

Agenda

Planning Commission - Regular Meeting City and Borough of Juneau

June 23, 2020
Virtual Meeting Only
7:00 PM

This virtual meeting will be by video and telephonic participation only. To join the webinar, paste this URL into your browser: <https://juneau.zoom.us/j/95328546768>. To participate telephonically, call: 1-346-248-7799 or 1-669-900-6833 or 1-253-215-8782 or 1-312-626-6799 or 1-929-436-2866 or 1-301-715-8592 and enter Webinar ID: 953 2854 6768.

I. ROLL CALL

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA

III. APPROVAL OF MINUTES

A. May 12, 2020 Draft Minutes, Regular Planning Commission - APPROVED

IV. BRIEF REVIEW OF THE RULES FOR PUBLIC PARTICIPATION

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

VI. ITEMS FOR RECONSIDERATION

VII. CONSENT AGENDA

VIII. UNFINISHED BUSINESS

IX. REGULAR AGENDA

A. CSP2020 0004: Land disposal by sale to neighboring property - RECOMMENDED RETENTION OF PROPERTY (FORWARDED TO ASSEMBLY)

B. AME2020 0003: Text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements - RECOMMENDED FOR APPROVAL WITH CHANGES (FORWARDED TO ASSEMBLY)

X. BOARD OF ADJUSTMENT

XI. OTHER BUSINESS

A. Juneau & Douglas Alternative Development Overlay Districts Extension Request - RECOMMENDED APPROVAL OF EXTENSIONS

XII. STAFF REPORTS

XIII. COMMITTEE REPORTS

XIV. LIAISON REPORT

XV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

XVI. PLANNING COMMISSION COMMENTS AND QUESTIONS

XVII. EXECUTIVE SESSION

XVIII. SUPPLEMENTAL MATERIALS

- A.** Additional Materials for June 23, 2020 Planning Commission Meeting

XIX. ADJOURNMENT

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

May 12, 2020 Draft Minutes, Regular Planning Commission - APPROVED

ATTACHMENTS:

	Description	Upload Date	Type
▣	May 12, 2020 Draft Minutes, Regular Planning Commission	6/5/2020	Minutes

Minutes
Planning Commission
Regular Meeting
CITY AND BOROUGH OF JUNEAU
Michael LeVine, Chairman
May 12, 2020

I. ROLL CALL

Michael LeVine, Chairman, called the Regular Meeting of the City and Borough of Juneau (CBJ) Planning Commission (PC), held in the Assembly Chambers of the Municipal Building, to order at 7:02 p.m.

Mr. Levine introduced H. Erik Pedersen as the new PC Commissioner and Ms. Wright administered the Oath of Office to Mr. Pedersen.

Commissioners present: All Commissioners present via video conferencing – Michael LeVine, Chairman; Nathaniel Dye, Vice Chairman; Paul Voelckers, Clerk; Travis Arndt, Assistant Clerk; Ken Alper, Dan Hickok, Weston Eiler, Josh Winchell, H. Erik Pedersen

Commissioners absent: None

Staff present: Jill Maclean, CDD Director; Alix Pierce, CDD; Teri Camery, CDD; Laurel Christian, CDD; Emily Wright, Law

Assembly members: Greg Smith

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA - None

III. APPROVAL OF MINUTES –

MOTION: *by Mr. Voelckers to approve minutes as amended*

The motion passed with no objection.

IV. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

V. ITEMS FOR RECONSIDERATION - None

VI. CONSENT AGENDA

USE2020 0004: A Conditional Use Permit to construct a marine float and allow up to 160 visitors per day at Sentinel Island Lighthouse
Applicant: Gastineau Channel Historical Society
Location: Sentinel Island

Staff Recommendation

Staff recommends that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use permit. The permit would allow construction of a marine float and allow up to 160 visitors per day at Sentinel Island Lighthouse.

MOTION: *by Mr. Voelckers to accept staff's findings, analysis, and recommendations, and approve USE2020 0004.*

The motion passed with no objection.

USE2020 0006: Hidden Valley Explosive Storage
Applicant: SECON
Location: Hidden Valley, Lemon Creek

Staff Recommendation

Staff recommends that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use permit. The permit would allow explosives storage in Hidden Valley, upper Lemon Creek, subject to the following conditions:

- 1) The permit shall be effective for ten years.
- 2) The applicant shall maintain approved ATF kingpins, locks and steel hoods on all storage containers/magazines regardless of ownership, mobility status, and the type of container.

MOTION: *by Mr. Voelckers to accept staff's findings, analysis and recommendations and approve USE2020 0006.*

The motion passed with no objection.

VII. UNFINISHED BUSINESS

VIII. REGULAR AGENDA

Prior to presentation of USE2020 0007, Mr. Voelckers declared a conflict of interest as his firm is the Applicant.

Recess: 7:14 to 7:16

USE2020 0007: Sealaska Heritage Institute Arts Instructional Building and Plaza
Applicant: MRV Architects
Location: 1 Sealaska Plaza

Staff Recommendation

It is recommended that the Planning Commission adopt the Director's analysis and findings and **APPROVE WITH CONDITIONS** the requested Conditional Use Permit. The permit would allow the development of a Sealaska Heritage Institute arts campus building and plaza.

The approval is subject to the following conditions:

1. Prior to commencement of work, a CBJ Right-of-Way Permit is required for any work being done in the public right-of-way.
2. Prior to issuance of a building permit, a Shared Use Parking Agreement must be approved by the Community Development Department, and must be recorded with the State Recorder's Office. The parking agreement must state that it may be nullified only when the Director has approved the nullification of the agreement on an instrument that is recorded with the State Recorder's Office.
3. Prior to issuance of a building permit, the developer shall submit to the CBJ Engineering Department a detailed drainage plan that includes provisions for managing storm water run-off during construction and details the drainage facilities to be included as part of the development. No building permit shall be issued until such plans are deemed adequate and approved by the CBJ Engineering Department.
4. Prior to the issuance of a building permit, the applicant shall submit a revised site plan showing snow storage location(s).
5. Prior to issuance of a building permit, the applicant shall submit a lighting plan illustrating the location and type of exterior lighting proposed for the development. Exterior lighting shall be designed and located to minimize offsite glare. Approval of the plan shall be at the discretion of the Community Development Department, according to the requirements of CBJ 49.40.230(d).
6. Prior to issuance of a building permit for the proposed structure, the applicant must submit a revised site plan showing all required parking that complies with the requirements of CBJ 49.40.
7. Prior to issuance of a temporary certificate of occupancy, wheel stops or striping shall be placed in the parking lot to define the location of parking spaces.
8. Prior to the issuance of a temporary certificate of occupancy, all pavement markings, including directional arrows, parking space stripes, and other markings shown on the project site plan, shall be applied to the parking and circulation area as shown on the site plan in a medium designed for such purposes.
9. Prior to the issuance of a temporary certificate of occupancy, one or more covered bicycle racks providing spaces for at least four (4) bicycles shall be provided. The rack(s) shall be permanently affixed to the ground, building, or other permanent fixture, and shall be located so that parked bicycles do not encroach into a pedestrian walkway or vehicle area.

Covered bicycle racks shall, at a minimum, be designed in accordance with the standards listed in the Juneau Non-Motorized Transportation Plan.

10. Access to the surface parking lot shall be limited to one (1) curb cut located on Front Street.

Staff Presentation

Questions for Staff:

Mr. Dye had questions regarding how the parking requirement was calculated and asked for clarification of whether the area was considered a loading zone or bus drop off and asked whether or not the average daily trip (ADT) calculation took tourism traffic into consideration. Ms. Christian explained the loading zone/bus drop off question would be better answered by the applicant but her understanding was it could function as both and she confirmed that the ADT calculation did not account for bus tourism. Rather, the general uses of the building (office, library, art manufacturing, and storage) were taken into consideration.

Mr. Winchell asked for clarification of the shared use parking mentioned in Condition #2. Ms. Christian explained that parking on the lot was shared with the Soboleff Building across the street from it.

Mr. Pedersen asked if the existing building was going to access via an easement or its own driveway and whether that was allowed in the comprehensive plan and land use code. He does not see it and asked where in code it is allowed. He noted that he does not see in code where the shared driveway is allowed. Ms. Wright said it is allowed in Title 49.65.735.

Mr. Alper had questions regarding the parking spaces and specifically asked if the surface parking would be available to public in evenings and weekends. Ms. Christian said that was a question for the applicant.

Applicant Presentation

Russell King, Sealaska Heritage Institute (Applicant), briefly presented a PowerPoint of their proposal to the Commission during which he explained to the Commission their preference for there to be two access points to the surface parking lot rather than limiting it to the one entrance/exit point mentioned in the Staff report. Mr. King also explained the intent is that the lot will continue to be available for public parking after hours and on the weekends.

Questions for Applicant

Russell King, Chris Gilberto, Lee Kazinger, and Spencer Stekoll all spoke on behalf of the Applicant.

Commissioners had questions regarding access to the lot and the applicant's preference for a second access and the availability of the parking lot to the public after hours and on the weekends.

The Applicant felt restricting the lot to a single entrance/exit point would cause congestion. CDD Staff explained that the proposed access from Main Street was problematic considering the amount of pedestrian and vehicular traffic already there with multiple crosswalks, the shoppers' lot, and the bus transit center across the street.

Mr. Arndt asked if the lot would be available to public in evenings or weekends. The Applicant explained that is the intent but they would not want that to be a condition of the USE permit as they may need the flexibility to close the lot for special events and after-hours activities.

Public Testimony – None

Continued Applicant Discussion –

Mr. Dye asked about the traffic pattern on the ramp for the parking garage. The applicant answered it is intended as a one-way ramp, right hand turn only in from main and right hand turn only out from main.

Questions/Discussion with Staff -

Commissioner questions for staff revolved around Condition #10 limiting access to the parking lot to a single access point on Front Street and noted the applicant's desire for a second access point on the Main Street side of the lot. Staff explained the limit is due to safety concerns and existing code restrictions to accesses onto arterial streets. Main Street is considered an arterial street that already experiences much vehicle and pedestrian traffic including and in addition to the two crosswalks nearby. Ms. Maclean cited the Comprehensive Plan and added that the Downtown Transit Center and shoppers parking lot are also right there and adding another access point would compound the congestion there.

MOTION: *by Mr. Dye to accept staff's findings, analysis, and recommendations, and approve USE2020 0007.*

Mr. Arndt asked whether they needed to add a condition allowing the applicant to use the shared driveway to the parking garages. Staff explained that it is on the site plan and, therefore, a condition is not needed.

MOTION: *by Mr. Winchell to amend Mr. Dye's motion by striking Condition #10.*

Mr. Eiler spoke to support Mr. Winchell's motion. Mr. Dye and Mr. Alper spoke against the motion citing the congestion already in that area as was pointed out by staff.

Roll Call Vote on Mr. Winchell's proposed Amendment:

Yes: Winchell, Eiler

No: Alper, Hickok, Pedersen, Arndt, Dye, Levine

The Amendment fails

Vote on the main motion:

The motion passed with no objection.

IX. BOARD OF ADJUSTMENT None

X. OTHER BUSINESS

Mr. LeVine welcomed Mr. Pedersen and assigned him to the Title 49 committee.

There is a vacancy for liaison with the Juneau Commission on Sustainability. Members interested in being the liaison can contact Mr. LeVine.

XI. STAFF REPORTS

- Ms. Maclean reported this is the last meeting in this format. Future meetings will be in Zoom webinar format
- Downtown Juneau Alternative Development Overlay District can be moved to the Commission at the next Committee of the Whole meeting
- FEMA Flood map requires small revisions but they are hoping to have it before the Commission at the June 9th or June 23rd meetings
- July 14th agenda will include a complex conditional use permit
- The RFP has been issued for the Comprehensive Plan
- Ms. Maclean reminded members to watch their emails as the committee meetings are back up and running
- Ms. Wright added there will be an appeal and possible executive session in June

The members discussed when to hold the next Committee of the Whole (COW). It was decided that Mr. LeVine and Mr. Dye would work with Staff to determine the date of the next COW.

XII. COMMITTEE REPORTS - None

XIII. LIAISON REPORTS

- Mr. Smith reported recent Assembly activities and welcomed Mr. Pedersen to the Commission
- Assembly Finance Committee is working on Budget
- Assembly met with Dr. Zink and discussed Coronavirus

- Looking to schedule a joint PC/Assembly meeting in the near future

XIV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

XV. PLANNING COMMISSION COMMENTS AND QUESTIONS- Mr. LeVine reminded members that they are not to discuss the case that is being appealed with each other or anybody.

XVI. EXECUTIVE SESSION- None

XVII. ADJOURNMENT - 8:48 pm

DRAFT

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

CSP2020 0004: Land disposal by sale to neighboring property - RECOMMENDED RETENTION OF
PROPERTY (FORWARDED TO ASSEMBLY)

AGENDA ITEM:

Case No.: CSP2020 0004
Applicant: City and Borough of Juneau
Location: 848 Basin Road
Proposal: Land disposal by sale to neighboring property

RECOMMENDATION:

Staff recommends the Planning Commission adopt the Director's analysis and findings and forward a recommendation of **DENIAL** to the CBJ Assembly for the land disposal.

Alternately, if the Planning Commission would like to consider approval of the disposal of the land, staff recommends that sale be contingent on a boundary and mitigation study drafted in accordance with 49.70.300(a)(4) & (5). That study should either establish that the property is not in a moderate hazard zone, or propose effective mitigating measures for development in the moderate hazard zone.

ATTACHMENTS:

Description	Upload Date	Type
☐ Staff Report for CSP2020 0004	6/12/2020	Staff Report
☐ Presentation for CSP2020 0004	6/22/2020	Presentation
☐ Notice of Recommendation for CSP2020 0004	7/6/2020	Notice of Recommendation



PLANNING COMMISSION STAFF REPORT
CITY PROJECT REVIEW CSP2020-0004
HEARING DATE: JUNE 23, 2020

(907) 586-0715
 CDD_Admin@juneau.org
 www.juneau.org/CDD
 155 S. Seward Street • Juneau, AK 99801

STAFF RECOMMENDATION:

Staff recommends the Planning Commission recommend **DENIAL** of the project to the Assembly.

ALTERNATIVE ACTIONS:

1. **Amend:** amend the recommendation to include conditions and recommend approval to the Assembly. Planning Commission must make its own findings.
2. **Approve:** recommend approval of the proposed project. Planning Commission must make its own findings.
3. **Continue:** continue the hearing to a later date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

A Notice of Recommendation will be forwarded to the Assembly for further action.

STANDARD OF REVIEW:

This is a legislative decision and requires five (5) affirmative votes for approval.

DATE: June 12, 2020

TO: Planning Commission

FROM: CBJ Community Development Department

BY: Irene Gallion, Senior Planner

PROPOSAL SYNOPSIS: Disposal of 848 Basin Road by land sale to the neighboring property owner.

SUMMARY OF KEY CONSIDERATIONS:

- The property is in a moderate hazard zone due to landslide.
- The Comprehensive Plan and the All Hazards Mitigation Plan recommend CBJ acquisition and retention of lands and discourage development in moderate hazard zones.

GENERAL INFORMATION

Property Owner	City and Borough of Juneau
Applicant	City and Borough of Juneau
Property Address	848 Basin Road
Legal Description	USS 3379 LT 11
Parcel Number	1C040A400100
Zoning	D18
Land Use Designation	Medium Density Residential
Lot Size	0.15 acres
Water/Sewer	CBJ
Access	Basin Road
Existing Land Use	Vacant
Associated Applications	None

SITE FEATURES	
Anadromous	No
Flood Zone	No
Hazard	Moderate (map 2/7)
Hillside	Yes
Wetlands	No



Figure 1: Vicinity Map, subject parcel outlined in white.

CBJ 49.10.170(c) Planning Commission Duties: *The commission shall review and make recommendations to the assembly on land acquisitions and disposals as prescribed by Title 53, or capital improvement project by any City and Borough agency. The report and recommendation of the commission shall be based upon the provisions of this title, the comprehensive plan, and the capital improvements program.*

CBJ 49.15.580(a) - CBJ Project Review: *The commission shall review all proposed City and Borough capital improvement projects estimated to cost \$500,000 or more for consistency with this title. The commission may review, at the director's discretion, all proposed City and Borough capital projects estimated to cost more than \$250,000 but less than \$500,000. The commission may recommend conditions on and modifications to any project reviewed by the commission through a notice of recommendation. The notice of recommendation shall be forwarded to the assembly for further action.*

ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Abutters Notice
Attachment C	Agency Comments
Attachment D	Public Comments

AGENCY REVIEW

CDD conducted an agency review comment period between May 18 and May 29, 2020. Agency review comments can be found in **Attachment C**.

Agency	Summary
Capital City Fire and Rescue	No code or department concerns.
CBJ General Engineering	Requires a 20-foot easement to maintain a CBJ retaining wall that supports Basin Road. Any damage to the wall by the property owner is the property owner's financial responsibility.
CBJ Emergency Programs	Best practice is to not build in hazard zones. Selling property is contrary to past practices of purchasing hazard zone land.

PUBLIC COMMENTS

Public noticing was done May 20 through June 1, 2020 via post card. A sign was hung on the property on June 9, 2020. Public comments submitted at time of writing this staff report can be found in **Attachment D**.

Name	Summary
Deborah Gillespie	Concerned with sale of the parcel to anyone at all. Assumed it was part of Cope Park. A new home would impact poor physical and operating conditions on Basin Road.
Fred Wiley	Supports Gillespie comments, adds "Leave [the land] for the young people."
Kim Metcalfe	Concerns regarding planned intent of land, road and hillside stability issues, parking, and construction impacts on Basin Road access.
Mike Wiley	Sale is a bad idea that would further congest traffic and parking.

Figure 2: CURRENT ZONING MAP

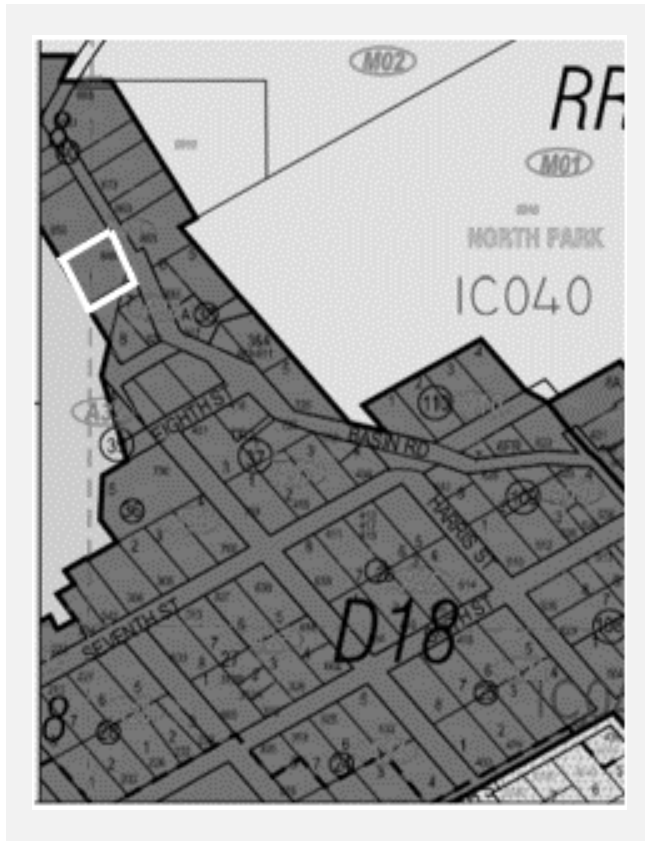
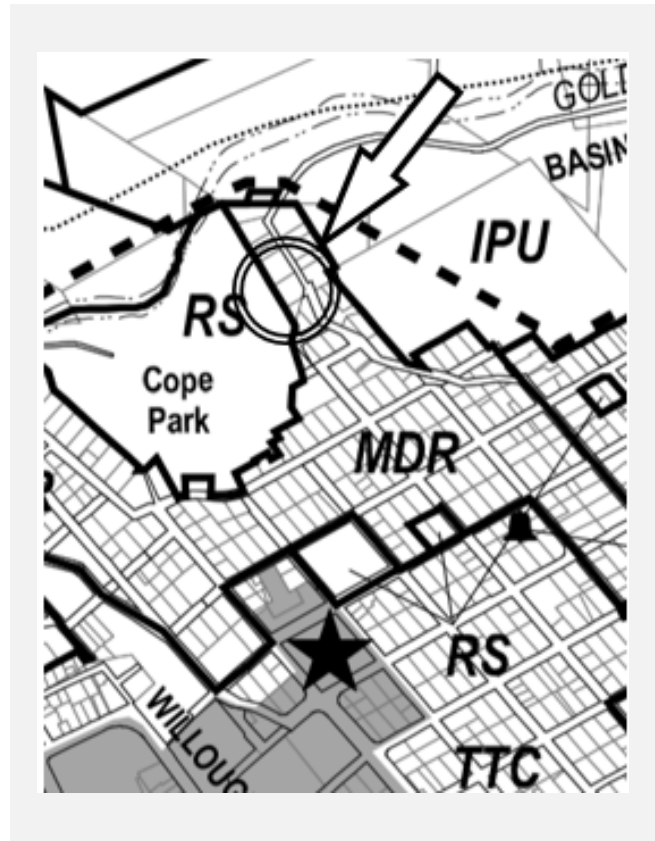


Figure 3: LAND USE DESIGNATION MAP



SURROUNDING LAND USES AND ZONING

Direction	Zoning District	Land Use
North	D18	Residential
South	D18	Residential
East	D10	Cope Park
West	D18	Basin Road

BACKGROUND INFORMATION

Proposal – The applicant is the CBJ Lands and Resources Division. The purchasing party that the Lands and Resources Division is working with is the current occupant of 850 Basin Road (north of the subject parcel). The purchasing party has a contract to buy 850 Basin Road from the owner of record. The purchasing party plans to use their current residence on Basin Road to access the subject parcel during construction, intending to minimize disruption to Basin Road traffic. The purchasing party is a registered architect who would use their experience to address the challenges of building on hillside terrain. Development of the subject lot would require its own access from Basin Road.

Permit and Parcel History -

The below table summarizes relevant history for the subject parcel and proposed development.	
Item	Summary
Demolition permit 1990 (approx.)	Demolition of single-family residence on the subject parcel

Current Conditions – The subject parcel has been vacant since approximately 1990, when records indicate the home on site was demolished. When that home had been constructed is undetermined. It is not present on 1927, 1948 or 1969 Sanborn (historical) Maps, nor is it discernable on historic imagery through 1961. A 1954 plat appears to show a dwelling on the lot. As the dwelling has been demolished, any nonconforming rights have been lost, and new construction would be required to meet current code requirements.

The City and Borough of Juneau has constructed a retaining wall along the east lot line that supports Basin Road. A bump-out in this area provides about 55 feet of parallel parking.

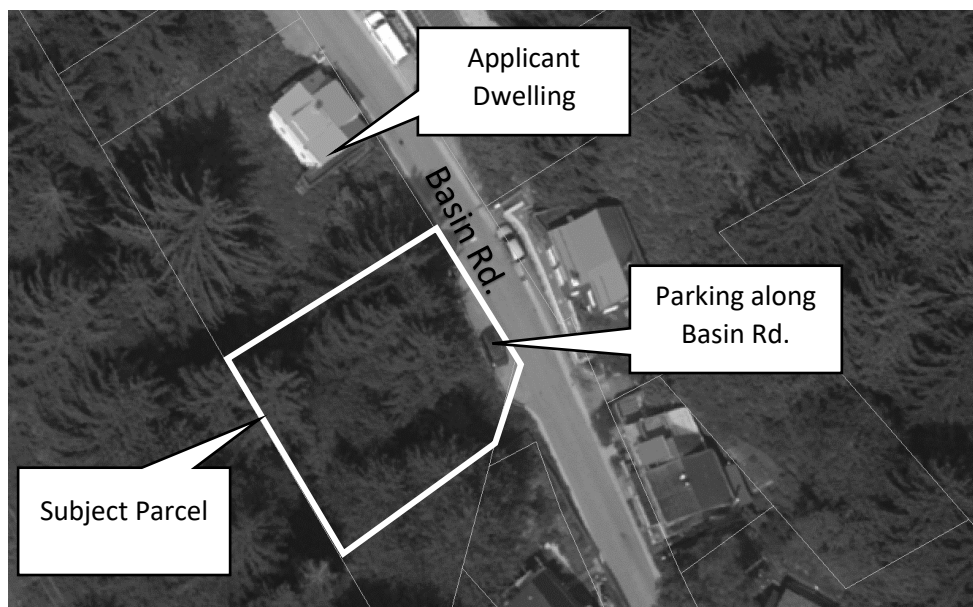


Figure 4: This figure highlights parking currently provided on the lot. This section of road is supported with a CBJ retaining wall.

The rise of the lot from the rear lot line to the retaining wall is about 55 feet. The depth mid lot from the rear lot line to the retaining wall is about 75 feet. This results in a slope of 73%. Slopes in excess of 18% require a Hillside Endorsement per CBJ49.70. The endorsement includes engineered drawings, a landscaping plan, and a geological report. If these items are provided by someone other than an Alaska-licensed engineer, the CBJ will charge the applicant for a consultant engineer to review the Hillside Endorsement.

ZONING ANALYSIS

49.05.100 - Purpose and intent. The purpose and Intent of Title 49 Land Use Code is:

- (1) To achieve the goals and objectives, and implement the policies, of the Juneau comprehensive plan, and coastal management program;*
- (2) To ensure that future growth and development in the City and Borough is in accord with the values of its residents;*
- (3) To identify and secure, for present and future residents, the beneficial impacts of growth while minimizing the negative impacts;*
- (4) To ensure that future growth is of the appropriate type, design and location, and is served by a proper range of public services and facilities such as water, sewage, and electrical distribution systems, transportation, schools, parks and other public requirements, and in general to promote public health, safety and general welfare;*
- (5) To provide adequate open space for light and air; and*
- (6) To recognize the economic value of land and encourage its proper and beneficial use.*

Other Permit Required – Construction of an eventual structure would require the applicant to get a Building Permit and a Hillside Endorsement. Depending on the layout of the home, the applicant may also need to pursue the relaxed dimensional standards of the Alternative Development Overlay District (ADOD), most likely under proposed revisions to current ADOD regulations. These actions would not require a hearing in front of the Planning Commission.

Hazard Areas – The property is in a mapped moderate hazard area according to 49.70.300, map 2 of 7.

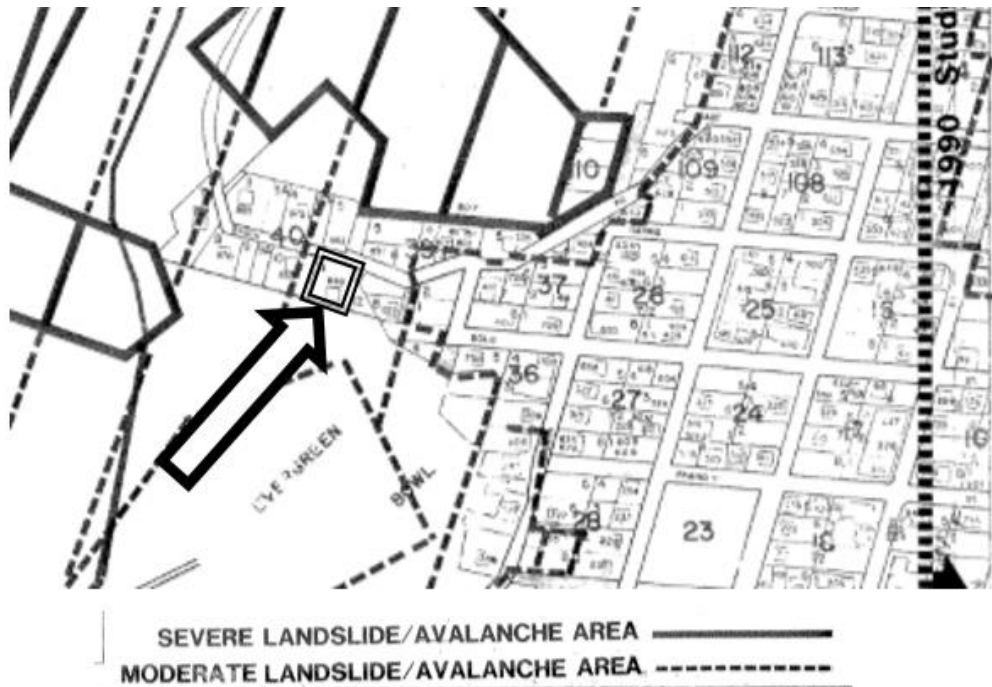
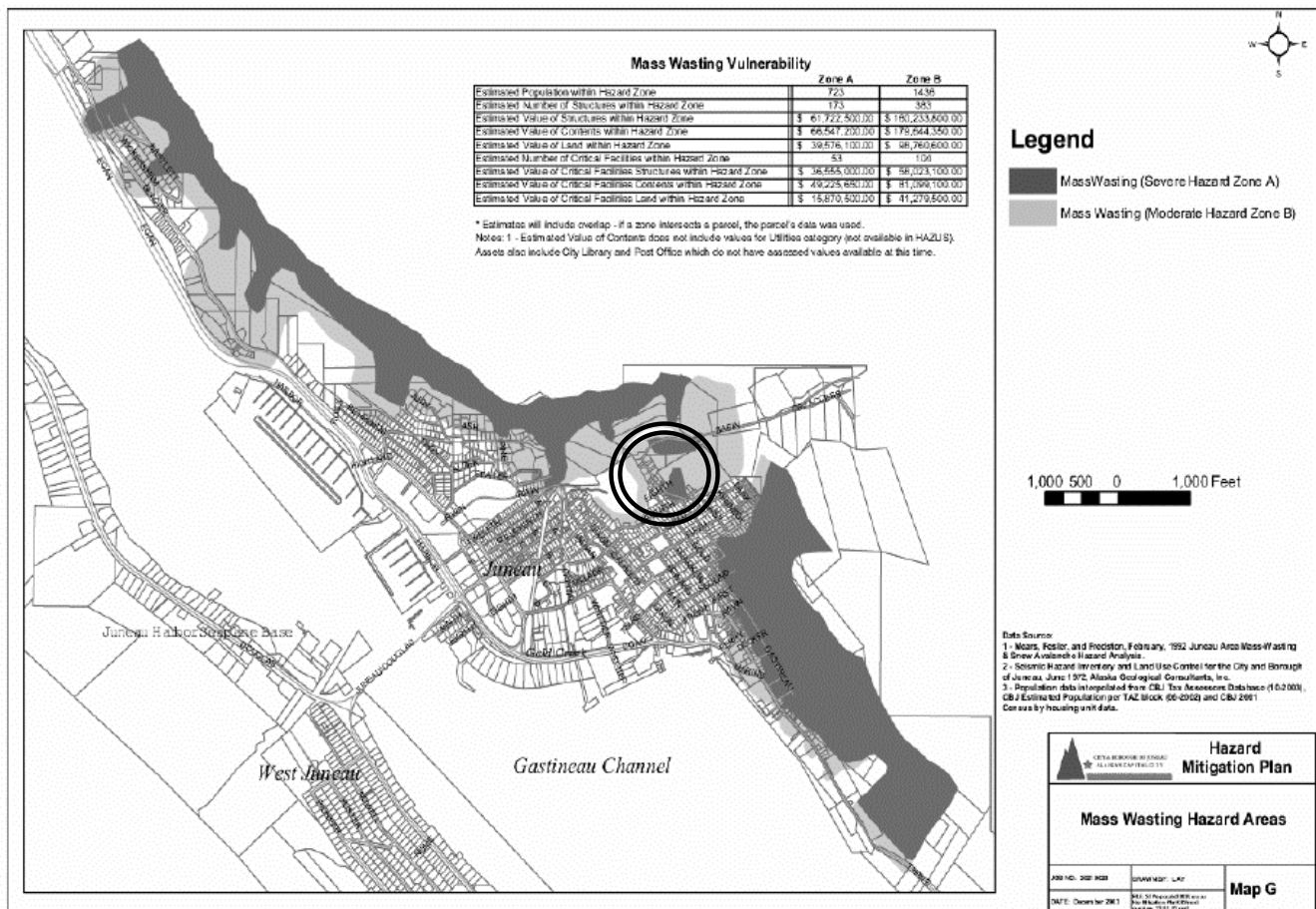


Figure 5: Section of Juneau's Avalanche/Landslide Area Maps (map 2 of 7) referenced in 49.70.300, "Landslide and Avalanche Areas." The subject parcel is indicated by the arrow outlined with a thick black line, and further delineated with a compound line border.

Juneau's hazard maps delineate two areas: a "severe landslide/avalanche area," and a "moderate landslide/avalanche area." These characterizations were made by combining the discrete hazard definitions for avalanche and mass wasting. A review of the "All Hazards Mitigation Plan" (2012) further characterizes that the hazard is from mass wasting (landslides, map page 52). Note that avalanche-prone areas of Basin Road appear to predominantly be up the road from the subject parcel, closer to the trestle.



Map 8 Mass Wasting Hazard Areas

Figure 6: A landslide hazard area map from the 2012 All Hazards Mitigation Plan. The subject parcel is circled with a compound line. The lighter grey coloration of the area indicates moderate landslide hazard.

Disposal of City-owned land in a moderate hazard zone is contrary to the Comprehensive Plan (see citations below).

If a developer disagrees with the City's hazard designation, they can have an appropriately-qualified engineer propose modifications to the boundaries depending on elements such as topography and accumulations of material [49.70.300(a)(4)]. The Commission can require that a qualified engineer design mitigations such as dissipating structures, and the Commission can limit density as a mitigation [49.70.300(a)(5)]. Development in a hazard area must mitigate the risk to life or property [49.70.300(a)(1)].

COMMUNITY SERVICES

Service	Summary
Urban Service Boundary	Yes
Water/Sewer	Provided by CBJ
Fire Service Area	In the service area
Schools	Harborview Elementary, Juneau Community Charter School, Montessori Borealis, Dzantik'i Heeni Middle School, high school of choice (closest is Juneau Douglas High School).
Recreation	Basin Road provides access to Perseverance Trail and The Flume, Mount Roberts Trail, and Last Chance Mining Museum. Cope Park abuts the west lot line of this parcel.

ENVIRONMENTAL, CONSERVATION, HISTORIC, AND ARCHEOLOGICAL RESOURCES

The below table summarizes Conservation, Historic, and Archeological Resources which may be affected by the property purchase.

Resource	Summary
Conservation Areas	No
Wetlands	No
Anadromous	No
Impaired Waterbodies	No
Historic	Not in historic district
Archeological	Unknown
Comprehensive Plan View-sheds	No

CONFORMITY WITH ADOPTED PLANS

The Comprehensive Plan (2013) is adopted by ordinance per 49.05.200. Section (b) of this chapter lists other plans incorporated by reference into the Comprehensive Plan. The Land Management Plan (2016) and the All Hazards Mitigation Plan (2012) are absent from that list.

The Planning Commission's charge is to review this project, "...for consistency with this title."

The 2016 Land Management Plan was drafted subsequent to the 2013 Comprehensive Plan, and is not adopted by ordinance. The two documents are in conflict. As the Land Management Plan is not adopted, the Comprehensive Plan takes precedence.

2013 COMPREHENSIVE PLAN VISION: *The City and Borough of Juneau is a vibrant State Capital that values the diversity and quality of its natural and built environments, creates a safe and satisfying quality of life for its diverse population, provides quality education and employment for its workers, encourages resident participation in community decisions and provides an environment to foster state-wide leadership.*

2013 COMPREHENSIVE PLAN - The proposed land disposal is **NOT** in compliance with the 2013 Comprehensive Plan. The Comprehensive Plan calls for CBJ to retain, or obtain, ownership for lands within the Moderate/Sever hazard area. Specific references to Basin Road cite maintaining the scaled density of the area (page 184), monitoring the impacts of tourism (page 195), and avoiding further impacts to the road if a Last Chance Basin interpretive center is developed (page 196).

Chapter	Page No.	Item	Summary
7	97	Policy 7.17	POLICY: TO MINIMIZE THE THREAT TO HUMAN SAFETY AND DEVELOPMENT POSED BY LANDSLIDES (MASS WASTING) AND AVALANCHES. 7.17 - DG2 Review any proposed land disposals of CBJ-owned lands in light of their hazard classification; <u>retain ownership of CBJ lands with moderate- to high- potential for avalanche or mass-wasting</u> (emphasis added).
7	98	Policy 7.17	Implementing Actions 7.17 - IA2 Designate all public lands located in hazard areas as Hazard Areas (HA) on the Comprehensive Plan Maps. Include all CBJ-owned land in hazard areas in the Parks and Open Space/Natural Areas Plan.
7	98	Policy 7.17	Implementing Actions 7.17 - IA5 The CBJ government should, to the greatest extent practical, acquire properties lying within areas designated as having high mass wasting or avalanche hazard potentials; <u>these CBJ-owned lands should remain undeveloped</u> .

2016 LAND MANAGEMENT PLAN - The proposed land disposal **complies** with the **2016** Land Management Plan

Chapter	Page No.	Item	Summary
CBJ's Land Holdings	57	LND-1020	LND-1020 Retain/Dispose. NOTE: "Retain/Dispose" are appropriate for disposal, but there are sections (such as stream corridors, high value wetlands, etc.) that may be retained for a public purpose. This designation is particularly common for larger parcels.

2012 ALL HAZARDS MITIGATION PLAN - The proposed land disposal is **NOT** compliant with the 2012 All Hazards Management Plan, which supports CBJ ownership of parcels within the Severe/Moderate Hazards areas.

Chapter	Page No.	Item	Summary
Landslides	58	Goal: Reduce the CBJ's vulnerability to landslide damage in terms of loss of life and property.	<u>Buy out property in affected areas</u> . A buyout could be implemented to reduce the number of people living in avalanche (sic) zones. <u>Disallow any new construction in landslide prone areas. New construction should not be permitted in known hazard areas.</u> Future disaster damages may be avoided by implementing this policy.

FINDINGS

In accordance with CBJ 49.15.580 staff finds the proposed land disposal complies with Title 49 Land Use Code but **IS NOT** in general conformity with adopted plans, specifically the 2013 Comprehensive Plan and the 2012 All Hazards Mitigation Plan.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and forward a recommendation of **DENIAL** to the CBJ Assembly for the land disposal.

Alternately, if the Planning Commission would like to consider approval of the disposal of the land, staff recommends that sale be contingent on a boundary and mitigation study drafted in accordance with 49.70.300(a)(4) & (5). That study should either establish that the property is not in a moderate hazard zone, or propose effective mitigating measures for development in the moderate hazard zone.

(4) If a developer disagrees with the boundaries shown on the maps, the developer may seek departmental relocation of the boundaries by submitting site specific studies prepared by a civil engineer experienced in avalanche and landslide analysis. Such studies shall include detailed analyses of topography, vegetation, potential snow accumulation, and other factors. The results should indicate actual hazard area boundaries and potential debris flow direction, time, distance and mass. If, in the opinion of the city engineer, the studies clearly establish that the map boundaries are inaccurate and the proposed development is outside a severe avalanche area or outside any avalanche or landslide area, the department shall proceed accordingly.

(5) The commission may require mitigating measures certified as effective by a professional engineer for development in landslide and avalanche areas. Such measures may include dissipating structures or dams, special structural engineering, or other techniques designed for the site. Mitigating measures may also include reduction in the proposed density.

Alternatives

1. **Amend** - The Commission may amend the recommendation to include conditions and forward the recommendation of approval to the Assembly. The Commission must adopt its own findings.
2. **Approve** - The Commission may recommend approval to the Assembly. The Commission must adopt its own findings.
3. **Continue** - The Commission may continue the public hearing to a future Commission hearing date if it determines that additional information or analysis is needed to make a decision or if additional testimony is warranted.

Ticket Page 22 of 196

Project Number	CITY and BOROUGH of JUNEAU	Date Received:
Project Name (City Staff to Assign Name)		

Project Description		
Street Address	City/Zip	
Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot)		
Assessor's Parcel Number(s)		
Property Owner's Name	Contact Person:	Work Phone:
Mailing Address	Home Phone:	Fax Number:
E-mail Address	Other Contact Phone Number(s):	
I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows: A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission. B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.		
X	<u>Daniel Bleidorn</u> Landowner/Lessee Signature	<u>05/11/2020</u> Date
X	 Landowner/Lessee Signature	 Date
NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.		
Applicant's Name	Contact Person:	Work Phone:
Mailing Address	Home Phone:	Fax Number:
E-mail Address	Other Contact Phone Number(s):	
X	 Applicant's Signature	 Date of Application

--OFFICE USE ONLY BELOW THIS LINE--

Permit Type	***SIGN	Date Received	Application Number(s)
Building/Grading Permit			
City/State Project Review and City Land Action			
Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)			
Mining Case (Small, Large, Rural, Extraction, Exploration)			
Sign Approval (If more than one, fill in all applicable permit #'s)			
Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)			
Variance Case (De Minimis and all other Variance case types)			
Wetlands Permits			
Zone Change Application			
Other (Describe)			

Comments:

***Public Notice Sign Form filled out and in the file.

Permit Intake Initials

NOTE: DEVELOPMENT PERMIT APPLICATION FORMS MUST ACCOMPANY ALL OTHER COMMUNITY DEVELOPMENT DEPARTMENT APPLICATIONS

CITY/STATE PROJECT AND LAND ACTION REVIEW APPLICATION Page 1 of 2

Project Number	Project Name (15 characters)	Case Number CSP	Date Received
----------------	------------------------------	--------------------	---------------

TYPE OF PROJECT REVIEW:

☐ City Project Review
 ☐ City Land Acquisition /Disposal
 ☐ State Project Review

DESCRIPTION OF PROJECT

Please attach a cover letter to fully explain the project if there is not adequate space on this form.

CURRENT USE OF LAND OR BUILDING(S):

PROPOSED USE OF LAND OR BUILDING(S):

PROJECT NUMBERS ASSOCIATED WITH PROPOSAL:

Is this project associated with any other Land Use Permits? ☐ No ☐ Yes Case No.: _____

Capital Improvement Program # (CIP) _____

Local Improvement District # (LID) _____

State Project # _____

ESTIMATED PROJECT COST: \$ _____

For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side.

If you need any assistance filling out this form, please contact the Permit Center at 586-0770.

CITY/STATE PROJECT FEES

	Fees	Check No.	Receipt	Date
Application Fees	\$ _____	_____	_____	_____
Total Fee	\$ _____	_____	_____	_____

**NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM
&**

**EVEN IF THE PROPOSED PROJECT IS ASSOCIATE WITH OTHER LAND USE PERMITS, THIS
APPLICATION MUST BE FILLED OUT**

Each application for a City/State Project is reviewed by the Planning Commission at a public hearing. The permit procedure is intended to provide the Commission the flexibility necessary to make recommendations tailored to individual applications.

Application: An application for a City/State Project Review will not be accepted by the Community Development Department until it is determined to be complete. The items needed for a complete application are:

Forms: A completed City/State Project Review Application form and Development Permit Application form. The "land owner or lessee consent" signature is mandatory for all landowners on the Development Permit Application form.

Fees: No fee required for projects that cost less than \$2.5 million. For projects costing more than this amount, the fee is \$1,600.00. All fees are subject to change.

Project Description: A detailed letter or narrative describing the project.

Plans: All plans are to be drawn to scale and clearly show the items listed below:

- A. Plat, site plan, floor plan and elevation views of existing and proposed structures and land;
- B. Existing and proposed parking areas, including dimensions of the spaces, aisle width and driveway entrances;
- C. Proposed traffic circulation within the site including access/egress points and traffic control devices;
- D. Existing and proposed lighting (including cut sheets for each type of lighting);
- E. Existing and proposed vegetation with location, area, height and type of plantings; and,
- F. Existing physical features of the site (i.e. drainage, eagle trees, hazard areas, salmon streams, wetlands, etc.)

Document Format: All information that is submitted as part of an application shall be submitted in either of the following formats:

- A. Electronic copies may be submitted by CD, DVD or E-mail in the following formats: .doc, .txt, .xls, .bmp, .pdf, .jpg, .gif, .xlm, .rtf or other formats pre-approved by the Community Development Department.
- B. Paper copies may not be larger than 11" X 17" (Unless a larger paper size is preapproved by the Community Development Department).

Application Review & Hearing Procedure: Once the application is determined to be complete, the Community Development Department will initiate the review and scheduling of the application. This process includes:

Review: As part of the review process the Community Development Department will evaluate the application for consistency with all applicable City & Borough of Juneau codes and adopted plans. Depending on unique characteristics of the permit request the application may be required to be reviewed by other municipal boards and committees. Review comments may require the applicant to provide additional information, clarification, or submit modifications/alterations for the proposed project.

Hearing: All City/State Project Review Permit Applications must be reviewed by the Planning Commission. Once an application has been deemed complete and has been reviewed by all applicable parties the Community Development Department will schedule the requested permit for the next appropriate meeting. The Planning Commission will make a recommendation based on staff's analysis and forward it to the Assembly for final approval/denial.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

MEMORANDUM

CITY/BOROUGH OF JUNEAU
 Lands and Resources Office
 155 S. Seward St., Juneau, Alaska 99801
 Greg.Chaney@Juneau.org
 Voice (907) 586-0205

TO: Rob Edwardson, Chair of the Assembly Lands Committee
FROM: Greg Chaney, Lands and Resources Manager 
DATE: March 18, 2020
SUBJECT: Ke Mell Application to Purchase City Property at 848 Basin Road

The Lands Office has received an application from Ke Mell to purchase a 8,538 square foot City lot at 848 Basin Road, in downtown Juneau. Ms. Mell's house is located next door at 850 Basin Road. The applicant is interested in purchasing the 848 Basin Road lot in order to build a house on the property. The area is zoned for D18 multifamily development but Basin Road is mostly developed with single family residences on very steep lots. Ke Mell is a registered architect and currently works as a project manager for the University of Alaska. She has significant construction management expertise and would use her experience to address the challenges presented by building on this very steep property. The application stated that the lot at 848 is extremely precipitous and would be extremely difficult to access from Basin Road. However, her lot could provide an access route to 848. Therefore her plan is to stage the construction from her property. As an adjacent property owner, she is uniquely situated to develop the neighboring City lot. Anyone else attempting to build on this property would be required to stage construction from Basin Road and would have to access the lot over a steep retaining wall. These factors would make the prospect tremendously difficult.

The parcel of land requested by Ke Mell is managed by the Lands and Resources Division.

CBJ§53.09.260 Negotiated sales, leases, and exchanges stipulates that once an application has been received, it must first be determined by the Assembly whether the proposal should be further considered by direct negotiation with the original proposer or if the property should be offered for public sale to other individuals. In this case, the subject property is very steep. Since this lot is zoned for residential development but is unusually steep, it is listed in the Land Management Plan LND 1020 for retain/dispose. The Lands Division has not offered this property as a candidate for general sale due to the extreme difficulties associated with developing this steep lot. By selling this lot to the applicant, a residential development could be built. Since this lot is not intended to be used by the City for any other purpose and it could be developed by the applicant to increase housing options within the downtown region, Lands staff is recommending that this lot be sold to the original proposer.

Suggested Motion: A motion of support to the Assembly for a fair market value sale of City property located at 848 Basin Road to the original applicant, Ke Mell.

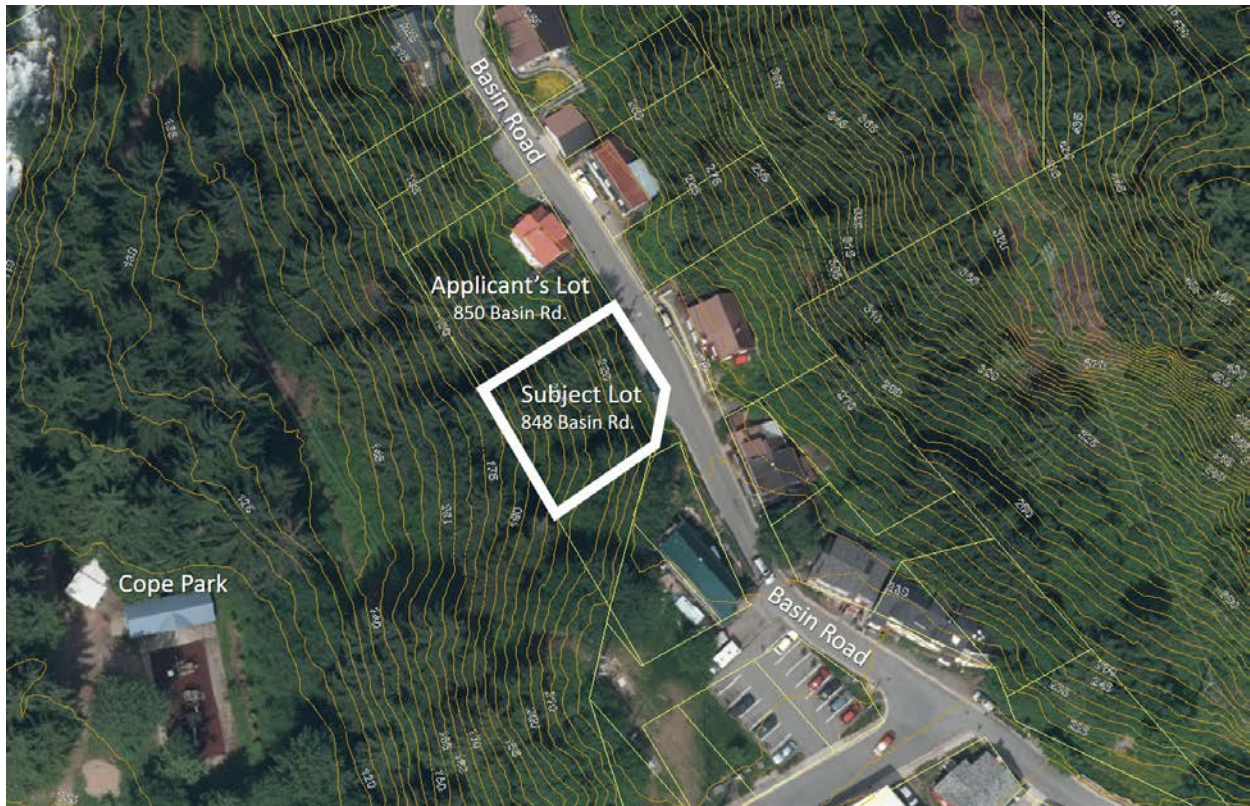


Figure 1. Location of 848 Basin Road property. Note structures clustered along Basin Road due to steep terrain. The applicant's home is located adjacent to the subject lot and could provide enhanced access to the site for construction.



City and Borough of Juneau Land Purchase Applicants

Applicant Information

Business / Individual *

Ke Mell

Address *

PO Box 2-1898

Street Address

Juneau

City

AK

State / Province / Region

99802

ZIP / Postal Code

Phone *

(907) 463-3942

Email

kemell@alaskan.com

☐ Add Another Business/Individual

CBJ Land Information

The [CBJ Assessor's Database](#) will provide information regarding site address and legal description. The [CBJ Parcel Viewer](#) tool can provide necessary maps needed to complete this application.

Site Address *

848 Basin Road

Legal Description *

Lot 11 of U.S. Survey No. 3378

Provide Brief Description of Your Proposal *

I propose to purchase Lot 11 and pay taxes on it. When resources allow, I plan to build housing on it, in accordance with CBJ Titles 49 and 19.

Provide a Map of CBJ Land you wish to Purchase *

848-Basin-Road.pdf  

Have you mailed the \$500.00 filing fee? *

- ☒ Yes
- ☐ Not Yet

Applications can only be processed when the \$500 fee is received. All checks are made out to "The City and Borough of Juneau" and can be sent to:
The City and Borough of Juneau
Attn:Lands and Resources Division
155 S. Seward St.
Juneau, AK 99081

Additional Comments for CBJ Staff to Consider

I'm a neighbor: Lot 11 adjoins Lots 10 and 9A at 850 Basin Road, which I have occupied since 2002 when I contracted with Anne Meeker, owner of record, to buy the house and lots from her. (Her husband Richard Meeker passed away in 1992.) Based on the 1' topographic contours in CBJ's staff parcel viewer, the best access to Lot 11 for development purposes (foundations) appears to be across Lot 10.

I have the skills to work out how best to develop a very difficult site: I'm a registered architect with 35 years of professional experience in Juneau. I'm currently (and for the past 11 years) employed by UAS as a Facilities Planning and Construction Project Manager, taking all sorts of projects—from tens of thousands to millions of dollars—from initial scoping thorough design and construction.

I'm well acquainted with neighborhood conditions: the topography of lots 11, 10, and 9A (and of Lots 9 and 8 to the northwest) is extremely difficult, as all slope down from Basin Road at 30 to 35 degrees over the depth of the lot (totaling 55-60' in elevation), with some areas sloping at 40 to 45 degrees. This considerably complicates any construction on the properties. On account of the slope, the ground is continuously mass wasting downhill—at varying rates—into Evergreen Bowl/Cope Park. Lot 11 has a retaining wall which supports two off-street parking places on Basin Road, but the retaining wall was never designed to support a building and will need to be removed or re-engineered.

I'm committed to more housing downtown: I'd like my kids to be able to live in Juneau. Over twenty-five years ago, when Cathy Munoz was newly elected to the Juneau Assembly, we sat on the summer grass watching our oldest children play, and I told her that what downtown really needs, is more people living here; that means more housing. Businesses will find their customers; housing needs more help.

"By submitting this form, I agree all information is accurate. Submission of this request is NOT approval by the City and Borough of Juneau. I understand that staff will review my application and follow up with questions. Once staff have reviewed my application, ultimate determination of my request to purchase City property will be made by the City Assembly."

Legal Representative of Business / Individual *

Ke

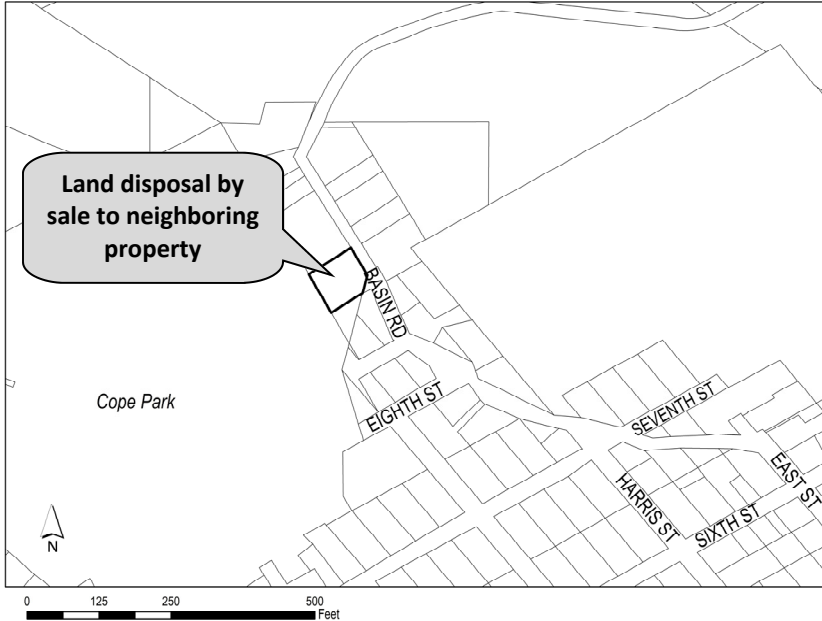
First

Mell

Last

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission
Your Community, Your Voice



COMMUNITY DEVELOPMENT

155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission to **dispose of 848 Basin Road by land sale to the neighboring property owner**. Subject parcel is in a **D18 zone**.

TIMELINE

Staff Report expected to be posted **Monday, June 15, 2020** at <https://beta.juneau.org/assembly/assembly-minutes-and-agendas>
Find hearing results, meeting minutes and more here as well.

Now through June 1

Comments received during this period will be sent to the Planner, **Irene Gallion**, to be included as an attachment in the staff report.

June 2 — noon, June 19

Comments received during this period will be sent directly to Commissioners to read over the weekend in preparation for the hearing.

HEARING DATE & TIME: 7:00 pm, June 23

This virtual meeting will be by video and telephonic participation only. To join the webinar, visit: <http://juneau.zoom.us/j/95328546768>. The Webinar ID is: 953 2854 6768. To join by telephone, call: +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782 or +1 312 626 6799 or +1 929 436 2866 or +1 301 715 8592 and enter the Webinar ID.

June 24

The results of the hearing will be posted online.

Phone: (907)586-0715 ♦ Email: pc_comments@juneau.org
Mail: Community Development, 155 S. Seward St, Juneau AK 99801

Printed May 20, 2020

Case No.: **CSP2020 0004**
Parcel No.: **1C040A400100**
CBJ Parcel Viewer: <http://epv.juneau.org>



(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Engineering & Public Works
STAFF PERSON/TITLE: Autumn Sapp
DATE: 5/20/2020
APPLICANT: Ke Mell, owner of neighboring property
TYPE OF APPLICATION: City/State Project and Land Action Review Application

PROJECT DESCRIPTION:

Purchase of 848 Basin Road (0.15 acres) by the contracted owner of the neighboring property at 850 Basin Road.

LEGAL DESCRIPTION: USS 3379 Lots 11 and 12
PARCEL NUMBER(S): 1C040A400100
PHYSICAL ADDRESS: 848 Basin Road

SPECIFIC QUESTIONS FROM PLANNER:

Do we need an easement for maintenance of any CBJ infrastructure? There is a retaining wall on the property.

AGENCY COMMENTS:

A minimum 20' access and maintenance easement for the wall will be required to be recorded. Additionally, as this wall is a CBJ wall any damage to the wall as a result of private activity related to 850 or 848 Basin will be the financial responsibility of the private property owner.



(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Fire
STAFF PERSON/TITLE: Dan Jager, Fire Marshal
DATE: May 18, 2020
APPLICANT: Ke Mell, owner of neighboring property
TYPE OF APPLICATION: City/State Project and Land Action Review Application

PROJECT DESCRIPTION:

Purchase of 848 Basin Road (0.15 acres) by the contracted owner of the neighboring property at 850 Basin Road.

LEGAL DESCRIPTION: USS 3379 Lots 11 and 12
PARCEL NUMBER(S): 1C040A400100
PHYSICAL ADDRESS: 848 Basin Road

SPECIFIC QUESTIONS FROM PLANNER:

Do we need an easement for maintenance of any CBJ infrastructure? There is a retaining wall on the property.

AGENCY COMMENTS:

There are no fire code or fire department concerns for this request.

Irene Gallion

From: Tom Mattice
Sent: Monday, June 1, 2020 9:13 AM
To: Irene Gallion
Subject: RE: Thoughts on proposed project: 848 Basin Road

Greetings Irene,

Best practices in natural hazards management say never build in known hazard zones. The best mitigation is simply to never build it in the first place.

CBJ has made effort over the last 20 years to purchase properties in the known hazard areas to remove vulnerability from our community. This would be in conflict with those practices.

The CBJ All Hazards Mitigation Plan specifically states “prohibit all new construction in hazard zones”. It also states; “prohibit removal of vegetation in landslide areas” as well as “restrict construction in landslide zones” and last but not least recommends a buyout of affected properties.

I recommend this land stay in CBJ possession.

Tom Mattice
 Emergency Programs Manager
 907-209-9207
Tom.Mattice@juneau.org

From: Irene Gallion <Irene.Gallion@juneau.org>
Sent: Saturday, May 30, 2020 4:33 PM
To: Tom Mattice <Tom.Mattice@juneau.org>
Subject: Thoughts on proposed project: 848 Basin Road

Hi Tom,

Lands is proposing the sale of this property to a member of the public. The intent is to build a home on it. It appears to be in the moderate hazard area according to our hazard maps. I’ve not found a hard core plan that comments on this scenario yet.

Thanks!

Irene M. Gallion
 City and Borough of Juneau
 Senior Planner
 (907) 586-0753

Irene Gallion

From: Deborah Gillespie <gillespiend@gmail.com>
Sent: Wednesday, May 27, 2020 2:53 PM
To: PC_Comments
Subject: 848 Basin Rd land sale case CSP2020 0004

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

Hello,

I am writing in response to an invitation to comment postcard I received in the mail regarding land sale of 848 Basin Rd. I own a home and property on Basin Road and would like to oppose the sale of this property.

I respect my neighbor and do not want to disrupt her plans to purchase the land and build on the property. I have no personal issue with her and would like to address the issue of selling this parcel in general. I have lived on Basin Rd for 8 years. I had no idea there ever was a home at 848 Basin and assumed the property was part of Cope Park.

Basin Road is a very narrow road, with no sidewalks and limited parking. It is a high traffic area, especially in the summer. There has been a lot of local concerns over traffic/tour buses over the past few years. I can not imagine the complication of adding another home to the equation, not to mention the disruption the actual construction of a home would be to an already overcrowded area.

Thank you for the opportunity to submit comment on this issue.

Sincerely,

Deborah Gillespie
 853 Basin Rd. Juneau

From: [kimberly.metcalf@cityofjuneau.org](#)
To: [PC_Comments](#)
Subject: Disposal of 848 Basin Road property
Date: Friday, May 29, 2020 1:53:57 PM

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

I live near the 848 Basin Road property subject to disposal by the City & Borough of Juneau. I know the adjacent property owner who is requesting the disposal, and she has been a good neighbor for many years. I do, however, have concerns regarding the disposal of the property at issue:

- I have lived at 730 Gold Street, just south of the property at issue, for most of my life, and I remember when there was a house at the 848 Basin Road site. The house was torn down and it was my understanding that the CBJ took possession of the land and that it would not be available for building. I don't have the ability to research the property transfer to the CBJ, so I'm not sure what the status was and is, but it was my understanding that the property would not be available for purchase by the public.
- The road has numerous stability issues along the Cope Park side, as is evident by the erosion that has occurred over the years between KE Mell's property and that of her neighbor, Steve Krall (875 Basin Road). My concern is, who pays to stabilize the bank on the 848 Basin Road building site? Is that a CBJ expense or is it the expense of the person building on the site? It could cost millions of dollars if a retaining wall has to be installed. Are there liability issues that should be examined should the road fail during or after construction?
- The area directly in front of the 848 Basin Road property is currently used as a parking area by Fred and Sally Wiley. Although there is no mandate for neighborhood parking, it would remove two parking areas from neighborhood or other public use. Parking is a premium in all downtown neighborhoods, and more so along Basin Road because of heavy recreational use of the area.
- Should construction occur on the site, the road would be blocked by building equipment. We have had issues in the past when the Gold Creek Salmon Bake was located at the end of Basin Road. At that time the owner gave residents a schedule when they could use the road for deliveries of fuel oil, construction materials, and anything else that involved the use of a large vehicle. I fear the same thing would happen during the construction of dwellings at the 848 Basin Road site. As is well known, the area is heavily used by locals and tourists and for access to the CBJ water wells. I expect there would be concern from people who traverse the road.
- Removal of trees would be necessary in order to build in the area. There are several very large spruce trees and other deciduous trees on the slope. Removal of these trees would further destabilize the bank.
- Depending on what kind of construction takes place, should a structure be built on a platform type of foundation, it would create a tunnel-like corridor along the road.

I hope the Planning Commission takes these concerns into consideration when determining the disposal of the 848 Basin Road property.

Thank you--

Kimberly L. Metcalfe
730 Gold Street
Juneau, Alaska

From: [Mike wiley](#)
To: [PC_Comments](#)
Subject: Case No:CSP2020 0004 PARCEL NO:C040A400100
Date: Friday, May 29, 2020 2:53:29 PM

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

Attention Irene Gallion .

I have lived on Basin Rd most of my life, and love that little neighborhood, there has always been a need for more space on that heavily congested road, and I think selling that parcel for development is a very bad idea and would do nothing more than congest things even more based on the lack of parking and traffic for Basin road , that is why a would appose the sale of this property to the public , Thank you for your time , sincerely Mike Willey. phone#907-723-7436

Irene Gallion

From: Irene Gallion
Sent: Friday, May 29, 2020 9:28 AM
To: Irene Gallion
Subject: CSP20-04: Comment

I returned a call from Fred Wiley at about 9:15 am on Friday, May 29, 2020. He lives at 831 Basin Road.

He 100% agrees with the comments submitted by Ms. Gillespie on May 27, 2020. He noted that road condition is poor.

In addition, his comment regarding the lot is, "Leave it for the young people." It is part of the people's park. There are amazing acoustics, there used to be concerts down there. He hopes the land could continue to function as an extension of the park.

Irene M. Gallion
City and Borough of Juneau
Senior Planner
(907) 586-0753

From: [ryn.](#)
To: [PC_Comments](#)
Subject: 848 Basin Road
Date: Monday, June 1, 2020 11:08:05 PM

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

I received a card in the mail that an application is being considered to "dispose" of 848 Basin Road by land sale to the "neighboring property owner." The card makes it sound like a neighbor may apply to buy the property but doesn't stipulate which neighbors qualify (eg: adjacent only?).

Aside from knowing the process is fair to all interested parties, my comment would be that the city should maintain access to Cope Park by the trail that currently descends through 848 Basin Road. This route serves to tie neighborhoods together and facilitates walkers' access to the grocery store and JD schools.

-

Ryan Stanley
(907) 723-3938
817 Basin Road

CSP2020 0004

Staff recommends **DENIAL** of disposal of
848 Basin Road by land sale to
neighboring property owner.

June 23, 2020 Planning Commission



Denial based on....

- Property is in moderate landslide area
- Comprehensive Plan and All Hazards Mitigation Plan recommend CBJ retain lands to discourage development in hazard zones.

Code compliant approval with:

- Redrawn hazard boundaries
- Engineered mitigation

Vicinity



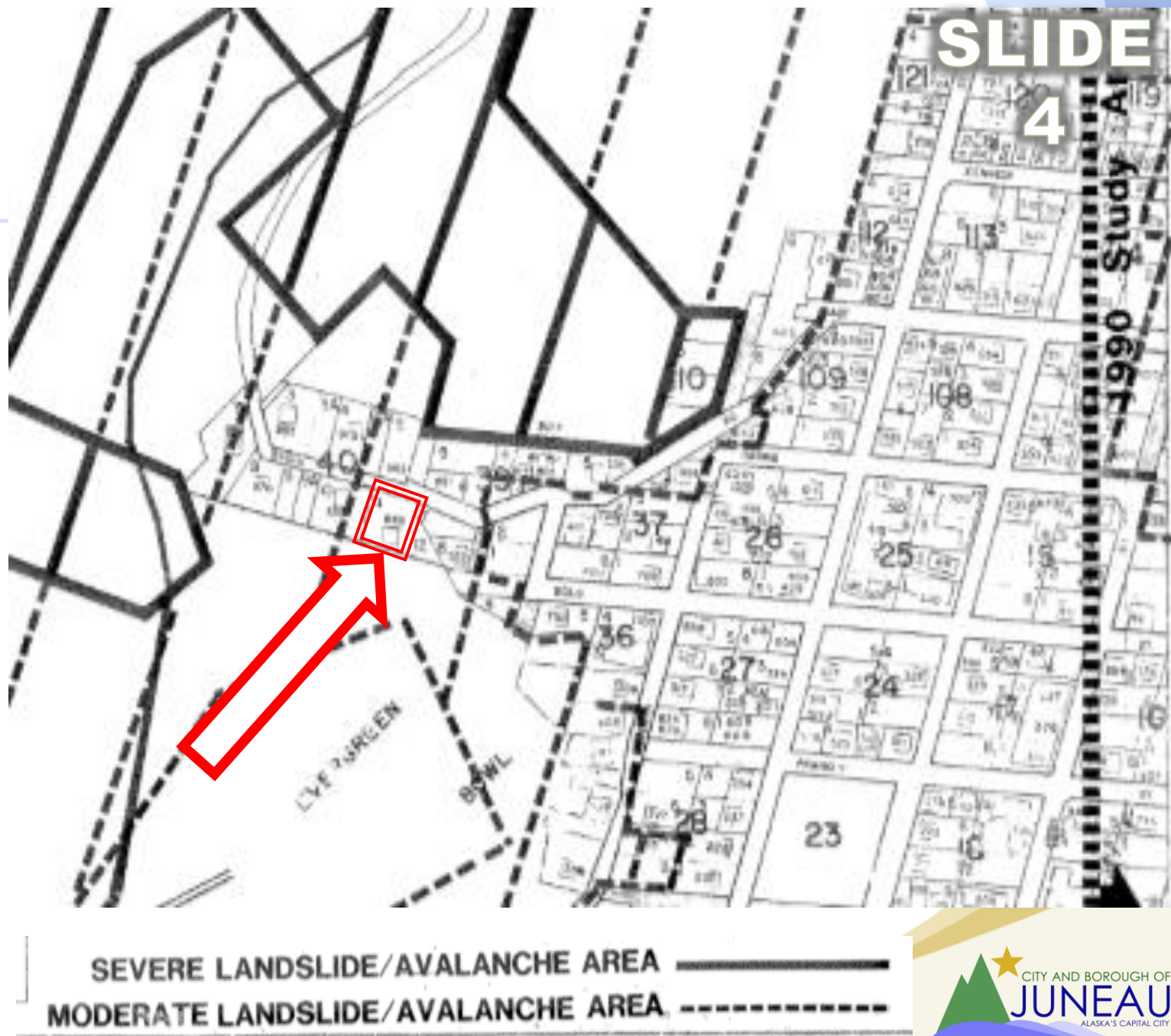
Brief review of terms:

“Applicant” is CBJ Lands and Resources

“Purchasing party” – owner of neighboring property (850 Basin Road) who is interested in buying subject property (848 Basin Road).

Hazard zone

49.70.300(a)(2)



Landslide area All Hazards Management Plan

SLIDE
5

Legend

- MassWasting (Severe Hazard Zone A)
- Mass Wasting (Moderate Hazard Zone B)

1,000 500 0 1,000 Feet

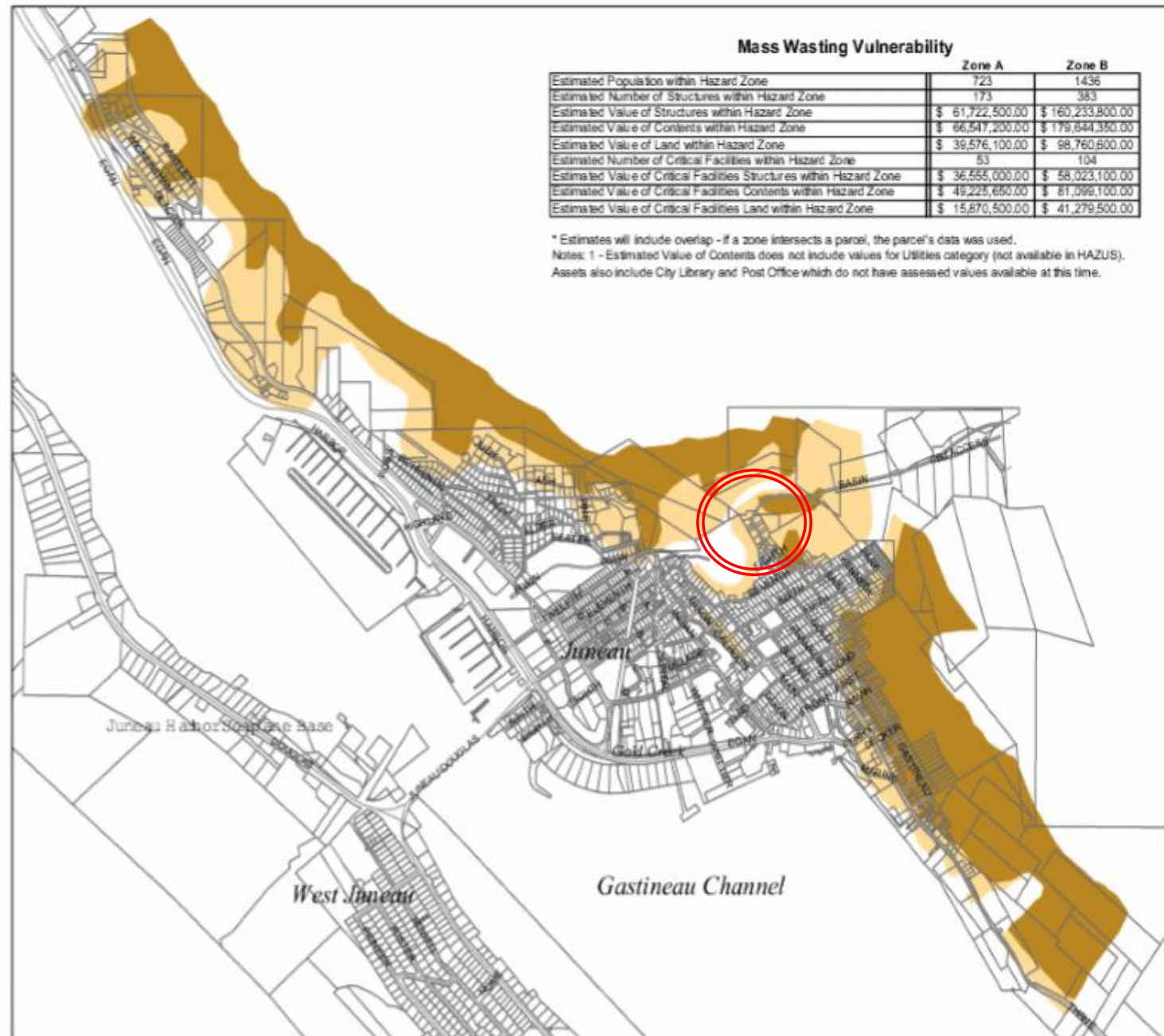
Data Source:
1 - Moens, Foslor, and Fredston, February, 1992 Juneau Area Mass-Wasting & Snow Avalanche Hazard Analysis.
2 - Seismic Hazard Inventory and Land Use Control for the City and Borough of Juneau, June 1972, Alaska Geological Consultants, Inc.
3 - Population data interpolated from CBJ Tax Assessors Database (162003), CBJ Estimated Population per TAZ block (06-2002) and CBJ 2001 Census by housing unit data.


Hazard Mitigation Plan

Mass Wasting Hazard Areas



JOB NO: 2021-0621
DATE: December 2021



Agency Comments

- CCFR: No concerns
- General Engineering: 20-foot easement for CBJ retaining wall supporting Basin Road.
- Emergency Programs: Contrary to best and past practices.



Public comments

- Concern regarding sale to anybody
- Road physical condition
- Road operations
- Park access
- Hillside stability



Conformity with adopted plans



Comprehensive Plan (2013) adopted by ordinance under 49.05.200

- PC charge to review “...for conformity with this title.” [49.15.580(a)]
- NOT incorporated by reference [49.05.200(b)(1)]:
 - Lands Management Plan (2016)
 - All Hazards Mitigation Plan (2012)

Conformity with adopted plans

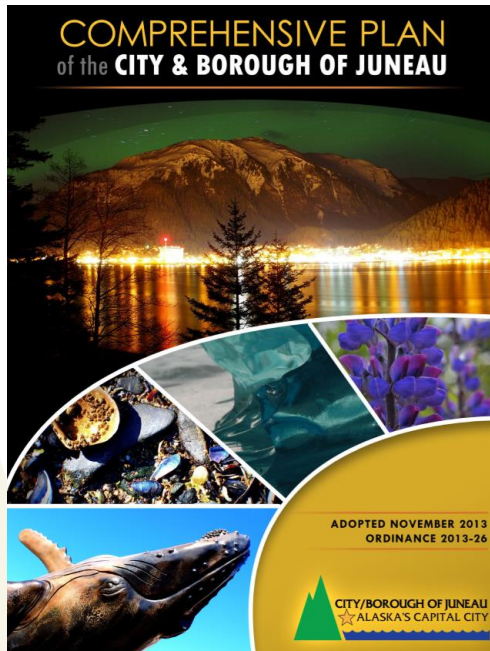
CORRECTION Lands Management Plan **IS** adopted by ordinance under
53.09.170

- The planning commission shall recommend to the assembly a land management plan for all City and Borough lands. [53.09.150(a)]
 - Land should not be made available for residential, commercial, or industrial development in areas that have *significant* landslide, avalanche, or floodplain hazards unless the development proposal includes adequate mitigation measures to prevent loss of life and property; ([53.09.150(c)(8)]. Emphasis added)

2015 Planning Commission had lucidly discussed need for downtown housing and consideration of this lot.

Comprehensive Plan Policy 7.17

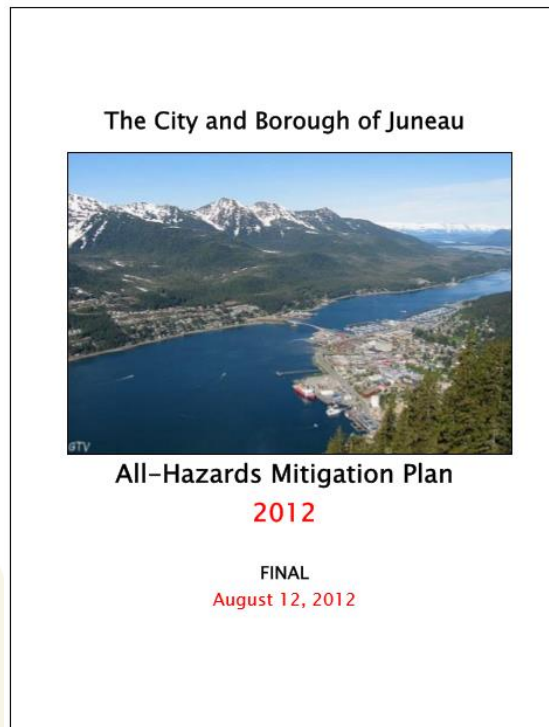
TO MINIMIZE THE THREAT TO HUMAN SAFETY AND DEVELOPMENT POSED BY LANDSLIDES (MASS WASTING) AND AVALANCHES.



- Retain ownership in hazard areas
- Include land in hazard areas in Parks and Open Space/Natural Areas Plan
- Acquire lands in hazard areas – remain undeveloped

All Hazards Mitigation Plan (2012)

Goal: Reduce the CBJ's vulnerability to landslide damage in terms of loss of life and property.



- Buy out property in affected area
- Disallow new construction in landslide-prone areas

Land Management Plan (2016)

LND-1020 Retain/Dispose.

- appropriate for disposal
- sections that may be retained for a public purpose.
- common for larger parcels.



Conformity summary

Comprehensive Plan (2013) **X**

All Hazards Mitigation Plan (2012) **X**

Land Management Plan (2016) **✓**

Recommend DENIAL

- Not in conformance with the Comprehensive Plan
- Not in conformance with the All Hazards Mitigation Plan

If you decide to approve, recommend either:

- Study requiring that parcel is not in a hazard zone
- Design hazard mitigation



Thank you!



Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION NOTICE OF RECOMMENDATION

Date: June 29, 2020
File No.: CSP2020 0004

City and Borough of Juneau
CBJ Assembly Members
155 S. Seward Street
Juneau, AK 99801

Proposal: Planning Commission recommendation to the City and Borough Assembly regarding land disposal by sale to neighboring property

Property Address: 848 Basin Road

Legal Description
or ROW name: USS 3379 Lot 11

Parcel Code No.: 1C040A400100

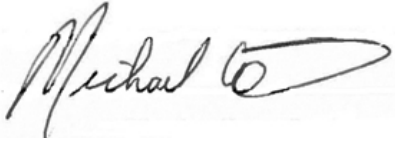
Hearing Date: June 23, 2020

The Planning Commission, at a regular public meeting, adopted the analysis and findings listed in the attached memorandum dated June 12, 2020, with supplemental materials. The Planning Commission recommends DENIAL of the land disposal.

- Attachments:
1. June 12, 2020 memorandum from Irene Gallion, Senior Planner, Community Development, to the CBJ Planning Commission regarding CSP2020 0004.
 2. June 17, 2020 correction memo from Irene Gallion, Senior Planner, Community Development, to the CBJ Planning Commission regarding CSP2020 0004.
 3. June 21, 2020 email from Ke Mell, with attachments:
 - A. July, 1992 Reconstruction Drawings
 - B. Section A-A from Basin Road Reconstruction Drawings, modified
 - C. Geophysical Hazards investigations for CBJ Summary

City and Borough of Juneau
 CBJ Assembly
 File No.: CSP2020 0004
 June 29, 2020
 Page 2 of 2

This Notice of Recommendation constitutes a recommendation of the CBJ Planning Commission to the City and Borough Assembly. Decisions to recommend an action are not appealable, even if the recommendation is procedurally required as a prerequisite to some other decision, according to the provisions of CBJ 01.50.020(b).

Project Planner:	 Irene Gallion, Planner Community Development Department	 Michael LeVine, Chair Planning Commission
	 Filed With Municipal Clerk	7/6/2020 Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ - adopted regulations. The CBJ and project designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

AME2020 0003: Text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements -
RECOMMENDED FOR APPROVAL WITH CHANGES (FORWARDED TO ASSEMBLY)

AGENDA ITEM:

Case No.: AME2020 0003

Applicant: City & Borough of Juneau

Location: Boroughwide

Proposal: Text amendment to reivse Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements

RECOMMENDATION:

Staff recommends the Planning Commission adopt the Director's analysis and findings and make a recommendation to the Assembly to APPROVE the proposed text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements.

ATTACHMENTS:

Description	Upload Date	Type
▣ Staff Report for AME2020 0003	6/15/2020	Staff Report
▣ Presentation for AME2020 0003	6/22/2020	Presentation
▣ Notice of Recommendation for AME2020 0003	7/6/2020	Notice of Recommendation



PLANNING COMMISSION STAFF REPORT
TEXT AMENDMENT AME2020-0003
HEARING DATE: JUNE 23, 2020

(907) 586-0715

CDD_Admin@juneau.org

www.juneau.org/CDD

155 S. Seward Street • Juneau, AK 99801

STAFF RECOMMENDATION:

Staff recommends the Planning Commission forward the proposed text amendment with a recommendation of **APPROVAL** to the Assembly.

ALTERNATIVE ACTIONS:

1. **Amend:** modify the proposed text amendment and recommend approval to the Assembly.
2. **Deny:** recommend denial of the proposed text amendment to the Assembly. Planning Commission must make its own findings.
3. **Continue:** continue the hearing to a later date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is required for this text amendment. The Commission's recommendation will be forwarded to the assembly for final action.

STANDARD OF REVIEW:

This is a legislative decision and requires five (5) affirmative votes for approval.

DATE: June 15, 2020**TO:** Planning Commission**FROM:** CBJ Community Development Department**BY:** Teri Camery, Senior Planner, CFM

PROPOSAL: A text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements

SUMMARY OF KEY CONSIDERATIONS:

- Adoption of the Revised September 18, 2020 FEMA Flood Insurance Rate Map and Flood Insurance Study
- Adoption of flood management revisions to CBJ Code 49.70.400; 49.70.410; 49.80.120; and 49.85.100, as required by FEMA

GENERAL INFORMATION

Applicant	City and Borough of Juneau
Initiated By	Community Development Department
Property Affected	Borough-wide

LAND USE CODE AMENDED

49.70.400 and 49.70.410	Flood Hazard Areas
49.80.120	Definitions
49.85.100	Fee Schedule

WORK SESSION DATES

Public Meetings	April 4, 2018 August 28, 2019
Assembly Lands Committee	June 1, 2020

49.10.170(d) Planning Commission Duties. *The commission shall make recommendations to the assembly on all proposed amendments to this title, zonings and rezoning, indicating compliance with the provisions of this title and the comprehensive plan.*

ATTACHMENTS

Item	Description
Attachment A	CBJ Assembly Lands Committee memo, May 27, 2020

INTRODUCTION

As a result of new analysis and public comments from the 2018 and 2019 public process, the Federal Emergency Management Agency (FEMA) has released the final pending Flood Insurance Rate Map and Flood Insurance Study. The map link on the CDD website (<https://beta.juneau.org/community-development/special-projects/flood-map-revisions>) provides a comparison between the currently adopted 2013 Flood Insurance Rate Map and the final pending map. The pending map and study are also available through the FEMA Map Service Center at <https://msc.fema.gov/portal/home>. At this link, click “search all products,” enter state, enter Juneau Borough under “county,” enter City and Borough of Juneau for community, and click on “pending product.”

To participate in FEMA’s National Flood Insurance Program (NFIP), CBJ must adopt and enforce specific floodplain management regulations, FEMA’s Flood Insurance Study for the borough, and FEMA’s Flood Insurance Rate Map that delineates different flood zones and base flood elevations. The CBJ land use code Flood Hazard Areas floodplain management text is dictated by FEMA requirements.

Federal requirements establish that the final pending map, study, and regulations will be effective on September 18, 2020, following CBJ Assembly adoption. If CBJ does not adopt these items by ordinance prior to September 18, 2020, CBJ will be suspended from the NFIP. If CBJ does not participate in the NFIP, borough property owners within Special Hazard Areas cannot obtain flood insurance or a federally-backed mortgage within Special Flood Hazard Areas, and the borough will not be eligible for federal disaster relief.

CBJ and FEMA estimate that the improved maps will remove approximately 191 parcels from the Special Flood Hazard Area. These property owners will no longer be required to have flood insurance with a federally-backed mortgage. Approximately 45 parcels will be added to the Special Flood Hazard Area. These owners will be required to obtain flood insurance with a federally-backed mortgage.

BACKGROUND

Mapping Process and Timeline. CBJ joined the NFIP in 1981. The last completed map revision was in 2013. These maps are currently in effect. Issues were identified in the 2013 revision that could not be addressed within federally mandated timelines. Therefore, a second analysis began shortly after to utilize new contour data and other information to develop more accurate flood maps. Highlights of the current map revision include:

- Preliminary Map Release. August 25, 2017.
- Public Meeting and FEMA/CBJ Workshop. April 4, 2018.
 - Approximately 150 people attended.
- First Appeal and Comment Period. April 11 – July 9, 2018.

- o In conjunction with the public meeting and appeal/comment period, CDD sent a postcard mailing to all properties within or adjacent to a flood zone with a website link, map, and comment information.
- Revised Preliminary Map Release. November 30, 2018.
 - o The first appeal/comment period revealed a minor but systematic error in the maps along a stretch of coastline that met FEMA's threshold for a second revision and map release.
 - o FEMA and CBJ held a second public meeting on August 28, 2019 with a second postcard mailing to all flood properties regarding the changes and the second public/comment appeal period. This meeting addressed both the borough-wide flood map revision and the separate Tee Harbor map revision.
- Second Appeal and Comment Period. July 24 – October 22, 2019.
- Letter of Final Determination. May 18, 2020.
 - o This is FEMA's final release of the maps and Flood Insurance Study (the report with supporting data), which starts the federal mandatory timeline of six months for adoption by CBJ.
 - o The final map revision removes approximately 191 parcels from the Special Flood Hazard Area, which eliminates the flood insurance requirement. Approximately 45 parcels will be added to the Special Flood Hazard Area, triggering the flood insurance requirement.
- Maps and Flood Insurance Study Become Effective. September 18, 2020.

Tee Harbor Map Revision. The Tee Harbor area was not within the scope of the new study and map revision. However, in the first appeal/comment period on the draft maps that began in April 2018, Tee Harbor residents sent comments to CBJ and FEMA regarding the extreme inaccuracy of the maps in that area and the high flood insurance costs associated with the error. FEMA agreed, and launched a separate study and timeline specifically for Tee Harbor through the Letter of Map Revision (LOMR) process. Revised Tee Harbor maps were released for public appeal/comment from January 24 – April 23, 2020. CDD sent another postcard mailing, and updated the website. No comments were received. The Tee Harbor LOMR had a separate public process from the borough-wide maps dictated by federal regulations, and LOMRs do not require approval by local ordinance. The Tee Harbor LOMR is final and effective as of May 26, 2020. The Tee Harbor map is available through the FEMA Map Service Center at <https://msc.fema.gov/portal/home>. At this link, click "search all products," enter state, enter Juneau Borough under "county," enter City and Borough of Juneau for community, click on "effective products," click on "LOMC," then "LOMR," then Product ID 19-10-1198P-020009.

TEXT AMENDMENT SUMMARY

The proposed text amendment adopts FEMA's revised Flood Insurance Rate Map and Flood Insurance Study, released on March 18, 2020 and effective on September 18, 2020. In addition, the text amendment would update Title 49 land use code, Sections 49.70.400 and 410, Flood Hazard Areas; Section 49.80.120, Definitions; and Section 49.85.100, Fee Schedule to conform with FEMA requirements. These changes would be effective on September 18, 2020. Highlights of the text amendment to the land use code include the following:

- Adds a disclaimer of liability language to explain that floods may exceed the heights and areas noted on the Flood Insurance Rate Map, as required by FEMA.
- Establishes required record-keeping duties and responsibilities of the Floodplain Administrator (CDD), as required by FEMA.

- Establishes a Floodplain Development Permit to ensure that CBJ regulates development within Special Flood Hazard Areas, as required by FEMA.
 - o The Floodplain Development Permit distinguishes between minor and major development.
 - o Minor development, defined as development that does not require a building permit, would have a fee of \$45.00. Major development, defined as development that does require a building permit, would have a fee of \$100.00.
 - o The proposed fee for a minor development is nominal, and partially covers minimum administrative and staff review costs for minor reviews. The proposed fee for a major development covers approximately 25 percent of estimated administrative and staff review costs.
- Incorporates FEMA definition language into the land use code to ensure that CBJ uses FEMA regulatory definitions in flood reviews.
- Includes other minor revisions to clarify existing review processes required by FEMA, such as the requirement to notify FEMA when a watercourse is moved. These revisions are for clarification and compliance only, and do not add new regulatory requirements.

PUBLIC NOTICE

As noted in the Background Section above, CBJ and FEMA held two public meetings in 2018 and 2019 regarding these revisions. Approximately 150 people attended the 2018 meeting, while 25 attended in 2019. Each public meeting was preceded by public service announcements, news articles, Facebook posts, CDD website updates, and postcard mailings to all property owners within or adjacent to Special Flood Hazard Areas. The postcard mailings included special attention to property owners who were likely to be added to the Special Flood Hazard Area for the first time.

The FEMA review process included two appeal and comment periods, which were emphasized in the public meetings, mailings, and on the CBJ website. No appeals or comments were received during the second period. In addition to the public meetings, CDD staff made a presentation to the Juneau Realtors Association in 2018, and FEMA staff held a workshop with local surveyors in 2019. CDD has maintained the website link with information on the update and a sliding map that allows property owners to compare the existing flood map with the proposed flood map. CDD will send a final mailing to property owners notifying them of the map adoption.

No additional public comments have been received at this writing.

COMPLIANCE WITH TITLE 49 Land Use Code

49.05.100 - Purpose and intent. The purpose and Intent of Title 49 Land Use Code is:

- (1) To achieve the goals and objectives, and implement the policies, of the Juneau comprehensive plan, and coastal management program;*
- (2) To ensure that future growth and development in the City and Borough is in accord with the values of its residents;*
- (3) To identify and secure, for present and future residents, the beneficial impacts of growth while minimizing the negative impacts;*
- (4) To ensure that future growth is of the appropriate type, design and location, and is served by a proper range of public services and facilities such as water, sewage, and electrical distribution systems, transportation, schools, parks and other public requirements, and in general to promote public health, safety and general welfare;*
- (5) To provide adequate open space for light and air; and*
- (6) To recognize the economic value of land and encourage its proper and beneficial use.*

TITLE 49: The proposed text amendment complies with CBJ Title 49 Land Use Code. Additionally, the proposed amendment will not create any inconsistencies in Title 49.

Code Reference	Item	Summary
49.05.100	Purpose Statement	The proposed text amendment complies with the purpose and intent of Title 49.

COMPLIANCE WITH ADOPTED PLANS

2013 COMPREHENSIVE PLAN VISION: *The City and Borough of Juneau is a vibrant State Capital that values the diversity and quality of its natural and built environments, creates a safe and satisfying quality of life for its diverse population, provides quality education and employment for its workers, encourages resident participation in community decisions and provides an environment to foster state-wide leadership.*

2013 COMPREHENSIVE PLAN The proposed text amendment is in compliance with the 2013 Comprehensive Plan.

Chapter	Page No.	Item	Summary
7	99	Policy 7.18	<i>Policy 7.18. TO PROHIBIT RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT IN FLOODWAYS, TO REGULATE DEVELOPMENT IN FLOODPLAINS, AND TO MAINTAIN A PROGRAM OF EDUCATION, ASSISTANCE, AND INFORMATION IN ORDER TO MAINTAIN ELIGIBILITY FOR THE NATIONAL FLOOD INSURANCE</i>

2013 COMPREHENSIVE PLAN The proposed text amendment is in compliance with the 2013 Comprehensive Plan.			
			<i>PROGRAM FOR THE BENEFIT OF LOCAL PROPERTY OWNERS AND THE LENDING INDUSTRY.</i> The proposed text amendment supports Policy 7.18 by adopting a new Flood Insurance Rate Map, a new Flood Insurance Study, and an updated flood management regulations to meet the Federal Emergency Management Agency requirements.

2016 HOUSING ACTION PLAN The proposed text amendment complies with the 2016 Housing Action Plan.			
Chapter	Page No.	Item	Summary
Part 2, Solutions	31	Recommendations	The proposed text amendment is in general compliance with Housing Action Plan recommendations because it will allow CBJ to remain in the National Flood Insurance Program. Participation in the National Flood Insurance Program allows purchase of homes within Special Flood Hazard Areas with a federally-backed mortgage. This is because federally-backed mortgages require the purchase of flood insurance within Special Flood Hazard Areas, and federal flood insurance is only available to communities who participate in the National Flood Insurance Program.

FINDINGS

1. Does the proposed text amendment comply with the Comprehensive Plan and other adopted plans?

Analysis: The proposed amendment balances the Comprehensive Plan and 2016 Housing Action Plan policies, and is generally consistent with the overall vision.

Finding: Yes. The proposed text amendment conforms to the 2013 Comprehensive Plan and the 2016 Housing Action Plan.

2. Does the proposed text amendment comply with Title 49 – Land Use Code?

Analysis: The proposed text amendment was drafted with the purpose and intent of Title 49 taken into account. If approved as drafted, it will be consistent with the above purposes, especially sections 49.70.400 and 49.70.410, Flood Hazard Areas.

Finding: Yes. The proposed text amendment conforms to the purpose and intent of Title 49 land use code. Additionally, the proposed text amendment does not create any inconsistencies within the code.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and make a recommendation to the Assembly to APPROVE the proposed text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements.



(907) 586-0757
 Jill.Maclean@juneau.org
 www.juneau.org/CDD
 155 S. Seward Street • Juneau, AK 99801

MEMO

TO: Rob Edwardson, Chair Lands Committee and
 Lands Committee Members

FROM: Jill Maclean, Director, AICP *Jill Maclean*

DATE: May 27, 2020

RE: FEMA Flood Map Adoption Process

This memo provides a brief background of the Federal Emergency Management Agency (FEMA) process regarding the CBJ borough-wide Flood Map Revision that is currently underway.

FEMA and CBJ Authority. To participate in FEMA's National Flood Insurance Program (NFIP), CBJ must adopt and enforce a floodplain management ordinance utilizing the floodplain maps developed by FEMA that delineate flood zones and base flood elevations. Participation in the program allows property owners to obtain flood insurance, and makes CBJ eligible to receive disaster funding. Flood insurance is necessary for all properties located in Special Flood Hazard Areas seeking to secure federally-backed mortgages.

Mapping Process and Timeline. CBJ first joined the NFIP in 1981. The last completed map revision was 2013. These maps are currently in effect. Issues were identified in the 2013 revision that could not be addressed within federally mandated timelines. Therefore, a second analysis began shortly after in order to utilize new contour data and other information to develop more accurate flood maps—this is the process currently underway. Highlights of the current map revision include:

- Preliminary Map Release. August 25, 2017
- Public Meeting and FEMA/CBJ Workshop. April 4, 2018
 - Approximately 150 people attended.
- First Appeal and Comment Period. April 11-July 9, 2018
 - In conjunction with the public meeting and appeal/comment period, CDD sent a postcard mailing to all properties within or adjacent to a flood zone with a website link, map, and comment information.
- Revised Preliminary Map Release. November 30, 2018
 - The first appeal/comment period revealed a minor, but systematic, error in the maps along a stretch of CBJ coastline that met FEMA's threshold for a second revision and map release.

- FEMA and CBJ held a second public meeting on August 28, 2019 with a second postcard mailing to all flood properties regarding the changes and the second public/comment appeal period. This meeting addressed both the borough-wide flood map revision and the separate Tee Harbor map revision.
- Second Appeal and Comment Period. July 24-October 22, 2019
- Letter of Final Determination. May 18, 2020
 - This is FEMA's final release of the maps and Flood Insurance Study (the report with supporting data), which starts the federal mandatory timeline of six months for CBJ to adopt the maps and ordinance.
 - The final map revision **removes approximately 191 parcels** from the Special Flood Hazard Area, which eliminates the flood insurance requirement. **Approximately 45 parcels** will be added to the Special Flood Hazard Area.
- ***Maps and Flood Insurance Study Become Effective—if adopted by CBJ. September 18, 2020***
 - ❖ Regardless of the speed at which CBJ moves to adopt the maps and ordinance, the maps go into effect on September 18, 2020 per FEMA—this date is not under CBJ's control.

Tee Harbor Map Revision. The Tee Harbor area was not within the scope of the new study and map revision. However, in the first appeal/comment period on the first draft maps that began in April 2018, Tee Harbor residents sent comments to CBJ and FEMA regarding the extreme inaccuracy of the maps in that area and the high flood insurance costs associated with the error. FEMA agreed, and launched a separate study and timeline specifically for Tee Harbor through the Letter of Map Revision (LOMR) process. Revised Tee Harbor maps were released for public appeal/comment from January 24 through April 23, 2020. CDD sent another postcard mailing, and updated the website. No comments were received. The Tee Harbor LOMR has a separate public process from the borough-wide maps, dictated by federal regulations, and LOMR do not require approval by local ordinance.

- ❖ The Tee Harbor Map Revision is effective as of May 26, 2020.

Next Steps. CDD is drafting an updated floodplain management ordinance, which must be revised to meet minimum federal requirements. The ordinance, maps, and study are tentatively scheduled for a public hearing before the Planning Commission on June 23, 2020. The Assembly must adopt the revised ordinance, with the revised maps and Flood Insurance Study, by September 18, 2020.

AME2020-0003

June 23, 2020

A text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements

Staff recommends the Planning Commission forward the proposed text amendment with a recommendation of APPROVAL to the Assembly.

Summary of Key Considerations (packet p 36)

- Applicant, CBJ; text amendment initiated by the Community Development Department for Borough-wide flood map revisions

Text Amendment addresses:

- Adoption of the Revised September 18, 2020 FEMA Flood Insurance Rate Map and Flood Insurance Study
- Adoption of flood management revisions to CBJ Code 49.70.400; 49.70.410; 49.80.120; and 49.85.100, as required by FEMA

Background (p. 37)

- CBJ joined the FEMA National Flood Insurance Program in 1981. Participation in the program allows property owners within Special Flood Hazard Areas to obtain flood insurance and federally-backed mortgages, and allows CBJ to obtain federal disaster relief.
- To participate in the program, CBJ must adopt the FEMA Flood Insurance Rate Map, the FEMA Flood Insurance Study, and specific flood management regulations that comply with federal requirements.

Background continued (pp. 37-38)

- The last flood map revision was completed in 2013. Second FEMA analysis began soon after and used new contour data to develop more accurate maps.
- FEMA process, coordinated with CBJ, included two appeal/comment periods and two public meetings in 2018 and 2019.
- FEMA released the Letter of Final Determination, with maps and study, on March 18, 2020. This started the six month timeline in the Federal Register. The maps and study will be effective on September 18, 2020, provided that CBJ adopts the maps, study, and a flood management ordinance that complies with FEMA requirements by this date.

Tee Harbor Map Revision (p. 38)

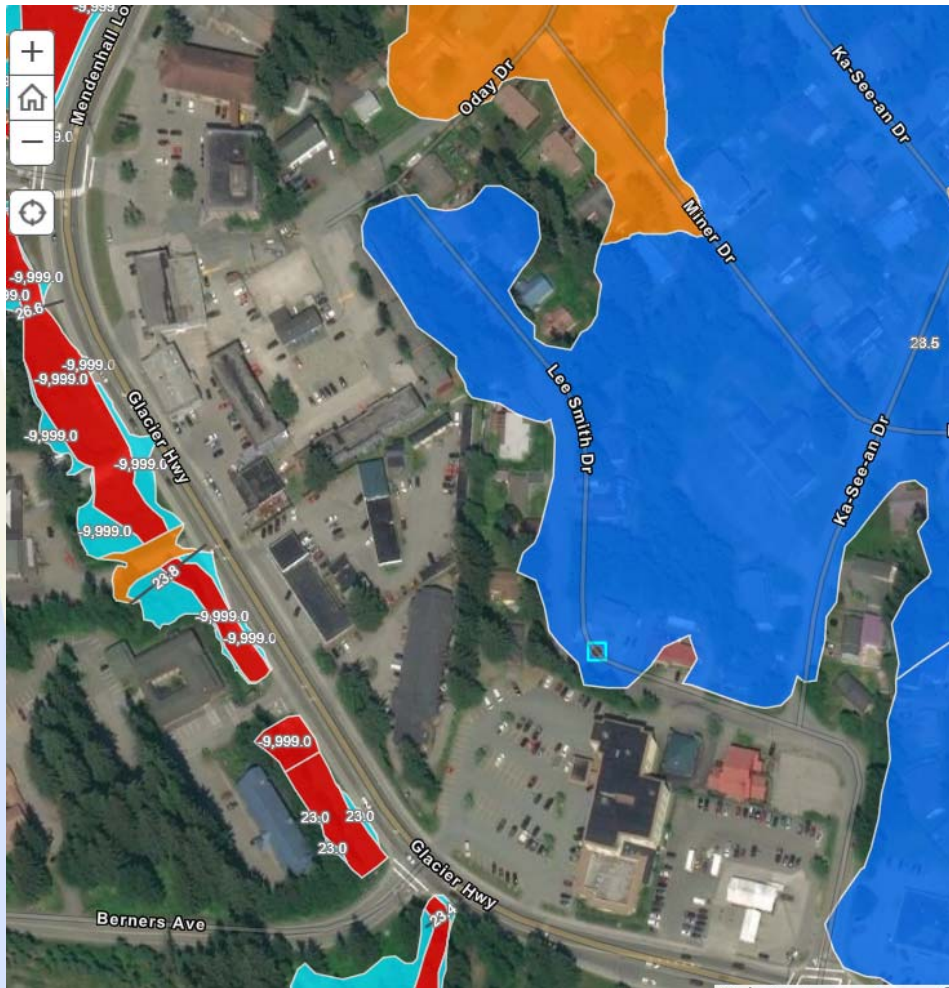
- During the first comment period on the boroughwide-maps, Tee Harbor residents informed CBJ and FEMA of major inaccuracies in the FEMA maps for this area and the high flood insurance costs associated with these errors.
- FEMA agreed to do an additional study just for this area.
- The Tee Harbor flood maps were completed through FEMA's Letter of Map Revision process. These maps are effective as of May 26, 2020. This process does not require Planning Commission or Assembly review.
- The revised map is available through the FEMA Map Service Center. A sliding map with the changes is also available on the CDD web page.

Text Amendment Summary (p. 38-39)

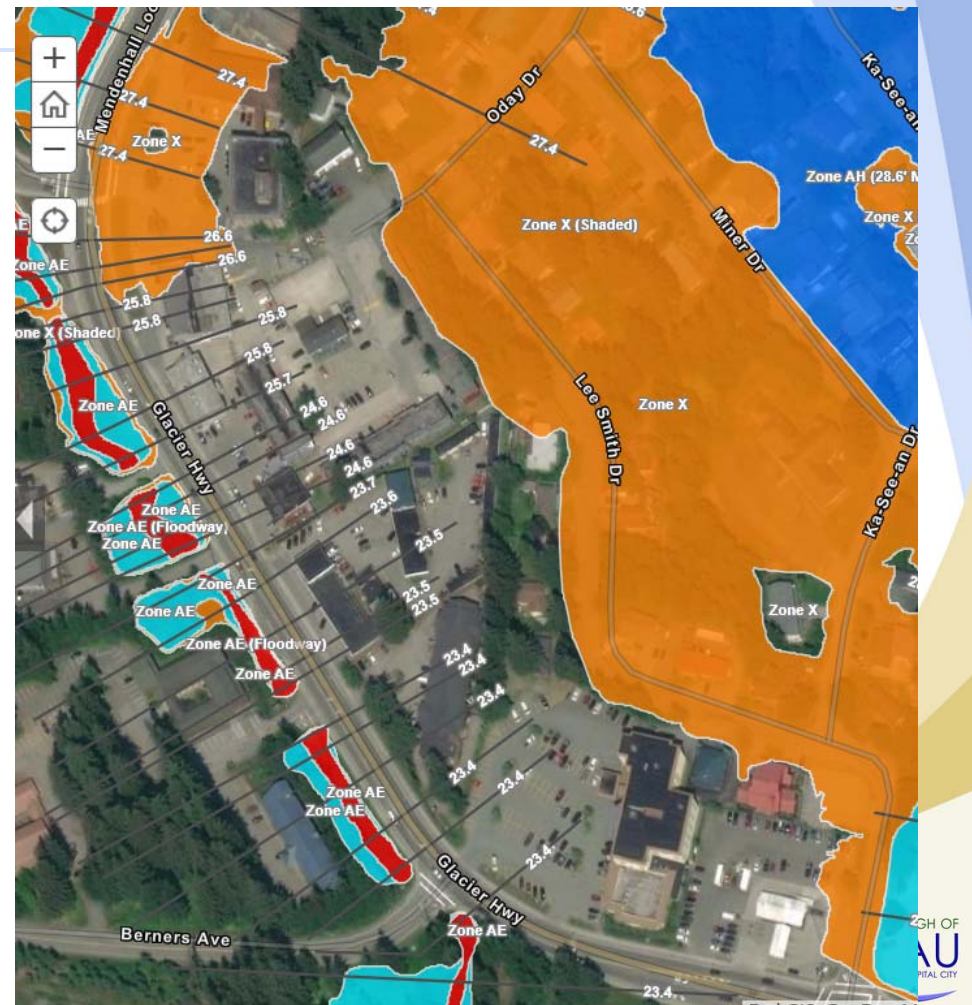
- The text amendment adopts FEMA's revised Flood Insurance Rate Map and Flood Insurance Study.
- The map and study are available through FEMA's Map Service Center on-line. CDD also has a limited number of paper copies.
- A sliding map, which shows the changes between the 2013 map and proposed map, is available on the CDD website.

Flood Map Example

Current



Revised and Pending



Text Amendment Summary continued

- The revised map will remove approximately 191 parcels from the Special Flood Hazard Area. These property owners will no longer be required to have flood insurance with a federally-backed mortgage.
- The revised map adds 45 parcels to the Special Flood Hazard Area. These property owners will be required to obtain flood insurance with a federally-backed mortgage.

Text Amendment Summary continued

- The text amendment also requires adoption of revised flood management regulations to comply with FEMA requirements. Language is dictated by FEMA.
- Revised sections include 49.70.400 and 49.70.410, Flood Hazard Areas; 49.80.120, Definitions, and 49.85.100 Fee Schedule

Text Amendment Summary continued

- Proposed code changes dictated by FEMA include:
 - o Disclaimer of liability language
 - o Record-keeping duties and responsibilities of the Floodplain Administrator
 - o Establishment of a Floodplain Development Permit to regulate development within Special Flood Hazard Areas. Fee is \$45 for minor development, defined as development without a building permit; and \$100 for major development, defined as development that requires a building permit.

Text Amendment Summary continued

- o Incorporates FEMA definition language into the land use code to ensure that CBJ uses FEMA regulatory definitions in flood reviews.
- o Includes other minor revisions to clarify existing review processes required by FEMA, such as the requirement to notify FEMA when a watercourse is moved. These revisions are for clarification and compliance only, and do not add new regulatory requirements.

Public Notice and Outreach (p. 39)

- Public Meeting and FEMA/CBJ Workshop. April 4, 2018.
 - Approximately 150 people attended.
- First Appeal and Comment Period. April 11 – July 9, 2018.
- Second Appeal and Comment Period. July 24 – October 22, 2019.
- Second public meeting on August 28, 2019
 - Approximately 25 people attended
 - No comments/appeals received during the second comment period

Public Notice and Outreach continued

- Each public meeting was preceded by news articles, PSAs, Facebook posts, CDD website updates, and postcard mailings to all property owners within or adjacent to Special Flood Hazard Areas.
- CDD staff made a presentation to the Juneau Realtors Association in 2018
- FEMA staff had a workshop with local surveyors in 2019.
- CDD has maintained the flood website link with updated information.
- Assembly Lands Committee Meeting, June 1, 2020

Findings (p. 41)

1. The text amendment complies with the Comprehensive Plan and other adopted plans.
2. The text amendment conforms to the purpose and intent of Title 49 land use code. The text amendment does not create any inconsistencies within the code.

Recommendation (p. 41)

Staff recommends the Planning Commission adopt the Director's analysis and findings and make a recommendation to the Assembly to APPROVE the proposed text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements.



Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION NOTICE OF RECOMMENDATION

Date: June 29, 2020

Case No.: AME2020 0003

City and Borough of Juneau
City and Borough Assembly
155 South Seward Street
Juneau, AK 99801

Proposal: Planning Commission Recommendation to the City and Borough Assembly regarding a text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements

Property Address: Borough-wide

Legal Description: N/A

Parcel Code Number: 0

Hearing Date: June 23, 2020

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated June 15, 2020 as amended, and recommended that the City and Borough Assembly adopt staff's recommendation with revisions as follows:

Findings as Amended:

1. Does the proposed text amendment comply with the Comprehensive Plan and other adopted plans?

Analysis: The proposed amendment balances the Comprehensive Plan and 2016 Housing Action Plan policies, and is generally consistent with the overall vision.

Finding: Yes. Adopting the proposed text amendment conforms to the 2013 Comprehensive Plan and the 2016 Housing Action Plan.

City and Borough Assembly
Case No.: AME2020 0003
June 29, 2020
Page 2 of 2

2. Does the proposed text amendment comply with Title 49 – Land Use Code?

Analysis: The proposed text amendment was drafted with the purpose and intent of Title 49 taken into account. If approved as drafted, it will be consistent with the above purposes, especially sections 49.70.400 and 49.70.410, Flood Hazard Areas.

Finding: Yes. Adopting the proposed text amendment conforms to the purpose and intent of Title 49 land use code. Additionally, adopting the proposed text amendment would not create any inconsistencies within the code.

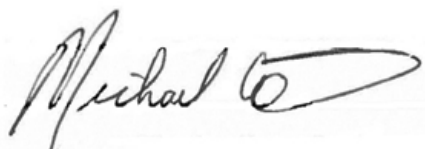
RECOMMENDATION AS AMENDED

The Planning Commission recommends the Assembly adopt an ordinance updating and revising Title 49 and adopting flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements.

Attachments: June 15, 2020 memorandum from Teri Camery, Community Development, to the CBJ Planning Commission regarding AME2020 0003.

This Notice of Recommendation constitutes a recommendation of the CBJ Planning Commission to the City and Borough Assembly. Decisions to recommend an action are not appealable, even if the recommendation is procedurally required as a prerequisite to some other decision, according to the provisions of CBJ 01.50.020 (b).

Project Planner: 
Teri Camery, Senior Planner
Community Development Department


Michael LeVine, Chair
Planning Commission


Filed With Municipal Clerk

7/6/2020
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this recommended text amendment. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

Juneau & Douglas Alternative Development Overlay Districts Extension Request - RECOMMENDED
APPROVAL OF EXTENSIONS

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

Additional Materials for June 23, 2020 Planning Commission Meeting

ATTACHMENTS:

Description	Upload Date	Type
Additional Materials for June 23, 2020 Planning Commission Meeting	6/24/2020	Miscellaneous

Additional Materials

Regular Planning Commission Meeting

Zoom Webinar and Telephonic

7:00 P.M.

Meeting Date: June 23, 2020

1. Revised Agenda

2. CSP2020 0004:

- a. Memo regarding correction to staff report
- b. July, 1992 Basin Road Reconstruction Drawings
- c. Section A-A from Basin Road Reconstruction Drawings
- d. Geophysical Hazards Investigation for CBJ Summary
- e. Public Comment – Joyanne Bloom, received 6.23.20
- f. Public Comment – Ke Mell, read at meeting

3. Other Business

- a. Draft Ordinance to amend the Land Use Code to extend the sunset date for the Downtown Juneau and Downtown Douglas Alternative Development Overlay Districts

Agenda

Planning Commission - Regular Meeting City and Borough of Juneau

June 23, 2020
Virtual Meeting Only
7:00 PM

This virtual meeting will be by video and telephonic participation only. To join the webinar, paste this URL into your browser: <https://juneau.zoom.us/j/95328546768>. To participate telephonically, call: 1-346-248-7799 or 1-669-900-6833 or 1-253-215-8782 or 1-312-626-6799 or 1-929-436-2866 or 1-301-715-8592 and enter Webinar ID: 953 2854 6768.

I. ROLL CALL

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA

III. APPROVAL OF MINUTES

A. May 12, 2020 Draft Minutes, Regular Planning Commission

IV. BRIEF REVIEW OF THE RULES FOR PUBLIC PARTICIPATION

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

VI. ITEMS FOR RECONSIDERATION

VII. CONSENT AGENDA

VIII. UNFINISHED BUSINESS

IX. REGULAR AGENDA

A. CSP2020 0004: Land disposal by sale to neighboring property

B. AME2020 0003: Text amendment to revise and update Title 49 to adopt flood management regulations, maps, and a flood insurance study to meet Federal Emergency Management Agency requirements

X. BOARD OF ADJUSTMENT

XI. OTHER BUSINESS

A. Juneau & Douglas Alternative Development Overlay Districts Extension Request

XII. STAFF REPORTS

XIII. COMMITTEE REPORTS

XIV. LIAISON REPORT

XV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

XVI. PLANNING COMMISSION COMMENTS AND QUESTIONS

XVII. EXECUTIVE SESSION

XVIII. ADJOURNMENT



(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

June 17, 2020

MEMO

From: Irene Gallion, Senior Planner 
To: Michael LeVine, Planning Commission Chair
Through: Jill Maclean, Community Development Director
Parcel No.: 1C040A400100
Legal Description: USS 3379 LTS 11
Case Number: CSP2020 0004

RE: Correction to Staff Report

The staff report for CSP20-04 dated June 12, 2020, contains an error regarding the adoption status of the Land Management Plan (2016).

While the Lands Management Plan is adopted by ordinance, it is not adopted into the Comprehensive Plan, nor into Title 49. The Planning Commission charge under CSP Code is to review the project "...for consistency with this title."

The Lands Management Plan is adopted by ordinance under Title 53. The Planning Commission recommends approval or denial of the plan to the Assembly [53.09.150(a)]. CBJ code provides the Planning Commission with guiding principles for recommending the plan, including:

Land should not be made available for residential, commercial, or industrial development in areas that have significant landslide, avalanche, or floodplain hazards unless the development proposal includes adequate mitigation measures to prevent loss of life and property; (23.09.150(c)(8), emphasis added).

"Significant" hazard is not defined. CBJ's Code conflates avalanches and landslides. Hazard maps referenced in Code [49.70.300(a)(2)] delineate "Moderate" and "Severe" hazard areas.

The inclusion of the subject lot in "retain/dispose" status contextually appears to be lucid. Property for housing was a subject of discussion at the 11/24/2015 Planning Commission Committee of the Whole.

Commissioner Voelckers said he did not find many opportunities for land development within the core town area identified within the plan. Mr. Chaney (Lands and Resources Manager) said that he would bring forward an overview for the Commission of City property in the downtown area, and what might be available for housing. However, he said, the City holds hardly any land that is vacant suitable for housing in the town area.

At the next Committee of the Whole meeting (12/8/2015) Mr. Chaney outlined property for housing near the downtown core, and listed LND-1020, the subject parcel. The memo said, *"This parcel is located near Basin Road. The property has significant topographic challenges and historic development on the adjacent private lot reduces development options for this parcel. However with the need to review all potentially suitable properties for disposal, Lands will investigate the suitability of this parcel for disposal. This property was initially deemed 'retain' but has been updated in the Draft Land Management Plan to 'retain/dispose.'"*

Minutes from that meeting indicate the subject lot was one of four lots in the downtown area that could be considered. One lot was partially in a hazard zone, and one was not. The other two lots are in hazard zones, but discussion of this fact is not recorded in the minutes:

There is also a small lot on Basin Road (subject lot) which could potentially be built upon, said Mr. Chaney. Although the lot is steep, it could feasibly be built upon, he noted. The small park which was located near the Gastineau Apartments is also another possibility for development, said Mr. Chaney.

The Planning Commission recommended the plan to be forwarded to the Assembly for approval, including the change of the subject lot from "retain" to "retain/dispose." The NOR adopted the findings of two attached memos. One outlined the structure of the plan and the procedure for updating it. The other was a summary of the changes made.

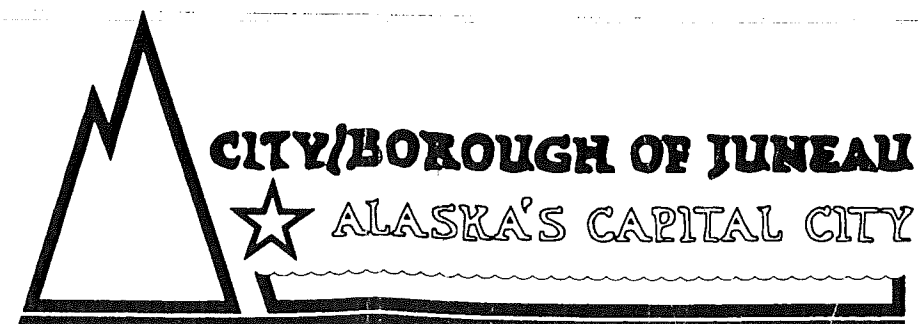
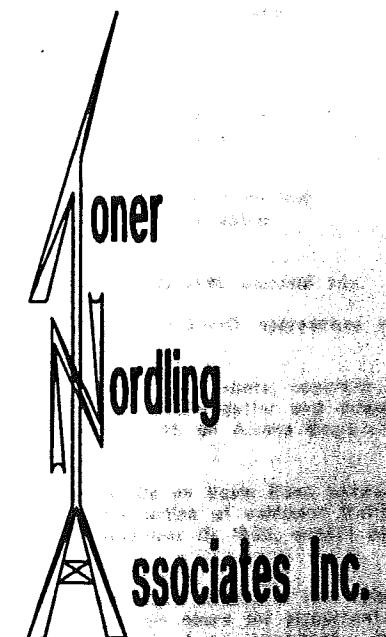
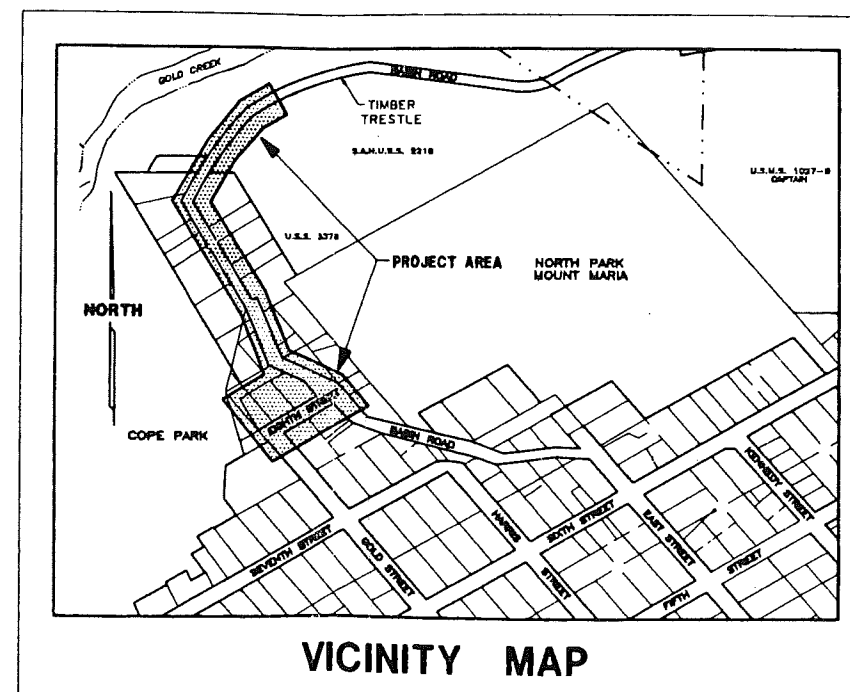
On 3/14/2016 the Assembly Committee of the Whole forwarded the Land Management Plan to the Assembly on 5/23/2016. The Plan garnered significant public comment and detailed discussion by the Assembly, but not on the issue of retaining land in a hazard zone. The Ordinance adopting the plan passed six to three.

BASIN ROAD RECONSTRUCTION

CONTRACT NO. E92-369

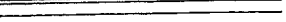
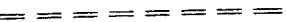
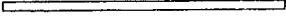
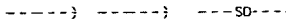
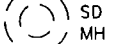
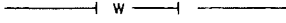
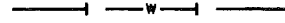
INDEX

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PROFILE STA "B" 14+00 TO E.O.P.	11 OF 11



APPROVED BY		SHEET NO. 1 of 11
DIRECTOR OF PUBLIC WORKS SIGNATURE	DATE 7/16/92	
CHIEF ENGINEER SIGNATURE	DATE 7/17/92	

LEGEND

Description	Existing	Proposed
CATCH BASIN		
CATCH BASIN (REMOVE)		
CONTROL MONUMENT		
CURB & GUTTER		
CURB & GUTTER (REMOVE)		
CURB ONLY		
FIRE HYDRANT		
HOUSE NO		
PROJECT CENTERLINE		
PROPERTY LINE		
POWER POLE		
SANITARY SEWER		
SANITARY SEWER (REMOVE)		
SANITARY SEWER MANHOLE		
SANITARY SEWER MANHOLE (REMOVE)		
SIGN		
STORM DRAIN		
STORM DRAIN (REMOVE)		
STORM DRAIN MANHOLE		
STRIP UNDERDRAIN		
TREE		
TREE (REMOVE)		
WATER LINE		
WATER LINE (REMOVE)		
WATER VALVE		
WATER VALVE (REMOVE)		
WATER METER		
WATER METER (REMOVE)		
WHEELCHAIR RAMP		

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE OR ASPHALT PAVING
CB	CATCH BASIN
CI	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIA	DIAMETER
FG	FINISHED GRADE
INV	INVERT
LT	LEFT
MH	MANHOLE
NO	NUMBER
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE PIPE
RT	RIGHT
STA	STATION
STD	STANDARD
SUD	STRIP UNDERDRAIN

ABBREVIATIONS TO BE USED WITHOUT PERIODS.

CATCH BASIN FRAME & GRATE / LID SUMMARY

CATCH BASIN NO	INLAND FOUNDARY CO., CBJ STANDARD No. OR EQUAL
CB-1	IFCO 404
CB-2	IFCO 571-4
CB-3	IFCO 404
CB-4	IFCO 404
CB-5	IFCO 571-4
CB-6	IFCO 404
CB-7	IFCO 571-4
CB-8	EXISTING

CATCH BASIN TOP SLAB OPENINGS SHALL BE DIMENSIONED TO FIT THE FRAME DIMENSIONS. ALL GRATES SHALL BE HEAVY DUTY CONSTRUCTION AND BICYCLE SAFE.

GENERAL NOTES

Begin subcut at 24 inches from pavement sawcut line. Remove and replace base course with 6 inches of D-1 to 12 inches from pavement sawcut line.

Signs within 5 feet of the edge of paved roadway shall be removed and replaced in accordance with the Manual of Uniform Traffic Control Devices with Alaska Supplement. Post assemblies shall be constructed in conformance with the sign detail shown on CBJ STD 41B, Sign Assembly.

Contractor shall assure garbage pickup and daily mail service will be uninterrupted to all residences affected by this project.

All driveway approaches shall be 6" thick concrete with No. 4 rebar at 18 inches on center, both directions, except as noted.

All existing water, sewer and storm drain pipes (to be abandoned) shall be removed and disposed, unless otherwise noted.

Existing pipe locations are derived from CBJ As-Builts or field located. Actual locations may vary from those shown. Depth of the existing pipes shown on the elevations are assumed. Contractor shall field verify the location of each existing service pipe prior to installing the respective sewer, water or storm main. DIAL BEFORE YOU DIG 586-1333

Grading and alignment are subject to minor revisions by the Engineer.

Location of storm drain catch basins, sanitary sewer manholes, piping and pipe lengths are subject to minor revisions by the Engineer.

The Contractor shall notify CBJ Water Utilities at 780-6808 and submit the "Water System Special Use Permit" (assigned by the Engineer) at least 48 HOURS PRIOR to shutdown or flushing of mainline water pipe.

Property line locations used in these plans are derived from record plats and do not represent a boundary survey.

Provide knockouts in catch basins for all CMP shown on the plans.

Contractor shall verify location and depth of existing water and sewer pipes, including all services, along the storm drain alignment, to determine pipe insulation locations.

Sewer service locations are approximate and may vary up to 20 feet from that shown. The Contractor shall provide all work necessary to determine actual service pipe locations.

All items designated to be removed shall be disposed of at an approved disposal site.

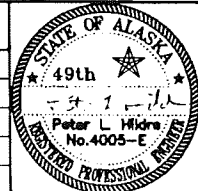
Sawcut as necessary along back of sidewalk at all driveway and sidewalk approaches to provide a neat match line.

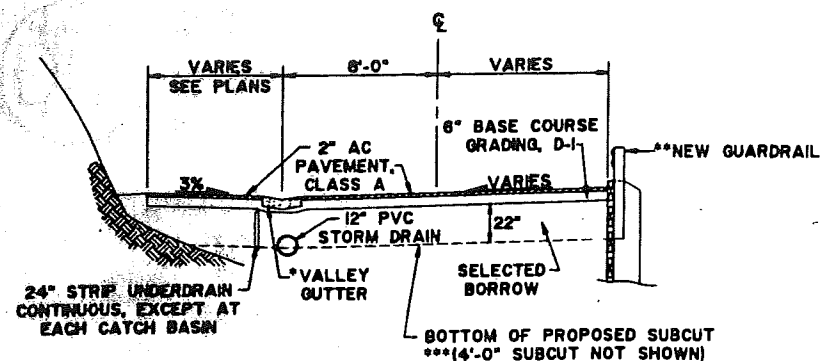
Contractor shall reference all existing property corner monuments (i.e. rebar, concrete nails, chisled X's) prior to sidewalk removal and remonument after curb and gutter and sidewalk replacement. All work shall be done by, or under the direction of, an Alaska Registered Land Surveyor.

The Contractor will not be permitted to obstruct vehicular traffic on Basin Road between the hours of 4:30pm to 8:30am, seven days per week. Obstruction of vehicular traffic will not be permitted until September 24, 1992, nor after November 15, 1992, except as noted below.

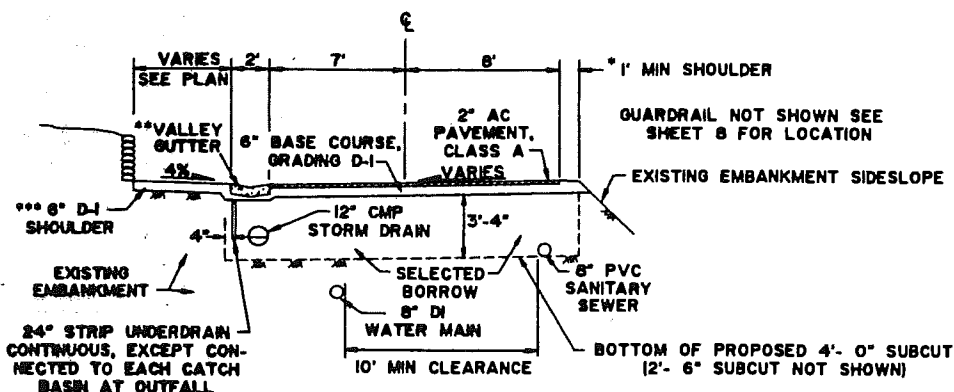
Vehicular traffic may not be obstructed on Basin Road, from Eighth Street to the timber trestle, after November 15, 1992, except for periods of up to two hours for placement of concrete curbing and gutter and up to eight hours for placement of a.c. pavement. In no case will obstruction of vehicular traffic be permitted after May 7, 1993.

Subcut limits for areas with bedrock less than 30 inches below finish grade, will be to the top of bedrock, or to 18 inches below finish grade, whichever is lesser.

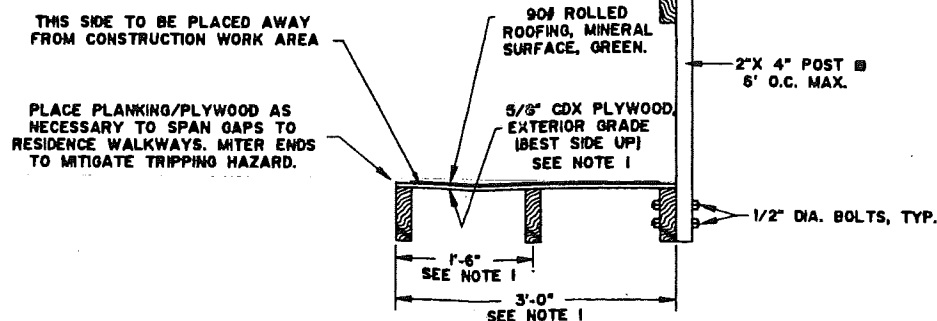
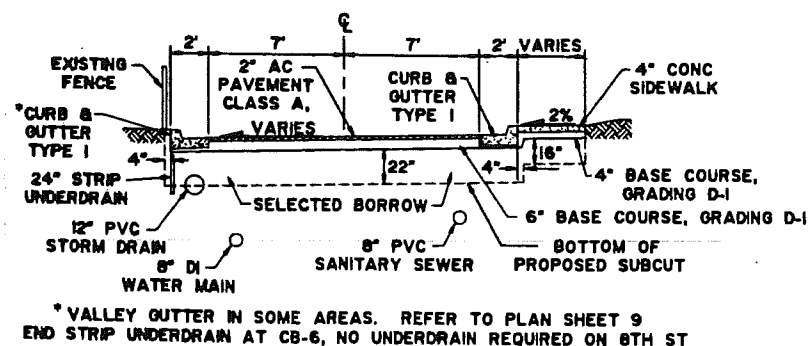
STATUS		DATE PRINTED			TONER-NORDLING & ASSOCIATES, INC. Civil Engineering Land Surveying Project Management 2221 North Jordan Avenue Juneau, Alaska 99801 (907) 789-3533		CITY & BOROUGH OF JUNEAU DEPARTMENT OF ENGINEERING BASIN ROAD RECONSTRUCTION		LEGEND, ABBREVIATIONS, GENERAL NOTES, CATCH BASIN FRAME AND GRATE TABLE		SHEET 2 of 1		
DATE		REVISIONS			DRAWN BY: STAFF		DESIGNED BY: PETER HILDRE		CHECKED BY: STAFF				
								DATE: JULY 1992		CONTRACT NO. E92-389		SCALE: NONE	



* CURB & GUTTER, TYPE I BEGINS AT STA "B" 12+65
** SEE PLAN SHEET 7 FOR GUARDRAIL LIMITS AND ATTACHMENT DETAILS
*** INCREASE SUBCUT TO 4'-0" BELOW FINISHED GRADE (EXCEPT SHOULDER)
STA "B" 12+00 TO STA "B" 12+65



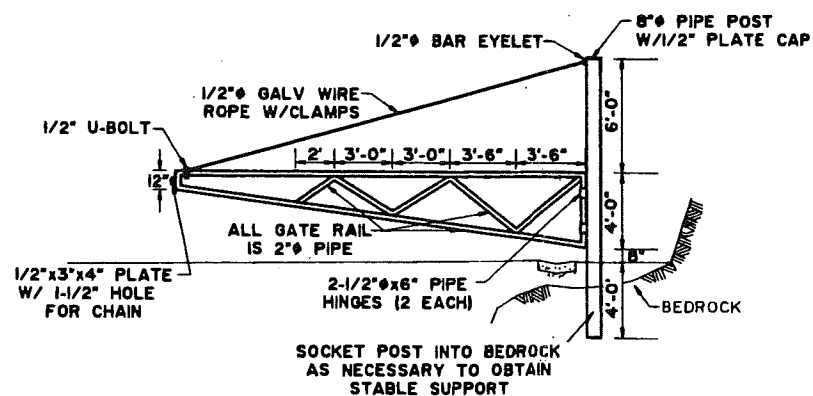
***SHOULDER AT HOUSE NO. 853 TO BE SUBCUT TO 24" AND PAVED



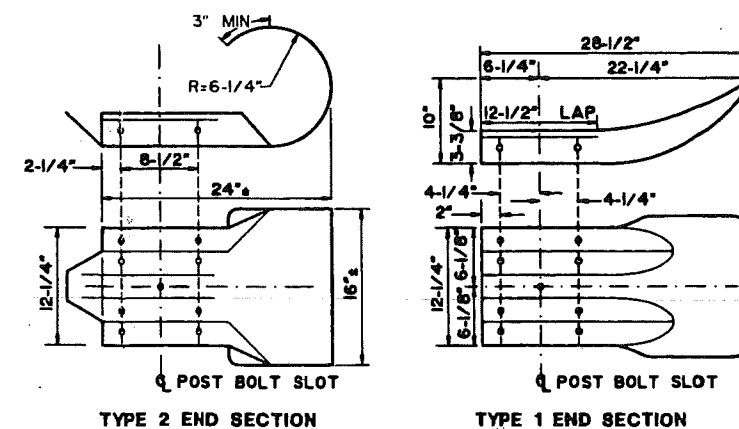
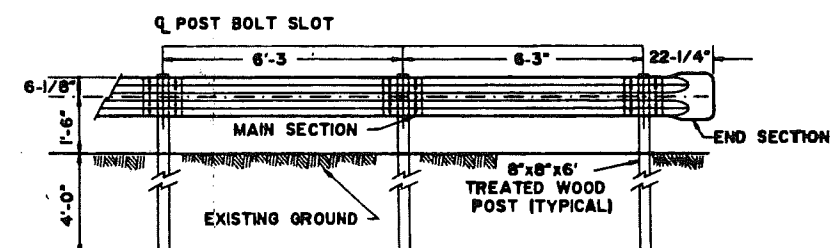
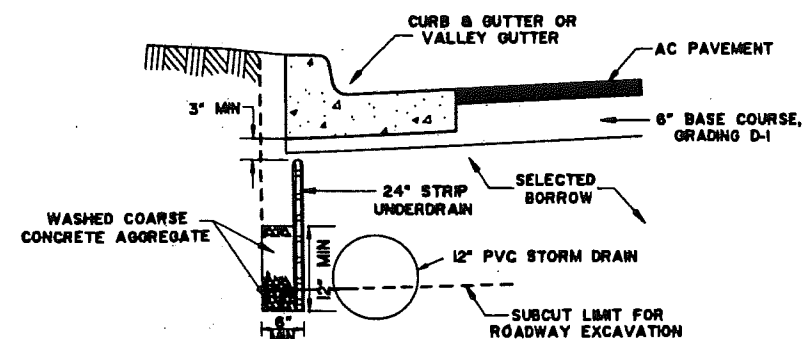
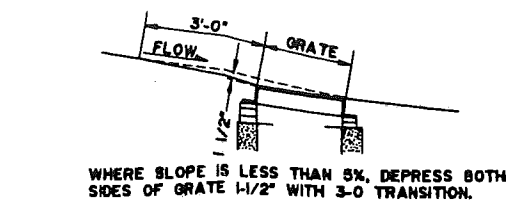
- D) 2"X 6" REQUIRED AT BOTH ENDS
- E) ALL WOOD TO BE STAINED WITH "OLYMPIC SOLID, CAPE COD GREY", OR APPROVED EQUAL.
- F) ALL NAIL HEADS SHALL BE FLUSH WITH NO PROTRUDING NAIL POINTS.
- G) WALKWAY SECTION LENGTHS TO BE AS REQUIRED TO SPAN GAPS INTO ENTRANCES.
- H) ALL WALKWAYS SHALL BE NEW CONSTRUCTION.
- I) WALKWAY TO BE PLACED BETWEEN STA "B" 16.00 AND HOUSE NO. 900.

TEMPORARY WALKWAY SECTION

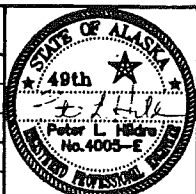
NTS



INSTALL VEHICLE GATE AND 4"x8'-0" CONCRETE FILLED POST WITH 1/2" U-BOLT AT STA"B"10+84 AS SHOWN ON SHEET 7. SET TOP OF 4" POST TO MATCH TOP OF GATE RAIL. CONNECT TO 4" POST WITH 1/2" GALV CHAIN AND PADLOCK. WELD ALL CONNECTIONS AND JOINTS ALL-AROUND. WELD HINGE PIPING TO POST, ALL-AROUND. PAINT ALL STEEL PIPE AND PLATE "CATERPILLAR YELLOW".



STATUS		DATE PRINTED	
DATE	REVISIONS		BY



TONER-NORDLING & ASSOCIATES, INC.

2221 North Jordan Avenue
Juneau, Alaska 99801
(907) 789-3533

DRAWN BY: STAFF

DESIGNED BY: PETER M. DRE

CHECKED BY: STAFF

**CITY & BOROUGH OF JUNEAU
DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION**

TYPICAL SECTIONS AND DETAILS

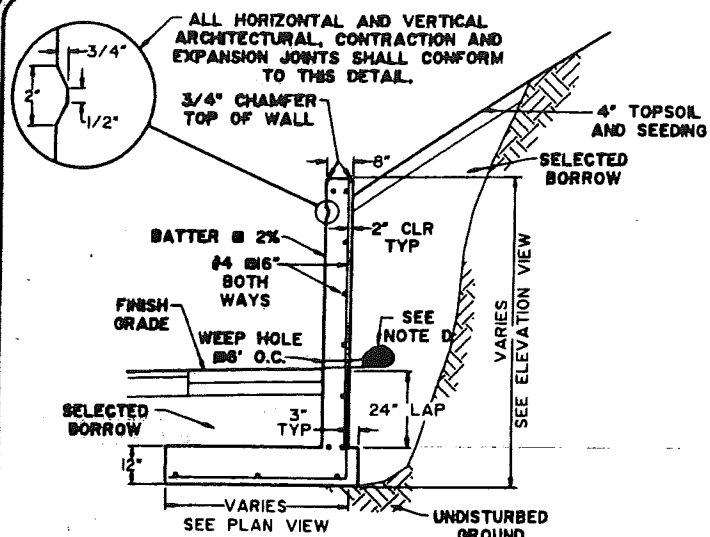
DATE JUL 1962

CONTRACT NO. F12-309

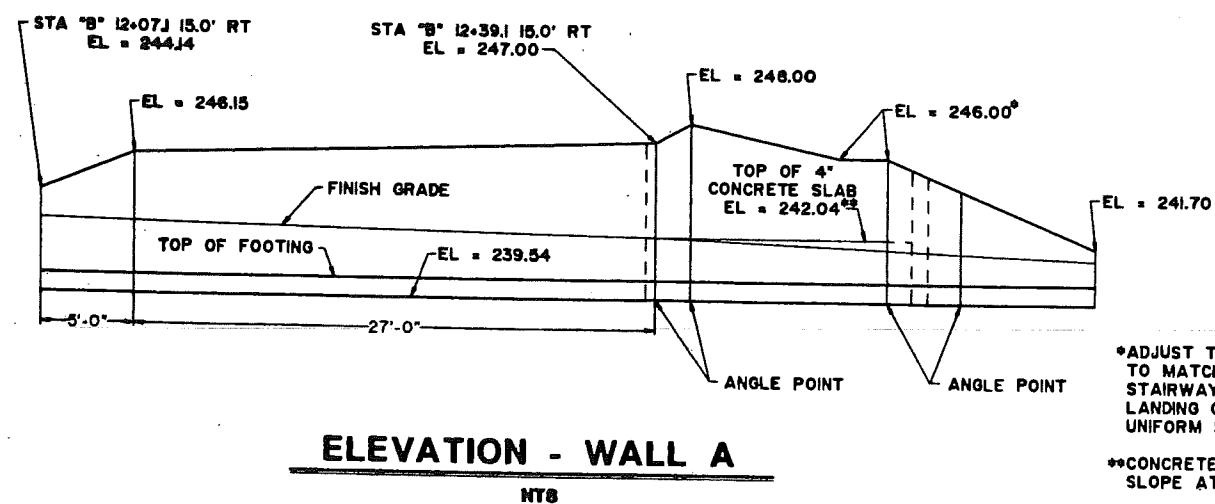
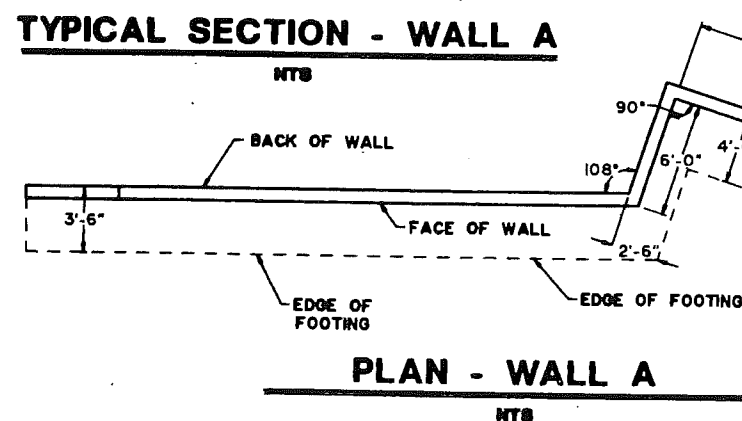
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SHEET NO.

3 of 1

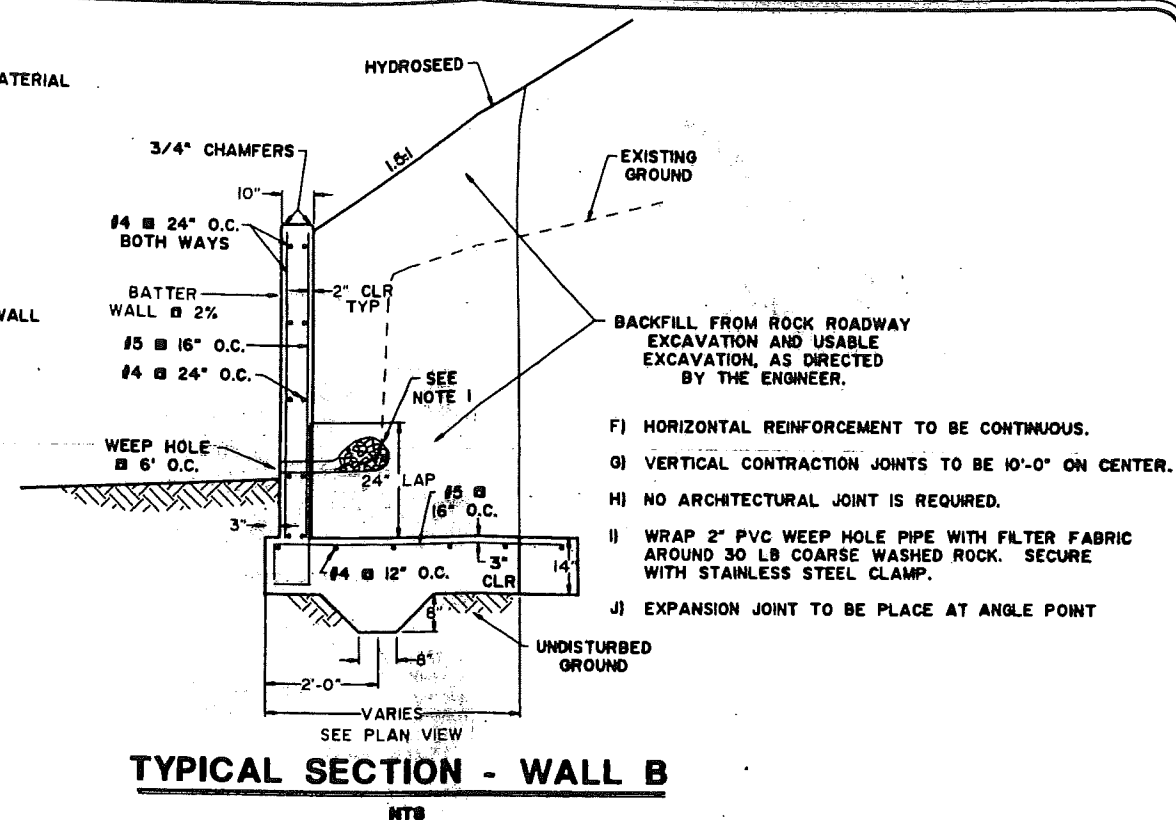
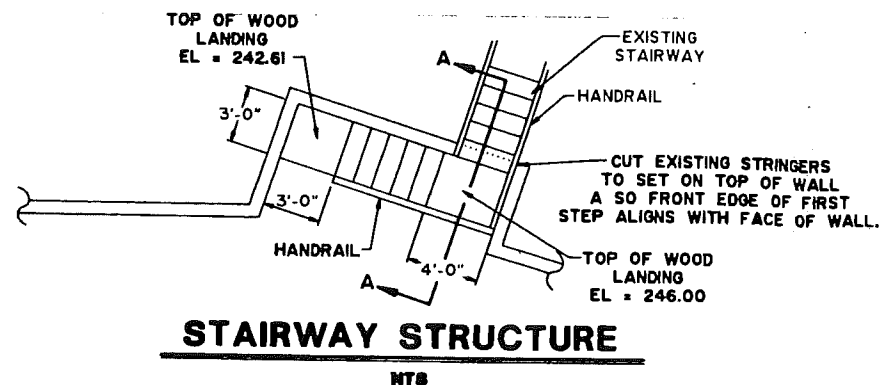
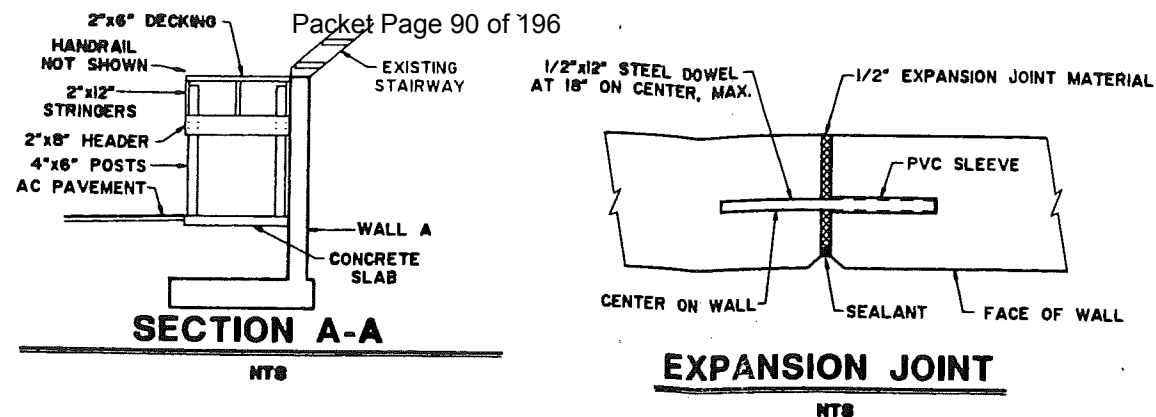


- A) HORIZONTAL REINFORCING STEEL TO BE CONTINUOUS.
- B) VERTICAL CONTRACTION JOINTS TO BE 10' ON CENTER.
- C) ARCHITECTURAL JOINT TO BE 6" BELOW AND PARALLEL TO TOP OF WALL.
- D) WRAP 2" PVC WEEP HOLE PIPE WITH FILTER FABRIC AROUND 30 LB COARSE WASHED ROCK. SECURE WITH STAINLESS STEEL CLAMP.
- E) NO EXPANSION JOINT REQUIRED THIS WALL.

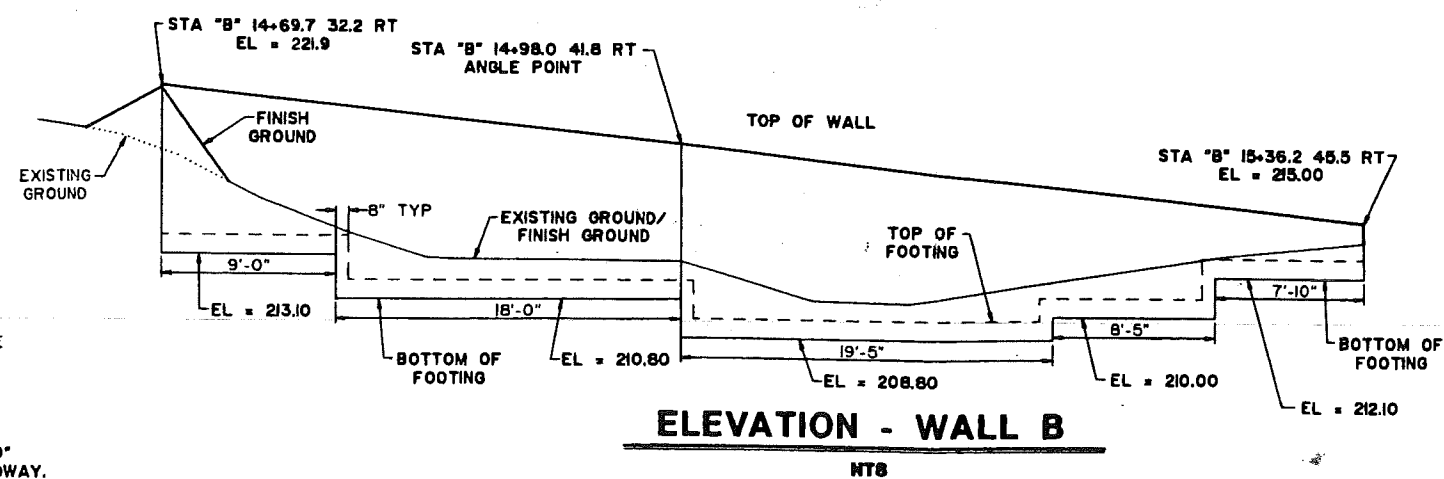
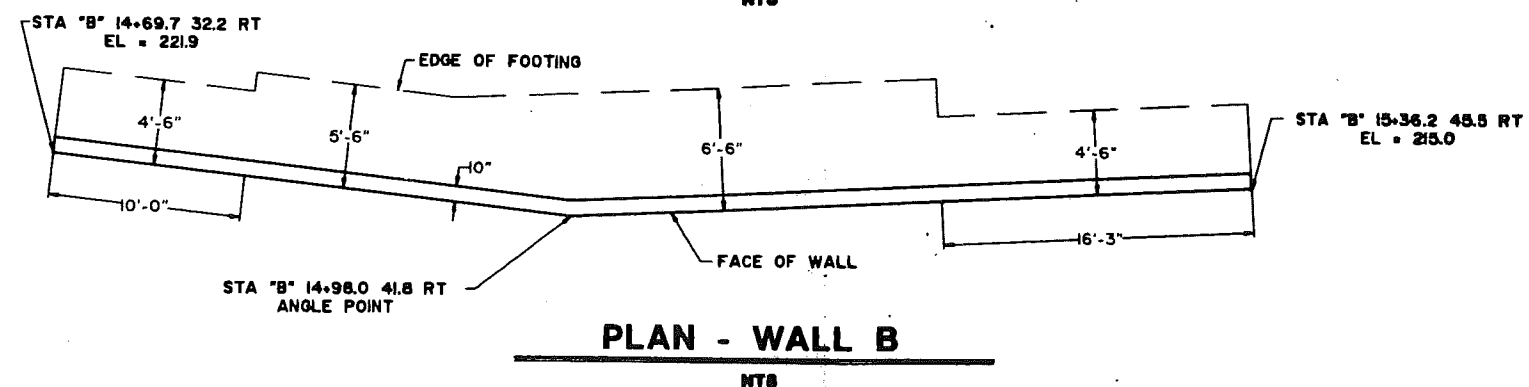


•ADJUST TOP OF WALL GRADE
TO MATCH WITH EXISTING
STAIRWAY, SO TOP OF NEW
LANDING COINCIDES WITH A
UNIFORM STEP RISE.

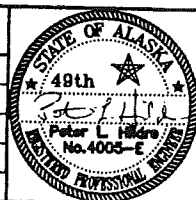
♦♦CONCRETE SLAB WIDTH = 3'-0"
SLOPE AT 1% TOWARDS ROADWAY.



- F) HORIZONTAL REINFORCEMENT TO BE CONTINUOUS.
- G) VERTICAL CONTRACTION JOINTS TO BE 10'-0" ON CENTER.
- H) NO ARCHITECTURAL JOINT IS REQUIRED.
- I) WRAP 2" PVC WEEP HOLE PIPE WITH FILTER FABRIC AROUND 30 LB COARSE WASHED ROCK. SECURE WITH STAINLESS STEEL CLAMP.
- J) EXPANSION JOINT TO BE PLACE AT ANGLE POINT



STATUS		DATE PRINTED	
1			
2			
3			
4			
5			
DATE	REVISIONS		BY



TONER-NORDLING & ASSOCIATES, INC.
Civil Engineering Land Surveying Project Management
2221 North Jordan Avenue
Juneau, Alaska 99801
(907) 789-3533

DRAWN BY: STAFF	DESIGNED BY: PETER HILDRE	CHECKED BY: STAFF
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DESIGNED BY: PETER HILDRE

CHECKED BY: STAFF

**CITY & BOROUGH OF JUNEAU
DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION**

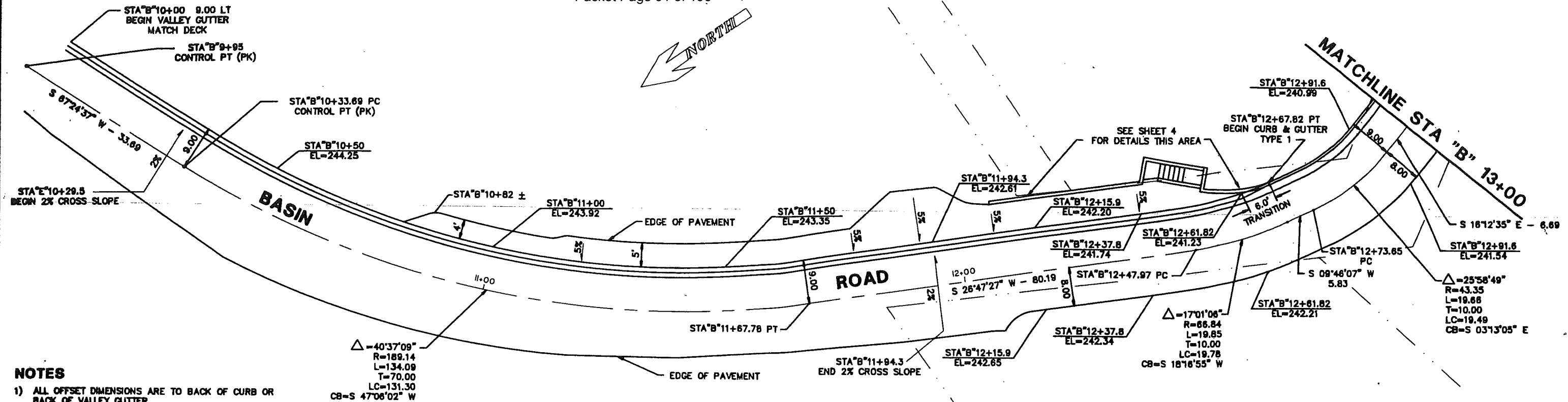
RETAINING WALLS

DATE JULY 1972

CONTRACT NO. E82-389

SCALE: NONE

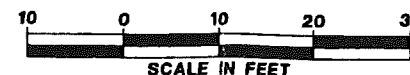
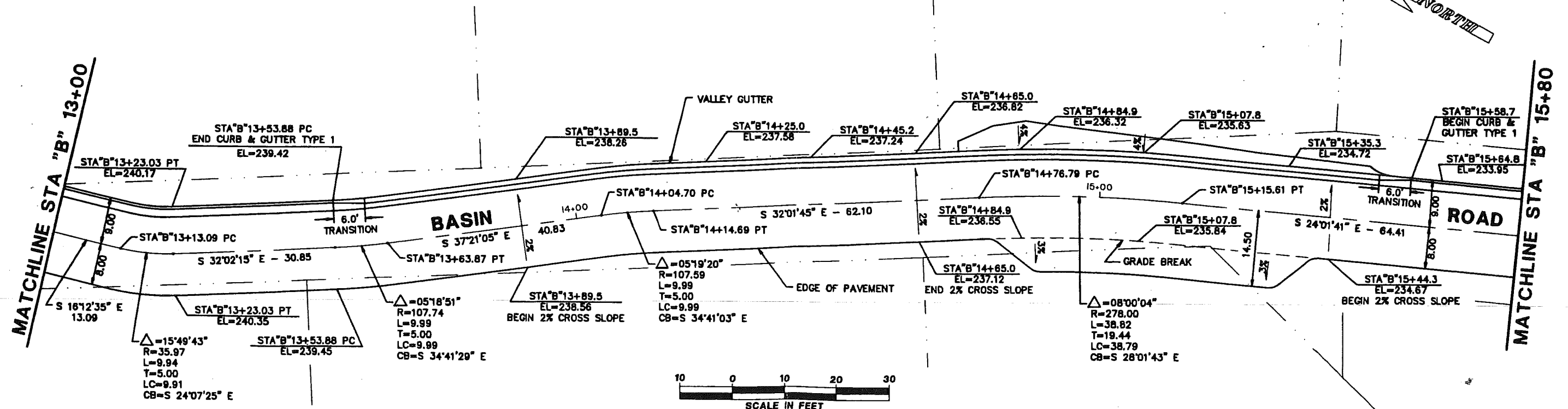
SHEET NO.
4 of 4



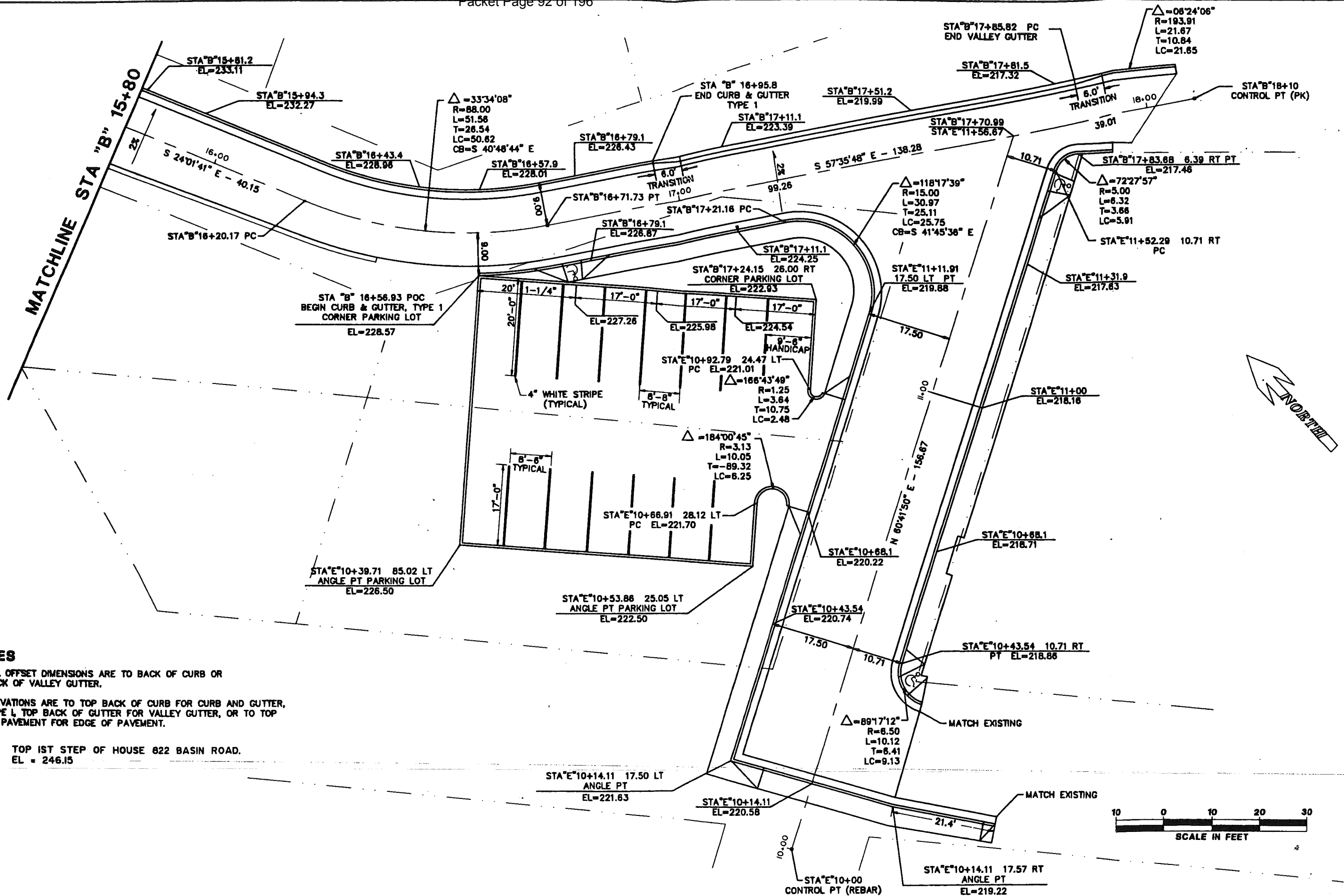
NOTES

- 1) ALL OFFSET DIMENSIONS ARE TO BACK OF CURB OR BACK OF VALLEY GUTTER.
- 2) ELEVATIONS ARE TO TOP BACK OF CURB FOR CURB AND GUTTER, TYPE L TOP BACK OF GUTTER FOR VALLEY GUTTER, OR TO TOP OF PAVEMENT FOR EDGE OF PAVEMENT.

TBM-1 PK SET IN TOP GUARDRAIL POST NEXT TO SECOND POWER POLE BEFORE TIMBERED TRESTLE.
EL = 246.15



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DATE		REVISIONS									DRAWN BY: STAFF		DESIGNED BY: PETER NORDLING		CHECKED BY: STAFF		5 of 11	
								DATE: JULY 1992		CONTRACT NO. E92-300		SCALE: AS SHOWN						



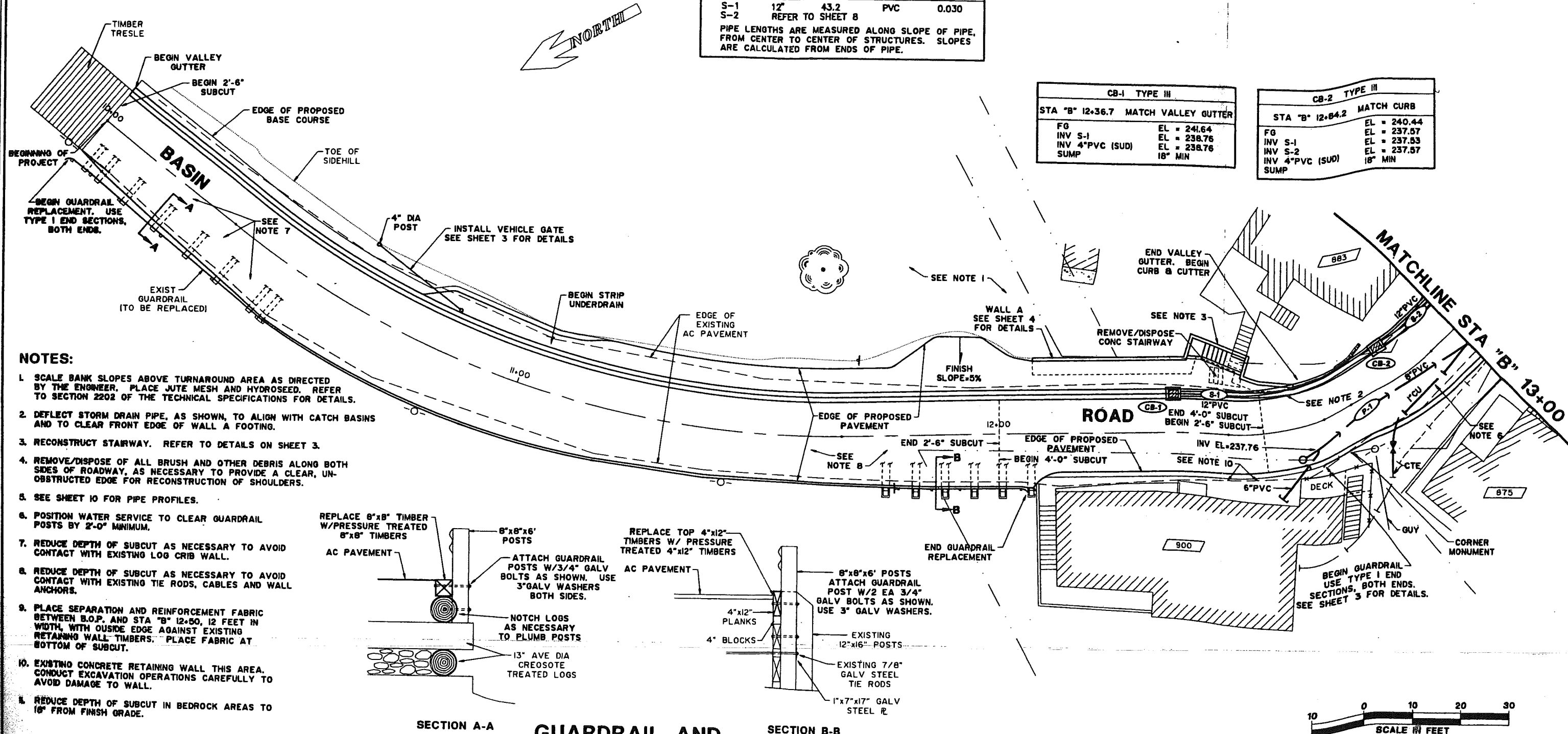
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DATE		REVISIONS							
BY		BY							
DRAWN BY: STAFF		DESIGNED BY: PETER HILDRE							
CHECKED BY: STAFF		DATE: JULY 1992		CONTRACT NO. E92-369		SCALE: AS SHOWN			

PIPE SUMMARY - STORM SERVICE				
PIPE	DIA	LENGTH	TYPE	SLOPE
S-1	12"	43.2	PVC	0.030
S-2	REFER TO SHEET 8			

PIPE LENGTHS ARE MEASURED ALONG SLOPE OF PIPE, FROM CENTER TO CENTER OF STRUCTURES. SLOPES ARE CALCULATED FROM ENDS OF PIPE.

CB-1 TYPE III	
STA "B" 12+36.7	MATCH VALLEY GUTTER
FG	EL = 241.64
INV S-1	EL = 238.76
INV 4" PVC (SUD)	EL = 238.76
SUMP	18" MIN

CB-2 TYPE III	
STA "B" 12+84.2	MATCH CURB
FG	EL = 240.44
INV S-1	EL = 237.57
INV S-2	EL = 237.53
INV 4" PVC (SUD)	EL = 237.57
SUMP	18" MIN



NOTES:

- SCALE BANK SLOPES ABOVE TURNAROUND AREA AS DIRECTED BY THE ENGINEER. PLACE JUTE MESH AND HYDROSEED. REFER TO SECTION 2202 OF THE TECHNICAL SPECIFICATIONS FOR DETAILS.
- DEFLECT STORM DRAIN PIPE, AS SHOWN, TO ALIGN WITH CATCH BASINS AND TO CLEAR FRONT EDGE OF WALL A FOOTING.
- RECONSTRUCT STAIRWAY. REFER TO DETAILS ON SHEET 3.
- REMOVE/DISPOSE OF ALL BRUSH AND OTHER DEBRIS ALONG BOTH SIDES OF ROADWAY, AS NECESSARY TO PROVIDE A CLEAR, UNOBSTRUCTED EDGE FOR RECONSTRUCTION OF SHOULDERS.
- SEE SHEET 10 FOR PIPE PROFILES.
- POSITION WATER SERVICE TO CLEAR GUARDRAIL POSTS BY 2'-0" MINIMUM.
- REDUCE DEPTH OF SUBCUT AS NECESSARY TO AVOID CONTACT WITH EXISTING LOG CRIB WALL.
- REDUCE DEPTH OF SUBCUT AS NECESSARY TO AVOID CONTACT WITH EXISTING TIE RODS, CABLES AND WALL ANCHORS.
- PLACE SEPARATION AND REINFORCEMENT FABRIC BETWEEN B.O.P. AND STA "B" 12+50, 12 FEET IN WIDTH, WITH OUTSIDE EDGE AGAINST EXISTING RETAINING WALL TIMBERS. PLACE FABRIC AT BOTTOM OF SUBCUT.
- EXISTING CONCRETE RETAINING WALL THIS AREA. CONDUCT EXCAVATION OPERATIONS CAREFULLY TO AVOID DAMAGE TO WALL.
- REDUCE DEPTH OF SUBCUT IN BEDROCK AREAS TO 18" FROM FINISH GRADE.

REPLACE 8"x8" TIMBER W/PRESSURE TREATED 8"x8" TIMBERS

AC PAVEMENT

8"x8"x6' POSTS
ATTACH GUARDRAIL POSTS W/3/4" GALV BOLTS AS SHOWN. USE 3" GALV WASHERS BOTH SIDES.

NOTCH LOGS AS NECESSARY TO PLUMB POSTS
13" AVE DIA CREOSOTE TREATED LOGS

REPLACE TOP 4"x12" TIMBERS W/ PRESSURE TREATED 4"x12" TIMBERS

AC PAVEMENT

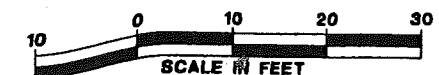
8"x8"x6' POSTS
ATTACH GUARDRAIL POST W/2 EA 3/4" GALV BOLTS AS SHOWN. USE 3" GALV WASHERS.

EXISTING 12"x16" POSTS
EXISTING 7/8" GALV STEEL TIE RODS
1"x7"x17" GALV STEEL R

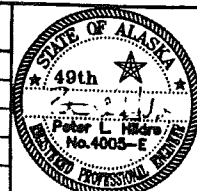
SECTION A-A

**GUARDRAIL AND
TIMBER REPLACEMENT**

SECTION B-B



DATE	REVISIONS	BY



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Civil Engineering Land Surveying Project Management
2221 North Jordan Avenue
Juneau, Alaska 99801
(907) 789-3533

DRAWN BY: STAFF DESIGNED BY: PETER HILDRE CHECKED BY: STAFF

**CITY & BOROUGH OF JUNEAU
DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION**

**PLAN - BASIN ROAD
B.O.P. TO STA 13+00**

DATE: JULY 1992 CONTRACT NO. E92-369 SCALE: AS SHOWN

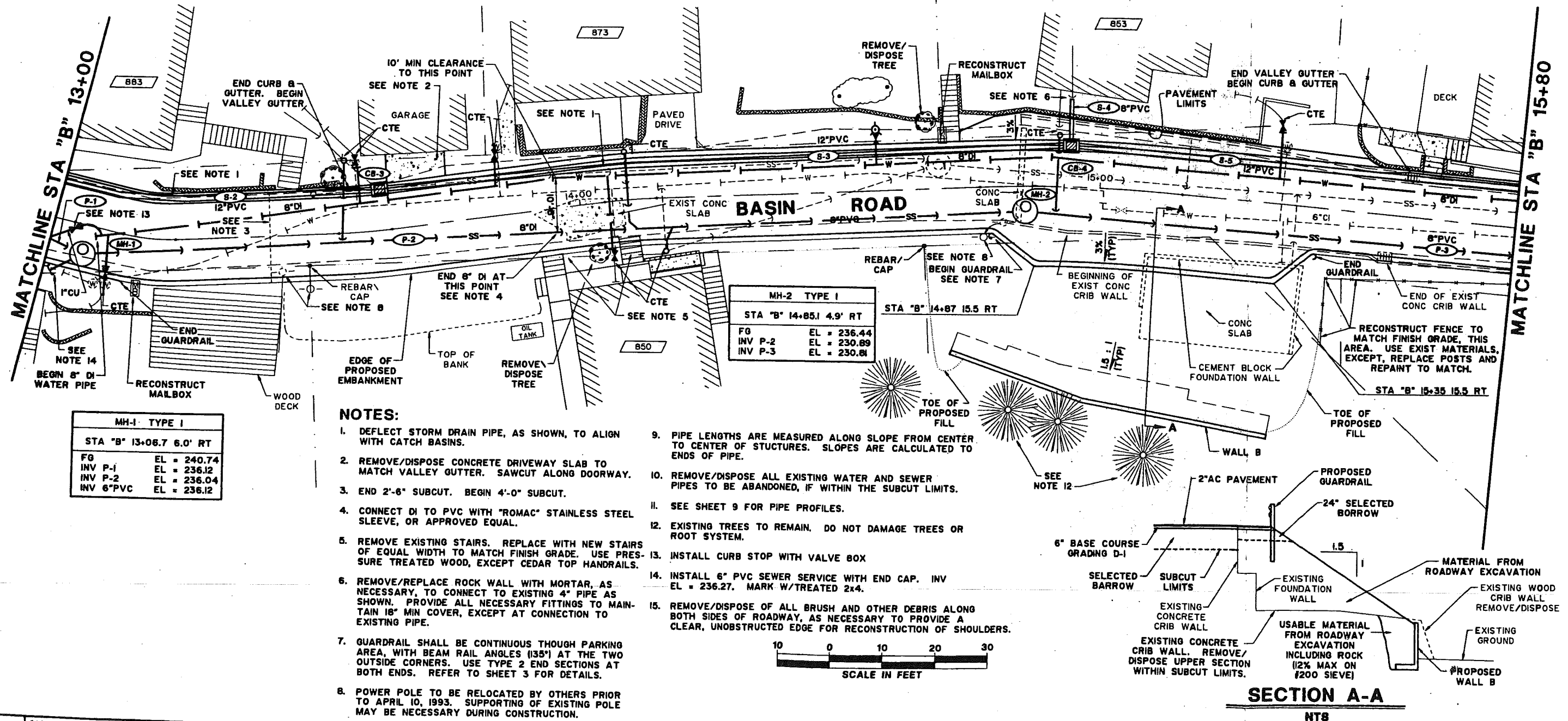
SHEET NO.
7
of
11

PIPE SUMMARY - STORM SERVICE				
PIPE	DIA	LENGTH	TYPE	SLOPE
S-2	12"	74.1	PVC	0.025
S-3	12"	133.3	PVC	0.021
S-4	8"	9.0*	PVC	VARIES
S-5	12"	160.6	PVC	VARIES**
SEE NOTE 9				
* HORIZONTAL MEASUREMENT				
** FOLLOW STREET GRADIENT				

PIPE SUMMARY - SANITARY SERVICE				
PIPE	DIA	LENGTH	TYPE	SLOPE
P-1	8"	45.0	DI	0.039
P-2	8"	181.6	DI/PVC	0.029
P-3	8"	165.5	PVC	VARIES*
SEE NOTE 9				
* FOLLOW STREET GRADIENT				

CB-3 TYPE III	
STA "B" 13+62.5 MATCH VALLEY GUTTER	
FG	EL = 238.71
INV S-2	EL = 235.71
INV S-3	EL = 235.67
INV 4" PVC (SUD)	EL = 235.71
SUMP	18" MIN

CB-4 TYPE IV	
STA "B" 14+94.7 MATCH VALLEY GUTTER	
FG	EL = 235.91
INV S-3	EL = 232.91
INV S-4	EL = 232.91
INV S-5	EL = 232.67
INV 4" PVC (SUD)	EL = 232.91
SUMP	18" MIN



NOTES:

1. DEFLECT STORM DRAIN PIPE, AS SHOWN, TO ALIGN WITH CATCH BASINS.
2. REMOVE/DISPOSE CONCRETE DRIVEWAY SLAB TO MATCH VALLEY GUTTER. SAWCUT ALONG DOORWAY.
3. END 2'-6" SUBCUT. BEGIN 4'-0" SUBCUT.
4. CONNECT DI TO PVC WITH "ROMAC" STAINLESS STEEL SLEEVE, OR APPROVED EQUAL.
5. REMOVE EXISTING STAIRS. REPLACE WITH NEW STAIRS OF EQUAL WIDTH TO MATCH FINISH GRADE. USE PRESURE TREATED WOOD, EXCEPT CEDAR TOP HANDRAILS.
6. REMOVE/REPLACE ROCK WALL WITH MORTAR, AS NECESSARY, TO CONNECT TO EXISTING 4" PIPE AS SHOWN. PROVIDE ALL NECESSARY FITTINGS TO MAINTAIN 18" MIN COVER, EXCEPT AT CONNECTION TO EXISTING PIPE.
7. GUARDRAIL SHALL BE CONTINUOUS THOUGH PARKING AREA, WITH BEAM RAIL ANGLES (135°) AT THE TWO OUTSIDE CORNERS. USE TYPE 2 END SECTIONS AT BOTH ENDS. REFER TO SHEET 3 FOR DETAILS.
8. POWER POLE TO BE RELOCATED BY OTHERS PRIOR TO APRIL 10, 1993. SUPPORTING OF EXISTING POLE MAY BE NECESSARY DURING CONSTRUCTION.
9. PIPE LENGTHS ARE MEASURED ALONG SLOPE FROM CENTER TO CENTER OF STRUCTURES. SLOPES ARE CALCULATED TO ENDS OF PIPE.
10. REMOVE/DISPOSE ALL EXISTING WATER AND SEWER PIPES TO BE ABANDONED, IF WITHIN THE SUBCUT LIMITS.
11. SEE SHEET 9 FOR PIPE PROFILES.
12. EXISTING TREES TO REMAIN. DO NOT DAMAGE TREES OR ROOT SYSTEM.
13. INSTALL CURB STOP WITH VALVE BOX
14. INSTALL 6" PVC SEWER SERVICE WITH END CAP. INV EL = 236.27. MARK W/TREATED 2x4.
15. REMOVE/DISPOSE OF ALL BRUSH AND OTHER DEBRIS ALONG BOTH SIDES OF ROADWAY, AS NECESSARY TO PROVIDE A CLEAR, UNOBSTRUCTED EDGE FOR RECONSTRUCTION OF SHOULDERS.



SECTION A-A NTS

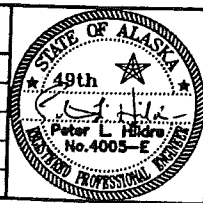
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Civil Engineering Land Surveying Project Management
2221 North Jordan Avenue
Juneau, Alaska 99801
(907) 789-3533

CITY & BOROUGH OF JUNEAU
DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION

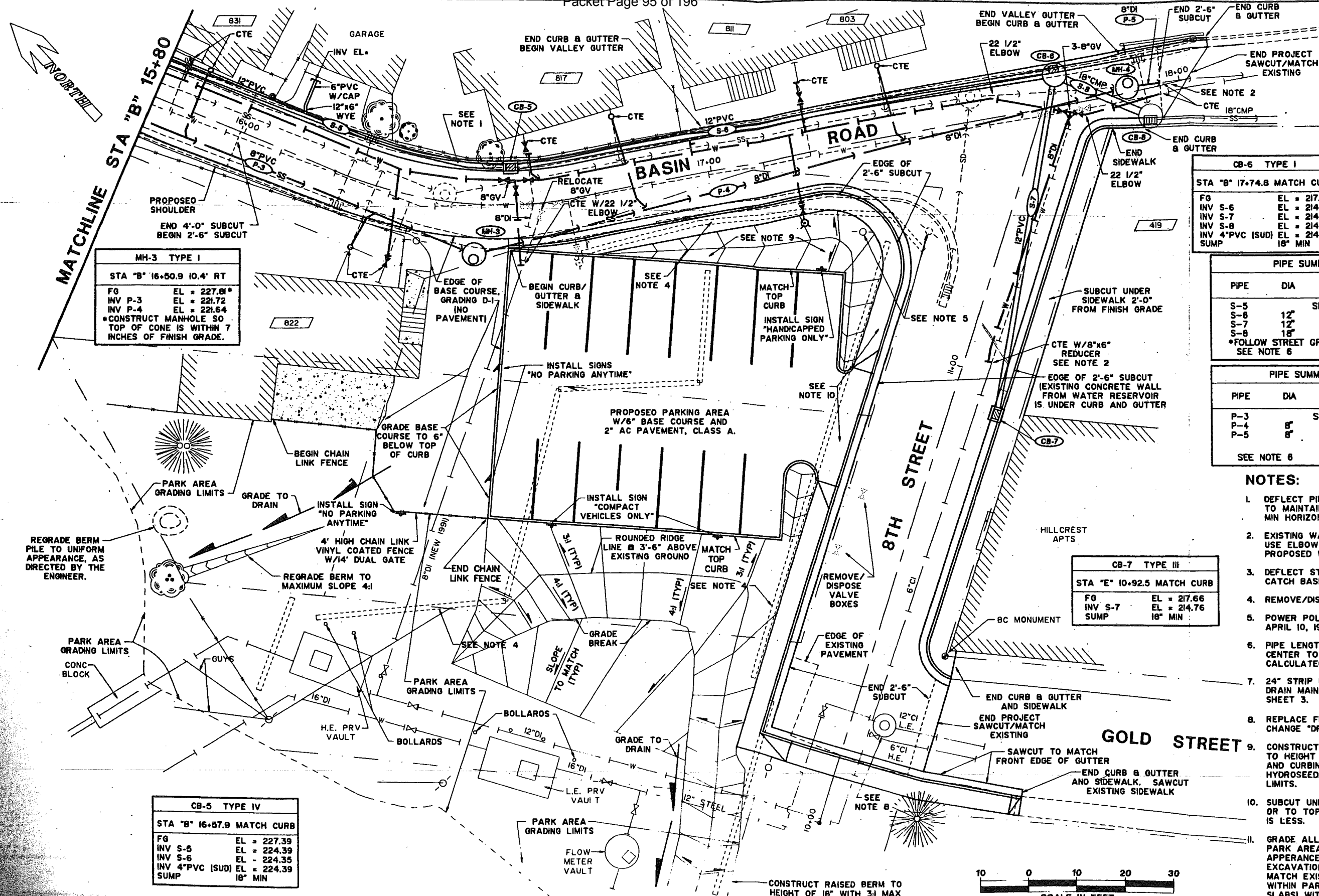
PLAN - BASIN ROAD
STA 13+00 TO STA 15+80

SHEET NO.
8
of
11

DATE: JULY 1992 CONTRACT NO. E92-309 SCALE: AS SHOWN



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MH-4 TYPE I

STA "B" 17+89.0 0.9' LT

FG	EL = 216.44
INV P-4	EL = 209.54*
INV P-5	EL = 209.46*

*EXISTING PIPE ELEV UNKNOWN
FIELD VERIFY BEFORE
CONSTRUCTING MANHOLE

CB-8 EXISTING

STA "B" 17+92.4

FG	EL = 216.02
INV S-8	EL = 212.72
INV EXIST 18" CMP	EL = 212.62
*INV EXIST	EL = 212.52

*PLUG OPENING

CB-6 TYPE I

STA "B" 17+74.8 MATCH CURB

FG	EL = 217.78
INV S-6	EL = 214.78
INV S-7	EL = 214.48
INV S-8	EL = 214.48
INV 4" PVC (SUD)	EL = 214.78
SUMP	18" MIN

MH-3 TYPE I

STA "B" 16+50.9 10.4' RT

FG	EL = 227.8*
INV P-3	EL = 221.72
INV P-4	EL = 221.64

*CONSTRUCT MANHOLE SO
TOP OF CONE IS WITHIN 7
INCHES OF FINISH GRADE.

PIPE SUMMARY - STORM SERVICE

PIPE	DIA	LENGTH	TYPE	SLOPE
S-5	12"	SEE SHEET 7	PVC	VARIES*
S-6	12"	116.0	PVC	0.004
S-7	12"	83.8	PVC	0.004
S-8	18"	21.9	PVC	0.098

*FOLLOW STREET GRADIENT
SEE NOTE 6

PIPE SUMMARY - SANITARY SERVICE

PIPE	DIA	LENGTH	TYPE	SLOPE
P-3	8"	SEE SHEET 7	DI	VARIES
P-4	8"	141.4	DI	CTE
P-5	8"	7.0	DI	CTE

SEE NOTE 6

- NOTES:**
1. DEFLECT PIPE OR USE ELBOW FITTINGS, AS NECESSARY, TO MAINTAIN 10' CLEARANCE TO SEWER MAIN AND 12' MIN HORIZONTAL CLEARANCE TO STORM MAIN.
 2. EXISTING WATER PIPES MAY BE AT LESS THAN 5' BURY. USE ELBOW FITTINGS, AS NECESSARY, TO CONNECT TO PROPOSED WATER PIPE.
 3. DEFLECT STORM DRAIN PIPE AS SHOWN TO ALIGN WITH CATCH BASINS.
 4. REMOVE/DISPOSE ALL LOGS THIS AREA.
 5. POWER POLE TO BE RELOCATED BY OTHERS PRIOR TO APRIL 10, 1993.
 6. PIPE LENGTHS ARE MEASURED ALONG SLOPE OF PIPE, CENTER TO CENTER OF STRUCTURE. SLOPES ARE CALCULATED TO ENDS OF PIPE.
 7. 24" STRIP UNDERDRAIN TO BE INSTALLED ALONG STORM DRAIN MAIN PER TYPICAL SECTIONS AND DETAILS ON SHEET 3. NOT SHOWN ON THIS SHEET.
 8. REPLACE FRAME/COVER PER CBJ STD 306, EXCEPT CHANGE "DRAIN" ON COVER TO READ "WATER".
 9. CONSTRUCT MOUND THIS AREA FROM USABLE EXCAVATION TO HEIGHT OF 24" AT PEAK, SLOPE TOWARDS SIDEWALK AND CURBING AT 3:1 MAX. COVER W/4" TOPSOIL AND HYDROSEED. THIS AREA IS WITHIN PARK AREA GRADING LIMITS.
 10. SUBCUT UNDER SIDEWALK TO 2'-0" FROM FINISH GRADE, OR TO TOP OF EXISTING CONCRETE WALL, WHICHEVER IS LESS.
 11. GRADE ALL AREAS BETWEEN CONSTRUCTED BERMS AND PARK AREA GRADING LIMITS TO DRAIN, WITH UNIFORM APPEARANCE, AS DIRECTED BY THE ENGINEER. USE USABLE EXCAVATION FROM ROADWAY AS NECESSARY. GRADE TO MATCH EXISTING VAULT TOP SLABS. COVER ALL AREA WITHIN PARK AREA GRADING LIMITS (EXCEPT VAULT TOP SLABS) WITH 4" TOPSOIL AND HYDROSEED.

CB-7 TYPE III

STA "E" 10+92.5 MATCH CURB

FG	EL = 217.66
INV S-7	EL = 214.76
SUMP	18" MIN

CB-5 TYPE IV

STA "B" 16+57.9 MATCH CURB

FG	EL = 227.39
INV S-5	EL = 224.39
INV S-6	EL = 224.35
INV 4" PVC (SUD)	EL = 224.39
SUMP	18" MIN



STATUS: _____ DATE PRINTED: _____

DATE: _____ REVISIONS: _____ BY: _____

STATE OF ALASKA
49th
Peter L. Hildre
No. 4005-E
REGISTERED PROFESSIONAL ENGINEER

TONER-NORDLING & ASSOCIATES, INC.
Civil Engineering Land Surveying Project Management
2221 North Jordan Avenue
Juneau, Alaska 99801
(907) 789-3533

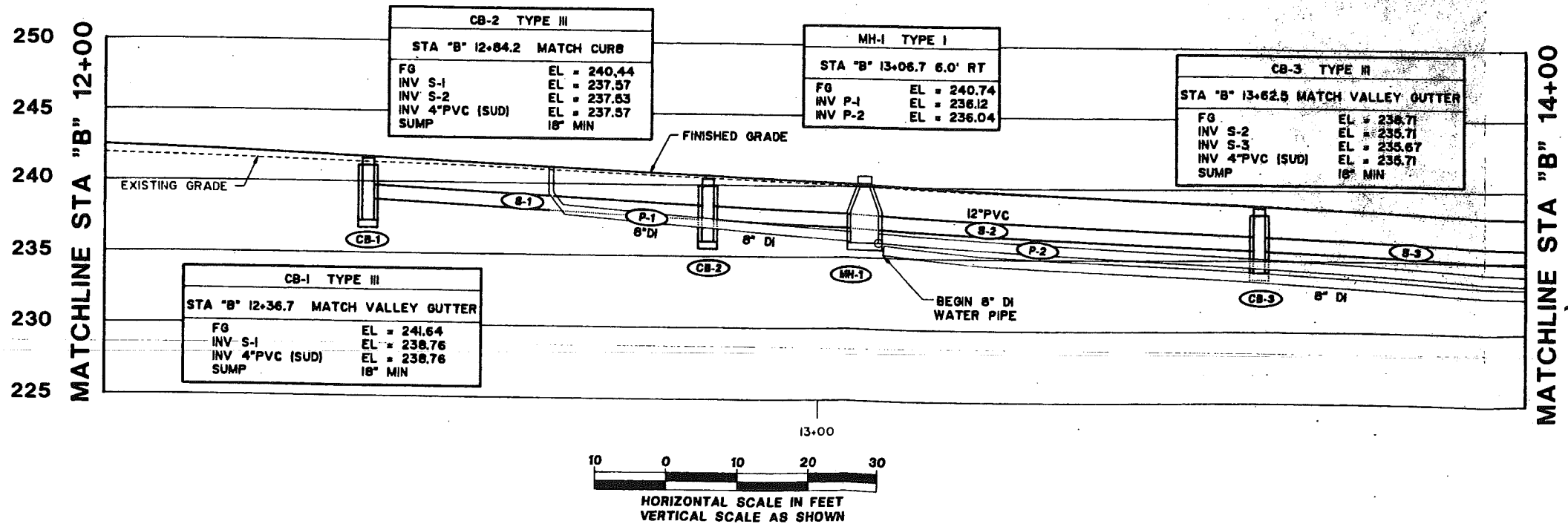
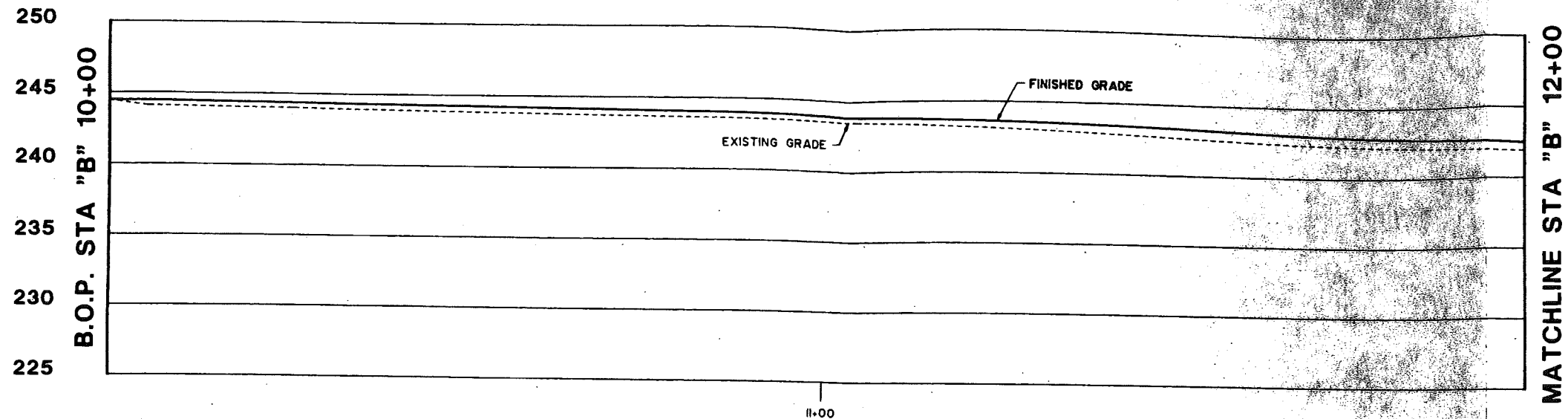
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CITY & BOROUGH OF JUNEAU
DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION

PLAN - BASIN ROAD
STA 15+80 TO E.O.P.

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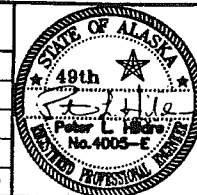
SHEET NO. 9 of 11



NOTES:

1. WATER SERVICES NOT SHOWN ON PROFILE.
2. EXISTING WATER, SEWER AND STORM PIPING NOT SHOWN ON PROFILE.
3. STRIP UNDERDRAIN NOT SHOWN ON PROFILE.
4. GRADE LINES SHOWN ARE ALONG CURB ALIGNMENT.

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DATE	REVISIONS
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 Civil Engineering Land Surveying Project Management
 2221 North Jordan Avenue
 Juneau, Alaska 99801
 (907) 789-3533

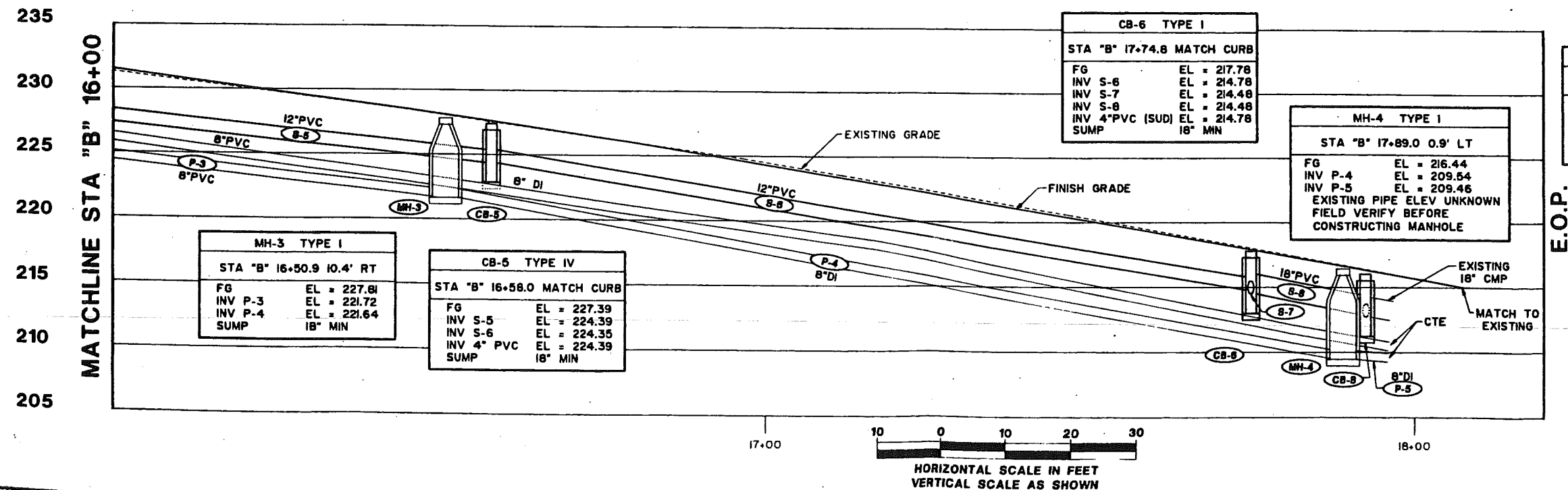
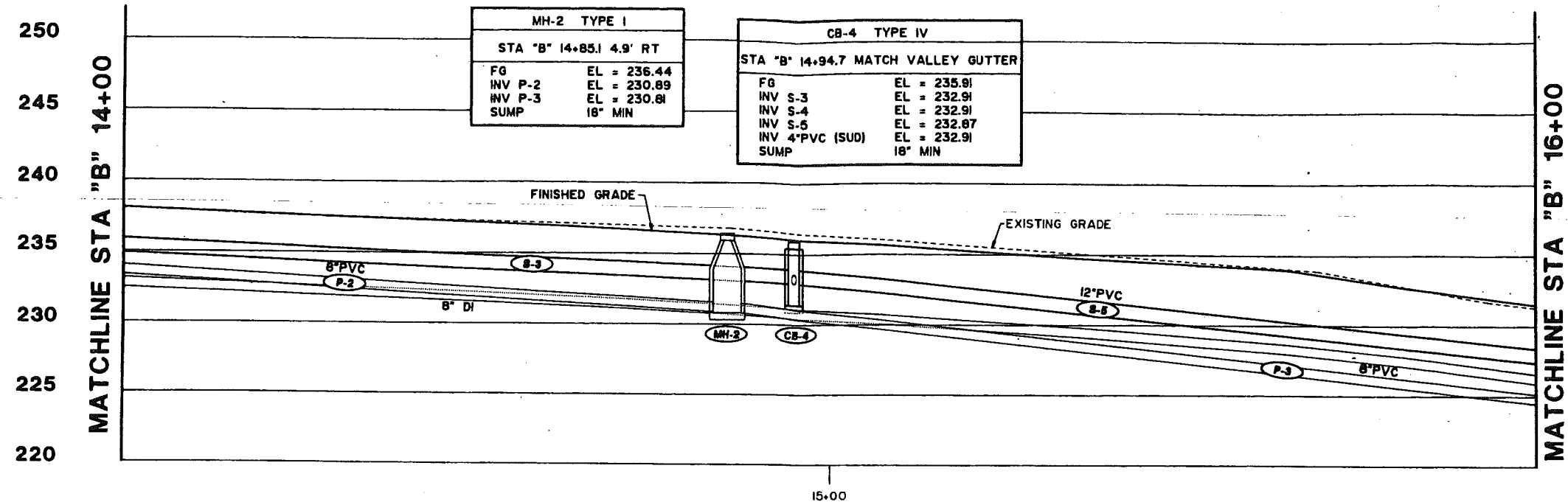
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DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION

PROFILE
B.O.P. TO STA "B" 14+00

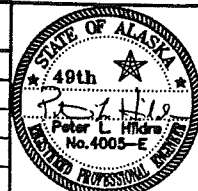
DATE: JULY 1992 CONTRACT NO. E92-398 SCALE: AS SHOWN

SHEET NO.
 10 of 11



- NOTES:**
1. WATER SERVICES NOT SHOWN ON PROFILE
 2. EXISTING WATER, SEWER AND STORM PIPING NOT SHOWN ON PROFILE.
 3. STRIP UNDERDRAIN NOT SHOWN ON PROFILE.
 4. GRADELINES SHOWN ARE ALONG CURB ALIGNMENT.
 5. EIGHTH STREET NOT SHOWN

DATE	REVISIONS	BY



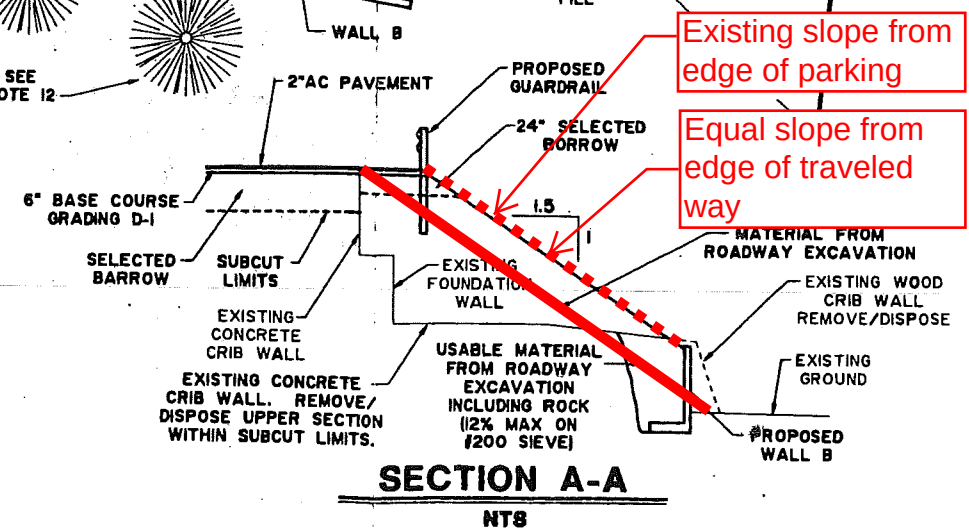
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Juneau, Alaska 99801
(907) 789-3533

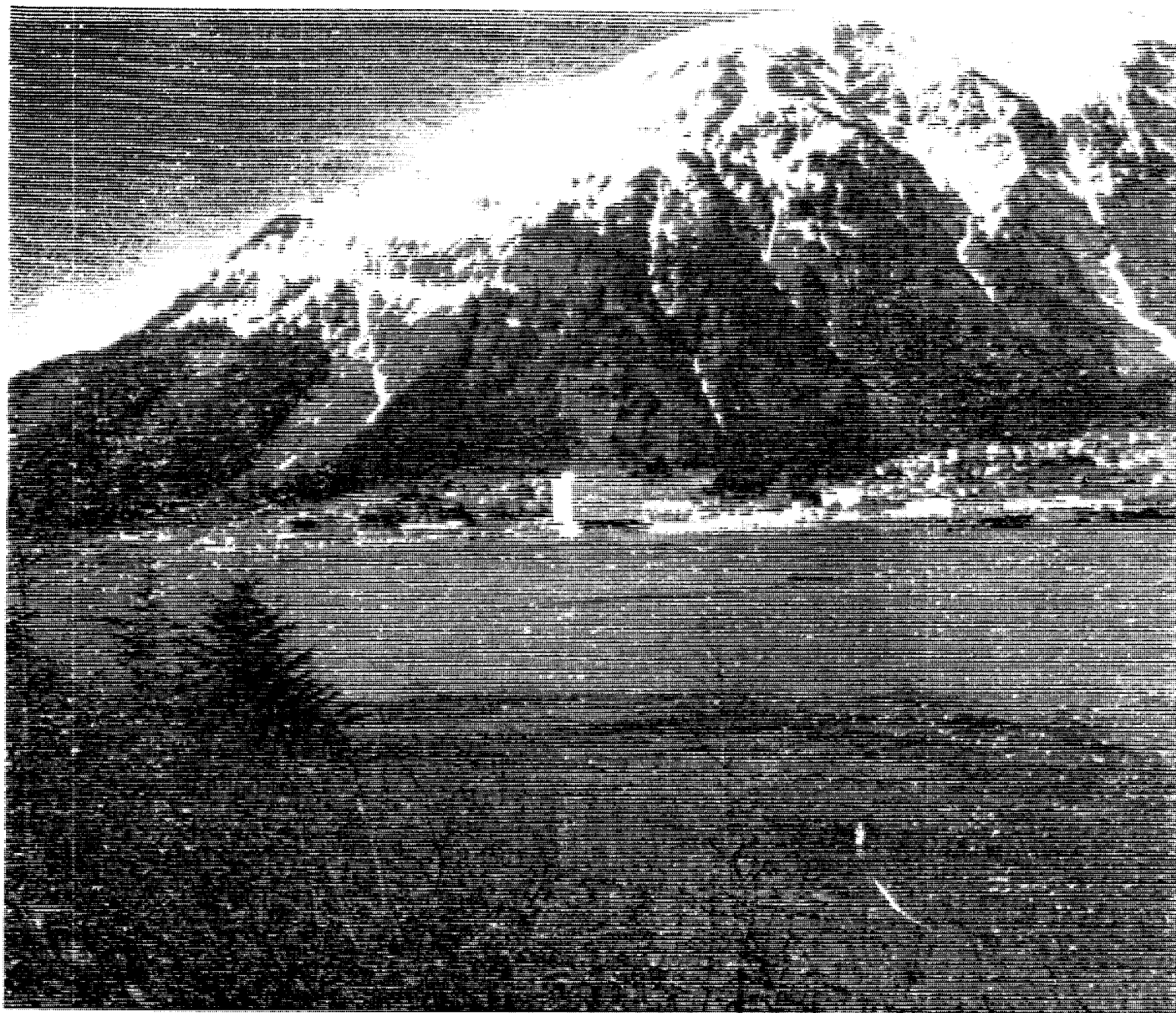
CITY & BOROUGH OF JUNEAU
DEPARTMENT OF ENGINEERING
BASIN ROAD
RECONSTRUCTION

PROFILE
STA "B" 14+00 TO E.O.P.

SHEET NO.
11 of **11**

DATE: JULY 1992 CONTRACT NO. E62-389 SCALE: AS SHOWN





**GEOPHYSICAL HAZARDS INVESTIGATION FOR THE
CITY AND BOROUGH OF JUNEAU, ALASKA**

A Summary Report

1972

1962

AFTER 1962

VIEW FROM GLACIER AVE

GEOPHYSICAL HAZARDS
INVESTIGATION
for the
City and Borough of Juneau

SUMMARY REPORT

October 1972



DMJM Daniel, Mann, Johnson, & Mendenhall
816 Pittock Block
Portland, Oregon 97205

The preparation of this report was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development, under provisions of Section 701 of the Housing Act of 1954, as amended.

DANIEL, MANN, JOHNSON, & MENDENHALL

October 12, 1972

Mr. Arthur H. Hartenberger
Planning Director
City and Borough of Juneau
155 South Seward Street
Juneau, Alaska 99801

PHILLIP J. DANIEL
ARTHUR E. MANN
S. KENNETH JOHNSON
IRVAN F. MENDENHALL
T. K. KUTAY
DAVID R. MILLER
SVEN B. SVENDSEN
ALBERT A. DORMAN
STANLEY M. SMITH

Dear Mr. Hartenberger:

It is with pleasure that we transmit herewith our final report on the Geophysical Hazards Investigation for the City and Borough of Juneau. This report consists of two parts:

1. The Summary Report of Findings
2. The Technical Supplement

We are also transmitting, under separate cover, the following reproducible maps which are designed for use in your planning program:

1. Composite Hazards Area Map Set
Scale: 1" = 200' (set of 4)
2. Mass Wasting Hazard Classification
Scale: 1:10,000
3. Snow Avalanche Hazard Classification
Scale: 1:10,000

We believe that this investigation is one of the most comprehensive and detailed inventory of geophysical hazards affecting any urbanized area in the United States. This inventory, coupled with recommendations for the control of land use and development, represents a truly pioneering effort on the part of the City and Borough of Juneau.

We are proud to have been associated with this exciting and imaginative project. Much credit for its success goes to you, members of your staff, and others concerned with the future well-being of your community.

Very truly yours,



Arnold M. Cogan
Associate Vice President

AMC/pl

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ACKNOWLEDGEMENTS

- | | |
|-----------------------------|---------------------------|
| Borough Assembly | - Joseph A. McLean, Mayor |
| | - James Duncan |
| | - Philip E. Chitwood |
| | - Clarence Jacobsen |
| | - Virginia Kline |
| | - Robert W. Loescher |
| | - B. W. Matheny |
| | - George W. Rogers, Ph.D. |
| | - William Walley |
| Planning Commission | - Thomas Schulz, Chairman |
| | - Kay Diebels |
| | - Marshall Erwin |
| | - Steve Forrest |
| | - Ray Nevin |
| | - Karl Mielke |
| | - James Triplette |
| | - James Wiedeman |
| City Manager | - Ronald L. Usher |
| City Attorney | - Billy G. Berrier |
| City-Borough Planning Staff | |
| Director | - Arthur H. Hartenberger |
| Senior Planner | - Keith Hart |
| Zoning Administrator | - Ronald Bolton |
| Building Official | - Linn A. Forrest, Jr. |

We wish to thank the many people who assisted the Geophysical Hazards Investigation Team while they were in Juneau. Our appreciation also goes to the organizations who provided a forum so that the citizenry could be better informed of this project, and, to the citizens who came to become better informed about the purpose, content and meaning of this investigation. The cooperation we received while working in Juneau was excellent. The citizens can be justifiably proud of their city and of those individuals responsible for its administration.

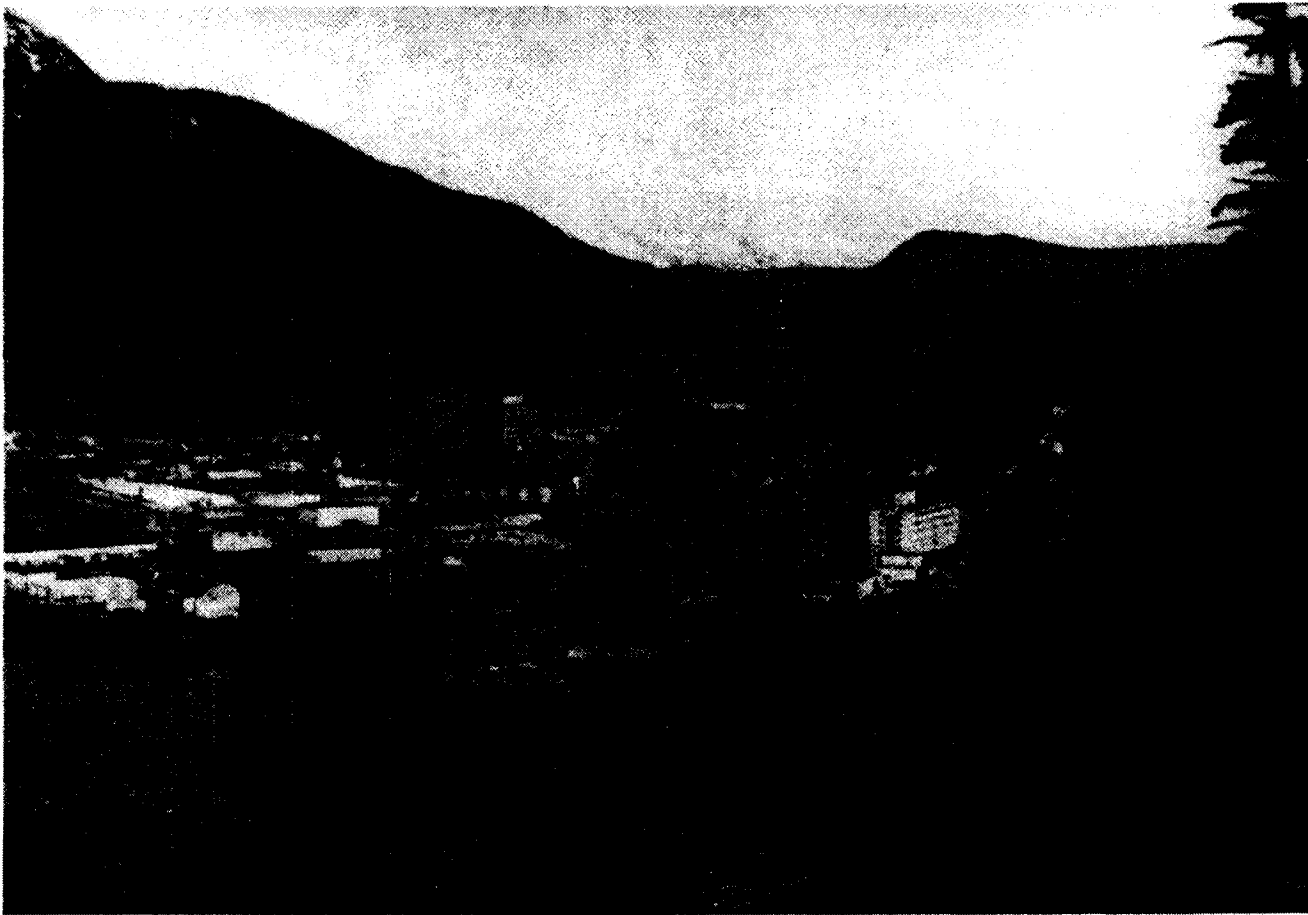
DANIEL, MANN, JOHNSON, & MENDENHALL

CONSULTANTS

Project Director	Arnold M. Cogan Associate Vice President
Project Manager	Michael A.C. Mann
Planner/Field Coordinator	George G. Palmer
Urban Planner	Edgar E. Storms
Graphics and Mapping	Jon R. Laughlin Cynthia Gebhart
Secretarial	Phyllis Lambert Carol McLean

ASSOCIATED CONSULTANTS

Mass Wasting Hazard	Douglas N. Swanston U. S. Forest Service Forestry Sciences Laboratory
Snow Avalanche Hazard	Hans Frutiger Swiss Federal Institute for Snow and Avalanche Research
Seismic Hazard	Harry Moening Alaska Geological Consultants, Inc.



HIGHLIGHTS

HIGHLIGHTS

1. A large portion of the urbanized area of Juneau is subject to potentially destructive geophysical hazards. Sound and safe community development depends upon recognition of the constraints imposed by these hazards.
2. The differing nature and extent of aggregate and individual geophysical hazards must be recognized.
 - a. Hazard from a severe earthquake is a generalized one. A revision in the adopted building code calling for more stringent application of building techniques designed to resist higher seismic loading than presently in force is required, as well as the designation of certain areas of Juneau for special consideration because of soil characteristics.
 - b. The nature of the mass wasting hazard is such that a portion of the inherent danger to life and property could be minimized by requiring that certain design and construction techniques be employed. In general, mass wasting hazards do not necessarily prohibit the use of the land. However, a change in usage and upgraded construction and design criteria would be required.
 - c. In the case of hazards resulting from snow avalanches, decisions which must be made are considerably more difficult. The potential extent of destructiveness of a snow avalanche is greater than that of a mass wasting event. Investigations

have revealed that there is some possibility of installing defense structures. Supporting structures located in avalanche starting zones have generally proven too expensive. A more economical solution would be to build diversion, retarding or arresting structures in the runout zone immediately above developed areas. Such structures might mitigate the effects of a ground borne avalanche, but would not be effective against airborne avalanches.

3. The policy position of the Borough Planning Commission and the Borough Assembly must be that the preservation of life is paramount vis-a-vis geophysical hazards in all decisions related to land use development.
4. In view of the known and documented danger from mass wasting and snow avalanche hazards in the Juneau area, it is imperative that an immediate moratorium be placed on any zone change or building permit that would have the effect of increasing population density in areas designated High Hazard. See Figure 11.

This moratorium should be temporary and in effect only until legislation and policies related to land use in hazardous areas have been considered by the Borough Assembly.

5. The Planning Commission and Borough Assembly should initiate policies which make the consideration of geophysical hazards a permanent part of the planning process related to regulations dealing with land use, zoning and community development.

6. Continued use of land subject to dangers from geophysical hazards should be strictly regulated by the adoption of overlay districts applicable only to such areas. No changes to uses should be allowed which will have the effect of increasing density in these areas. The maximum permitted density on land exposed to high degree of danger due to geophysical hazards should not exceed 10 persons per acre. The permitted density of land in areas of potential danger should not exceed 20 persons per acre.
7. In some instances regulations will be necessary which may reduce the development or resale potential of some property. A clear definition must be derived which will differentiate between real value and potential value as applied to developed and undeveloped property.
 - a. The existence of geophysical hazards cannot be denied. Planning policies as related to such hazards cannot, therefore, be considered as being capricious and arbitrary decisions of those responsible for community planning.
 - b. Owners of land subject to restrictions because of the existence of geophysical hazards need not be compensated for any loss in real or potential value, unless the Borough Assembly deems otherwise.
 - c. The Borough Assembly should develop a flexible policy which will permit the control of land uses in hazardous areas. This policy should allow for a series of options, consonant with the degree of danger, to be exercised, ranging from allowing use of land on conditional basis to outright condemnation and purchase.

8. A program should be instituted whereby public land could be used as partial or total compensation for privately owned land that may be condemned because of its location in highly hazardous areas.
9. The present system of taxation will be inequitable to owners in high hazard areas if new legislation imposes constraints to development of their land. Taxes on land in highly hazardous areas should recognize the limited value of this land, and therefore, be adjusted to minimum levels. The Borough cannot advocate controls on land use because of hazardous conditions, while continuing to increase or maintain taxes at levels applicable to land not subject to the constraints imposed by geophysical hazards.
10. A base on land and improvements for all property located in hazardous areas should be immediately established which will fix values. While improvements which will not increase density or require rezoning cannot be prohibited on land affected by hazards, and for which the taxes may have been adjusted, compensation for such improvements which will tend to increase value beyond reasonable limits is not required if the land is to be publicly acquired in the future.
11. The geographic limits of the hazard areas should be incorporated into the Comprehensive Plan Map, zoning map and assessor's maps. A requirement should be made and enforced that a deed disclosure be made prior to transaction of property. The title and trust, lending and mortgage, and insuring agencies should be apprised of the existence, nature and extent of the geophysical hazards in the Juneau area.

12. Losses sustained as a result of a disaster due to an existing geophysical hazard are not isolated in effect. Individuals do not stand the losses alone. The community as a whole also suffers the loss and incurs the costs. This cost is incurred, directly or indirectly, as a result of litigation, disaster relief, damage to capital improvements, loss of revenues, etc. Therefore, the argument in justification for taking no action to limit land uses because only a limited number of individuals would sustain losses is a specious one.

Michael J. ...
 on the slide slammed do
 side and smashed in th
 room window flinging
 rock the house two

GOLD TREE BRIDGE BLOCKED AS HEAVY DOWNPOUR LOOSENS MT. JUNEAU HILLSIDE

Two earth slides an hour apart yesterday evening badly damaged a residence at F Street and Gold Creek bridge and caused a panic from the neighborhood.

Mrs. I
Street, a
A and M
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the Alliance
living room
and took
cup.
In the la
some a new
w drier we
A first slide
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and fir
dated 15 d

**WORST SCENE
IN JUNE'S
HISTORY WAS
YESTERDAY'S**

GOLD TRAIN SHOWING THE
HIGHEST GAIN OF THE WEEK

**WORST SLIDE IN
HISTORY JUNEAU
IS EXPERIENCED**

(Continued from p. 1)

Mr. Paul P. Taylor, P. J. Thompson, P. J. Stevens, Fred A. M. Kautz.

The damage public utilities sustain-
ed by the storm of just a month ago
was dwarfed by the damage of the
storm of yesterday and Saturday even-
ed. Gold creek was a howling, raging
river.

Worship Service, beginning at 9 o'clock from the Catholic Church. The Rev. W. G. La Vener will conduct the services. Pallbearers are to be Paul Schneider, Wendel Schneider, Charles Nadel, Ted Nadel, Mable Turner and Robert Meyer.

is possibly a third person, an elderly man, still buried in the debris. He has not been identified, but the Mayor said today reports permitted that such a man lived in the West-march neighborhood.

WORST SLIDE IN HISTORY OF
JUNEAU TEARS DOWN HILL TO
FRONT STREET AND TAKES ALONG
SIX BUILDINGS IN ITS PAT

THE DAILY ALASKA EMPIRE, FRIDAY, NOV. 27, 1936.

**LAST RITES FOR
SLIDE VICTIMS
BEING ARRANGED**

Seven Will Be Laid Away in
Juncos - One Body
Taken to Silka

**2 MORE BODIES
ARE RECOVERED
OVER HOLIDAY**

Mr. and Mrs. Hugo Peterson Found in Wreckage of Own Home

**LIST OF DEATH
GROWS AS WORK
MOVES FORWARD**

Lorraine Vanali, Pete Bottello, Mrs. George Lee
Found in Wreckage

ANDREW WALLIN DIES FROM
INJURIES RECEIVED IN SLIDE

THE INJURED
PETER KOSKI—Injured very badly internally and broken ribs.
ER KOSKI—Badly injured internally.
REW WALLIN—Left leg broken and badly bruised. He was in the kitchen of the time of the slide.
AND KALLIA—Badly bruised. He was second story of the Larson House.
AND FAJANTERI—Dislocated right hip about the body. Was in Larson house.
NEIMI—Injured back. Was in Koski.
NEIMI—Bad cut on head and bruised.
WAS in Larson house.
LARSON—Badly injured, in Larson house.

ONE IS MISSING

right injured and in the hospital, one whom
struck and others damaged, totaling prop-
erty at \$20,000, one of the most disastrous
ice jams took place at 11:30 a. m. today;
and heavy rains, for a distance of ap-
proximately below the town of the Alaska-J
down to Front Street, and jus

HISTORY AND TASK DESCRIPTION

At the inception of this project, the term "Geophysical Hazards" was adopted to describe, in general, the seismic, mass wasting and snow avalanche hazards existent in the Juneau area which were to be the subject of this investigation. Although the term itself is not scientifically accurate, its use has been nevertheless a convenient way to describe collectively such hazards. In this report seismic hazards refer to dangers existing due either to the proximity of fault lines and poor foundation conditions in Juneau, or to secondary triggering of mass wasting or snow avalanche effects. Mass wasting hazards refer to the danger existent in certain areas of Juneau because of their susceptibility to rock, mud or earth debris slides. Snow avalanche hazards are the danger caused by either airborne or ground borne snow slides in certain areas of the Borough.

In November 1968, Dr. Edward LaChapelle, in a report to the City and Borough of Juneau entitled "The Behrends Avenue Avalanche and Other Avalanche Hazards in the Greater Juneau Borough", recognized that a variety of geophysical hazards endanger many portions of the city. At that time, he recommended that the Borough government initiate immediately a survey of those geophysical hazards. Since that time, increasing numbers of people have become concerned about the location, extent and nature of such hazards. The initiation of a detailed survey of the geophysical hazards affecting Juneau represents the final outgrowth of that concern. This report containing the findings of the detailed

investigation that was conducted along with recommendations dealing with geophysical hazards is an extension of the advance planning program of the City and Borough of Juneau.

The purpose of this Geophysical Hazards Investigation has been twofold.

1. To investigate and report the extent and probability of geophysical hazards to urban development in the Juneau area resulting from any seismic, mass wasting or snow avalanche events that might occur.
2. To prepare recommended revisions to the Comprehensive Plan, Zoning Ordinance and Subdivision Ordinance and Building Code consistent with the findings of any hazards.

Specific urbanized areas within the City and Borough of Juneau were identified for detailed and intensive investigation, (see Figs. 3 and 9), because of the known and recorded existence of mass wasting and snow avalanche hazards. The remaining urbanized or urbanizing areas were subjected to a generalized investigation. The investigation related to seismic hazards was conducted for the whole City-Borough area, as well as those contiguous areas where faults exist which would affect Juneau.

Throughout the course of the field investigations, during the months of May and June 1972, a series of interviews with the local news media were arranged and public meetings held. The purpose of this was to inform the citizens of the City and Borough of Juneau of the purpose of this investigation, the work that was being done and of the findings of the Geophysical Hazards Investigation Team. A memorandum to the working file, listing the dates, occasions and participants, summarizing

the citizens information program is included as an appendix to the Technical Supplement of this Summary Report.

This Summary Report and accompanying Technical Supplement set forth the findings and recommendations of the Geophysical Hazards Investigation.



GEOPHYSICAL SETTING

THE GEOPHYSICAL SETTING

The City and Borough of Juneau, Alaska is situated in the circum-Pacific Seismic Belt called the "Ring of Fire", on the border between the Boundary Range and the Alexander Archipelago Physiographic Divisions of Southeastern Alaska. To the east, the Boundary Ranges are characterized by deep, steep-walled, U-shaped valleys, many of which are filled with water, forming fjords. The mountains are massive, giving an impression of great bulk, and are bordered largely by cliffs that plunge several thousand feet to tidewater. Geologically, the Boundary Ranges are underlain by the massive granitic Coast Range batholith and a thick sequence of highly metamorphosed, youthfully weathered, sedimentary rock - mostly schist, phyllite and graywacke. To the west, across the Gastineau Channel, lies the Coastal Foothills Division. This division is characterized by blocks of high mountains and generally flat-floored valleys. It is underlain by mostly the same highly metamorphosed, youthfully weathered sedimentary rock, resulting from intrusion of the Coast Range batholith. The active Fairweather-Queen Charlotte Islands Fault lies near enough to affect the Juneau area.

Since the Pleistocene glaciers which covered the Juneau region began to recede, the earth's crust, which was depressed under the great weight of ice, has been rebounding - rising upward. Both the depressing process and the on-going rebounding have created a complex system of small regular cracks in the rock material. The existence of these joints plays an important role in the geomorphic development of the Juneau region.

Climate also plays an important role. Juneau's climate is governed by both cold polar air masses and warm, moist maritime air masses. These combine with orographic phenomenon to produce a high average annual precipitation that is distributed fairly evenly throughout the year. Deep snow accumulations build at higher elevations, and high run-off from lower elevations is normal. During the winter months many freeze-thaw cycles occur. The complex system of joints in the bedrock permits ample infiltration of moisture which, during the frequent freeze-thaw cycles, wedges blocks and plates of bedrock material apart. These accumulate on the slopes as debris.

The short period since the beginning of the soil forming processes, the dominance of mechanical weathering and the steepness of the slopes has resulted in the formation of only a thin mantle of coarse-grained soil. On the predominantly steep slopes, this soil is rapidly removed by landsliding and soil creep, thus retarding or precluding the natural development of soil-holding vegetation. The accumulated debris and lack of supporting vegetation are then affected by gravity and precipitation causing active mass wasting.

A similar combination of climate, geology and soil factors create a wintertime condition which directly affects the Juneau area. Precipitation in the form of snow accumulates on the steep slopes of the mountains behind the city. The poor soils inhibit the growth of vegetation, frost wedging of ice in bedrock joints contributes an unstable surface and rapidly changing extremes of temperature decrease the little on-slope storage capacity for snow accumulation. Frequent snow avalanches, ranging from very small and inconspicuous to large and destructive, are normal.

Seismic events, mass wasting and snow avalanches, all dynamic earth-shaping forces, expose portions of the urban and urbanizing areas of the City-Borough to extreme geophysical hazards.



FINDINGS

FINDINGS

A. Some Comments on the Philosophy of Probabilities

In order to anticipate any potential loss to the community which would be incurred if a destructive event were to take place, some estimates of mathematical probability can be established. Historical data is researched, statistical analyses assembled, and then, the past patterns are projected into the future. This method is particularly valid in cases where future events are dependent upon the events which have preceded. However, natural phenomenon such as earthquakes and mass wasting or avalanches are random, independent events, and are not readily subject to mathematical projection.

The case of flipping a coin is used for illustration. At every flip, the probability of heads coming up is 50%. Each flip is an independent event. Regardless of any pattern of past flips, the probability of heads coming up at any future flip remains 50%.

This example does not suggest that in the case of natural phenomena, historical evidence is to be discounted. Natural processes are immensely more complex than the example of the coin, and historical patterns can provide one basis for judgmental evaluations.

Great care must also be exercised in the use and interpretation of the statistical terms which apply to natural phenomenon. Such terms as recurrence interval or return interval are potentially misleading. These are defined as the average interval of time within which an event (such as a storm) of a given magnitude will be equalled. This is dependent upon the underlying premise that the storms occurring in a period of time constitute a sample of an indefinitely large population in time. For instance, if in a period of ten years of record the largest storm recorded was of a certain size, it is probable that the next ten years will also contain a storm of equal magnitude. In this sense, recurrence interval, or return interval, is also a statement of probability. An event having a recurrence interval of ten years is one that has a 10% probability of occurring in any given year. Which year cannot be determined.

Concerning the 1962 Behrends Avenue avalanche,

"Hart has pointed out in this report that the average return interval (emphasis added) is 13 years. If the average life of a house located within the present influence zone is taken as 40 years, then the encounter probability between house and avalanche is 96%. This means almost certain damage or destruction of a house sometime during its normal expected life. The probability is not 100% because the return interval is an average of presumably random events, for which there is a finite probability that more than 40 years will elapse between two successive events. From the practical standpoint of evaluating the significance of this to a homeowner on Behrends Avenue, it should be remembered that which 40 years this might be is completely undetermined."
(LaChapelle, 1968)

It must be emphasized that in the case of the natural phenomena

under investigation, though mathematical probability of any occurrence in the statistical sense can be established, probability does not constitute a forecast. It falls to knowledge and interpretation of the history and the technical ingredients of each phenomenon for a qualitative judgment of probability.

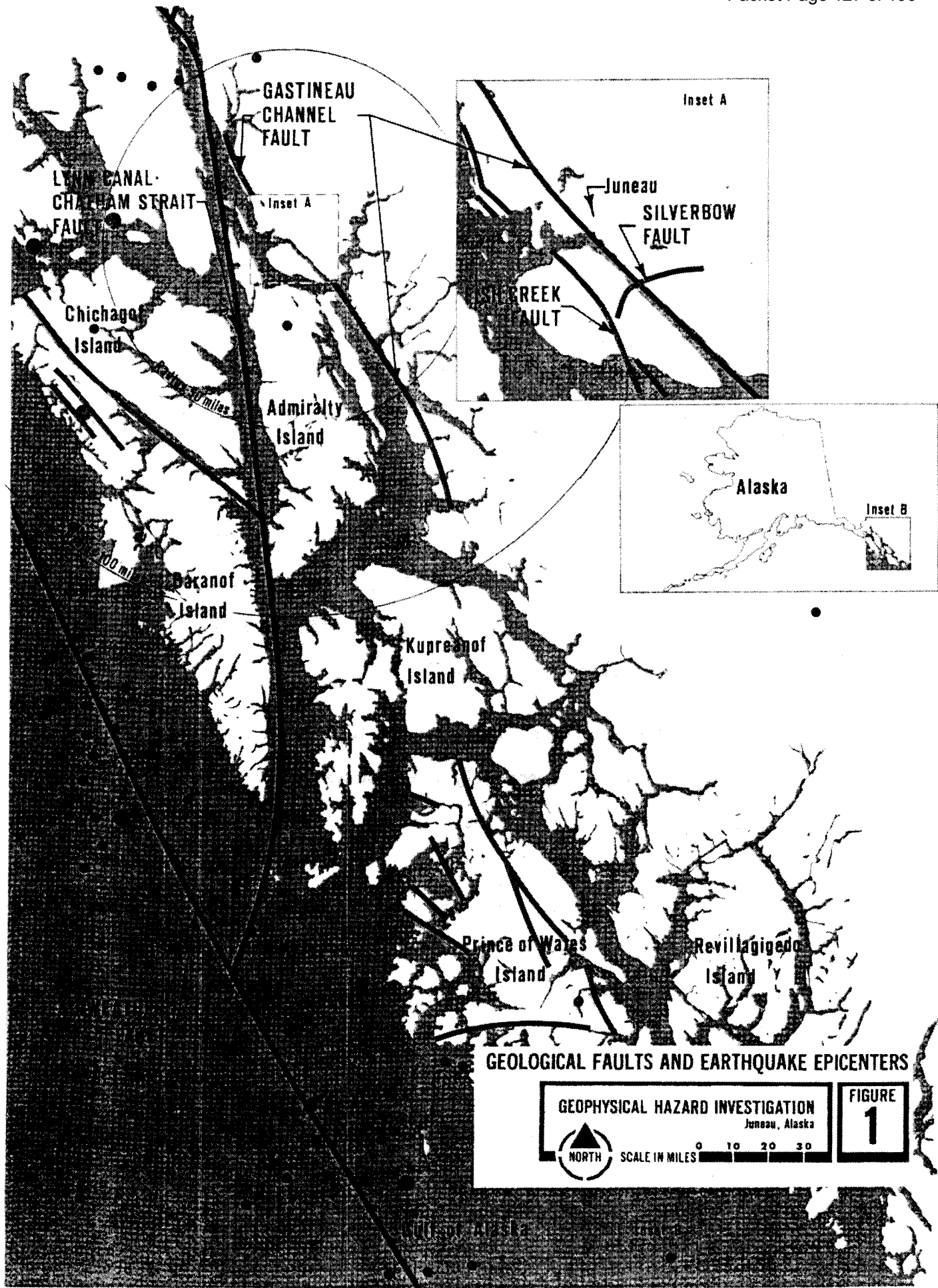
In those instances where a hazard is known to exist, prudence demands an assumption that an event will take place, and appropriate action necessary to minimize losses to life and property should be initiated.

B. Results of the Seismic Hazard Investigation

1. Earthquakes

There are five known major fault zones within 100 miles of Juneau, see Fig. 1. Of these, the Gastineau Channel-Berners Bay Fault, the Silverbow Fault, the Fish Creek Fault and the Lynn Canal-Chatham Strait Fault exhibit no evidence of movement during the Pleistocene or Recent time. The Fairweather-Queen Charlotte Island Fault has been the scene of numerous major quakes in historic times. From 1899 to the present, sixteen earthquakes with magnitudes ranging from 6.0 to 8.6 on the Richter scale have been recorded. It is reasonable to predict that earthquakes strong enough to affect Juneau will occur along this fault.

Although the four inactive faults have shown no historical movement, it should not be assumed that they are tectonically inactive. A long period of seismic quietude may be an indication that strain is being accumulated which could be released as an earthquake. The relative probability of occurrence of earthquakes or earth movements in the Juneau area within 100 years (based in part on the historical record, and in part on subjective reasoning); is assessed as follows:



<u>Event</u> ¹	<u>Probability</u> ²
Earthquake of magnitude 6 or greater with epicenter at Juneau	1
Earthquake of magnitude 6 or greater with epicenter within 50 miles of Juneau	3
Earthquake of magnitude 6 or greater with epicenter within 100 miles of Juneau	5
Movement along faults in Juneau area	1

2. Geologic Setting

Every geologic unit responds differently to the shaking and vibrations of earthquakes. Structures located on soft ground have suffered five to ten times greater damage than structures on hard-rock formations. Water filled alluvium or saturated filled ground tend to magnify the amplitude of earthquake shockwaves. Conversely, bedrock or other extremely competent materials tend to dampen shockwave amplitude.

Thick beds of loose, water-saturated, cohesionless alluvium frequently react to earthquake shaking by granular response. That is, compaction or densification results in differential settling of the land surface. Bedrock and other extremely competent materials commonly exhibit an elastic reaction. However, brittle response of bedrock material can be expected in precipitous areas with attendant rockfalls, rock avalanches and earthslides

¹ Adapted from Miller, 1972

² Probability ranges from 1 (almost impossible) to 5 (almost certain) (Miller, 1972)

on steep slopes.

A detailed investigation of the surficial geology of the Juneau urban area was recently completed by the United States Geological Survey.³ This open file report fully describes the origin, location and characteristics of each unit of surficial geology. Accompanying maps locate each unit and interpret its anticipated behavior in the event of a seismic occurrence.

The Geophysical Hazards Investigation Team has reviewed these findings and concurs without exception. Fig. 2, adapted from Miller, 1972, delineates those areas where, based on the anticipated behavior under seismic stress, poor, marginal and acceptable geologic foundation materials can be expected.

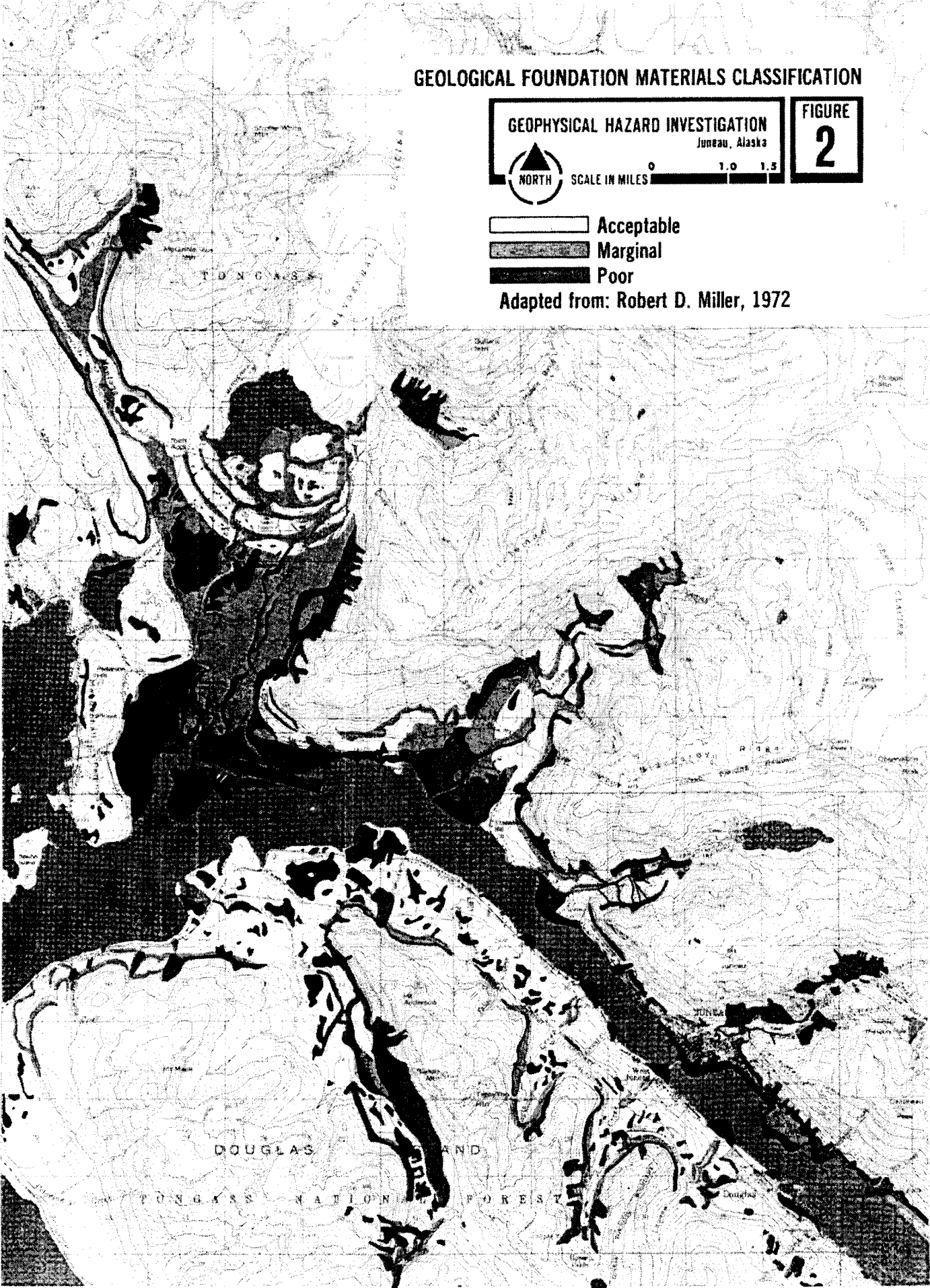
Particular attention is directed to the classification system:

- a) Areas of poorest foundation conditions. A severe local response to an earthquake probably will cause one or more of the following to occur: differential downslope movement, compaction and differential settlement, ejection of water and (or) sediment, and local sliding toward unsupported faces of deltas.

³Miller, R.D.
Surficial Geology of the Juneau Urban Area and Vicinity, Alaska, with
Emphasis on Earthquake and Other Geologic Hazards; United States Depart-
ment of the Interior Geological Survey, open file report, 1972.

- b) Areas of marginal foundation conditions. A severe local response to an earthquake probably will cause one or more of the following to occur: differential compaction, ground fracturing, ejection of water and /or sediment. Reaction to seismic shaking depends on earthquake magnitude, epicentral distance, seismic wave length and amplitude, and duration of shaking. Depth to water table and density and thickness of geological units also bear on the ground reaction. Prediction of which of the areas in the classification may not be damaged by an earthquake cannot be made.
- c) Areas of most acceptable foundation condition. Best foundation material (bedrock); or, very good foundation material (generally dense or well compacted); or, satisfactory foundation material, though local conditions will govern reaction to earthquakes which might cause some compaction, some fracturing, and some isolated water and/or sediment ejection.

Particular note should be made of the urban and urbanizing areas which are underlain by unconsolidated material, and are classified as having poorest foundation conditions. Reference to Fig. 2 shows that large areas of the Mendenhall Valley, the vicinity of the Juneau International Airport, the Lemon Creek and Salmon River Deltas and the man-made filled areas of the Juneau waterfront are potentially



unstable in the event of a seismic occurrence.

It must be stressed that foundation conditions are a highly site-specific phenomenon and do not necessarily entail a hazard condition. While an area may be classed as having poor conditions from a small scale perspective, structural criteria or land use decisions, particularly in the case of public occupancy and high-density structures, must be made on the basis of detailed on-site engineering geology reports.

3. Effects of Triggering

In addition to the danger presented directly by earth movement, a seismic event poses a much greater threat in terms of the mass wasting, or avalanches which could be triggered. The following table estimates the probability of occurrence, within the next 100 years, of selected seismic initiated, geomorphic events.

<u>Geomorphic Event</u> ¹	<u>Probability</u> ²
Massive landslides in glaciomarine deposits similar to landslides that occurred in the Bootlegger Cove Clay in the Anchorage area during the March 1964 earthquake	1
Delta-front slides into water as result of earthquake, causing waves with rapid run-ups in excess of 5 feet	3
Tsunamis in Gastineau Channel with rapid runups in excess of 5 feet	2
Debris flows along existing or new channels on mountain slope above the Gastineau Avenue-Franklin Street area	5

¹Adapted from Miller, 1972

²Probability ranges from 1 (almost impossible) to 5 (almost certain) (Miller, 1972)

<u>Geomorphic Event (Cont.)</u>	<u>Probability</u>
Massive rockslide-avalanches along mountain fronts	4
Isolated rockfalls along existing talus cones, and as unexpected occurrences elsewhere	5
Damage from severe shaking caused by earthquake of magnitude 6 or greater with epicenter within 100 miles of Juneau	3
Compaction and settlement of water-saturated deposits from shaking of ground in response to earthquake of magnitude 6 or greater with epicenter within 100 miles of Juneau	3

We are also concerned about the possibility of seismic-triggered landslides descending into Salmon Creek Reservoir. A major slide would probably result in extreme hydrostatic pressure on the circa 1915 dam. Any possibility of failure of the dam would endanger the developed and developable portions of the Salmon Creek Valley. This possibility must be carefully evaluated prior to determination of future land uses or developments in the vicinity of the dam or in areas which would be subject to inundation as a result of dam failure.

C. Results of the Mass Wasting Hazard Investigation

1. Geographic Limits

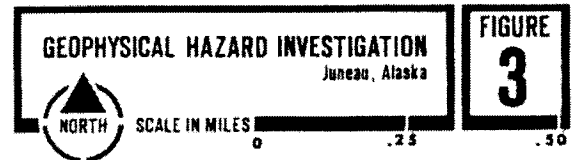
The mass wasting hazard investigation was conducted at two levels of detail:

- a) A generalized investigation including the City-Borough portion of Douglas Island and a seven mile wide corridor on the east side of the Gastineau Channel from Thane to the Mendenhall Valley.
- b) A detailed investigation limited to the sub-areas shown on Fig. 3.

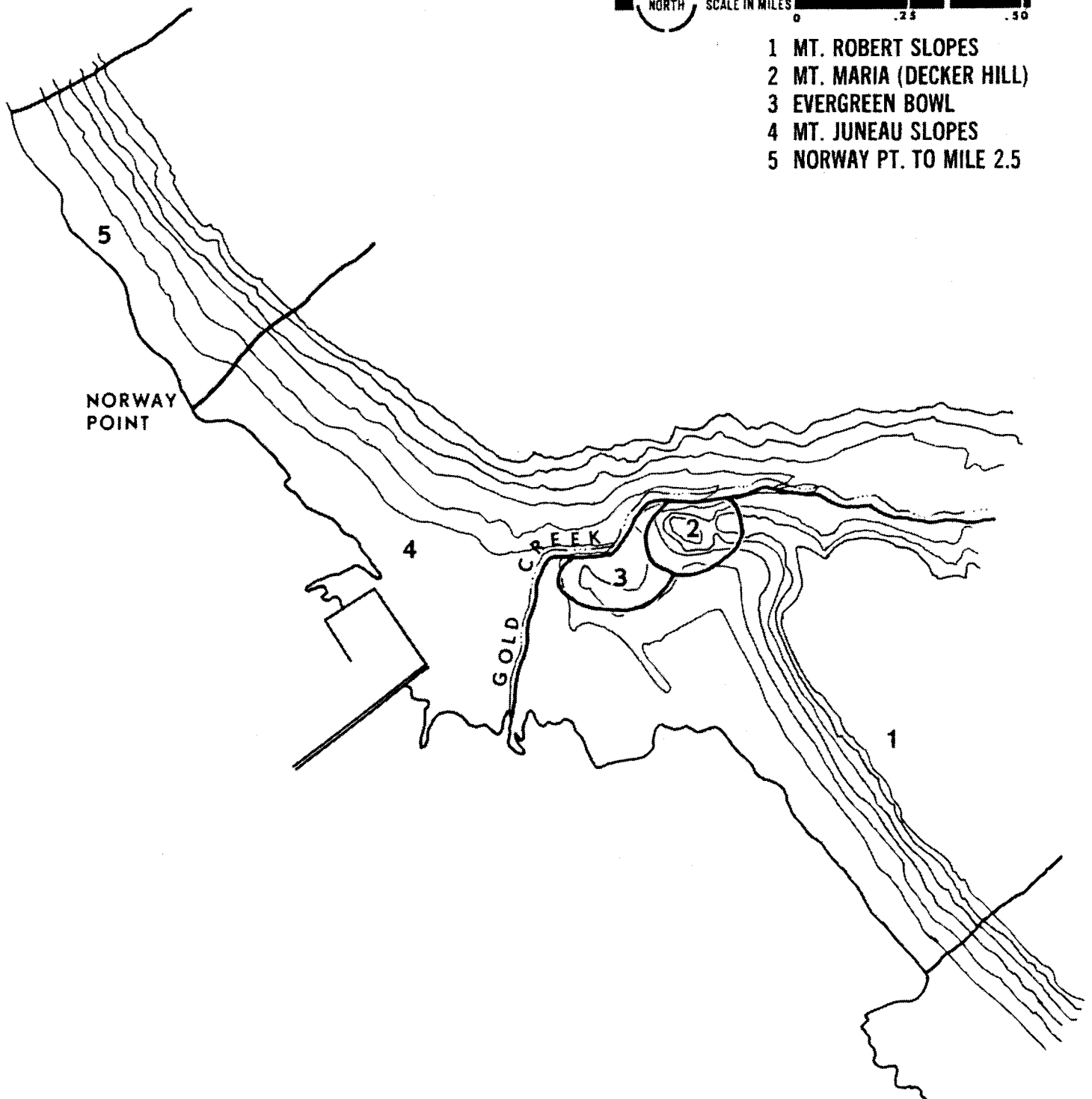
2. Hazard Classification System

A separate classification system was needed for each of the two levels of investigation. The propensity for mass wasting to occur at any given location is dependent upon the ratio between the effective angle of internal friction characteristic of the natural soil and the slope on which that soil is located. The angle of internal friction for soils in the Juneau area ranges from 28° to 37° . Consequently, at the generalized investigation level, if the slope of the land exceeds 37° , the area is classified as highly unstable. Slopes with gradients between 28° and 37° are classified as potentially unstable. Figs. 4 and 5 show those areas covered by the generalized investigation, based on the angle of internal friction and mapped slope angle, which are classified as highly unstable and potentially unstable.

MASS WASTING HAZARD INVESTIGATION SUB-AREAS



- 1 MT. ROBERT SLOPES
- 2 MT. MARIA (DECKER HILL)
- 3 EVERGREEN BOWL
- 4 MT. JUNEAU SLOPES
- 5 NORWAY PT. TO MILE 2.5



In addition to the basic mechanical properties of the soils, the detailed investigation included three additional criteria:

- a) History of mass wasting occurrences
- b) Presence of gullies or V-notch channels
 - having substantial accumulations of debris
 - relatively free from debris
- c) Probable extent of area affected by landslide.¹

Areas classified as high hazard demonstrate a history of landslides, and have channels or gullies containing substantial amounts of accumulated debris. This accumulation of debris, while temporarily stabilized, will eventually come down into the area below. No prediction can be made of when a slide will occur.

Areas classified as potential hazard also exhibit a history of landslides, but the channels or gullies present are relatively free from debris.

3. Significant Findings of Mass Wasting Hazard Investigation

The following findings constitute the most significant classification of hazard areas. Refer to Figs. 6 and 7 and the Mass Wasting Investigation Technical Report for complete information.

a) Mt. Roberts Slopes:

21 channels have been mapped on the Mt. Roberts slope above the city, (nos. 13 to 29). Fifteen are

¹The term landslide as used in the remainder of this Summary Report embraces all mass wasting events exclusive of "creep". Implicit in the term landslide as used herein are the following: rockfalls, rockslides, rock avalanches, debris slides, debris avalanches and debris flows.

GENERALIZED SLOPE INVESTIGATION-JUNEAU VICINITY

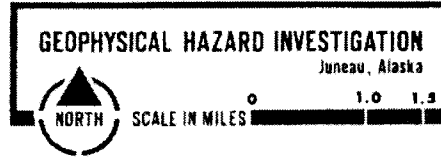
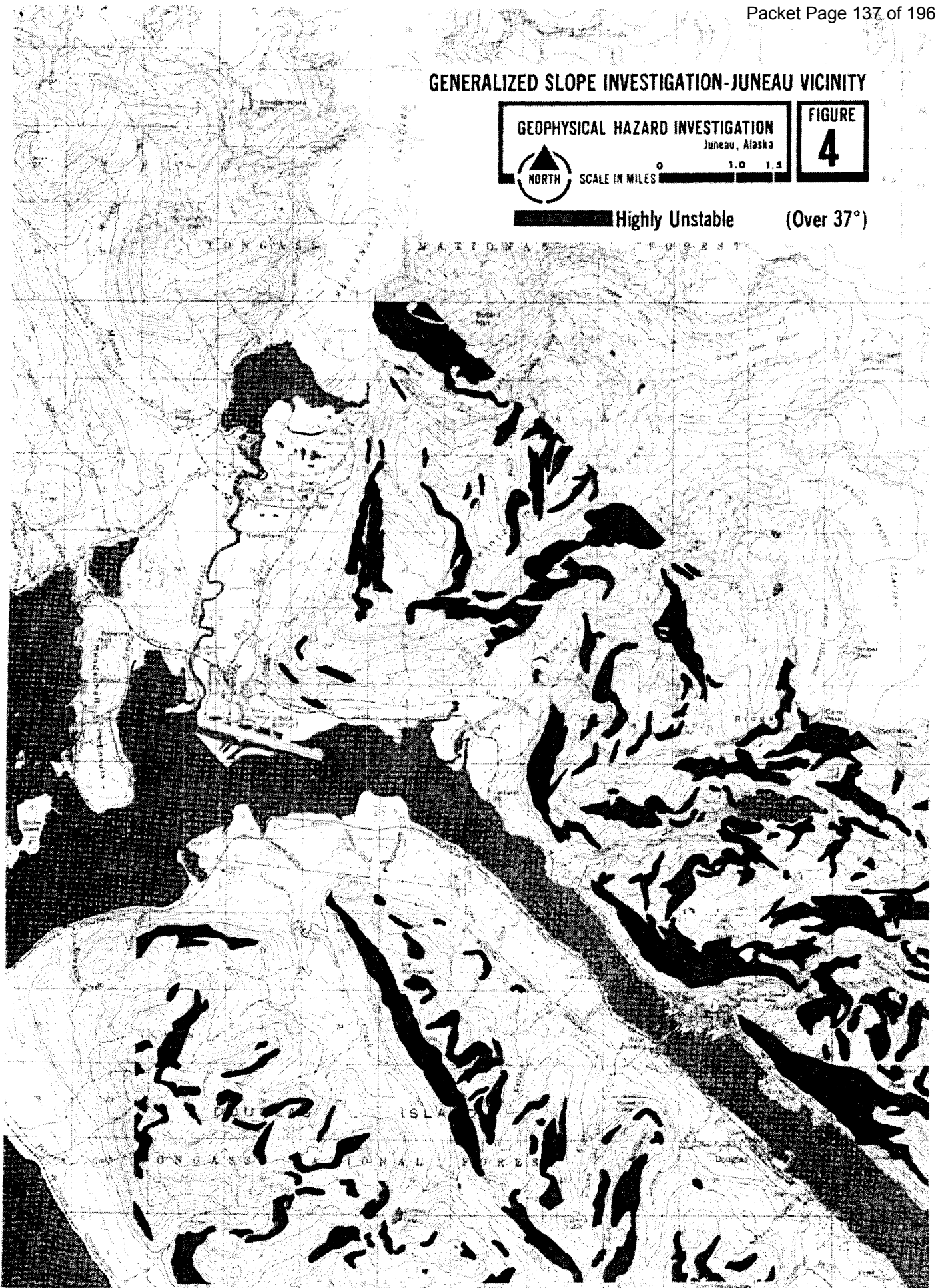


FIGURE
4

Highly Unstable (Over 37°)



identified as having a high hazard principally because of the large accumulations of temporarily stabilized loose debris material. The remaining are classified as potentially hazardous. Considering the extremely steep slopes, unstable bedrock and soil conditions, numerous high hazard gullies extending directly into the urban area and the known history of landsliding, most of the Mt. Roberts slope above South Franklin Street and Gastineau Avenue is to be considered as highly hazardous in terms of danger of property damage and loss of life.

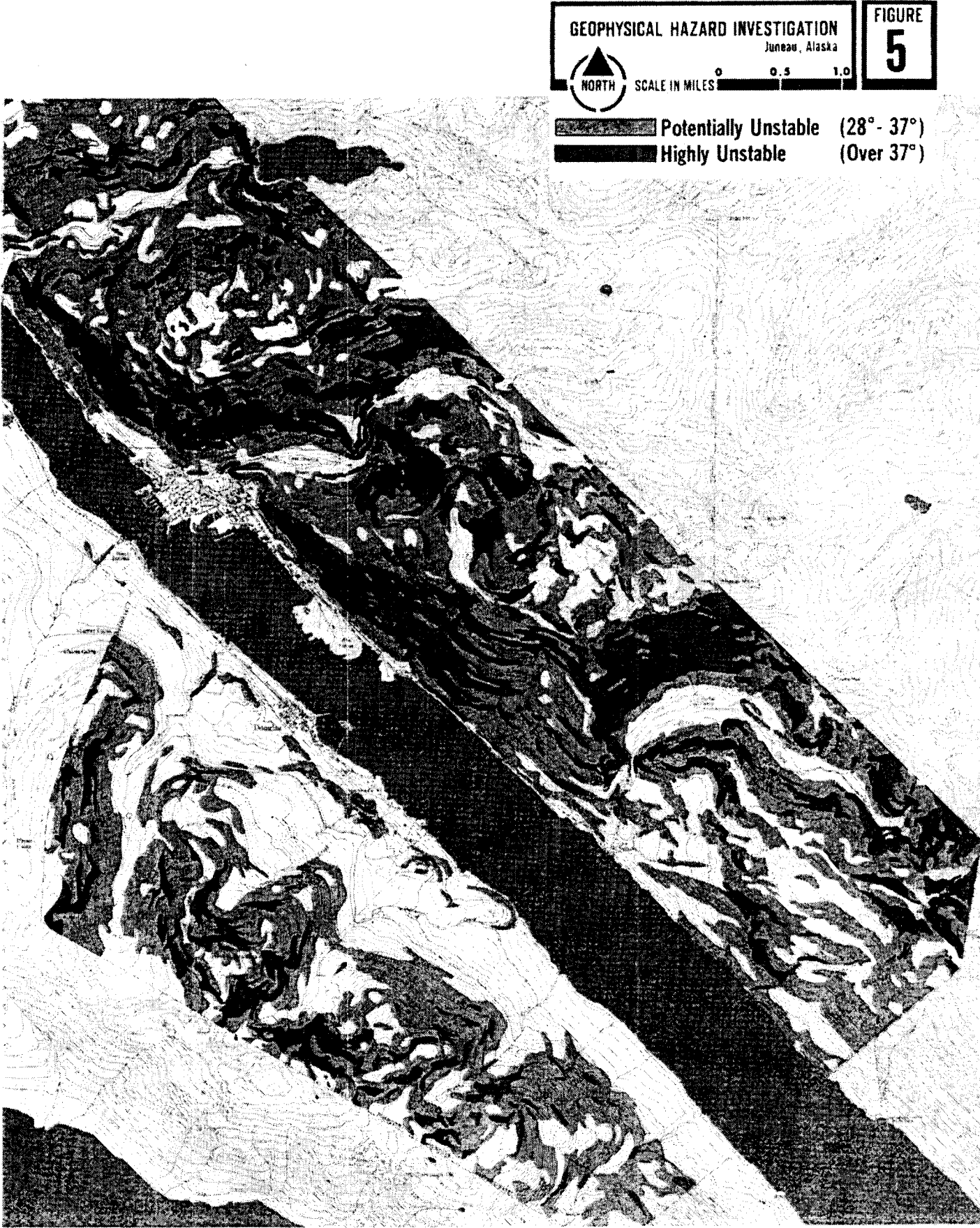
b) Mt. Maria (Decker Hill):

The area directly below the open rock cliff above Basin Road is a high hazard zone. The area below the rock cliff above 6th and Nelson Streets is a high hazard area. The trestle portion of Basin Road is also a high hazard area.

c) Evergreen Bowl:

The slopes surrounding Evergreen Bowl are potential hazard areas to property at the top of the slope and adjacent to Basin Road, Gold Belt Avenue and 7th Street. A high hazard area from falling rock also exists above Calhoun Street between Dixon Street and 6th Street.

GENERALIZED SLOPE INVESTIGATION-JUNEAU DOUGLAS AREA



d) Mt. Juneau Slopes:

The slopes from Norway Point to the Behrends Avenue snow avalanche path, though free from channels or gullies, are classified as high hazard due to the overall unstable conditions. Three distinct channels (Nos. 3 to 5), exist within the Behrends Avenue avalanche track. These are classed as high hazard, with No. 3 extending to Behrends Avenue. Above Evergreen Avenue three channels (Nos. 6, 7 and 8) present a significant danger to urban areas. These are classed as high hazard. Channels 9, 10, 11 and 12 were identified on the slopes above Gold Creek and designated as high hazard areas.

e) Norway Point to Mile 2.5:

The channel (No. 2b) above Norway Point is very active and is classed as a high hazard area, with the remainder of Norway Point classified as potentially hazardous area. Channel No. 2a just west of Norway Point is also a high hazard area. The area between Channel No. 1a and 1c is classed as potential hazard. The channel above the Johnson Children's Home (No. 1c) is classified as high hazard. Between miles 2.0 and 2.5 on the Glacier Highway, Channel No. 1b is classified high hazard.

4. Probability of Occurrence

A review of the history of recorded landslide occurrences in the Juneau urban area reveals some valuable information: (see Fig. 8)

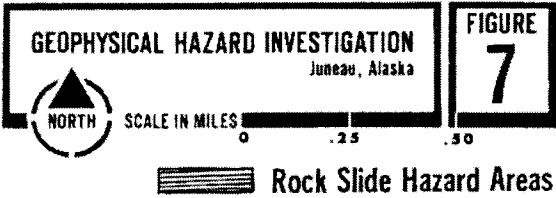
MASS WASTING HAZARD AREAS



- 18 years have passed since the last landslide.
- 17 destructive or potentially destructive landslides occurred during the period 1918 through 1954.
- All recorded landslides occurred between September 25 and January 2.
- 16 of the 17 landslides occurred during eleven major storms, each having between two to four inches of rain in a 24-hour period. (The seventeenth occurred during an abnormally warm period with heavy rain and snow melt.)
- Eleven of the 17 landslides occurred on the Mt. Roberts slopes above South Franklin Street.
- Of the total eleven landslides which occurred during the 26 years of the A-J mill operation (1918-1944), seven landslides occurred above South Franklin Street. It is interesting to note that while it is reported that the A-J Mining Company did its blasting on Sundays, no landslides occurred on a Sunday.
- Between 1944 when the A-J ceased operation, and 1954, five landslides occurred - four above South Franklin Street.

A comparison between the United States Weather Bureau calculations of the probabilities of a storm of greater than two inches rainfall in a 24-hour period during the period September through January and the actual percentage of landslides during that period is as follows:

MASS WASTING CHANNELS AND ROCK SLIDE AREAS



<u>Probability of More Than 2" in 24-Hours</u>			<u>Actual % Distribution of Slides by Month</u>
-	September	- 18% probability	23.6%
-	October	- 25% probability	35.4%
-	November	- 15% probability	29.9%
-	December	- 9% probability	5.8%
-	January	- 4% probability	5.8%

This high degree of correlation is very important, indicating that the occurrence of landsliding is dependent upon high precipitation to act as a triggering mechanism.

A landslide cannot occur, regardless of the most favorable weather conditions, unless earth material is available to slide. For the past 18 years material has been accumulating in the channels and gullies classified as high hazard. This accumulation represents the potential for highly destructive landsliding. Combined with the very high probability of rainfall sufficient to trigger a slide, this accumulation of material constitutes an imminent and unpredictable danger.

D. Results of the Snow Avalanche Hazard Investigation

1. Geographic Limits

The Avalanche Hazard Investigation was conducted at two levels of detail. A detailed investigation was made of the four sub-areas shown on Fig. 9. A generalized investigation was also performed in those areas outside the detailed investigation area where avalanche hazards might affect urban development, specifically along the four major arterial roads: Glacier Highway, Thane Road, Douglas Road North and Douglas Road South. No investigation was made in the valleys not accessible by road, including the valleys on Douglas Island, Salmon Creek Valley, Lemon Creek Valley and in Last Chance Basin above the bridge.

2. Hazard Classification System

The Swiss Federal Institute for Snow and Avalanche Research has developed a standard procedure for classifying avalanche hazard zones. See Fig. 10 and Table 1. Table 1 sets forth the criteria for each zone.

SNOW AVALANCHE HAZARD INVESTIGATION SUB-AREAS

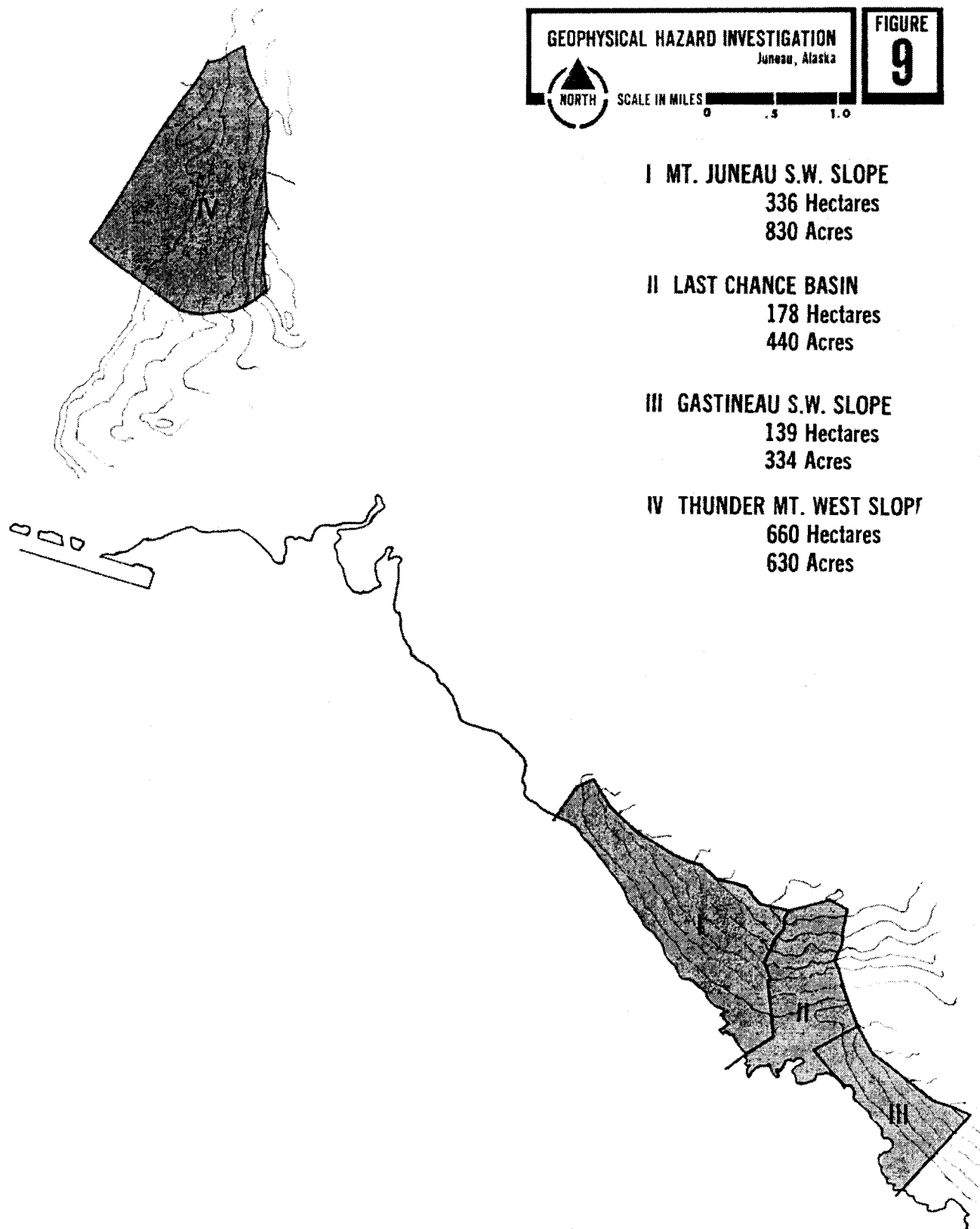
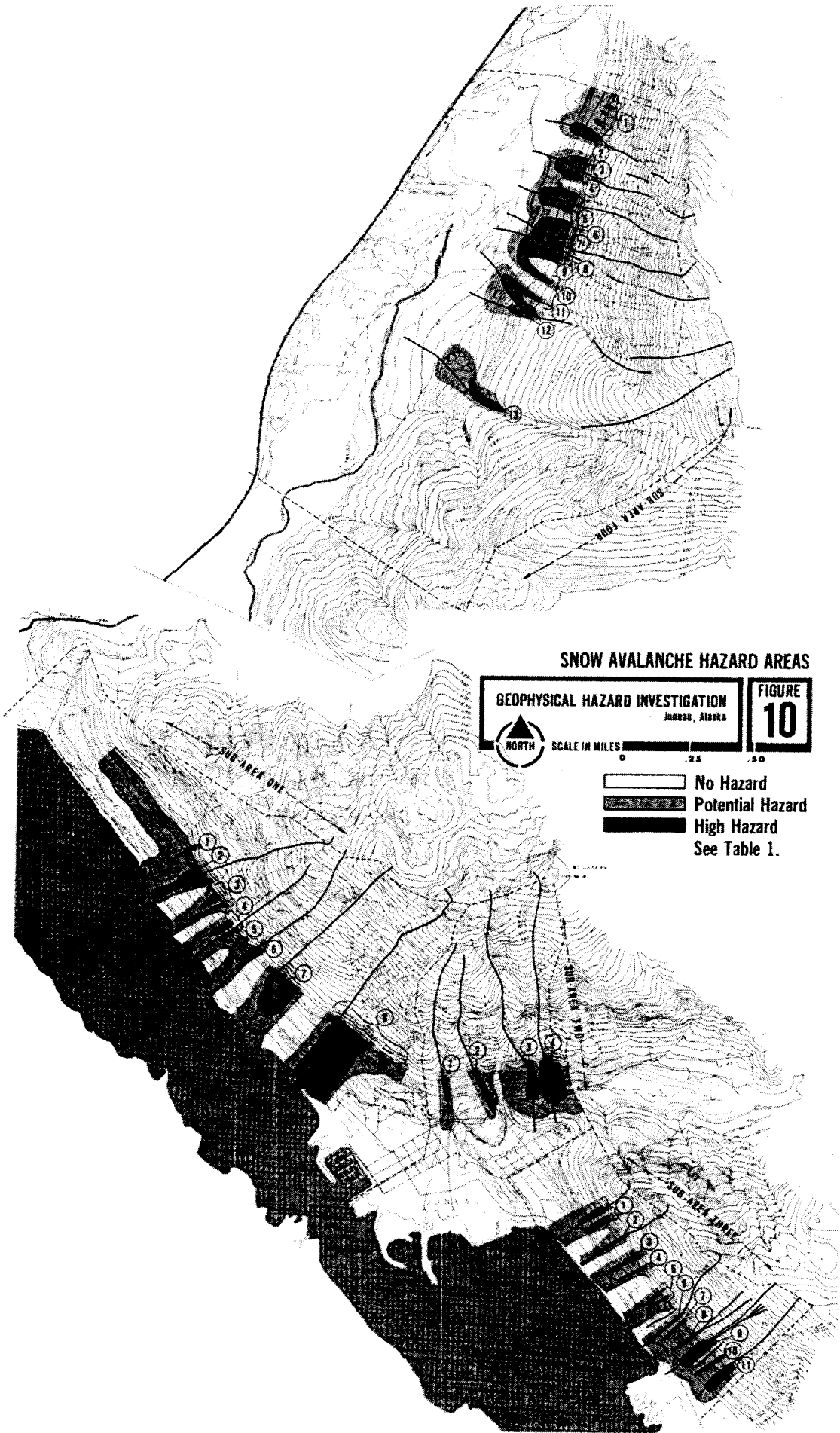


TABLE 1
TABULATION OF SNOW AVALANCHE ZONE CRITERIA

Zone	Zone Characterized As:	Return Period	Damage will Result to Structures not Capable of Withstanding the Wind/Snow Pressures Listed Below	Probability of Occurrence*
No Hazard	Free of Avalanche Hazard	None	20 lb/ft ² wind pressure (= Approx. 70 mph wind)	
Potential Hazard	Avalanches Occur Seldom But May be Powerful	More than 90 yrs.	More than 600 lb/ft ² snow pressure (= More than 350 mph wind)	less than 1% per year
		or More than 30 yrs.	200-600 lb/ft ² snow pressure (= Approx. 220-350 mph wind)	less than 3% per year
		or Less than 30 yrs.	20-200 lb/ft ² snow pressure (= Approx. 70-220 mph wind)	more than 3% per year
High Hazard	Frequent and Powerful Avalanches	Less than 30 yrs.	200-600 lb/ft ² snow pressure (= Approx. 220-350 mph wind)	more than 3% per year
		or Less than 90 yrs.	More than 600 lb/ft ² snow pressure (= More than 350 mph wind)	more than 1% per year

* See Section A. Comments on Probability



3. Significant Findings of the Snow Avalanche Hazard Investigation

(Refer to Fig. 10)

a) Sub-Area I - Mt. Juneau S. W. Slope:

This sub-area presents the most critical avalanche hazard to urban and urbanizing land. Six potential hazard zones cross the Glacier Highway between the Juneau-Douglas High School and mile 2.5. A number of high hazard zones exist in this area, two of which, the Behrends Avenue zone and the White Subdivision zone extend to the Gastineau Channel.

The remaining high hazard zones do not extend below the 25 meter (82 feet) elevation line, and therefore, do not impose a great threat to present urban land.

b) Sub-Area II - Last Chance Basin:

There are four potential hazard zones in this sub-area. Two are deep into Last Chance Basin and do not at present affect any urban land. Avalanche zone #4 which is the site of the 1972 avalanche which severed the city water flume is most important. Here the high hazard zone extends across Gold Creek and up to Basin Road.

Avalanche zone #1, the high hazard zone, terminating in the slope above presently urban land, is a danger as the potential hazard zone extends into the area of upper Calhoun Avenue where it crosses Gold Creek.

c) Sub-Area III - Gastineau-S. W. Slope of Mt. Roberts:
Eleven distinct avalanche tracks are identified along the Thane Road between the A-J Mine Office and the A-J rock dump. While the high hazard of these eleven tracks terminate on the slope above Thane Road, the potential hazard zones extend to Gastineau Channel. At present no significant structures are affected by these tracks. Travel along Thane Road during avalanche periods is considered to be dangerous.

d) Sub-Area IV - Thunder Mountain - West Slope:
Thirteen avalanche tracks are identified in this sub-area. In all but two cases the high hazard zones terminate above the 25 meter (82 feet) elevation and the potential hazard zones do not extend into presently urbanized land.

4. Probability of Occurrence

Unlike the Mass Wasting Hazard Investigation where the potential for landsliding includes a cumulative element, potential for snow avalanching, on an annual basis is non-cumulative. The setting for avalanching - steep slopes, poor or no snow retaining ground cover, are ever-present, but snow accumulation is dependent upon the weather phenomena occurring in each separate winter.

Calculations of avalanche probability require a history

of weather and snow accumulation data collected over an extended period of time at potential avalanche sites, as well as over a wide geographic area. In Juneau such a program has never been in effect which would have provided the requisite weather and snow data, thus precluding any precise computation of probability based on weather records.

It must be nevertheless emphasized that the most decisive weather condition for causing an avalanche to occur is the amount and intensity of each single snowfall. The available precipitation data of Juneau was gathered and analyzed for this investigation. From this analysis an estimate of snow accumulation was made. However, for the reasons stated above, the probability of avalanche occurrence was not made. Consequently, the susceptibility of certain areas to avalanche hazards, i.e. no hazard, potential hazard and high hazard, was made on criteria based exclusively on terrain configuration and vegetation cover. To determine the probability of an avalanche occurring it would be necessary to compare snowfall data to known avalanche occurrences. Unfortunately, very little correlative information of such nature is in existence, thus making the determination of probability extremely difficult.

E. Composite Mass Wasting and Snow Avalanche Hazard Rating System

The purpose of this Composite Hazard Rating System is twofold.

- to identify areas wherein the aggregate, life and property are exposed to high, moderate and low hazards
- to provide a basis for prioritizing corrective and preventative measures.

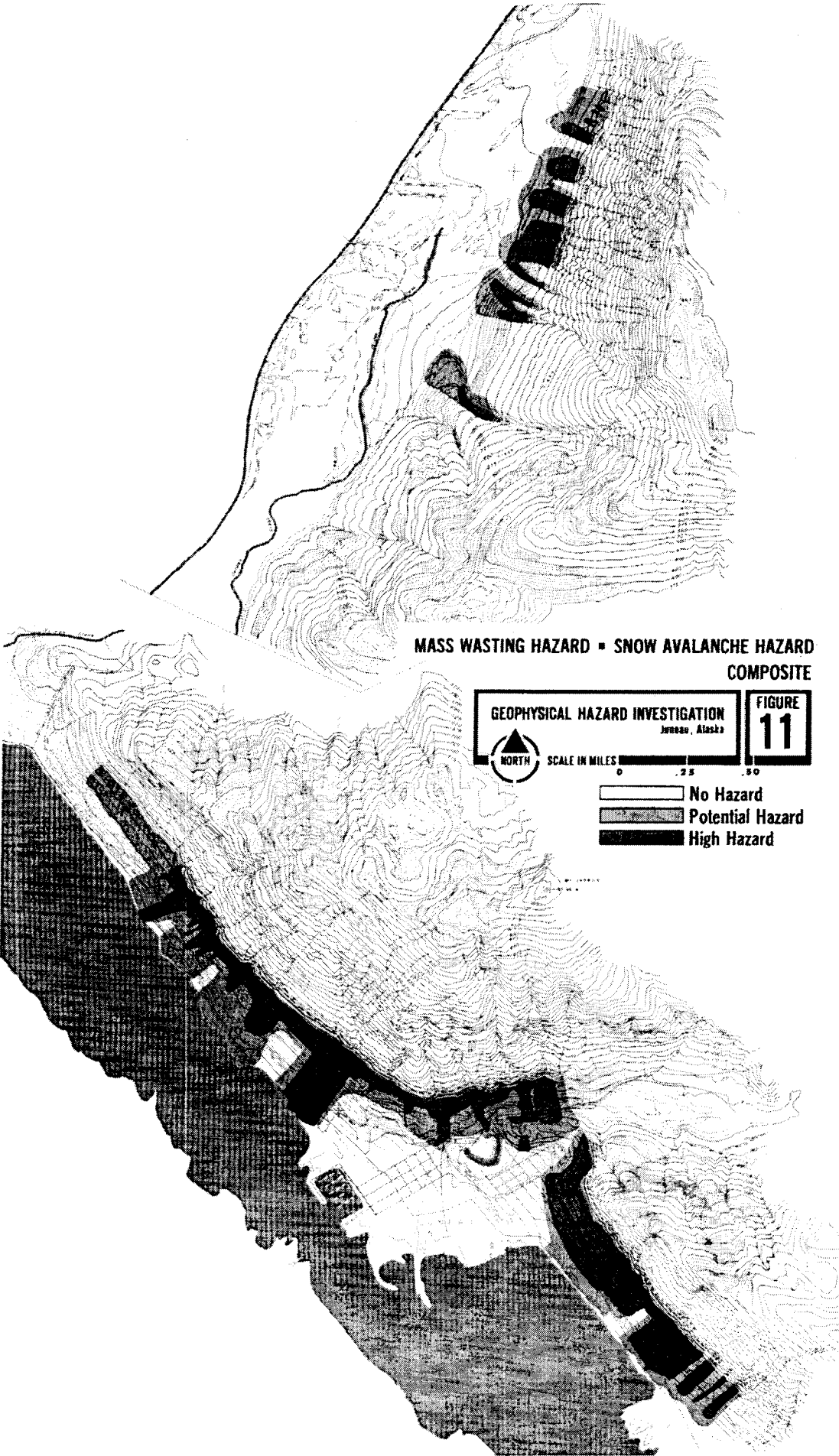
Only mass wasting sub-areas 1 - 5, and snow avalanche hazard sub-areas 1 - 3, are included in the compilation of a Composite Hazard Rating System because these affect the urbanized areas of Juneau most directly. Seismic hazard, except for the potential for triggering either mass wasting or avalanches is not included. Triggering responses are implicit in the areas classified as having a snow avalanche or mass wasting hazard.

Each category of hazard - mass wasting and snow avalanche - identifies three degrees of hazard. Aggregating the two systems, nine combinations of hazards are possible. Practically speaking, nine classifications is an unworkable number. However, it is logical to group several of these combinations under common headings. If a geographic area is known to be vulnerable to both a high snow avalanche hazard and a potential mass wasting hazard, then the known higher level of hazard should govern, and the resulting composite hazard class is High Hazard. Similarly, two high hazard ratings constitute a Very High Hazard. Adopting this philosophy, classifications result as shown in Table 2.

TABLE 2
COMPOSITE HAZARD CLASSIFICATION

SNOW AVALANCHE HAZARD CLASSIFICATIONS				
MASS WASTING HAZARD CLASSIFICATIONS		High Hazard	Potential Hazard	No Hazard
	High Hazard	Very High Hazard	High Hazard	High Hazard
	Potential Hazard	High Hazard	Potential Hazard	Potential Hazard
	No Hazard	High Hazard	Potential Hazard	No Hazard

Maps of the individual hazard investigations were overlaid and the above criteria applied. Developed or feasibly developable land was found not to exist on the slopes above the 300 foot elevation in the areas investigated, (see Figs. 3 and 9). Consequently, areas above were excluded from consideration in developing the composite hazard classification. It must be noted that two areas were found which fell into the Very High Hazard class. These are located on the slopes above 300 feet elevation in the Behrends Avenue Avalanche Track and above the White Subdivision, and do not include any presently developed or developable land. Consequently, there is no area classed in the Very High Hazard category shown on the Composite Snow Avalanche and Mass Wasting Hazard Map, Fig. 11.





ECONOMIC EVALUATION

ECONOMIC EVALUATION

To provide the City and Borough staff and members of the Planning Commission and Borough Assembly with additional data which would assist them in making decisions, an economic evaluation of the land affected by geophysical hazards was made. The economic data can be used as a tool which would make it possible to evaluate the economic consequences of policies affecting present and future land use in these areas.

The land affected by geophysical hazards was divided into six areas. This division was made on the basis of similarity of land uses, thereby an evaluation of basically homogeneous areas could be made. See Fig. 12. With the assistance of the Planning Staff the developed and developable land area in zones of high and potential hazard was then calculated. Values for the land, except that which is in public ownership, and any improvements were obtained from the Assessor's records. The valuations are based upon 100% of 1972 fair market value. By aggregating the valuations and then dividing these by the land area average values for land, improvements and total value per acre were obtained. The breakdowns for each of the six areas are shown on Table 3.

TABLE 3

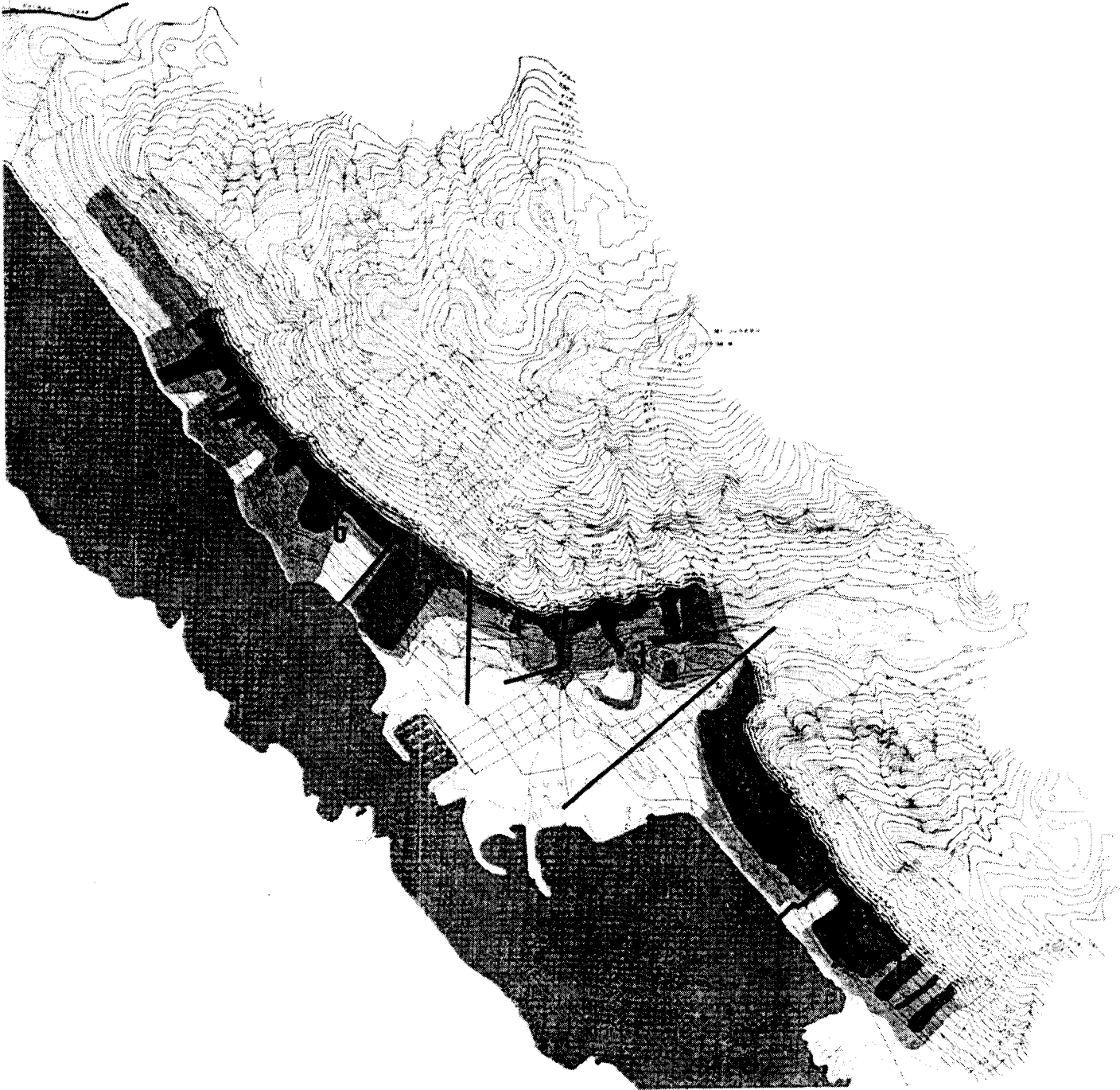
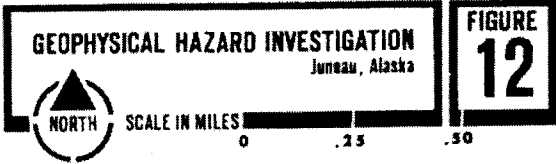
ECONOMIC EVALUATION - REVISED TO 1972

Land Area and Assessed Value Tabulation

	<u>Area 1</u>	<u>Area 2</u>	<u>Area 3</u>	<u>Area 4</u>	<u>Area 5</u>	<u>Area 6</u>
<u>Square Feet</u>						
High Hazard Zone		2,482,778	642,968	100,595	738,199	1,174,355
Potential Hazard Zone	904,613	479,869	1,365,464	506,156	406,429	3,180,391
TOTAL	904,613	2,961,127	2,008,431	606,751	1,144,662	4,354,746
<u>Acres</u>						
High Hazard Zone		57.00	14.76	2.31	16.95	26.96
Potential Hazard Zone	20.77	11.02	31.35	11.62	9.33	73.01
TOTAL	20.77	67.98	46.11	13.93	26.28	99.97
<u>Land Value (\$)</u>						
High Hazard Zone		1,268,463	60,217	30,520	321,425	84,285
Potential Hazard Zone	681,928	2,065,748	294,402	363,800	214,116	241,073
TOTAL	681,928	3,334,211	353,719	394,320	535,541	325,258
<u>Building Value (\$)</u>						
High Hazard Zone		2,578,576		65,800	1,144,850	81,341
Potential Hazard Zone	382,732	6,258,755	580,300	868,388	598,574	594,230
TOTAL	382,732	8,837,331	580,300	934,188	1,743,424	675,571
<u>Land Value/Acre (\$/Ac)</u>						
High Hazard Zone		22,254	4,080	13,212	18,963	3,126
Potential Hazard Zone	32,832	187,454	9,391	31,308	22,949	3,302
TOTAL	32,832	49,047	7,671	28,307	20,378	3,254
<u>Building Value/Acre (\$/Ac)</u>						
High Hazard Zone		45,238		28,485	67,543	3,017
Potential Hazard Zone	18,427	467,945	18,510	74,732	64,156	8,139
TOTAL	18,427	129,999	12,585	67,063	66,340	6,758
<u>Total (Land & Building) Value/Acre (\$/Ac)</u>						
High Hazard Zone		67,492	4,080	41,697	86,506	6,143
Potential Hazard Zone	51,259	755,399	27,901	106,040	87,105	11,441
TOTAL	51,259	179,046	20,256	95,370	86,718	10,012

Source: City and Borough of Juneau

ECONOMIC EVALUATION AREAS





FRAMEWORK FOR RECOMMENDATIONS

FRAMEWORK FOR RECOMMENDATIONS

This section describes the growth of the city of Juneau and influences of geophysical hazards on community development. It places findings of the Geophysical Hazards Investigation into a planning and land use control framework; and recommends alternative actions to the Borough Assembly as it deals with the problems of land use and community development in hazardous areas.

A Juneau History

Discovery of gold in 1880 and resultant mining activities created the city of Juneau. Topography restricted early physical growth to the narrow, relatively flat area along the waters edge, backed by the steep slopes of Mt. Juneau and Mt. Roberts. Street and building locations were determined primarily by convenience to the mining sites, availability of materials and transportation. Poor roads limited access to areas outside the immediate environs of the city. Until recent years, much of the growth of the city has continued within the original city limits.

A significant change occurred in 1900. As a result of the move of the state capital site from Sitka, Juneau was established as a permanent city. Greater capital investment was required to provide the buildings and ancillary spaces required for governmental functions. The permanent residential population increased, less accessible land was developed and the community expanded further.

B. Community Development and Geophysical Hazards

Historically, the existence of any geophysical hazard has been a minor factor in determining the development and growth of a city. Disastrous events are not completely predictable, and long periods of time may elapse between disasters of major proportions. Consequently, people tend to either ignore or forget the existence of such hazards.

Community development generally occurs on sites which can serve the functional needs of a society. Cities are generally established because of proximity to good harbors, trade routes, market areas, natural resource deposits, etc. Development patterns are established early. As the community grows to maturity, it becomes increasingly difficult to modify the course of development once established. The city of San Francisco is an example. Developed as a trade center serving both the interior of the United States and the Orient, the city was virtually destroyed by the 1906 earthquake and fire. Despite the ever-present danger of another catastrophic earthquake, the city was rebuilt and continues to flourish on the same site.

Extensive development also has occurred along the San Andreas Fault in California. Development continues despite all scientific evidence which indicates that a severe earthquake of catastrophic proportions will in all probability occur sometime in the future, causing extensive losses of life and property.

Three elements affect community planning.

1. Cultural

Cultural influences on community planning are difficult to define because they exist in the value system which establishes goals. Nevertheless, they exert a significant force in the shaping of a community. Communities whose cultural values are similar will generally have similar patterns of growth.

2. Physical

The physical element imposes controls and limits to community development in very obvious ways. Topography, soil conditions, flood plains, water tables, all impose certain kinds of constraints and conditions upon land use patterns and development.

3. Public Welfare

Land use planning and development regulations derive their authority from community held concepts about public welfare. The belief is that the regulation of uses of land to achieve community goals and that the control of development to maintain certain standards will insure the health, safety and well being of citizens as well as promoting a well balanced and attractive community for the benefit of all. The issue, which is applicable to Juneau, is to deal with the existing geophysical hazards as related to land use planning and public welfare. This Summary Report sets forth the nature, extent and location of the earthquake, mass wasting and snow avalanche hazards affecting Juneau. The Technical Supplement presents the work and findings of the

consulting teams engaged in this investigation, as well as reports of related investigations which were done in the past. Now these technical findings must be translated into action which will permit the Planning Commission and Borough Assembly to make decisions concerning the use of land in the hazardous areas of Juneau.

Not all natural hazards prevent development. Policies have been established, and legislation enacted, to bring about public works projects to mitigate the disasterous effects of some natural hazards.

The national policy for funding of flood control projects under the auspices of the Corps of Army Engineers and the Flood Plain Insurance Subsidy Program are two examples. The series of dams, dikes and levees constructed to control the rivers of the United States has made available a large amount of land for use which had been heretofore unsafe. However, there is no reasonable way to make this land totally safe from flooding. Consequently, communities have imposed certain flood plain land use controls upon development of flood prone land.

Seismic hazard zoning and building regulations such as those included in the Uniform Building Code are another example of the policies which influence the extent and type of development. Though not so dramatic as flood plain zoning in terms of land use development and control, communities adopting UBC

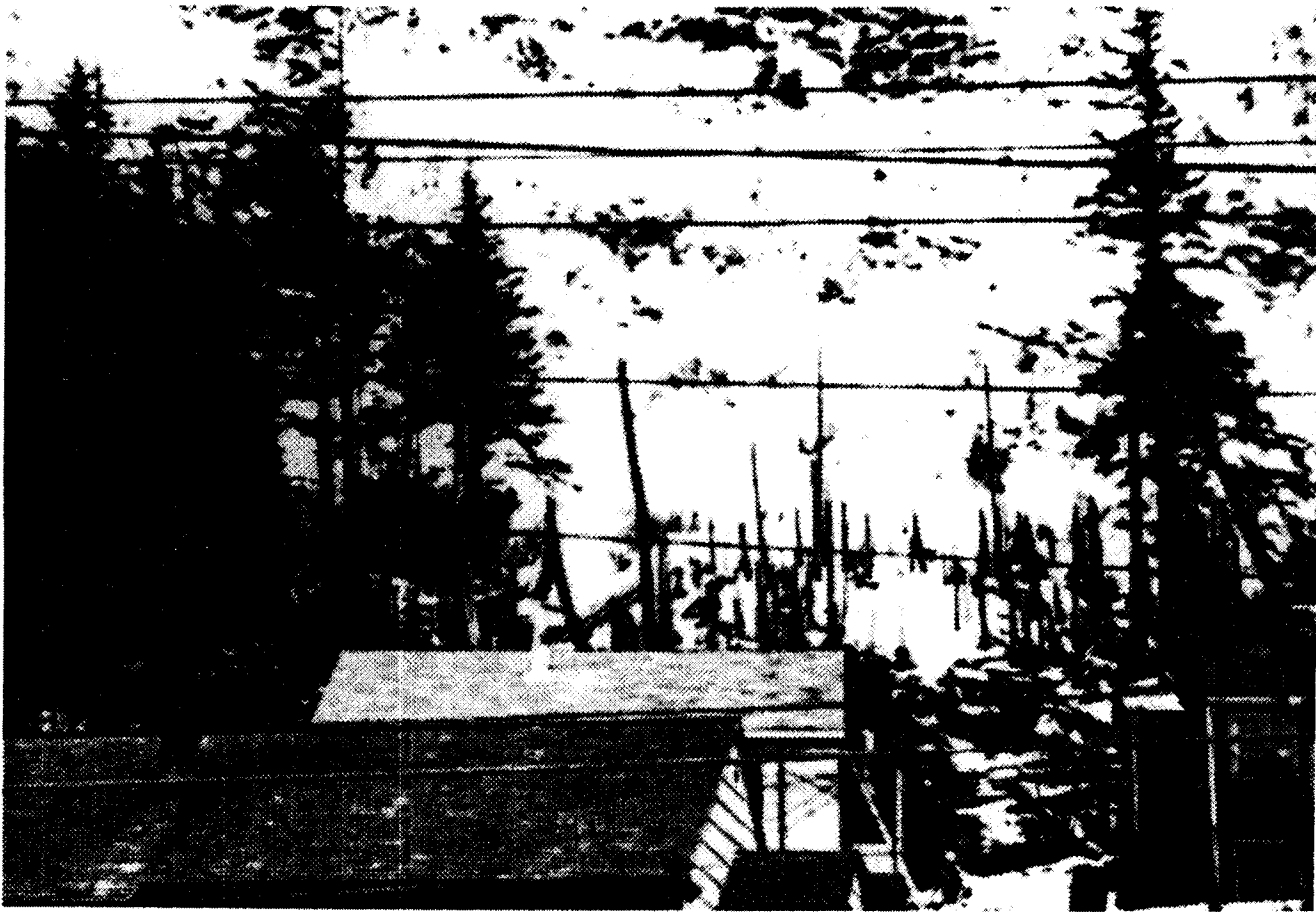
regulations dealing with the construction and design of buildings in earthquake prone areas are recognizing an existent danger, and attempting to deal with potential loss of life or damage to property.

On the other hand, the inability of communities to act effectively and adopt the necessary legislation which can prevent development of hazardous areas can have far reaching consequences. A case in point, which is directly applicable to Juneau is the Yodlin disaster of Sunday, January 24, 1971, at Stevens Pass in Chelan County, State of Washington. Four people were killed and six injured when a snow avalanche struck an area where about forty vacation cabins were clustered. The recreational development had been allowed to be built despite reported warnings that the area was prone to avalanches. As a result of the disaster a suit for damages has been filed against the Board of County Commissioners and the Planning Commission of Chelan County, Washington. The plaintiffs contend that the governing body is liable for damages for allowing development to occur in an area which was known and documented to be susceptible to snow avalanches.

Altering land use patterns is by no means an easy task in an established community. The patterns have been set, improvements made and a vested interest developed. Changes or the imposition of stricter land use controls invariably become a controversial issue.

Other factors influencing zoning and planning decisions, such as cultural dictates, community design philosophy, or economics may be changed. However, natural hazards, for the most part, cannot be changed by man's actions. The application of land use controls based on known natural hazards thus assumes prime importance.

The following section offers a series of recommendations which, if incorporated into existing land use control and development regulations, would constitute a body of legislation recognizing and dealing effectively with geophysical hazards.



RECOMMENDATIONS

RECOMMENDATIONS

The authority and responsibility for the planning and development of a community is given to the Borough Assembly by the state and is defined in the Alaska Statutes. At the local level the general body of law and regulations is contained in such documents as the Zoning Ordinance, Subdivision Ordinance, Comprehensive Plan, etc. A basic legal premise behind these documents rests in the theory that controls are drawn up for the purpose of providing for the general public welfare. A quote from paragraph 49.25.101, Purpose and Intent of the Comprehensive Zoning Ordinance of the Greater Borough of Juneau is illustrative.

"The several purposes of the ordinance are: to implement the comprehensive development plan for the Borough, to encourage the most appropriate use of land; to conserve and stabilize the value of property; to aid in the rendering of fire and police protection; to provide adequate open space for light and air; to lessen the congestion on the streets; to give an orderly growth to the Borough; to prevent undue concentrations of population; to improve the Borough's appearance; to facilitate adequate provisions for community utilities facilities such as water, sewerage, electrical distribution systems, transportation, schools, parks, and other public requirements, and in general to promote public health, safety and general welfare." (emphasis added)

Since the regulatory powers of the Borough Assembly are derived from this theory of law, the premise adopted by this report, and upon which the following recommendations are predicated, is that the government has a direct responsibility to impose land use controls which will eliminate or minimize danger to life and property due to known geophysical hazards.

The specific recommendations which follow deal with each of the geo-

physical hazards on an individual and aggregate basis. No attempt has been made to provide a set of blanket recommendations covering legislation which would provide for every instance and treat all hazards equally since not all of the hazards present equal danger to life and property.

In addition to and supplementing the recommendations set forth in each of the separate Geophysical Hazard Investigation reports contained in the Technical Supplement, we specifically recommend the following:

A. Legislative Recommendations

1. That the Planning Commission submit to the Borough Assembly the draft of a resolution instituting a temporary moratorium on any changes to land uses which would have the effect of increasing population densities in those areas determined by this investigation to be high hazard areas (see Fig. 11). This moratorium to be in effect only so long as to permit the Planning Commission to prepare formal revisions to the Comprehensive Plan and to submit to the Borough Assembly a legislative package containing revisions to the Comprehensive Plan, Zoning Ordinance, Subdivision Ordinance and Building Code. The moratorium should be automatically terminated upon action of the Borough Assembly on this legislative package.
2. That the City and Borough planning programs be revised to incorporate effectively the constraints to community development imposed by the existence of geophysical hazards. This can be accomplished by changes and amendments to the Comprehensive Plan, Zoning and Subdivision Ordinances in the following manner:

a) Comprehensive Plan

- (1) Amending the Comprehensive Plan Map to incorporate those areas within the City and Borough of Juneau designated as high and potential hazard areas in the Composite Hazard Map (Fig. 11) of this report.
- (2) Incorporation of textual changes reflecting the necessity for imposing limitations on the use of land in hazard areas, particularly in terms of population exposed to dangers as a result of geophysical hazards.
- (3) Revision to the planned development pattern of the Comprehensive Plan so that open space or very low density land uses are allocated to areas of high hazard. (Refer to Fig. 11).
- (4) Eliminating from long and short range development plans any public facilities which would have the effect of concentrating people in hazard areas, or which provide necessary community services.
- (5) Planning for development in hazard areas which will tend to eliminate the loss of life and minimize property damage should a catastrophic event occur. Uses to be considered are parking, warehousing, open recreation space, storage, etc.

b) Zoning Ordinance

The Zoning Ordinance of the City and Borough of Juneau should be amended to account for geophysical hazards. It is suggested that the method for control of land use in affected areas be by the adoption of two overlay districts which reflect the degree of danger to life and property from such hazards. The designation of these districts could be:

H-1 High Geophysical Hazard District

H-2 Potential Geophysical Hazard District

The geographical limits of these two districts, and the controls on land uses within these districts is identified on the Composite Hazard Map (Fig. 11) in this report.

The purpose of these overlay zones is not intended to eliminate the existing and future uses of land affected by geophysical hazards, but to control, modify and change the density and the use of such land so that loss of life and property may be either totally avoided or minimized, in the event of the occurrence of a geophysical disaster.

(1) H-1 High Geophysical Hazard District

Purpose: The purpose of the H-1 District is to recognize that certain lands within the City and Borough of Juneau are affected by geophysical

hazards which constitute a severe danger to life and property. Therefore, it is deemed appropriate that the Borough Assembly take action which will impose such controls as necessary to limit the density and development of such affected land in order to prevent loss of life and property. The Borough Assembly may, from time to time as warranted, create and superimpose H-1 Districts upon other existing districts in addition to those affected at the time of adoption of this ordinance.

Land classified in a H-1 District shall, in addition, retain its original classification in one of the regular districts as listed in Article IV. The zoning of such land shall then be designated by a combination of symbols, e.g. R-5H-1, RMMH-1, etc.

A. Existing Uses

- 1) Any lawful use of land and/or building or structure existing or under construction at the time this ordinance was adopted, may be continued. However, all such land and/or buildings and structures automatically become subject to the provisions of Section 49.25.505 at the time of adoption of this ordinance.

- 2) Affected land and/or building or structure affected by the superimposed provisions of this ordinance will continue to be regulated by the provisions of the regular districts as listed in Article IV at the time of adoption.
- 3) No use shall be allowed to enlarge, or any action taken by the owner which would cause an increase in density above ten (10) persons per acre.

B. New Uses

- 1) Revisions to existing uses and the establishment of new uses of land and/or building or structure may be considered by the Planning Commission. The revision of an existing use or the establishment of a new use will be permitted in this district only after the issuance of a conditional use permit subject to the provisions of Section 49.25.600.
- 2) The Planning Commission shall periodically review the development pattern of areas upon which this district has been superimposed. The Planning Commission shall also make periodic recommendations to the Borough Assembly for revisions to the

development patterns of areas affected by this district which may then be incorporated into the Comprehensive Plan.

- 3) No use shall be permitted which would cause an increase in density above ten (10) persons per acre.

C. Appeals

Any person aggrieved by the provisions of this ordinance may appeal in accordance with the provisions of Section 49.25.600 or Article VIII.

(2) H-2 Potential Geophysical Hazard District

Purpose: The purpose of the H-2 District is to recognize that certain lands within the City and Borough of Juneau are affected by geophysical hazards which constitute a significant danger to life and property. Therefore, it is deemed appropriate that the Borough Assembly take action which will impose such controls as necessary to limit the density and development of such affected land in order to prevent loss of life and property. The Borough Assembly may, from time to time as warranted, create and superimpose H-2 Districts upon other existing districts in addition to those affected at the time of adoption of this ordinance.

Land classified in a H-2 District shall, in addition, retain its original classification in one of the regular districts as listed in Article IV. The zoning of such land shall then be designated by a combination of symbols, e.g. R-5H-2, RMMH-2, etc.

A. Existing Uses

- 1) Any lawful use of land and/or building or structure existing or under construction at the time this ordinance was adopted may be continued. However, any such use which permits a density in excess of twenty (20) persons per acre automatically becomes subject to the provisions of Section 49.25.505 at the time of adoption of this ordinance.
- 2) Affected land and/or building or structure affected by the superimposed provisions of this will continue to be regulated by the provisions of the regular districts as listed in Article IV at the time of adoption.
- 3) Any change in the existing use of any land and/or building or structure falling under the regulations of this district will be permitted only after the issuance of a conditional use permit subject to the provisions of Section 49.25.600.

- 4) No use shall be allowed to enlarge, or any action taken by the owner, which would cause an increase in density above twenty (20) persons per acre.

B. New Uses

- 1) Revisions to existing uses and the establishment of new uses of land and/or building or structure may be considered by the Planning Commission. The revision of an existing use or the establishment of a new use will be permitted in this district only after the issuance of a conditional use permit subject to the provisions of Section 49.25.600.
- 2) The Planning Commission shall periodically review the development pattern of areas upon which this district has been superimposed. The Planning Commission shall also make periodic recommendations to the Borough Assembly for revisions to the development patterns of areas affected by this district which may then be incorporated into the Comprehensive Plan. No use shall be permitted which would cause an increase in density above twenty (20) persons per acre.

C. Subdivision Ordinance

- 1) Incorporation into the text of the Subdivision Ordinance of the requirement for a special review by the Platting Board of subdivisions proposed for areas where known geophysical hazards exist. The purpose of this review would be to determine the extent and severity of hazards to the proposed subdivision.
 - 2) Revision to the Ordinance which would grant authority to the Platting Board to deny acceptance of a proposed subdivision on the basis of exposure to geophysical hazards.
 - 3) Incorporation of the provision that no waiver of review will be granted for land affected by geophysical hazards.
 - 4) Amending Sections 49.35.130(b) and 49.35.170(b) of the Subdivision Ordinance to require that all areas with a proposal subdivision which are exposed to geophysical hazards be delineated and noted on the Preliminary and Final Plats.
3. It is recommended that the ordinance adopting the 1970 version of the Uniform Building Code as the governing building code for the

City and Borough of Juneau be amended as follows:

- a. Redesignate Juneau as seismic probability area 3 instead of 2.
- b. Require that soil tests be made by engineering geologists and foundations designed by structural engineers for all buildings proposed for construction in areas of poor soil conditions that would be severely affected in the event of a seismic occurrence. Refer to Fig. 2 for location. Waiver of this requirement should be made upon the discretion of the Building Official.
- c. Prohibit or allow only limited building activity with very low permissible occupancy in mass wasting hazard areas as indicated on Fig. 6 of this report. Structures which would house facilities providing vital services to the general community, as well as those that would encourage concentrations of people on a permanent or temporary basis, would be prohibited in high hazard areas. All proposed building projects should be reviewed and approved by the Building Official for type, design, construction and occupancy prior to the issuance of a building permit.

Design criteria for the effects of a landslide on a building are dependent on a number of variable factors such as: building design, location of site, soil conditions, configuration of site, location and aspect of building in relation to potential hazard, etc. Therefore, it is recommended that each project planned in hazardous areas be studied individually and as part of this study, a detailed engineering geology investigation

of the site be made by a qualified engineer. Furthermore, that all structures to be so located be designed by a qualified structural engineer. It is further recommended that evidence be submitted to the Building Official that these requirements have been met at the time of application for a building permit.

The following guidelines for design of buildings to be located in hazardous areas are recommended:

- (1) Anticipated density of sliding material is 80 lbs/ft^3 moving at a velocity of 3 ft/sec.
 - (2) Buildings should be of reinforced concrete or structural steel frame construction.
 - (3) Buildings should have no planned occupancy on first and/or second floors, as determined by the slope of the site.
 - (4) Buildings constructed on slopes should be elevated on columns. Any walls on ground floor should have breakaway or knockout provisions.
 - (5) Buildings located on level sites beyond toe of slopes should have a minimum of 40 feet level horizontal clearance between the toe of the slope and any wall in the uphill side if solid walls are to be constructed. No openings are to be permitted in such walls, and the design should be able to withstand an equivalent fluid pressure of 60 lbs/ft^2 to a depth of 20 feet.
- d. Prohibit or severely limit building activity in high hazard snow avalanche areas as indicated on Fig. 10 of this report.

Economical solutions to buildings which would permit occupancy with any degree of safety and withstand snow pressures exceeding 200 lbs/ft^2 is highly improbable. Limited building activity for certain uses not requiring human occupancy and not providing vital services to the general community may be permitted at the discretion of the Building Official. However, all such proposed projects should be made contingent upon his review and approval prior to the issuance of a building permit.

Allow only limited building activity with very low permissible occupancy in potential hazard snow avalanche areas as indicated on Fig. 10 of this report. All proposed building projects should be reviewed and approved by the Building Official for type, design, construction and occupancy prior to the issuance of a building permit.

Criteria for the design of structures in potential hazard areas should conform to the guidelines set forth in Table 1 of this report. Recommended design criteria for structures is as follows:

- (1) Buildings are to be constructed of reinforced concrete walls and roofs.
- (2) Wall panels and frame are to be designed to withstand pressures of 200 lbs/ft^2 .
- (3) Roofs designed to withstand equivalent uplift forces as would be generated by winds of 220 m.p.h.

- (4) Building design should eliminate long term occupancy spaces and openings facing the direction of the anticipated avalanche, and relegate such exposure to non-occupied spaces as corridors and mechanical rooms.

B. Administrative Recommendations

The following recommendations are made for incorporation into the administrative policies of the City and Borough of Juneau:

1. That a policy and procedure be established whereby land acquired by the Borough from the State of Alaska could be made available for exchange with that of property owners in hazardous areas. This policy to also permit partial or total compensation, as the case may be, to land owners who sustain a real loss as a result of zone changes.
2. Institute a policy providing for a special capital investment fund for the specific purpose of acquiring property and improvements from those individuals whose property is located in highly hazardous areas and whose continued occupancy constitutes a serious threat to life. The acquisition costs should be based on replacement costs established at the time this policy goes into effect. Compensation for improvements made after such time would not be made.
3. Institute a policy of hazard disclosure. This would consist of posting of hazard areas on the zoning map, comprehensive plan map, assessor's maps and mandatory clause to be included in the deed to the property in such areas which would alert prospective buyers. Disclosure of hazards by real estate agents should also be made a requirement.
4. Institute a policy of tax adjustment for those properties located in hazardous areas.

Other Recommendations

The following recommendations are not to be construed as being effective alternatives to a set of legislative and administrative policies controlling land development and population in hazardous areas. Rather, they should be considered as complementary to such policies, and as additional means of providing safeguards against disasters.

Implementation only of these recommendations would not constitute an effective program providing the required safeguards for people and property, since on each case they have inherent limitations. For example, a warning system may be extremely difficult to implement in the urbanized areas of Juneau. Warning systems have had only limited degrees of success, and then in basically rural areas. Furthermore, it is virtually impossible to predict precisely when an avalanche will occur. Consequently, a warning system has built into it the factor of "false alarms". Inevitably, a series of such false alarms is bound to occur which in turn result in the erosion of credibility in the system.

A vegetation retention and reforestation program has limited applicability. The danger of placing faith in such a program is that property owners might get a false sense of their own security. Vegetation on steep slopes will do a great deal to stabilize the soil and thick stands of trees will, to some degree, provide a buffer against avalanches. However, neither will guarantee total safety from avalanches.

Total reliance on defense structures in snow avalanche-prone zones can similarly be deceptive. It is true that structural defense testing programs have been underway for some time, and that some types of structures have been proved to have some value; however, the costs of the most effective structures have been very high, and their effectiveness, when weighed against the possible loss of many lives, has been limited.

The following recommendations have been made in order to apprise those responsible of all methods which are currently available to deal with the problems caused by geophysical hazards. Despite the limited effect that each of these recommendations may ultimately have on the preservation of life and protection of property, it cannot be argued that they have no value at all. Therefore, in order to provide a comprehensive report on geophysical hazards in Juneau and recommended action to deal with the problems, the following recommendations are made:

1. Climate Monitoring - it is recommended that a program for the monitoring of snowfall during the winter and of accumulation of debris and rocks on potentially hazardous slopes be instituted. Arrange for trained personnel or designate present personnel who could be trained, who combined with visual observations and telemetry devices, would serve to provide advance warning of potential hazards. The snow accumulation monitoring program should be carried on during the winter and early spring when the hazard of avalanche is the greatest. Local authorities should also be alert during periods of heavy rain in late fall and early winter when the probability of rock and mud slides occurring is greatest. A jointly run and financed program involving the U.S. Weather Bureau, U.S. Forest Service and the City and Borough of Juneau should be considered.

2. Warning Systems - concurrently, with the establishment of a climate monitoring program, there should be established a system of warning. This warning system should be effective enough so as to ensure that all people residing in hazardous areas can be contacted in sufficient time to evacuate their premises. The Civil Defense organization would be the agency that would be most logically responsible for issuing the requisite warning.

In conjunction with the warning system, an evacuation plan should then be developed. This plan should consist of specific locations for people who are required to leave their homes during times of imminent danger. Locations for temporary lodging such as the National Guard Armory, schools and other suitable public buildings located in areas free from hazards should be made available with provisions for the establishment of temporary sleeping quarters and feeding the evacuees. Since most major public buildings in Juneau are not located within the boundaries of hazardous areas, several could be suitable for this purpose. The existing Civil Defense organization is already trained in these procedures and could form the skeleton for an evacuation team.

3. Retention of Vegetation

- a. It is recommended that an immediate moratorium with penalties for violation, be placed on the removal of any vegetation now existing in undeveloped areas classified as High Hazard in the Composite Hazard Maps. (Fig. 11)
- b. It is recommended that the City immediately undertake, in consultation with the United States Forest Service, a program of reforestation of selected areas within the High Hazard classification which are presently denuded or only partially vegetated.

c. Furthermore, no additional vegetation be removed in High Hazard areas which are presently developed, and that efforts be made encouraging landowners of presently developed High Hazard areas to protect those properties with a barrier of vegetation.

4. Defense Structures - an alternative for eliminating destruction as a result of natural hazards, especially in the case of snow avalanches, is to erect structures in the breakaway zones of snow avalanche areas to catch and retain snow. The cost-effectiveness relationship of defense structures may be questionable and detailed review would be required to determine in what locations are most suited and where they would be most effective.

Research work has been conducted and is currently underway in various parts of the United States as well as Europe which has developed suitable structures. This alternative may be more desirable than one in which may accrue high costs to the community for the acquisition of land that would be no longer suitable for development or habitation because of the extreme hazard.

5. Excavations

- a. It is recommended that a policy be adopted prohibiting the disturbance or removal of earth materials in areas of active mass wasting or classified as Mass Wasting High Hazard.
- b. It is recommended that no excavation be permitted on the upper surface or lateral edges of any known historic or prehistoric landslide deposit, except that done by the City-Borough to remove overloaded upper portions. In the event that excavation at or near the toe of the slide cannot

be avoided, supportive structures providing a restraining force equivalent to those of the material removed should be constructed immediately after excavation. Furthermore, any such excavation should be prohibited during periods of high precipitation, particularly the months of September, October and November.

GLOSSARY OF TERMS

ALLUVIUM - a general term for all fragment deposits resulting from the operations of modern rivers, thus including the sediments laid down in river beds, flood plains, lakes, stands at the foot of mountain slopes, and estuaries.

CHANNEL - a groove or gully eroded into the surface of the slope of a hill or mountain.

COHESION - the ability of individual soil particles to stick or adhere together through the action of temporary tension, cementation or weak electrical bonding of clay minerals and organic colloids.

COLLUVIUM - a general term applied to loose and incoherent deposits, usually at the foot of a slope or cliff and brought there chiefly by gravity. Talus and cliff debris are included in such deposits.

DEBRIS - the material resulting from the decay and disintegration of rocks. It may occur in the place where it was produced or it may be transported by streams of water or ice and deposited in other localities.

DIP - the angle at which a stratum or any other planar feature is inclined from the horizontal. The dip is at a right angle to the strike (see definition).

GULLY - a small ravine. Any erosion channel so deep that it cannot be crossed by a wheeled vehicle or eliminated by plowing.

JOINT - fracture in rock, generally more or less vertical or transversed bedding, along which no appreciable movement has occurred.

METAMORPHISM - the process by which consolidated rocks are altered in composition, texture, or internal structure or conditions and forces not resulting simply from burial and the weight of subsequently accumulated overburden. Pressure, heat and the introduction of new chemical substances are the principal causes, and the resulting changes, which generally include the development of new minerals or a thermodynamic response to a greatly altered environment.

PORE WATER PRESSURE - pressure produced by the head of water (its vertical height above an impermeable base) in a saturated soil and transferred to the base of the soil through the pore water.

STRIKE - the course or compass bearing of the outcrop of an inclined bed or structure on a level surface; the direction or bearing of a horizontal line in the plane of an inclined stratum, joint, fault, cleavage plane, or other structural plane.

TALUS - a collection of fallen, weak, non-firm material which has formed a slope at the foot of a steeper declivity.

TECTONIC - of, pertaining to, or designating the rock structure and external forms resulting from the deformation of the earth's crust. As applied to earthquakes it is used to describe shocks not due to volcanic action or to collapse of caverns or landslides.

F-095

Mt. Tureau
el. 3576'

Breakaway Zone

Daniel, Mann, Johnson, and Mendenhall



From: Joyanne Bloom <joyanneb@gmail.com>
Sent: Tuesday, June 23, 2020 12:56 PM
To: PC_Comments
Subject: Purchase of Basin Road City Lot

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

To CBJ Planning Committee,

Since I will not be part of your planning meeting tonight, I would like to share my thoughts through this comments page.

I have concerns about the proposed city sale of the lot next to 850 Basin Road:

- 1) I lived here when the last house on the property was condemned and removed in the 1970s. It was my understanding that the parcel did not go on the market because it was not safe or practicle for new home construction.
- 2) The side of Basin Road the parcel is on is not stable and cannot be widened. Neighbors on that side have put up barricades to prevent vehicles from continuing to veer into their property.
- 3) Removal of the full-grown evergreens that would be necessary for construction would cause further erosion of the steep hillside into Cope Park formerly known as Evergreen Bowl.
- 4) The property serves as an appropriate buffer to Cope Park/Evergreen Bowl. The bowl-shaped park is circled by steep hills rooted with evergreens all around.
- 5) Parking is already a challenge on Basin Road with very few public spaces. Two public spaces would be removed for new construction. Those spaces were put in during the last street upgrade to ease the parking pressure. The removal of the spaces in conjunction with an additional residence would recreate the parking problems the city sought to fix.

Thank you for taking my five comments into consideration.

Joyanne Bloom

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Joyanne Bloom
883 Basin Road
Juneau, Alaska 99801
(907) 723-3604

From: Ke Mell <kemell@alaskan.com>
Sent: Sunday, June 21, 2020 4:15 PM
To: Irene Gallion <Irene.Gallion@juneau.org>
Cc: Dan Bleidorn <Dan.Bleidorn@juneau.org>
Subject: CSP20-04 Disposal of 848 Basin Road by land sale

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

Irene,

My thanks to you for researching and assembling the staff report, and to Dan Bleidorn, CBJ Lands Manager, for applying for the disposal. I have reviewed the report and have the following comments:

General Comments

Sale of 848 follows directly from Title 49.05.100 (6) “To recognize the economic value of land and encourage its proper and beneficial use“, as quoted on page 5 of 10 of the staff report under Zoning Analysis. Securing “the beneficial impacts of growth while minimizing the negative impacts”—per 49.05-100, (3)—can be met through CBJ Titles 49 and 19.

Minor Corrections

Page 3, Surrounding Land Uses and Zoning: Direction East, Land Use Cope Park and Direction West, Land Use Basin Road should be reversed; Copy Park/Evergreen Bowl is west of the parcel; Basin Road is east.

All-Hazards Mitigation Plan 2012 FINAL August 12, 2012, Table of Contents: The report has 163 pages. Everything from Section 2: Community Profile on is listed in the Table of Contents as being on page 11; the chapter on Landslides actually starts on p. 45.

Retaining Wall Maintenance

Page 2, Agency Review, CBJ General Engineering, “Requires a 20-foot easement to maintain a CBJ retaining wall that supports Basin Road”, and page 4, Current Conditions, paragraph 2: “The City and Borough of Juneau has constructed a retaining wall along the east lot line that supports Basin Road.” Per attached 1992 drawings (92 July Basin Road Reconstruction Drawings.pdf” by Toner Nordling Associates, Inc. from which the retaining wall was built, the retaining wall, shown on 8 of 11 in plan and section, is not along the east lot line; it is significantly west of the edge of the parking (approximately 27’ per the plan on 8 of 11, and 32’--measured roughly along the slope through dense vegetation—per field measurement).

The gives rise to the question of whether the retaining wall in fact supports Basin Road, or only the parking spaces, which are on 848 and not part of the road per se. Per my attached sketch on “Section A-A from 8 of 11 92 July Basin Road Reconstruction Drawings.pdf”, the retaining wall appears unnecessary if the slope can start—as it does for a portion of 848, much of 850, and a portion of 875 Basin Road—from the edge of the road. A registered civil engineer can address this. If the retaining wall supports the parking, then its maintenance is the responsibility of the owner of 848 Basin Road. The retaining wall appears to be in good condition.

Moderate Hazard Zone

The staff report refers numerous times to 848 Basin Road (and indeed all of the houses along Basin Road) being in a moderate hazard area for landslides/mass wasting based on the 2012 “All Hazards Mitigation Plan”. Map G from the Hazard Mitigation Plan appears to be based largely on the map in the attached 1972 report, Geophysical-Hazards-Investigation-for-CBJ-Summary.pdf, which on page 39 indicates areas of “Potential Hazard” and “High Hazard” for downtown Juneau. All of Basin Road north of Eighth Street is indicated as “Potential Hazard”. Page 36, c) of the 1972 report states, “Evergreen Bowl: The slopes surrounding Evergreen Bowl are potential hazard areas to property at the top of the slope and adjacent to Basin Road, Gold Belt Avenue and 7th Street.” This would be ground failure from under a building or structure, which can be mitigated by site specific geotechnical assessment and proper civil engineering and foundation design.

Rather than deny the sale, in contravention of Title 49.05.100 (6), I would urge the Commission to Amend the recommendation or Continue the hearing to include a site specific geotechnical assessment of the landslide hazard potential of 848 Basin Road, per page 10 of the staff report.

Public Comments

My thanks to my neighbors for their interest and feedback. Many of their comments bear on how the property would be developed. Development would be in accordance with CBJ’s rules and regulations which include opportunities for public input. I’m always more than happy to talk directly to anyone who has concerns.

Ke Mell

Presented by: The Manager
Introduced: 06/XX/2020
Drafted by: X

ORDINANCE OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 2020-XX

An Ordinance Amending the Land Use Code to Extend the Sunset Date for the Downtown Juneau and Downtown Douglas Alternative Development Overlay Districts.

BE IT ENACTED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

Section 1. Classification. This ordinance is of a general and permanent nature and shall become a part of the City and Borough of Juneau Municipal Code.

Section 2. Amendment of Section. CBJ 49.70.1210, Overlay Districts, is amended to read:

(a) *Downtown Juneau overlay district.* This article applies to property within the alternative development overlay district for Downtown Juneau as shown on the map dated May 25, 2017. The Downtown Juneau overlay district shall cease to exist and the provisions of this article shall not apply to property within the Downtown Juneau overlay district after December 31, 2020.

(b) *Downtown Douglas overlay district.* This article applies to property within the alternative development overlay district for Downtown Douglas as shown on the map dated May 25, 2017. The Downtown Douglas overlay district shall cease to exist and the provisions of this article shall not apply to property within the Downtown Douglas overlay district after December 31, 2021.

Section 3. Effective Date. This ordinance shall be effective 30 days after its adoption.

Adopted this _____ day of _____, 2020.

Beth A. Weldon, Mayor

Attest:

Elizabeth J. McEwen, Municipal Clerk