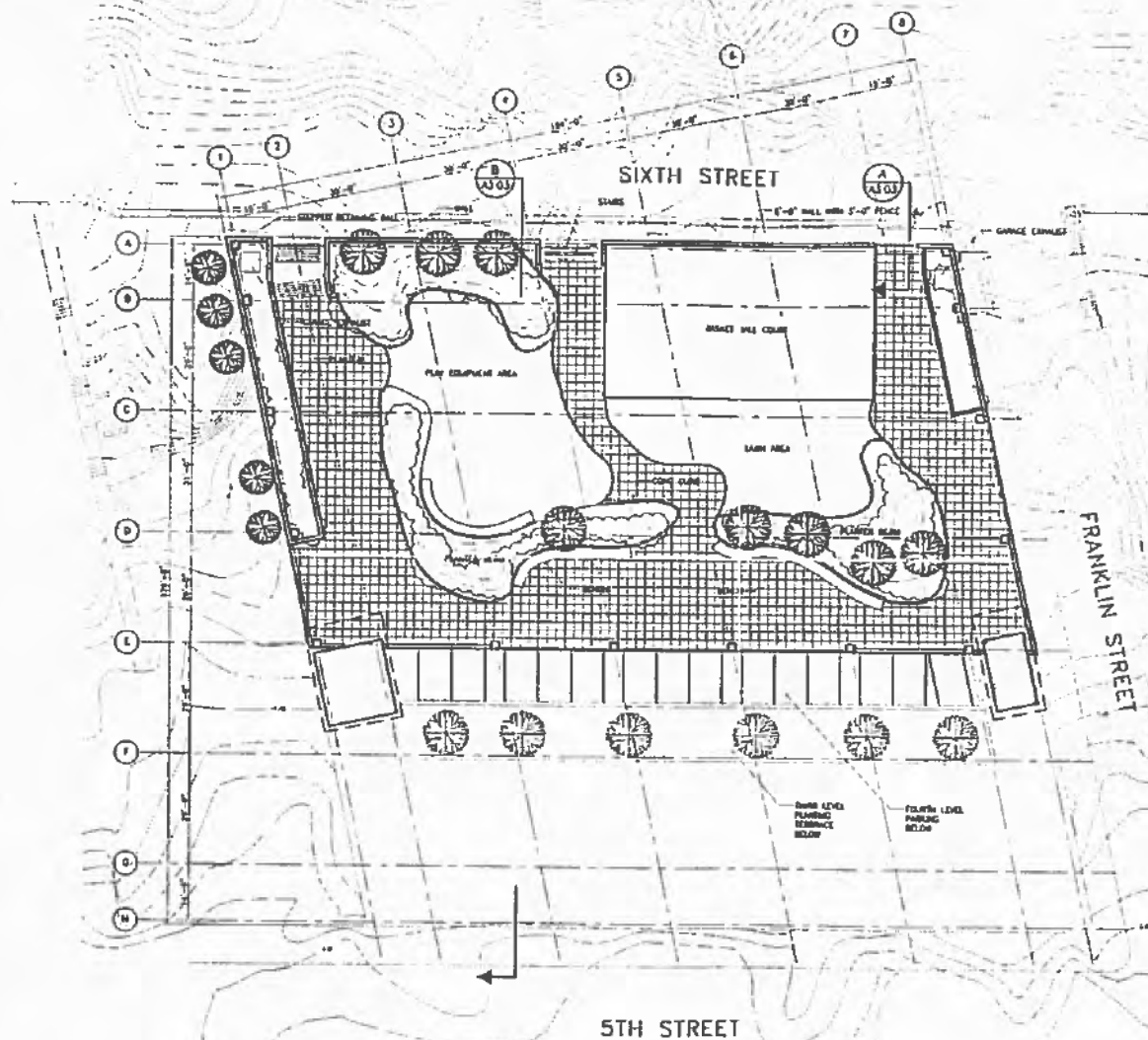
FOURTH LEVEL
PLAN (30.00)
1/16" = 1'-0"



DATE: 05/17/04	DESIGNED:	DESIGNED:
DESIGNED:	CHECKED:	CHECKED:
CHECKED:	APPROVED:	APPROVED:

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Juneau, Alaska 99801-1364
907-586-6400 Fax: 907-463-3877

CITY AND BOROUGH OF JUNEAU, ALASKA JUNEAU PARKING GARAGE DESIGN STUDY CAPITAL PARK GARAGE FLOOR PLANS		FILE NO. JA09-12.00
		PROJECT NO. 331001.3
		DWG NO. A2.04
		SHEET. 02



PARK LEVEL
PLAN (40.00')
1/16" = 1'-0"

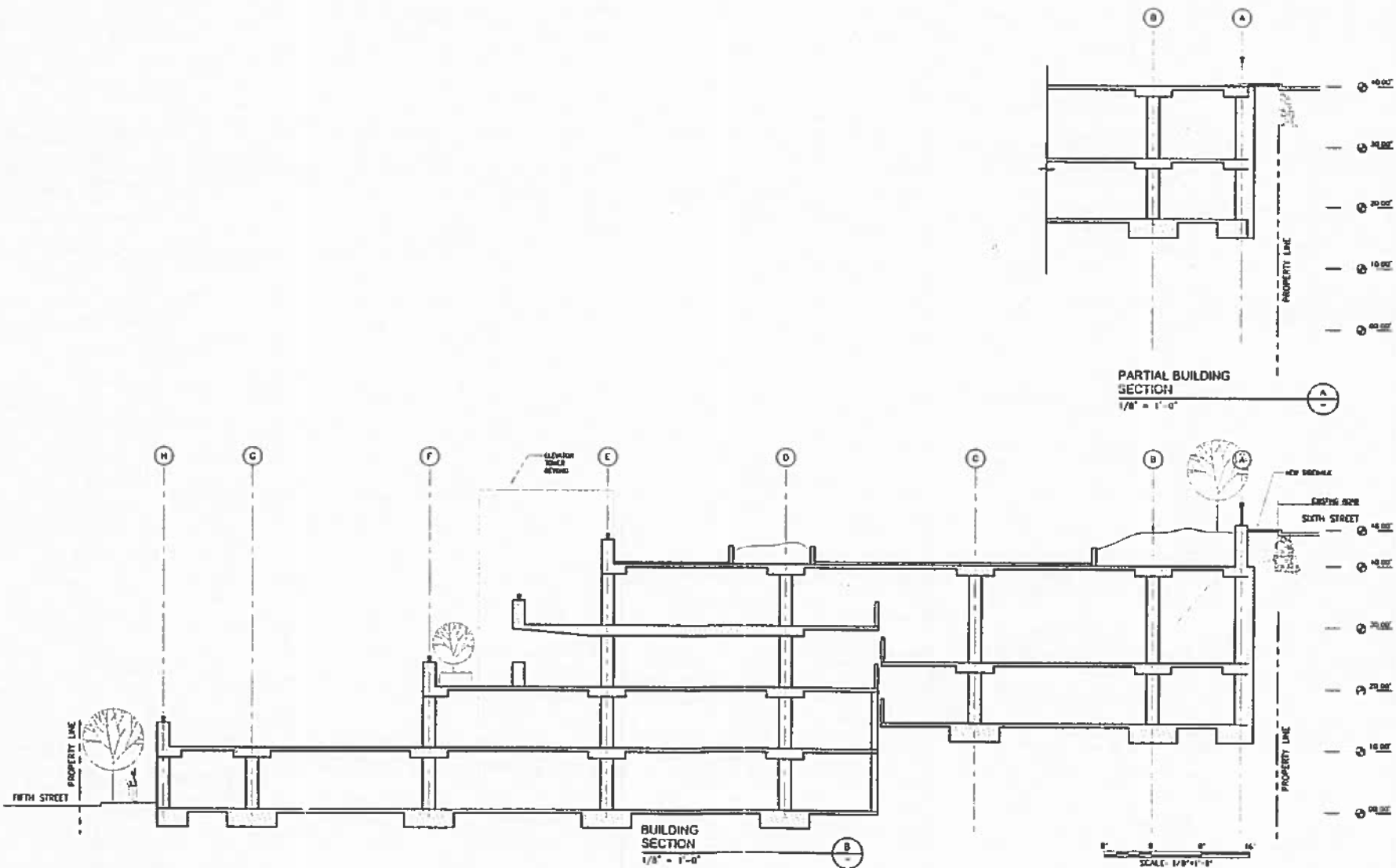
TETRA TECH/KCM
230 South Franklin Street, Suite #212
Juneau, Alaska 99801-1364
907-586-6400 Fax: 907-463-3877

12" 0" 12" 24" 36"
SCALE: 1/16" = 1'-0"

DATE: 05/12/04	DESIGNED:	CHKD:
DRAWN:	CHKD:	APPROVED:
DATE: 05/12/04	DESIGNED:	CHKD:
DRAWN:	CHKD:	APPROVED:

CITY AND BOROUGH OF JUNEAU ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
CAPITAL PARK GARAGE
PARK LEVEL PLAN

FILE NO: JAO29-17.00
PROJECT NO: 3310013
SHEET NO: A2.05
SHEET OF

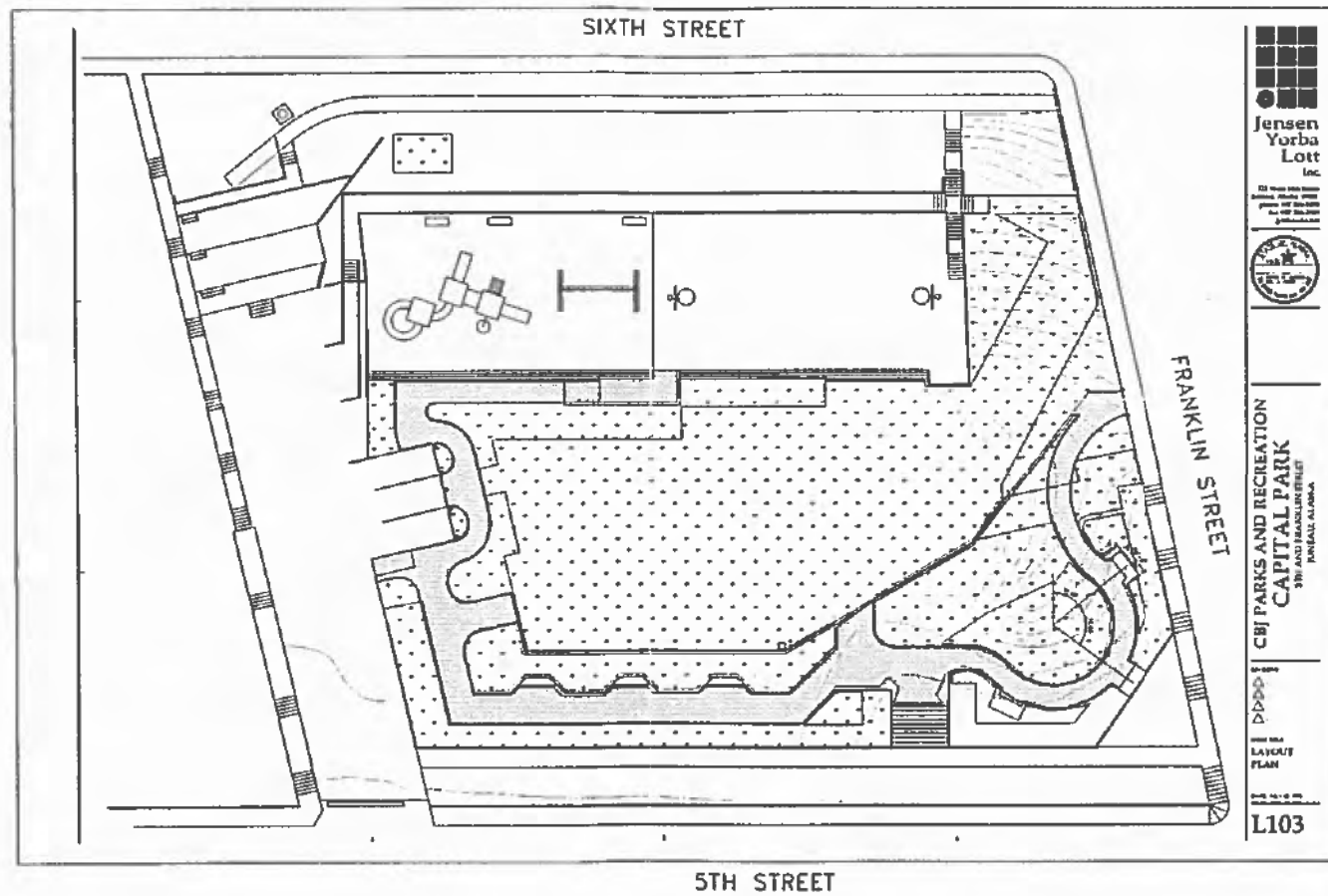


DATE: 05/12/04	DWG. NO.: 11009-13.00
DESIGNED BY: [Signature]	PROJECT NO.: 11009-13
DRAWN BY: [Signature]	DWG. NO.: A3.03
CHECKED BY: [Signature]	SHEET: 03
APPROVED BY: [Signature]	

TETRA TECH/KCM
230 South Franklin Street, Suite #212
Juneau, Alaska 99801-1364
907-586-6480 Fax 907-413-0877

CITY AND BOROUGH OF JUNEAU ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
CAPITAL PARK GARAGE
SECTIONS AND ELEVATIONS

FILE NO: 11009-13.00
PROJECT NO: 11009-13
DWG NO: A3.03
SHEET: 03



SIXTH STREET

FRANKLIN STREET

FIFTH STREET

EXISTING SITE PLAN
1/16"=1'-0"

**Jensen
Yorba
Lott
Inc.**



**CBJ PARKS AND RECREATION
CAPITAL PARK
3RD AND FRANKLIN STREET
JUNEAU, ALASKA**

**LAYOUT
PLAN**

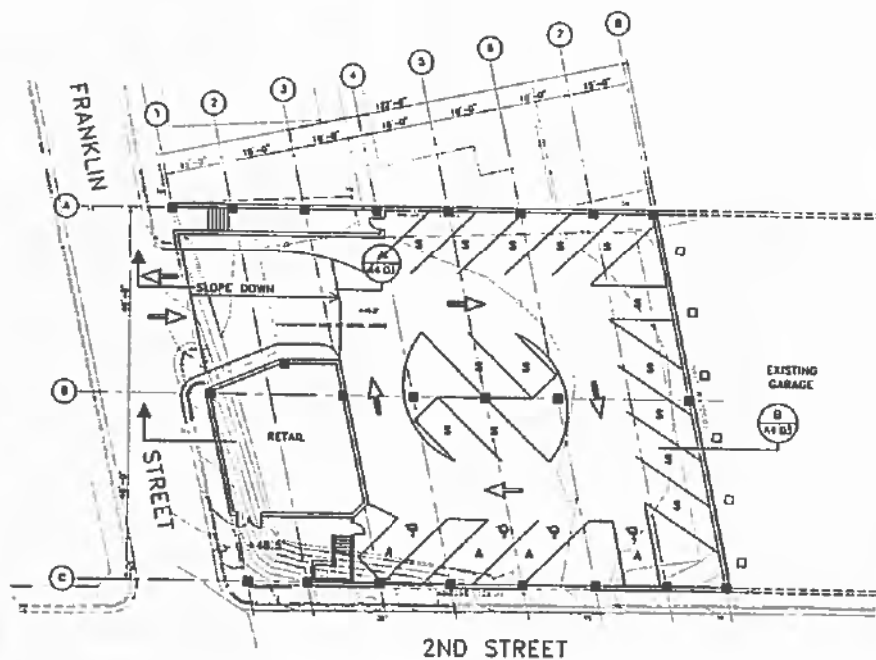
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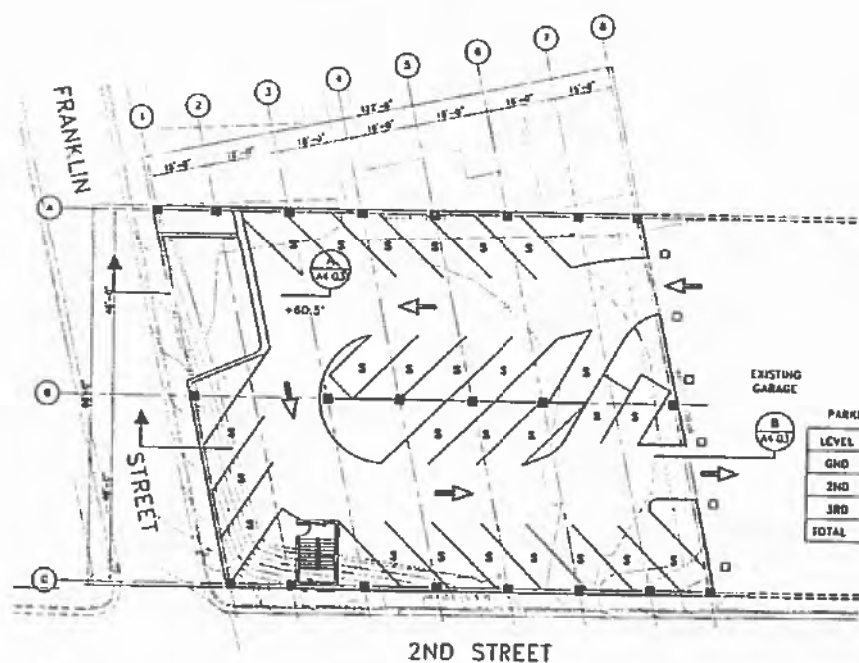
TETRA TECH/KCM
230 South Franklin Street, Suite 8212
Juneau, Alaska 99801-1384
907-586-8400 Fax 907-483-3077

**CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
CAPITAL PARK GARAGE
EXISTING SITE PLAN**

FILE NO: JAOB-CZ-00
PROJECT NO: 231001.3
SHEET NO: 1
SHEET OF: 07



GROUND LEVEL
PLAN
1/16" = 1'-0"



SECOND LEVEL
PLAN
1/16" = 1'-0"

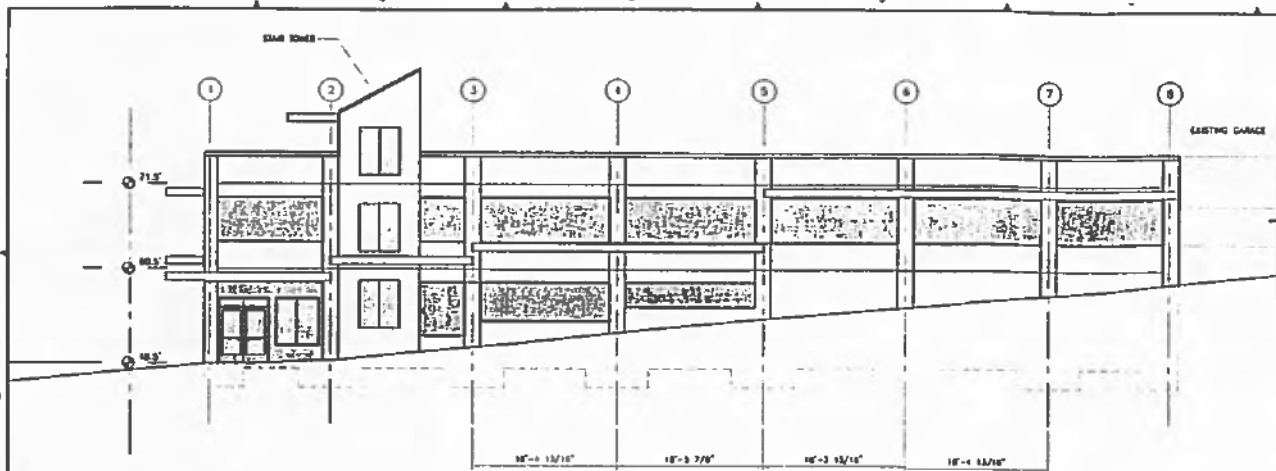
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LEVEL	SPACES
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2ND	26
3RD	28
TOTAL	68

DATE: 05/11/94	CH: JAC
DESIGNED: JAC	CHK: JAC
DRAWN: JAC	APP: JAC
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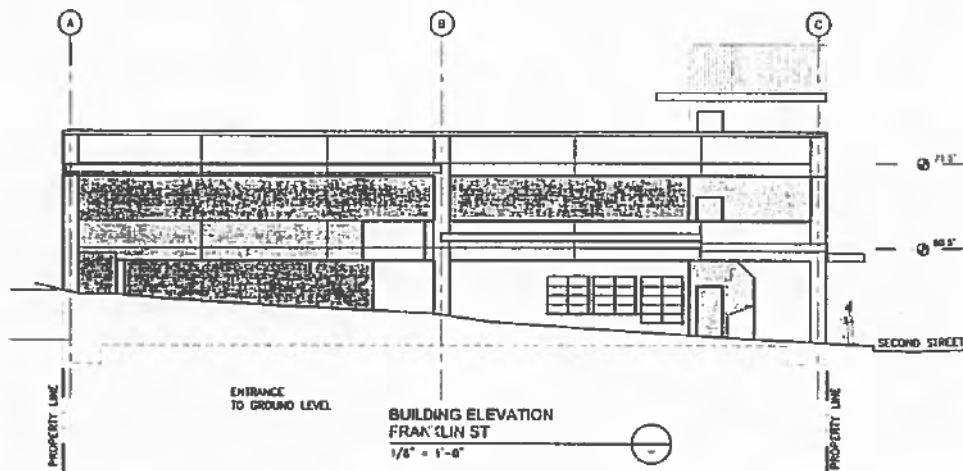
TETRA TECH/KCM
230 South Franklin Street, Suite #212
Juneau, Alaska 99801-1364
907-586-6400 Fax: 907-483-3671

CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
SECOND AND FRANKLIN GARAGE
FLOOR PLANS

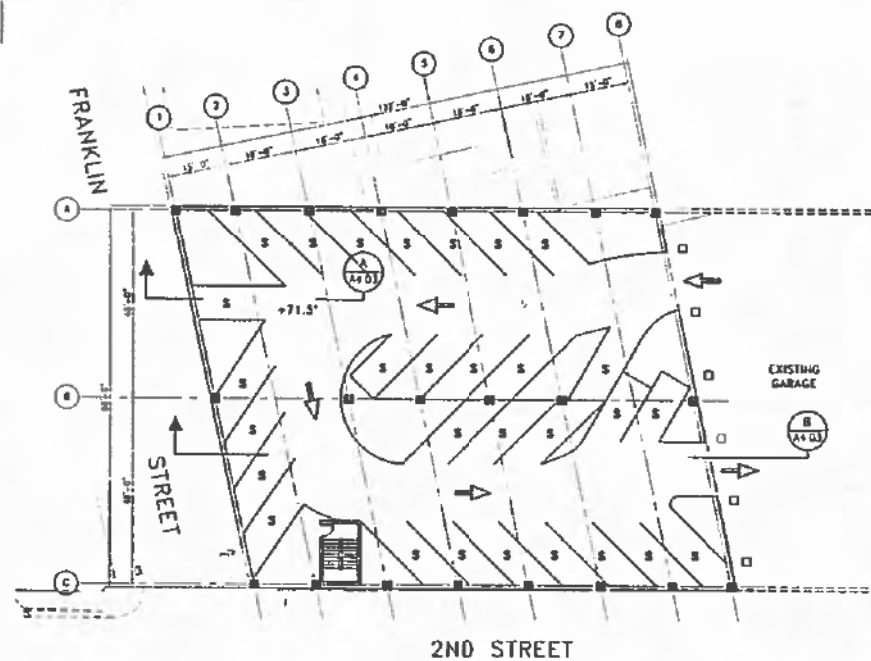
FILE NO. JAC09-49 (D)
PROJECT NO. 3310001
DWG NO. A4.01
SHEET: 02



BUILDING SECTION
SECOND ST
1/8" = 1'-0"

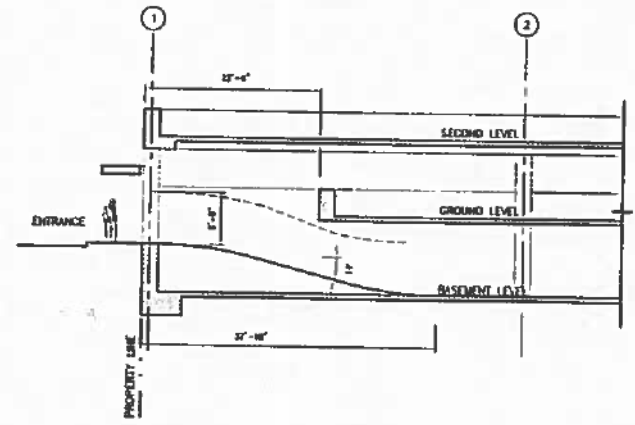


BUILDING ELEVATION
FRANKLIN ST
1/8" = 1'-0"



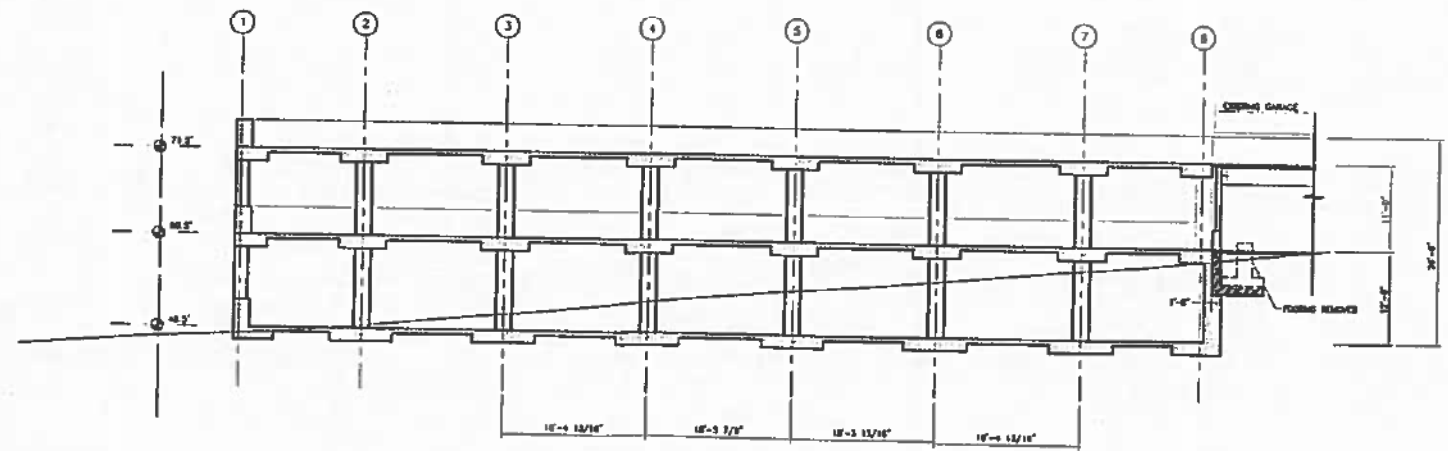
THIRD LEVEL
PLAN
1/16" = 1'-0"

12" 6" 3" 1 1/2" 3/4" 3/8" 3/16" 1/8" 1/16" 1/32" 1/64" 1/128" 1/256" 1/512" 1/1024" 1/2048" 1/4096" 1/8192" 1/16384" 1/32768" 1/65536" 1/131072" 1/262144" 1/524288" 1/1048576" 1/2097152" 1/4194304" 1/8388608" 1/16777216" 1/33554432" 1/67108864" 1/134217728" 1/268435456" 1/536870912" 1/1073741824" 1/2147483648" 1/4294967296" 1/8589934592" 1/17179869184" 1/34359738368" 1/68719476736" 1/137438953472" 1/274877906944" 1/549755813888" 1/1099511627776" 1/2199023255552" 1/4398046511104" 1/8796093022208" 1/17592186044416" 1/35184372088832" 1/70368744177664" 1/140737488355328" 1/281474976710656" 1/562949953421312" 1/1125899906842624" 1/2251799813685248" 1/4503599627370496" 1/9007199254740992" 1/18014398509481984" 1/36028797018963968" 1/72057594037927936" 1/144115188075855872" 1/288230376151711744" 1/576460752303423488" 1/1152921504606846976" 1/2305843009213693952" 1/4611686018427387904" 1/9223372036854775808" 1/18446744073709551616" 1/36893488147419103232" 1/73786976294838206464" 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**BUILDING SECTION
AUTO ENTRY**
1/8" = 1'-0"

A
-



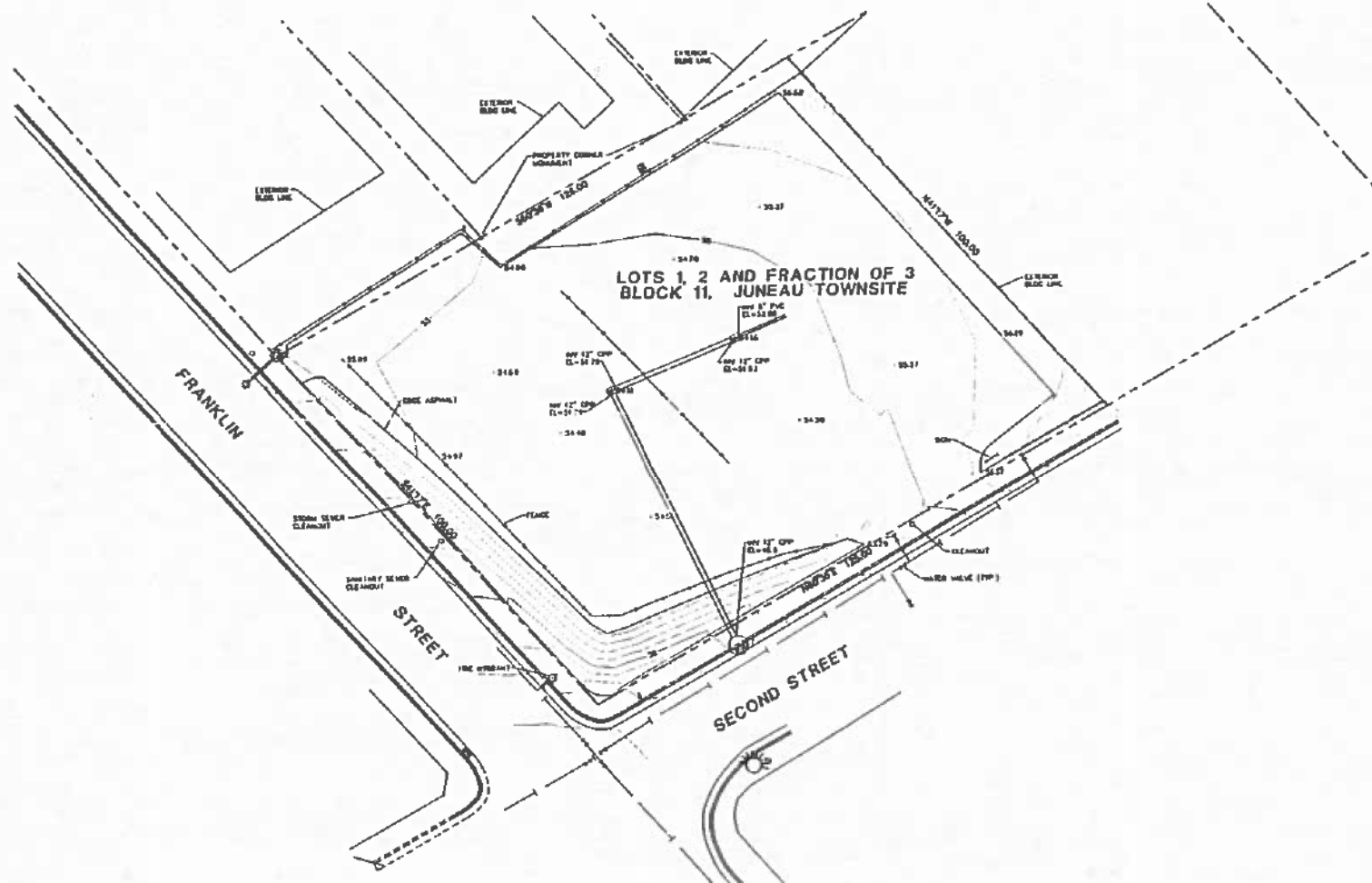
BUILDING SECTION
1/8" = 1'-0"

B
-

DATE: 05/12/04	DR: [blank]
DESIGNED: [blank]	CHK: [blank]
DRAWN: [blank]	APP: [blank]
CHECKED: [blank]	REV: [blank]
APPROVED: [blank]	SCALE: [blank]

TETRA TECH/KCM
230 South Franklin Street, Suite #212
Juneau, Alaska 99801-1384
907-585-6400 Fax: 907-463-3677

CITY AND BOROUGH OF JUNEAU ALASKA JUNEAU PARKING GARAGE DESIGN STUDY		FILE NO: JAOB-44.00
SECOND AND FRANKLIN GARAGE BUILDING SECTION		PROJECT NO: 3310013
		DWG NO: A4.03
		SHEET: 07



EXISTING SITE
PLAN
NOT TO SCALE



TETRA TECH/KCM
230 South Franklin Street, Suite #212
Juneau, Alaska 99801-1364
907-586-6100 Fax: 907-463-3877

CITY AND BOROUGH OF JUNEAU ALASKA
JUNEAU PARKING GARAGE
DESIGN STUDY
**SECOND AND FRANKLIN GARAGE
EXISTING SITE SURVEY PLAN**

FILE NO: JAGS-CT 00
PROJECT NO: 331001.3
DWG NO: 1
SHEET: 07

DATE: 05/12/04	CHK: [initials]
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Scale: 1" = 100' (Not to Scale)

APPENDIX B. COST ESTIMATE

Table B-1
Parking Structure Construction Costs in Juneau

	Structure	Basis of Costs	Source of Information	New Stalls	Stalls Lost	Net Stalls	Total Area	Parking Area	Constr/Est Date	Constr/Est Cost	Const Cost 2004	Area per New Stall	Cost per sf	Cost per New Stall	Cost per Net Stall	Total Cost per Net Stall	Monthly Rental Req'd
	Past Projects										[3]					[4]	[5]
[1]	Marine Park Garage	Construction	CBJ Files	291	50	241	97,000	97,000	1985	\$5,115,000	\$8,833,000	333	\$91	\$30,400	\$36,700	\$44,000	\$273
[2]	2nd and Gold St	Construction	KCMACourt Plaza	44	20	24	10,830	10,830	1984	\$280,000	\$484,000	246	\$45	\$11,000	\$20,200	\$26,300	\$128
[6]	Main & Egan (large w/office, retail)	A/E estimate	MRV/Transpo	646	55	591	223,270	185,684	1999	\$15,414,872	\$16,985,000	287	\$78	\$26,300	\$28,700	\$37,300	\$258
[6]	Main & Egan (large, parking only)	A/E estimate	MRV/Transpo	646	55	591	n/a	185,684	1999	\$11,438,144	\$12,603,000	287	\$68	\$19,500	\$21,300	\$27,700	\$200
[6]	Main & Egan (medium w/office, retail)	A/E estimate	MRV/Transpo	315	55	260	119,000	100,650	1999	\$8,783,037	\$9,658,000	320	\$81	\$30,700	\$37,100	\$46,200	\$295
[6]	Main & Egan (medium, parking only)	A/E estimate	MRV/Transpo	315	55	260	n/a	100,650	1999	\$8,598,165	\$7,268,000	320	\$72	\$23,100	\$28,000	\$36,400	\$231
[6]	Armory Site (w/office, retail)	A/E estimate	MRV/Transpo	400	85	315	167,441	150,250	1999	\$11,500,220	\$12,872,000	378	\$78	\$31,700	\$40,200	\$52,300	\$304
[6]	Armory Site (parking only)	A/E estimate	MRV/Transpo	400	85	315	n/a	150,250	1999	\$8,584,645	\$9,470,000	378	\$63	\$23,700	\$30,100	\$39,100	\$236
	Current Estimates																
	Capital Park	A/E estimate	TU/KCM	239	3	236	127,575	100,400	2004	\$10,257,500	\$10,258,000	420	\$80	\$42,900	\$43,500	\$56,800	\$398
	Capital Park (Alt. 1)	A/E estimate	TU/KCM	287	3	284	138,875	111,700	2004	\$10,687,500	\$10,698,000	418	\$77	\$40,100	\$40,500	\$52,700	\$375
	Capital Park (Alt. 1, w/o park)	A/E estimate	TU/KCM	267	3	264	114,875	111,700	2004	\$8,727,950	\$8,728,000	418	\$78	\$33,000	\$33,100	\$43,000	\$315
	2nd and Franklin (w/ retail)	A/E estimate	TU/KCM	76	30	46	38,800	37,500	2004	\$2,665,300	\$2,865,000	493	\$69	\$35,100	\$57,900	\$75,300	\$332
	2nd and Franklin (Alt. 1, w/o retail)	A/E estimate	TU/KCM	79	30	49	38,300	38,300	2004	\$2,454,100	\$2,454,000	485	\$64	\$31,100	\$50,100	\$65,100	\$298

[1] Design/build project, constr cost incl design fees, approx area = 87,000 sf

[2] Constr cost estimated from bid prices, final records not available, spaces only 8' wide, less than standard aisles

[3] Based on ENR Index for Northwest US.

[4] Includes associated project costs at 30% of construction costs for all projects except Marine Park garage, which was estimated at 20%.

[5] Based on 25-yr life of structure, 6% cost of capital, \$35/stall/month o&m costs

[6] Based on 1999 Schematic Design, no independent confirmation of design or estimates



City and Borough of Juneau
City & Borough Manager's Office
155 South Seward Street
Juneau, Alaska 99801

Telephone: 586-5240 Facsimile: 586-5385

TO: Chair Troll, Assembly Lands Committee

DATE: August 26, 2016

FROM: Rorie Watt, P.E., City Manager

A handwritten signature in black ink, appearing to read "Rorie Watt", is placed over the printed name.

RE: Parking Issues Update

The COW asked for a number of pieces of information at its meeting on 8/15/16. Attached to this memorandum are:

1. The Fee-In-Lieu of parking ordinance which allows some properties to contribute cash funds instead of providing on-site parking spaces.
2. An update on usage of the Fee-In-Lieu code program: Since 2007, four developments have used the program. So far developers have paid \$135,197 but the total will increase to \$169,360 when the fees are paid off. This represents 21 parking spaces. I would remind the Assembly that the FIL code was passed to help stimulate denser development in the downtown core and was passed in the context of constructing the Downtown Transportation Center Parking garage which has 208 parking spaces. At the time, it was well understood and acknowledged that surface parking lots are a poor use of land in the urbanized core.
3. Ad Hoc Parking Committee – I am working with DBA and the DIG to form an ad hoc committee that will allow better coordination and flexibility on all parking issues.

I would also note that the Willoughby District parking structure report is in the PWFC packet for 8/29/16.



City and Borough of Juneau
Engineering Department
155 South Seward Street
Juneau, Alaska 99801
Telephone: 586-0800 Facsimile: 463-2606

DATE: August 25, 2016

TO: Maria Gladziszewski, Chair Public Works and Facilities Committee

FROM: Michele Elfers, Chief Landscape Architect, Engineering and Public Works Department

RE: RecycleWorks Program Update

In the spring of 2015, staff created the solid waste action plan as a guidance tool to maximize waste diversion from the landfill. It was presented to JCOS and PWFC for comment and discussion in the summer of 2015. Since that time staff has been working to implement the plan. The following is an update on action items:

1. Install and Operate Drop Box Recycling: 5 Drop boxes are in Juneau waiting for labels to be made and affixed. They will accept source separated recycling materials similar to the collection at Capital Landfill. The boxes will be delivered to the following sites the week of September 5th:
 - a. The Alaska Club on Riverside Drive in the Mendenhall Valley, for residential public use (not commercial/business)
 - b. Statter Harbor in Auke Bay for residential public use and Harbor use
 - c. Aurora Harbor Downtown for residential public use and Harbor use
 - d. Bartlett Regional Hospital for CBJ use. RecycleWorks will make one or two drop boxes available to CBJ entities for internal use on a rotating basis as a pilot program to encourage recycling.
 - e. Future sites- Juneau School District (JSD) is interested in use of the drop boxes and RecycleWorks will develop this fall and winter a trial program for schools with drop boxes and education on recycling for students.
2. Increase Recycling Bins in Public Facilities: RecycleWorks purchased moveable recycle bins that are being used at festivals and events. This summer they were placed at the Maritime Festival and the JPD lunch in Marine Park.
3. Food Compost: A community/professional ad hoc group has been meeting for a year to develop food and yard waste composting programs. Harborview School students are composting their lunch waste currently and CBJ is working with Cedar Grove, a large composting firm in Seattle to evaluate the feasibility of a centralized composting facility in Juneau. A report will be brought to the PWFC this fall for review.
4. Public Outreach:
 - a. Branding- The RecycleWorks program has a new logo.



- b. Information- The new website is launched and can be found at Juneaurecycling.com. The website offers more user friendly access to program information and information on why recycling is important.
- c. Education- RecycleWorks staff participated in the STEM program this past year educating students on the Waste theme and recycling. We are also creating educational kits that will be given to JSD as part of their kit program on recycling and composting. The kits will complement composting program development at schools and JSD recycling program development.
- d. Advertising- In the next two weeks we will have radio and newspaper advertisements to provide the public information on the drop box program and the new website, juneaurecycling.com.

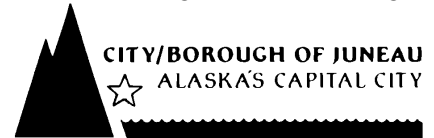
The overarching goal of the solid waste action plan, and more specifically, increasing program efficiencies is to divert material from being placed in the landfill. In FY 15, the CBJ diverted approximately 2200 tons of material from the landfill through the recycling and HHW programs. Capitol Disposal estimated approximately 700 tons of recycled material is collected from the private curbside recycling program. This represents approximately 9% of the average annual tonnage placed in the landfill.

Next steps for the program include:

1. Continued work on composting at schools and at a centralized facility.
2. Continued evaluation of colocation of a HHW and Recycling facility.
3. Evaluation of program costs, user fees, and program revenue.
4. Create program information newsletter to be mailed to Juneau residents.

An update on these steps will be brought to the PWFC this fall.

	Solid Waste Action Plan					
	<u>Category</u>	<u>Action</u>	<u>Priority</u>	<u>Task</u>	<u>Timeline</u>	<u>Other</u>
1	Recycling	Increase Recycling Bins in public facilities	High	List and prioritize locations for new bins	ongoing	
				Purchase bins and install at high visibility public locations	fall 2015	Pilot program this season, purchase 10 bins @ \$300/bin, evaluate cost, collection, management to inform expanding program for long term
				Consider other collectors such as Docks and Harbors/Parks and Rec for docks and park areas	winter 2015	Work with Streets, D&H and P&R to evaluate cost of CBJ vs private contractor
				Evaluate collection and contracting	winter 2015	
2	Recycling	Install and Operate Drop Box recycling	High	List and prioritize locations for drop boxes	ongoing	
				Purchase Drop Boxes and Install	2016	Pilot program to install 3 drop-boxes with 2 extra at one location. Evaluate program at end of year for expansion and long term.
				Identify truck/equipment/driver for box transport	2016	Consider CBJ collection vs. private collector
				Evaluate collection and contracting	2016	Use info from pilot project and user departments to inform decision
3	HHW	Move Street's salt storage from HHW Facility to Consolidated Street Facility	High	Design new building	summer 2015	
				Construct new building and move out of HHW building	fall 2015	
4	HHW	Increase HHW programs	High	Develop Floor Plan for HHW building for 5 year buildout plan	winter 2015	
			High	Increase space and Improve Customer Service of Hazbin area	winter 2015	
			Medium	Implement expanded recycling program in new building	2017	
			Low	Expand HHW Matchmaking with new space and coordinate with Freecycle	2018	
7	Contracts	Consider Co location of Recycling and HHW	High	Develop Floor Plan for HHW building for 5 year buildout plan (above in Increase HHW program)	2016	
			Medium	Analyze Cost Impacts of Operating program at HHW by public and private sector	2017	
8	Food Compost	Educate Staff on Food Compost Programs	High	Attend Training on management, operation and technology by SWANA	May-2015	
		Build Partnerships	High	Create Ad-Hoc Committee with private/public/committee participation	Fall 2015	
		Build Program	High	Evaluate Cost/Land/Technology, Staff, Disposal Issues	Fall 2015	
			Low	Build collection and source program	2018	
			Low	Build composting technical program	2018	
			Low	Implement program	2018	
5	Public Outreach	Make Programs Visible to Public	High	Good signage at drop boxes, HHW, Landfill Recycling/Baler, any new programs	2016	
6	Public Outreach	Brand and Market the Program	High	Hire consultant to brand -logo, slogan, flyer/rack card, stickers, website, ads	2015-2016	
			Medium	Create regular newsletter/mailer	2016	Need to evaluate type, amount of information, who manages this.
			Low	Participate in Local Events - July 4, Maritime Festival, Earth Day, School Events	2016	
10	Public Outreach	Build Partnerships	Medium	Partner with Chamber, Rotary, other local business organizations on Public Outreach tasks	2016	As the high priority items are complete, start doing outreach and education on what we are doing.
9	Recycling	Evaluate Use of Recyclables in CBJ facilities	Medium	Research other cities policies/purchasing codes	2016	
				Analyze cost impacts	2016	
11	Contracts	Evaluate and Renew Contracts	Medium	Provide update on current status, scope, cost of contracts with long term strategy	2016	
				Evaluate other tasks and what contract mechanism should be	2016	

MEMORANDUM

TO: Roger Healy, P.E.
Engineering & Public Works Director

FROM: Greg Smith
Contract Administrator

Date: August 25, 2016

SUBJECT: Contracts Division Activity
August 12, 2016, through August 25, 2016

Current Bids – Construction Projects >\$50,000

E17-022	Egan Water System Replacement	Estimate \$578,000. 3 bids received. Southeast Earthmovers low bidder \$554,961. Award in progress.
E16-146	JNU Aircraft Rescue & Firefighting (ARFF) Station Modifications	Estimate \$2.1 Million. 3 bids received. Dawson Construction low bidder, \$1,810,000. NTP issued 8/16/16.
E16-254	JNU Snow Removal Equipment Building	Estimate \$16.4 Million. 5 bids received. F & W Construction Co. Inc., low bidder \$13,373,833. Award in progress.
E17-082	Dzantik'I Heeni Middle School Roof Repairs	Estimate \$100,000. Bids due 9/7/16
E17-045	JNU Runway Safety Area Improvements, Phase 2B	Estimate \$4,100,000. 5 Bids Received. SECON low bidder, \$3,974,321. McG Constructors deemed non-responsive. Award in progress.
BE17-072	Treadwell Mine Office Building Rehabilitation – PH I	Estimate \$115,000. Bids due 9/13/16.

Current RFP's – Services

RFP E17-026	Juneau School District Facility Master Plan	3 proposals received. Jensen Yorba Lott successful proposer. Negotiations in progress.
RFP E17-040	Planning and Environmental Permitting for Taxiway-A Rehabilitation and Runway Incursion Mitigation	PDC Inc. Engineers successful proposer. Negotiations in progress.
RFP E17-102	Inspection Services for Cathodic Protection Systems at Public Works Utilities	Proposals due 9/13/16.

Current Request for Quotes –RFQs – Construction (between \$20,000-\$50,000)

RFQ E17-099	Downtown Fire Station Sidewalk	Admiralty Construction, low bidder, \$15,340. NTP issued 8/24/16.
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Other Projects – Professional Services – Contracts, Amendments & MR's >\$20,000

RFP E15-183	A 3 – Conceptual Design and Planning Services for Franklin and Front Street Reconstruction – Phase 1	DOWL, \$149,920. Processing 8/10/16.
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Contracts Division Activity
August 12, 2016 through August 25, 2016

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Other Projects – Professional Services – Contracts, Amendments & MR's >\$20,000 (Cont'd.)

RFP E10-178	A7 – Planning & Design Services for Salmon Creek Water Source Secondary Disinfection	Carson Dorn, \$39,600. Routing for signatures.
RFP E15-204	A1- Contract Administration and Inspection Services for Eagles Edge Subdivision Water System Improvements – PH III	DOWL, \$73,640. Processing 8/24/16.
RFP E16-026	A2 – Design JNU ARFF Building Modifications	Jensen Yorba Lott, Inc., \$81,588. NTP issued 8/24/16.
RFP E14-111	A5 – Design Services for Egan Drive Water System Replacement Main Street to Tenth Street	DOWL, \$55,340. Processing 8/23/16.

Term Contract – Professional Services (between \$20,000-\$50,000)

MR E13-156 (Environmental)	CBJ Water Utility 2016 Sanitary Survey	Responses due 8/19/16. – Cancelled.
MR E13-156 (Environmental)	MWWTP Fuel Leak Monitoring	Cox Environmental only proposer. Negotiations underway.
MR E13-156 (JYL-Arch)	PA 8 – Child Adolescent Mental Health Unit	Jensen Yorba Lott, NTE \$50,000. Processing 8/23/16.

Term Contract – Stabler Point Mapping Services (between \$20,000-\$50,000)

RFP E15-148 (A)	PA 2 – Stabler Quarry Sediment Control Rack Install and Site Improvements	Arete Construction, \$33,926. NTP issued 8/25/16.
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Term Contract – Electrical (between \$20,000-\$50,000)

RFP E15-170(Alcan)	Water SCADA Master Radio Relocation	Alcan Electric, \$40,252. NTP issued 8/24/16.
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Term Contract – Bartlett Regional Hospital Small Projects >\$20,000

RFP E15-143	PA 7 – Design and Contract Administration Services for BRH Tomosynthesis Room 1305 / 1306 Renovation	Wilson Engineering, Inc., \$58,115. NTP issued 8/19/16.
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Construction Change Orders (>\$20,000)

E16-016	CO 1 – Capital Transit Facility Renovation and Addition	Alaska Commercial Contractors, Inc., \$106,610. Bonding letter sent 8/17/16.
E16-143	CO 1 – Wren Drive Paving	SECON \$31,765.05. Bonding letter sent 8/17/16.
E15-237	CO 4 – Cope Park PH II Improvements	Glacier State Contractors, \$25,156.86. Processing 8/22/16.

Key for Abbreviations and Acronyms

A	Amendment to PA or Professional Services Contract
CA	Contract Administration
CO	Change Order to construction contract or RFQ
MR	Modification Request – for exceptions to competitive procurement procedures
NTE	Not-to-exceed
NTP	Notice to Proceed

Contracts Division Activity
August 12, 2016 through August 25, 2016

PA Project Agreement - to either term contracts or utility agreements
RFP Request for Proposals, solicitation for professional services
RFQ Request for Quotes (for construction projects <\$50,000)
RSA Reimbursable Services Agreement
SA Supplemental Agreement