Agenda

Planning Commission - Regular Meeting
City and Borough of Juneau

November 12, 2019
Assembly Chambers
7:00 PM

I. ROLL CALL

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA

III. APPROVAL OF MINUTES

A. October 15, 2019 Draft Minutes, Special Planning Commission Meeting

IV. WRITTEN AGENCY AND PUBLIC COMMENTS POST DEADLINE

A. Additional Materials for November 12, 2019 Planning Commission Meeting

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

VI. ITEMS FOR RECONSIDERATION

VII. CONSENT AGENDA

A. CSP2019 0010: A State Consistency Review for the Auke Bay Ferry Terminal site improvements

VIII. UNFINISHED BUSINESS

IX. REGULAR AGENDA

A. SMP2019 0004: A Phased Major Subdivision creating 14 lots and 1 large tract for future development (15 total parcels)

B. AME2019 0012: A text amendment to adopt Juneau's Historic & Cultural Preservation Plan as part of the CBJ Comprehensive Plan

X. BOARD OF ADJUSTMENT

XI. OTHER BUSINESS

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

Agenda
Planning Commission
Special Meeting
CITY AND BOROUGH OF JUNEAU
Ben Haight, Chairman
October 15, 2019

I. ROLL CALL

Ben Haight, 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.

Commissioners present: Ben Haight, Chairman; Paul Voelckers, Vice Chairman; Nathaniel Dye, Shannon Crossley, Dan Hickok, Travis Arndt, Weston Eiler, Ken Alper (joined at 7:08)

Commissioners absent: Michael LeVine

Staff present: Jill Maclean, CDD Director; Alex Pierce, CDD Planning Manager; Beth McKibben, CDD Senior Planner; Tim Felstead, CDD Planner II; Jane Mores, Assistant Municipal Attorney

Assembly members: Loren Jones

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA

Item AME2019 0010 has been withdrawn by the applicant and removed from the Agenda

III. APPROVAL OF MINUTES

A. September 17, 2019 DRAFT Minutes – Planning Commission Regular Meeting

MOTION: *by Mr. Dye to approve the September 17, 2019, Planning Commission Regular Meeting minutes noting any staff corrections or commissioner comments.*

The motion passed with no objection.

IV. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - none

V. ITEMS FOR RECONSIDERATION - none

VI. CONSENT AGENDA

MOTION: *by Mr. Dye to approve* items USE2019 0019 and USE2019 0020 and accept staff recommendations and findings.

The motion passed with no objection.

USE2019 0019: A Child Care Center in an existing church
Applicant: Jensen Yorba Lott Architects
Location: 8001 Glacier Highway

Staff Recommendation

It is recommended that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use Permit. The permit would allow the development of a State of Alaska licensed Child Care Center in an existing church.

The approval is subject to the following conditions:

1. Prior to issuance of a building permit for the proposed structure, the applicant must submit a revised site plan showing standard parking spaces, accessible spaces, van accessible spaces, and circulation aisles that comply with the requirements of §49.40.
2. CBJ-approved signage shall be posted for the accessible parking space prior to commencement of the proposed use.
3. If a joint use agreement is used, the agreement must be approved by the Director prior to temporary certificate of occupancy.

USE2019 0020: A Conditional Use Permit to expand retail development in a severe hazard area
Applicant: Island Contractors
Location: 207 S. Franklin Street

Staff Recommendation

It is recommended that the Planning Commission adopt the Director's analysis and findings and approve the requested Conditional Use Permit. The permit would allow the addition of 800 square feet to an existing 2,500 square foot building, and allow remodel of that building into three retail units. The approval is subject to the following condition:

1. Prior to issuance of a Building Permit, the applicant must record the plat for the lot consolidation (SLC2019 0003);

2. Prior to issuance of a Building Permit, the applicant must provide parking that meets the Land Use Code requirements;

3. Prior to issuance of a Building Permit, the applicant must provide a lighting plan that meets Land Use Code requirements, with review and approval by the Historic Resources Advisory Committee;

4. Prior to issuance of a Building Permit, the applicant must receive approval of the project design by the Historic Resources Advisory Committee.

VII. UNFINISHED BUSINESS - none

VIII. REGULAR AGENDA

AME2019 0009: A zoning upgrade for twelve (12) D1(T)D3 transitional zone lots
Applicant: City & Borough of Juneau
Location: 10825 through 10965 Glacier Highway

Staff Recommendation

It is recommended that the Planning Commission adopt the Director's analysis and findings and **APPROVE** the zoning upgrade of the subject lots from D1(T)D3 to D3.

Prior to Staff presentation, Ms. Crossley declared she is related to Mr. Felstead as a first cousin. There was no objection to her hearing the presentation.

Mr. Felstead explained this issue was originally before the Commission in May and was sent back to CDD for more work and that it is in alignment with the Land Use Code.

This request applies to twelve parcels along Glacier Highway opposite Auke Lake. The parcels are part of a larger D1(T)D3 set of lots along the Mendenhall Peninsula. Of these, eleven have water and sewer and the twelfth has water and is in process of adding sewer. Eleven of the parcels have been developed. The one parcel that has not been developed is owned by CBJ and there is no plan to dispose of that parcel currently. Currently, ten of the parcels are undersized for D1 zoning, with the upgrade to D3, three of them will remain undersized.

Questions for Staff

Ms. Crossley inquired why these parcels should be rezoned to D3 rather than D5 or D10 similar to some of the areas nearby.

Mr. Felstead explained that is because it is located near a main arterial highway and there is limited sewer capacity. Mr. Felstead did highlight other areas that are part of the same D1(T)D3 zoning behind the subject parcels that might be suitable for higher density zoning if or when CBJ wished to develop or dispose of that area. Ms. MacLean added that this has already been approved as D1 to D3 transition by the Assembly so the Commission tonight does not have the

option to upgrade the parcels to D5 or D10. The task for the commission tonight is basically to verify that the public improvements that the transition was based upon have been made.

Public Comment

Laurie Craig, 10825 Glacier Highway explained that she is not opposed to this zoning upgrade but expressed concerns with runoff, drainage, and traffic in the area. She wanted the Commission to be aware and to have these issues on their mind when making decisions about the zoning in the area.

MOTION: *by Mr. Voelckers to adopt* AME2019 0009 and approve it with Directors analysis and findings.

The motion passed with no objection.

AME2018 0009:	A text amendment to revise Title 49 to repeal and replace 49.30 – Nonconforming Development – Continued from August 27, 2019
Applicant:	City & Borough of Juneau
Location:	Borough-wide

Staff Recommendation

Staff recommends that the Planning Commission review and consider the proposed ordinance and forward a recommendation to adopt this ordinance to the Assembly.

Ms. McKibben explained Staff has gone through and made changes as recommended at the last meeting and she is available for questions. The Commission reviewed the draft ordinance page by page and proposed the following changes.

43.30.120 (5): Mr. Voelckers proposed striking the words “off-street”.

49.30.230(b): After discussion, it was decided to strike “may be extended to any portion of the existing structure, but”.

49.30.240(b): Mr. Arndt was concerned that the word “conforming” at the beginning would make the section confusing or incorrect. Ms. Mores agreed and it was decided that would be removed.

49.30.240(b)(2): Mr. Arndt pointed out this is just restating the title of the section and is redundant. Staff agreed to remove item (2).

49.30.320(f)(2)(E): Mr. Arndt recalled from prior discussion that it had been agreed to delete (E) from 49.30.320(f)(2) and to add items i, ii, iii, and iv to (D) as vi, vii, viii, and ix. After discussion, staff agreed to this change.

49.30.320(g)(3) (A) and (B): Mr. Arndt proposed striking the phrase "the nonconforming situation".

49.80.120: Mr. Arndt proposed removing the word "which" throughout the section where "but which" appears and just leave "but" in its place.

Definitions: Ms. Maclean proposed striking "permitted by this title" and adding back "regardless of intent" at the definition of *USE* at the end of the page in the last line of Section 6.

Public Comment -none

MOTION: *by Mr. Dye to recommend to the Assembly* AME2018 0009 noting corrections from the Planning Commission.

The motion passed with no objection

IX. BOARD OF ADJUSTMENT -none

X. OTHER BUSINESS -none

XI. STAFF REPORTS

Directors Report –

- Ms. Mores has completed the Rules of Order and it will be before the Commission on November 12th.
- The South Douglas West Juneau area plan is currently out for bid.
- Title 49 is meeting October 30th at 12:00 pm
- Blueprint is meeting next on November 7th at 6:00 pm
- Assembly Member Greg Smith is the new Assembly Liaison to the Commission.
- The Alaska Planning Conference will be February 9-11, 2020 in Anchorage.
- The Assembly has voted to protest the Marijuana license for Rainforest Farms retail and cultivation due to nonpayment of Sales Tax.

Ms. Pierce reported CDD staff are restarting the update to the Trails Plan

The next Commission meeting will be Ms. Mores' last one.

XII. COMMITTEE REPORTS

Title 49 – Mr. Dye reported they have met and are still working on downtown zoning.

Blueprint Downtown Committee – Mr. Dye reported they met and discussed historic preservation and natural resources. Ms. Crossley will take his place at the next meeting on November 7th

Public Works – Mr. Arndt reported

- The bid for repaving at the Airport came in about $4,000,000 over the Engineers estimate. The FAA and the consultant reviewed the bid and approved it as acceptable. The FAA will fund the additional money with CBJ match from Passenger Fees.
- CBJ will be taking a $4,000,000 DEC Loan to replace the Douglas Highway watermain.
- The committee is discussing whether to do a LID in order to pave River Road. There will be a public meeting to decide this.

XIII. LIAISON REPORTS – none

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

XV. PLANNING COMMISSION COMMENTS AND QUESTIONS

Traffic issues – Mr. Haight asked about what can we do when traffic issues come up related to permit activities. Ms. Maclean offered staff will look into that and get information back to the Commission.

XVI. EXECUTIVE SESSION – none

XVII. ADJOURNMENT – The meeting adjourned at 8:54 pm

DRAFT

Additional Materials

Regular Planning Commission Meeting

Assembly Chambers, 7:00pm
Meeting Date: November 12, 2019

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1. **SMP2019 0004:**
   a. Public comment from Dan Kenkel, received 11/4/19
   b. Public comment from Glenn and Carol Stephens, received 11/6/19
   c. Public comment from Michael Heumann, received 11/8/19

Dan Kenkel
4850 Glacier Highway D7
Juneau, Alaska 99801

October 4, 2019

Case No.: SMP2019 0004
Parcel No.: 7B1001160010

To the Juneau Commissioners,

I am one of the owners living in a condo at Tamarack Trails Condominiums located at 4850 Glacier Highway. I am also a member of the board of directors for our condo association. It appears that a future new development, that is located at 4506 Hillcrest Avenue, would like to have access to the right-a-way that our complex has been using for over 20 years for a new road. This same area is also used for some of our parking in buildings A & C.

I have examined the parcel of land that is being proposed for new development and have a few questions and comments.

1) I really don't understand why this right-a-way is even being considered. Looking at the plans it appears that in the Mountainside area there are already three separate streets that could service the proposed new area. The end of Hillside Avenue already appears prepped to accommodate the additional homes and this only impacts 20 other homes. Looking at the plans it appears that Mountainside Drive and Robbie Road have also been designed to continue into the proposed area. By using the right-a-way there is an impact to over 32 homes.

2) How would merging our driveway with a new street impact our access to Glacier Highway? This could created a potentially dangerous intersection.

3) As a resident I have a lot of concern regarding years of ongoing construction equipment being operated near the building I currently reside in. I doubt that I would have purchased my condo had I have known that I could be living in a long term construction zone. I feel that my property value will quickly go down in value if construction of what I consider a useless roadway is allowed to happen.

4) One of major concerns is water runoff. Prior to moving to Juneau I lived in a subdivision that was down the hill from a building site where there were only two homes being built. During a few rainfall events in the area some of my neighbors who's homes were below the construction area experienced terrible damage due to water and mud coming down the hill. This ended in legal battles with my neighbors winning sizeable settlements. I do not want something like that happening to the complex that would suffer the most if something were to go wrong.

5) What will happen to the loss of some the valuable parking spaces that our condo complex requires?

Sincerely,

Dan Kenkel

• **Cell: 907-988-2046** • **Email: dkenkel56@gmail.com**

From: steppass@gci.net
Sent: Wednesday, November 06, 2019 5:41 PM
To: PC_Comments
Subject: Case # SMP2019 0004

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

Attn: Commissioners
Re: Case # SMP2019 004

My family has lived in Mountain Side Estates since the mid-eighties. We have experienced the last building boom in Mountain Side. By the time it was done the street and infrastructure that were constructed during the original construction were all but destroyed. The CBJ has spent millions of dollars reconstructing the service streets in Mountain Side. We are presently enjoying the fruits of City's labor with paved streets, curb and gutters, storm drains, and sidewalks in some areas. I am a licensed contractor with 40 years of experience in excavation and trucking. I do believe if a permit is granted for the proposed next phase and the contractor is allowed to access his major subdivision project through Craig Street/Hillcrest/Mountain Side Drive that history will repeat itself. The infrastructure again will be destroyed as before, this would be inevitable when running dump trucks, lowboys, equipment trailers, heavy equipment on these streets. Many of the citizens that live in Mountain Side have concerns about traffic, school children's safety, dust and dirt which will be carried down the streets during construction, and will go on for several years.

There is a simple answer to this problem and that is to require permitting of Hooter Lane <u>before</u> a permit is issued for the major subdivision that contractor is proposing. All of the underground utilities that are present in Mountain Side will be utilized for the construction of this new project. The contractor will eventually have to connect through Hooter Lane to Glacier Highway to provide a loop for the underground utilities (water, sewer & electric, etc.). Restricting construction traffic through Hooter Lane will provide all the solution needed to extend safety and preserve the integrity of the existing neighborhood.

Thank you for your consideration

Glenn & Carol Stephens

From: michael heumann
To: Laurel Christian
Subject: Re: Traffic Study Chilkat Vistas
Date: Friday, November 8, 2019 9:38:11 AM

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

Hi Laurel,

The level of service analysis I sent over yesterday show the 2029 levels of service assuming a full buildout of Chilkat Vistas. While we don't have a full traffic study available at this time, the analysis I sent over will be technical basis of that study. The levels of service at Hooter Lane and Craig Street are at worst a B. At the Vanderbilt Hill intersection we have a C level of service with the existing configuration. While we don't have the baseline level of service analysis for the intersections at the moment, even if we assume the worst case and all existing intersections operate at an A LOS the code allows development to raise the LOS two levels. This indicates that traffic from our development does not require mitigation measures.

Sent via the Samsung Galaxy S8 Active, an AT&T 5G Evolution capable smartphone

HCM 2010 TWSC
1: Vanderbilt Rd & Glacier Highway

11/7/2019

Intersection	
Int Delay, s/veh	5.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	241	359	54	192	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	259	386	58	206	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	415	0	0	444	0
Stage 1	415	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	637	-	-	1116	-
Stage 1	666	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	637	-	-	1116	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	3.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	547	1116	-
HCM Lane V/C Ratio	-	-	0.55	0.185	-
HCM Control Delay (s)	-	-	19.3	9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3.3	0.7	-

HCM 2010 TWSC
1: Vanderbilt Rd & Glacier Highway

11/7/2019

Intersection	
Int Delay, s/veh	7.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	39	241	359	54	192	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	259	386	58	206	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	415	0	0	444	0
Stage 1	415	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	637	-	-	1116	-
Stage 1	666	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	175	637	-	-	1116	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	3.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	466	1116	-
HCM Lane V/C Ratio	-	-	0.646	0.185	-
HCM Control Delay (s)	-	-	25.8	9	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	4.5	0.7	-

HCM 2010 TWSC
6: Glacier Highway & Hooter Wy

11/7/2019

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	91	163	231	24	14	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	201	285	30	17	67

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	315	0	-	0	726	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	426	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1245	-	-	-	391	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1245	-	-	-	352	740
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	592	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1245	-	-	-	603
HCM Lane V/C Ratio	0.09	-	-	-	0.139
HCM Control Delay (s)	8.2	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

HCM 2010 TWSC
8: Glacier Highway & Craig St

11/7/2019

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	50	127	208	84	46	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	140	229	92	51	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	321	0	-	0	524	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1239	-	-	-	514	764
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	489	764
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1239	-	-	-	577
HCM Lane V/C Ratio	0.044	-	-	-	0.152
HCM Control Delay (s)	8	0	-	-	12.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Richland Manor Site Plan (101 SF and 192 MF units) September 2019

	Land Use			AM Peak			PM Peak			Daily	
New	**Code**	**Size**	**X**	**Enter**	**Exit**	**Trips**	**Enter**	**Exit**	**Trips**	**Trips**	Method
Single Family Detached Housing	210	101	Units	19	56	75	63	37	100	953	average
Residential Condominiums/Townhouses/Apartments	220	192	Units	20	68	88	68	40	108	1,405	average
Total Trip Generation				**39**	**124**	**163**	**131**	**77**	**208**	**2,358**	

Richland Manor Site Plan (47 SF and 356 MF units) October 2019

	Land Use			AM Peak			PM Peak			Daily	
New	**Code**	**Size**	**X**	**Enter**	**Exit**	**Trips**	**Enter**	**Exit**	**Trips**	**Trips**	Method
Single Family Detached Housing	210	47	Units	9	26	35	30	17	47	444	average
Residential Condominiums/Townhouses/Apartments	220	356	Units	38	126	164	125	74	199	2,606	average
Total Trip Generation				**46**	**153**	**199**	**155**	**91**	**246**	**3,050**	

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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

DATE: October 28, 2019

TO: Planning Commission

FROM: Irene Gallion, Planner
Community Development Department

FILE NO.: CSP2019 0010

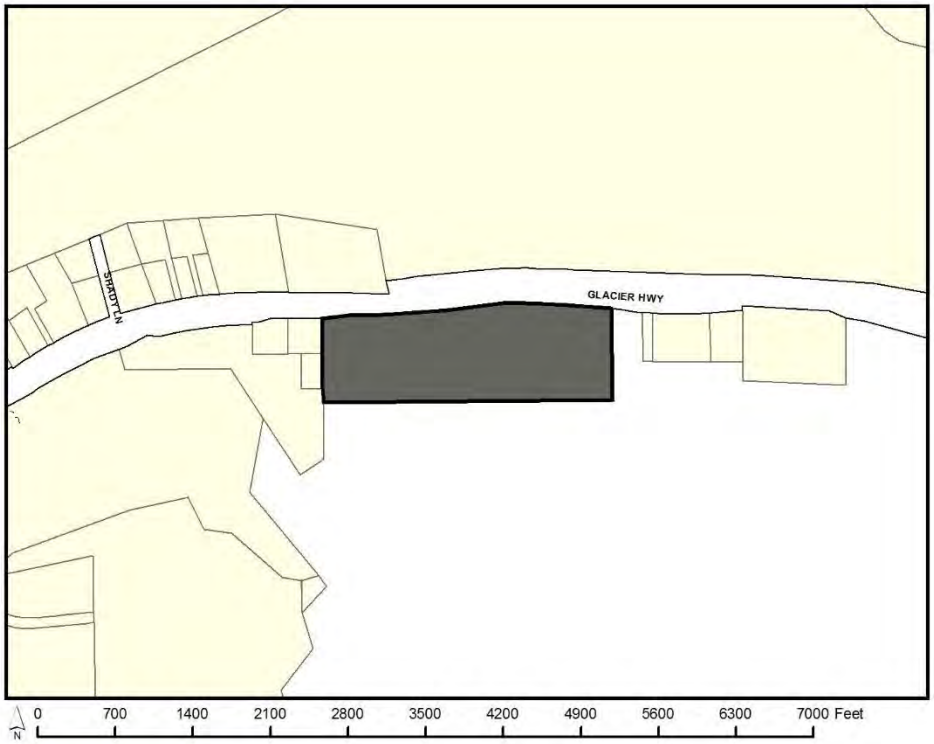
PROPOSAL: A State Consistency Review for the Auke Bay Ferry Terminal site improvements

GENERAL INFORMATION

Applicant:	State of Alaska Department of Transportation & Public Facilities
Property Owner:	State of Alaska Department of Transportation & Public Facilities
Property Address:	13445 Glacier Highway
Legal Description:	ATS 1526
Parcel Code No.:	4B3001020030
Site Size:	306,662
Comprehensive Plan Future Land Use Designation:	Waterfront Commercial Industrial
Zoning:	Waterfront Industrial (WI)
Utilities:	CBJ water, on-site septic
Access:	Glacier Highway
Existing Land Use:	Alaska Marine Highway System ferry terminal

Surrounding Land Use:	North	-	Vacant with some parking
	South	-	Waterfront
	East	-	Allen Marine Greens Creek Dock
	West	-	Alaska Glacier Seafoods

VICINITY MAP



ATTACHMENTS

Attachment A – Application
Attachment B – 49.70 Article IV

PROPOSAL

Staff recommends APPROVAL of both maintenance projects, which are primarily pursued to protect water resources and reduce operating costs:

- Replace an existing underground fuel storage tank with an aboveground storage tank.
- Remove and replace the existing on-site wastewater treatment facility (septic tank).

BACKGROUND

Fuel tank: The Alaska Marine Highway System (AMHS) is replacing underground fuel tanks with aboveground tanks at eight of their ferry terminal locations, including Juneau.

The Auke Bay terminal's single fuel-fired boiler is currently served by an underground tank with an existing "tiger loop," which removes air from the fuel and allows the fuel tank to be installed lower than the boiler. There is a single supply line routed below grade in a common secondary containment pipe. When the existing fuel tank is removed, the supply line will be abandoned and the tiger loop will be reused. The new aboveground tank will have new aboveground supply pipe. The supply line will run from the new fuel tank along the building, and overhead across the sidewalk to an existing day tank that will remain in service.

Aboveground tanks are preferred for storage of fuel, because they are less costly to install and easier to visually check for leaks. The new tank will include integral secondary containment, interstitial leak detection, whistling atmospheric vents, clock level gages, and supply and return dip tubes with foot valves.

Septic system: The current system will be decommissioned and replaced with a 38-gallon-minimum, two-compartment clarifier prior to new effluent filter systems. Then, a new secondary treatment plant, capable of 1,000 gallons per day, will be installed. Effluent will be disposed of into a 900-square-foot soil absorption system.

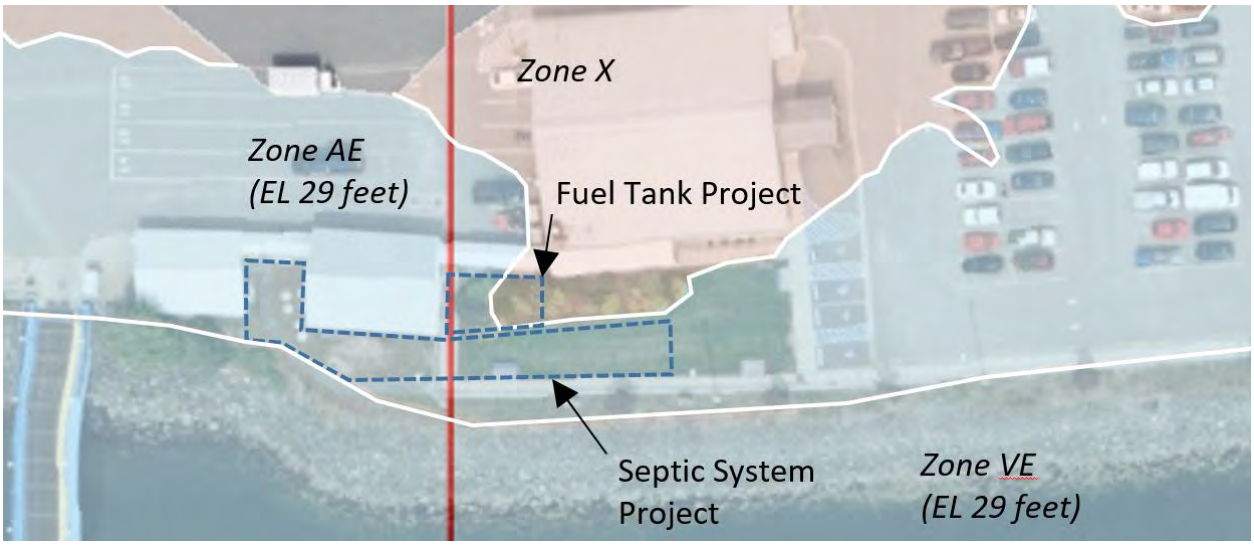
ANALYSIS

In addition to Planning, the project documents have been reviewed by Docks and Harbors, General Engineering, our own building permit review staff, and the Fire Marshall. None registered concerns with the project regarding the CSP application.

The fuel tank project will be reviewed through a CBJ Building Permit. As part of that process, our building permit review staff will review the particulars of the construction, and the Fire Marshall will provide detailed review and final approval for the fuel tank.

The septic tank is approved and regulated through the Alaska Department of Environmental Conservation, who permit and inspect the project.

The project is located in two different flood zones and near a third:



Zone X: Areas of 0.2% annual chance of flood.

Zone AE (elevation 29 feet): This special flood hazard area is inundated by 1% annual chance flood with a base flood elevation of 29 feet.

Zone VE (elevation 29 feet): This special flood hazard area is inundated by 1% annual chance flood, experiences coastal floods with velocity hazards (wave action), with a base flood elevation of 29 feet.

In the picture above, the waterfront is toward the bottom of the picture. The fuel tank project is located in the AE and X zones, and the septic system project is wholly within the AE zone.

The Alaska Department of Environmental Conservation has issued an Approval to Construct for ADOT&PF's proposed septic design. Included in that approval is a waiver under 18 AAC 72.060 to separation distances, which are outlined in 18 AAC 72.020:

> *(b) The minimum separation distance between…the mean higher high water level of coastal waters, and a…septic tank, soil absorption system,…or other wastewater collection, treatment, or disposal system is 100 feet, measured horizontally.*

As noted in the Approval to Construct, "The effluent goes through additional treatment and is not seen as a threat to public health, water systems or the environment."

CBJ Code 49.70 Article IV regulates development in a flood area. To summarize, the purpose of the regulations include protecting waters from pollution and reducing emergency response impacts.

The project is in compliance with the following applicable sections of 49.70.400 – "*Floodplain*." A summary of compliance is included after the regulations. The entire regulation is found in Attachment B.

(a) *Purpose. The purpose of this article is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas. Other purposes are to:*

(3) Minimize danger to public health by protecting the water supply and promoting safe and sanitary drainage;

(4) Reduce the financial burdens imposed on the community, its governmental units, and its individuals by frequent and periodic floods and overflow of lands;

(7) Ensure that those who occupy the special flood hazard area assume financial responsibility for their development.

(b) Interpretation.

(1) In the interpretation and application of this article, all provisions shall be considered as minimum requirements and shall be liberally construed in favor of the governing body.

(2) This article is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where the provisions of this article and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(3) This article shall apply to all areas of special flood hazard areas within the jurisdiction of the City and Borough of Juneau.

(4) The special flood hazard areas are identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study" and the flood insurance rate maps, effective date, August 19, 2013, for the City and Borough of Juneau, Alaska are adopted. The flood insurance study and flood insurance rate maps shall be on file with the department.

(c) Methods of reducing losses. In order to accomplish its purpose, this article includes methods and provisions for:

(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(d) General standards for flood hazard protection. In special flood hazard areas the following standards shall be met:

(1) *Anchoring.*

(A) All new construction and substantial improvements shall be designed, modified, and adequately anchored, to prevent flotation, collapse, or lateral movement of the structure.

(2) Construction materials and methods.

(A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(B) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

(C) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(3) Utilities.

(C) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(5) Review of building permits shall include:

(A) The review of the flood insurance rate map and flood insurance study for flood zone determinations for all new or substantially improved structures;

(C) In Zones A and V, where elevation data are not available through the flood insurance study or from another authoritative source, applications for building permits shall be reviewed to ensure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and may be based on historical data, high water marks, photographs of past flooding, and other similar or relevant data. Failure to elevate construction at least two feet above grade in these zones may result in higher insurance rates.

(6) Other permits. All development permits shall be reviewed to determine that all necessary permits have been obtained from those federal or state governmental agencies from which prior approval is required.

(e) Specific standards for flood hazards protection. In special flood hazard areas where base flood elevation data has been provided, the following provisions are required:

(5) Nonresidential construction. New construction or substantial improvement of any nonresidential structure:

(C) Within Zones A1-30, AE, AH and AO, may have the area below the base flood elevation be floodproof so that:

(i) *The structure and utility and sanitary facilities are watertight with walls substantially impermeable to the passage of water;*

(ii) Structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(D) A floodproof structure shall be designed by an engineer or architect licensed in the State of Alaska, certifying that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on the engineer's or architect's development or review of the structural design, specifications, and plans. Such certification shall be provided to the building official;

(Serial No. 87-49, § 2, 1987; Serial No. 90-46, §§ 2—9, 1990; Serial No. 2013-19(b), § 2, 7-15-2013)

The four main tenants below summarize general 49.70.400 compliance with flood provisions, and address specific code requirements as noted below.

Tenant	Directly Applicable Code
The function of the AMHS Terminal results in its location in an area that could be subject to wave action during a flooding event. Therefore, this project will harden the improvements to withstand a flood event in accordance with this section.	49.70.400(c)(2)
The septic system is restrained from movement by direct burial. It is liquid-filled, which will equalize hydrostatic forces in the event of a flood.	49.70.400(d)(1), (d)(2)(C), (d)(3)(C), (e)(5)(C),
The fuel tank will be installed outside of the flood zone and slightly above the neighboring flood elevation. It is restrained on a concrete pad to prevent flotation, collapse or movement (Plan Set page C1.3). Vents are 12 feet above grade.	49.70.400(d)(1), (d)(2)(C)
The septic system has received an Approval to Construct from the Alaska Department of Environmental Conservation, and is stamped by a credentialed engineer.	49.70.400(d)(6),

The fuel system has been designed in accordance with the International Building Code; National Electric Code; and National Fire Protection Association Chapter 30 – Flammable and Combustible

Liquids Code, including subsection (a) Standard for Emergency and Standby Power Systems. The details of this design are outlined in Appendix B of the applicant's materials. The plans are stamped by a credentialed engineer.

Habitat

No known habitats that are protected by the Land Use Code exist on the site.

Conformity with Adopted Plans

In reviewing this project for conformance with CBJ's plans, there are very few references to maintaining the condition of the facilities serving ferry passengers. However, this sort of maintenance is key to AMHS functions recognized in the plans:

- Our critical economic interests in maintaining the AMHS.
- The importance of the AMHS as part of our multi-modal transportation system.
- The importance of the AMHS to our independent visitor industry.

<u>Comprehensive Plan of the City and Borough of Juneau (2013 update)</u> – Yes.

CHAPTER 5, ECONOMIC DEVELOPMENT

POLICY 5.2. THROUGH A COOPERATIVE EFFORT WITH THE STATE OF ALASKA, TO PLAN FOR AND SUPPORT DEVELOPMENT OF AN ATTRACTIVE SETTING, FACILITIES, AND OTHER SERVICES TO ENHANCE THE STATE CAPITAL AND TO STRIVE TO PROVIDE AN ATMOSPHERE CONDUCIVE TO GOOD LEADERSHIP IN THE STATE, ACCESSIBLE TO AND SUPPORTIVE OF ALL PEOPLE OF THE STATE OF ALASKA.

IA6 Assume a leadership role in the encouragement of transportation links into and out of the borough. Consider all affordable energy-efficient transportation alternatives to improve transportation links between Juneau and other areas of Southeast Alaska, including improved air passenger and cargo service, roadways, ferries, and fixed-guideway systems.

Tourism and Visitors, Independent and Overnight Group Travelers

Independent travelers are a diverse group. They may arrive in Juneau via air, ferry, private boat, or plane and engage in a variety of activities in the community. The distinguishing factor of these markets is their tendency to utilize the various lodging and camping facilities, and their higher per-person-per-day spending pattern compared to a day visit cruise passenger. This segment of the industry is primarily a summer market and should continue to be cultivated, while development that supports year-round visitor services and activities should also be encouraged.

CHAPTER 8 TRANSPORTATION
Regional Transportation System

Due to the lack of a road connection with other regions of Alaska and Canada, the residents, visitors, businesses, and even CBJ government depend upon air and marine transportation that also serve the Southeast Alaska region. Waterway transport accounts for much of the passenger, most of the freight, and all of the vehicular traffic to and from Juneau. The Alaska Marine Highway System provides critical access between Southeast Alaska communities, but the ferry terminal at Auke Bay is difficult to reach without a private automobile, and access to this important facility needs to be improved

POLICY 8.4. TO SUPPORT THE IMPROVEMENT OF TRANSPORTATION FACILITIES AND SYSTEMS THAT REINFORCE JUNEAU'S ROLE AS THE CAPITAL CITY OF ALASKA AND A REGIONAL TRANSPORTATION AND SERVICE CENTER.

SOP1 Assume a leadership role in the encouragement of transportation links into and out of Juneau. Consider all affordable energy-efficient transport alternatives to improve transportation links between the borough and other areas of Southeast Alaska, including improved air passenger and cargo service, roadways, ferries, and fixed-guideway systems.

IA6 Work to provide public and private transportation links to the Alaska Marine Highway System ferry terminal in Auke Bay that are coordinated with the ferry schedule.

Auke Bay Area Plan (2016) – Yes. This plan recognizes the ferry terminal as a multi-modal hub serving Auke Bay and the rest of Juneau, worthy of transit and non-motorized facilities and services.

Juneau Economic Development Plan (2015) – Yes. "Juneau has a critical economic interest in Lynn Canal transportation infrastructure and service, compelling the community to maintain an active involvement in ADOTPF's effort to enhance service and/or control costs." (page 49)

FINDINGS

Both maintenance projects protect water resources by reducing risks posed by aging fuel and wastewater infrastructure, while improving efficiency of on-going operations. A review of adopted plans and codes indicates the importance of the ferry service to Juneau's culture and economy, and improving the current facility supports ongoing AMHS service.

RECOMMENDATION

Staff recommends APPROVAL of this project.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant

PROPERTY LOCATION

Physical Address
13445 GLACIER HWY

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot)
ATS 1526, Section 21

Parcel Number(s)
4B3001020030

☐ This property located in the downtown historic district
☑ This property located in a mapped hazard area, if so, which AE & VE Flood Zones

LANDOWNER/ LESSEE

Property Owner	Contact Person
STATE OF ALASKA & DOTPF	Loren Gehring, P.E.

Mailing Address	Phone Number(s)
PO BOX 112506, JUNEAU AK 99811	907-465-8189
E-mail Address: loren.gehring@alaska.gov	

LANDOWNER/ LESSEE CONSENT

Required for Planning Permits, not needed on Building/ Engineering Permits

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 _____ Landowner/Lessee Signature _____ 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

If the same as OWNER, write "SAME"

Applicant	Contact Person
Loren Gehring	Loren Gehring

Mailing Address	Phone Number(s)
PO BOX 112506, JUNEAU AK 99811	907-465-8189
E-mail Address: loren.gehring@alaska.gov	

X _____ Applicant's Signature _____ 9/5/19 Date of Application

----DEPARTMENT USE ONLY BELOW THIS LINE----

Intake Initials	Case Number	Date Received
ANE	CSP19-010	9/5/19

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

CITY/STATE PROJECT AND LAND ACTION REVIEW APPLICATION

See reverse side for more information regarding the permitting process and the materials required for a complete application.
NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY
Improvements to the AMHS Terminal in Auke Bay:
Replace the existing below ground fuel stroage tank with an above ground storage tank (Project No. SAMHS00088);
Replace the existing terminal on-site waste water treatment system (Project No. Z701610000).

TYPE OF PROJECT REVIEW:
☐ City Project Review ☐ City Land Acquisition /Disposal ☑ State Project Review

PROJECT NUMBERS ASSOCIATED WITH PROPOSAL:
Is this project associated with any other Land Use Permits? ◯ YES Case No.: _____ ◯ NO

Capital Improvement Program # (CIP) _____

Local Improvement District # (LID) _____

State Project # SAMHS00088, Z701610000

ESTIMATED PROJECT COST: $ 425,000

ALL REQUIRED MATERIALS ATTACHED
- ☑ **Complete application**
- ☐ **Pre-Application notes** (if applicable)
- ☑ **Narrative including:**
  - ☑ Current use of land or building(s)
  - ☑ Proposed use of land or building(s)
  - ☑ How the proposed project complies with the Comprehensive Plan
  - ☑ How the proposed project complies with the Land Use Code (Title 49)
- ☑ **Site Plan** (details on page 2)

NOTE: This application is <u>required</u> even if the proposed project is associated with other Land Use permits.

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

CITY/STATE PROJECT FEES	Fees	Check No.	Receipt	Date
Application Fees	$ No Fee			

RECEIVED
SEP 05 2019
PERMIT CENTER/CDD

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number	Date Received
CSP19-010	9/5/19

CBJ Project Review Application Narrative

For

AMHS Auke Bay Ferry Terminal Improvements; Fuel Storage Tank Replacement and On-site Wastewater System Replacement

Juneau, AK

Project No. SAMHS00088 & Z70161000

April 2018

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

Prepared By:
Loren Gehring, P.E.
Design Engineer

Date: 09/05/2019

STATE OF ALASKA
49 TH
LOREN GEHRING, P.E.
9/5/2019
AELC10155
REGISTERED PROFESSIONAL ENGINEER

"Keep Alaska Moving through service and infrastructure."

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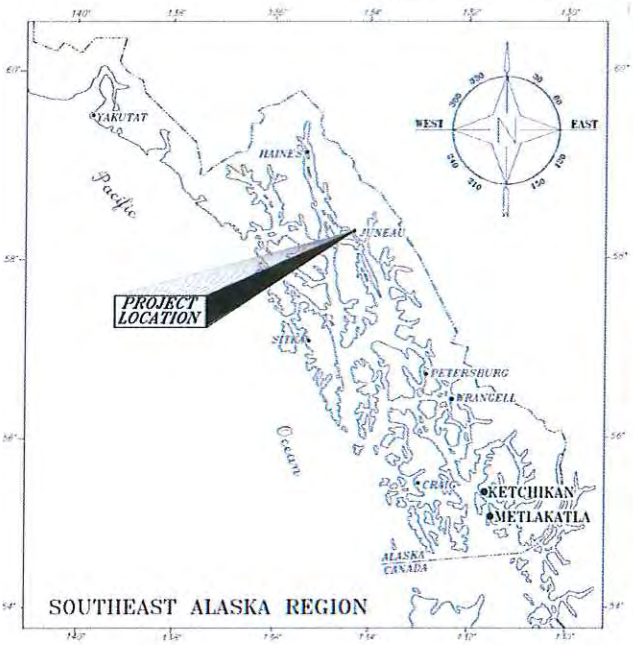
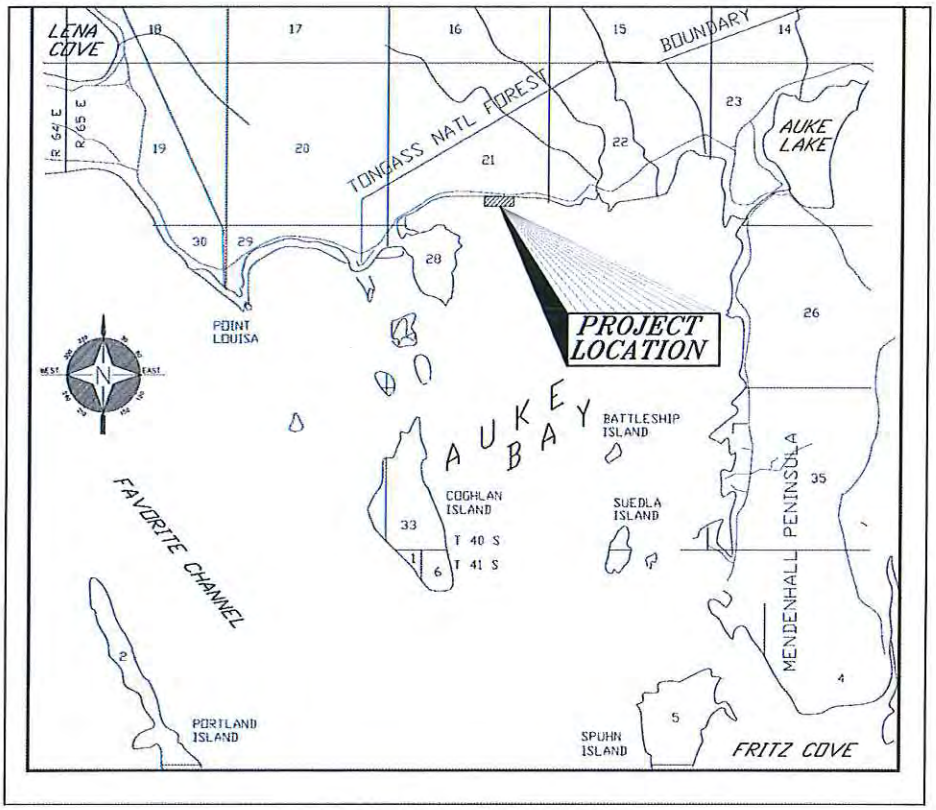
LIST OF APPENDICES

VICINITY MAP

13445 GLACIER HWY, Juneau AK
Parcel: 4B3001020030
Legal: ATS 1526, Section 21





GENERAL DESCRIPITON OF PROPOSED WORK

This project will construct the following improvements at the AMHS Auke Bay Ferry Terminal:

- Remove and replace an existing underground fuel storage tank with an above ground storage tank.
- Remove and replace the existing on-site waste water treatment facility.

This project will not change the current use of the land.

PROTECTION OF PUBLIC HEALTH AND ENVIRONMENTAL CONSIDERATIONS

The proposed fuel storage tank replacement and on-site wastewater treatment system have been developed in accordance with best practices and to ensure the protection of human health and the environment. No adverse effects are anticipated to public and private drinking water systems.

The following will be implemented on this project to minimize risk of adverse effects:

a. ADEC has reviewed the proposed on-site waste water system in accordance to the Wastewater Disposal Regulations 18AAC 71 and Approval to Construct has been received on August 26, 2019. See Appendix A.

b. The fuel storage tank has been designed in accordance the following:
   · International Building Code (IBC)
   · National Electrical Code (NEC)
   · National fire Protection Association (NFPA) 30 - Flammable and Combustible Liquids Code
   a. · NFPA 110: Standard for Emergency and Standby Power Systems
   See Appendix B.

Appendix A

ADEC On-site Wastewater system approval to construct

THE STATE of ALASKA
GOVERNOR MICHAEL J DUNLEAVY

Department of Environmental Conservation
DIVISION OF WATER
Engineering Support and Plan Review
PO Box 111800
Juneau, Alaska 99811
Main: 907.456.5180
Fax: 907.456.5177
dec.alaska.gov

Plan Tracking No.: 28163

August 26, 2019

Brett Serlin, P.E.

RE: AMHS Auke Bay Ferry Terminal WWTS
ATS 1526, Section 21, T40S, R65E, CRM
Clarifier, Secondary Treatment Plant, and Soil Absorption System
Design Flow – 801 gpd
Approval to Construct

Greetings,

On August 5, 2019 the Alaska Department of Environmental Conservation (ADEC or Department) received a submittal requesting construction approval for the AMHS Auke Bay Ferry Terminal WWTS located in Juneau, AK. The information was reviewed in accordance with Wastewater Disposal Regulations 18 AAC 72 and **construction approval is granted.** Enclosed is the Construction and Operation Certificate with the Approval to Construct section signed.

Project Description

The approved project includes decommissioning of the existing WWTS. Replacement components to be installed include a new 38-gallon minimum two compartment clarifier prior to a new Zabel A300 effluent filter system. Next, a new secondary treatment plant capable of 1000 gpd will be instated and final effluent will be disposed of into a 900 ft^2 Soil Absorption System.

Waiver Approval

The waiver request was reviewed in accordance with 18 AAC 72.060 in regards to potential impact on public health, public and private water systems, and the environment. Based on the recommendation of a Professional Engineer and information provided to justify that the lesser separation distance, this waiver is approved for the following reasons:

1. The effluent goes through additional treatment and is not seen as a threat to public health, water systems, or the environment.

Approval to Operate Requirements

This construction approval includes a 90 day interim approval to operate provided that construction substantially complied with the approved design drawings. In order to receive final operational approval, please submit the following information within 60 days of the completion of this project:

1. Written request for operational approval that includes a statement regarding any changes made during construction
2. Record drawings prepared (signed and dated) by the engineer responsible for observing the construction of this project (The Department prefers drawings that are no larger than 11" x 17".)
3. Certification of Construction form complete with signatures from the Owner, Construction Contractor, and Engineer (A copy of this form may be downloaded and printed from the Department of Environmental Conservation website or a copy will be provided upon request. http://dec.alaska.gov/water/wastewater/engineering/engineered-systems)
4. Signed maintenance agreement with a qualified service provider for the WWTS.

If the approval to operate requirements cannot be met within 90 days of construction completion, an extension of the interim approval to operate must be requested at least 30 days in advance by addressing item 3 - 4 above. Any portion of the wastewater collection or disposal system that is planned to be operated beyond the 90 days interim operational approval pending completion of multiple phases of work must either have an extended interim or final operational approval.

Disclaimers and Appeals Process

Approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulation. The Department's construction approval does not guarantee correctness or the functionality of the design, or waive the owner's responsibility for continued compliance with state regulations. Deviations from approved plans which affect capacity, flow, pressure, operation, compliance, or materials of major system components must be approved by this Department prior to their construction or implementation.

This approval is valid for two years from the date of this letter. If the applicant fails to construct, alter, install, or modify the system, the approval is void and plans must be resubmitted for department review and approval according to 18 AAC 72.200.

This approval is contingent upon your receipt of any other state, federal, or local authorizations which are required for your project. You are required to obtain all other necessary authorizations before proceeding with your project. This approval does not imply the granting of additional authorizations nor obligate any state, federal, or local regulatory body to grant required authorizations.

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195- 18 AAC 15.340 or an informal review in accordance with 18 AAC 15.185. **Informal review requests** must be delivered to the Division of Water Director, 555 Cordova Street, Anchorage, AK 99501, within 20 days of this decision. **Adjudicatory hearing requests** must be delivered to the Commissioner of the Department of Environmental Conservation, PO

Box 111800, Juneau, AK 99811, within 30 days of this decision. If a hearing is not requested within 30 days, the right to appeal is waived. More information on the Department's administrative appeals process can be found at http://dec.alaska.gov/commish/review-guidance/.

If you have questions please contact me at 907-456-5167 or by e-mail at raymond.zimmer@alaska.gov.

Sincerely,

Raymond Zimmer
Engineering Associate I

Enclosures: Construction and Operation Certificate

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CONSTRUCTION AND OPERATION CERTIFICATE
FOR
DOMESTIC WASTEWATER DISPOSAL SYSTEMS

A. APPROVAL TO CONSTRUCT

Plans for the construction or modification of the **AMHS Auke Bay Ferry Terminal** domestic wastewater system, located at **Juneau, Alaska**, submitted in accordance with 18 AAC 72.200 through 18 AAC 72.235 by **Brett Serlin, P.E.** have been reviewed and are

☒ **approved as submitted** ☐ **conditionally approved (see attached conditions)**

By: Raymond Zimmer	Engineering Associate I (Title)	08/26/2019 (Date of Approval)

If applicant fails to construct, alter, install, or modify the system within two years of the date of approval to construct, approval is void, and plans must be resubmitted for Department review and approval.

B. APPROVED CHANGE ORDERS

Change (contract order number or descriptive reference)

(Reviewing Engineer)	(Title)	(Date of Approval)

C. APPROVAL TO OPERATE

The **"Interim Approval to Operate"** or **"Final Approval to Operate"** section must be completed and signed by the Department to continue to use this system beyond 90 days following the construction completion date.

Interim Approval to Operate:

The construction of the above referenced domestic wastewater disposal system was completed on _____. The system is hereby granted an extension of the ***INTERIM APPROVAL TO OPERATE*** until _____ date. It is illegal to operate the domestic wastewater disposal system beyond this date without **Final Approval to Operate** from the Department.

(Reviewing Engineer)	(Title)	(Date of Approval)

Final Approval to Operate:

Record drawings and other documents submitted to the Department, or an inspection by the Department, has confirmed that the domestic wastewater disposal system was constructed in substantial conformance with the approved plans. The system is hereby granted ***FINAL APPROVAL TO OPERATE***.

(Reviewing Engineer)	(Title)	(Date of Approval)

Appendix B

Fuel Storage Tank Basis of Design

Alaska Marine Highway System Aboveground Fuel Storage Tanks Basis of Design

CEI Project Number: 190289

COFFMAN ENGINEERS
800 F Street
Anchorage, Alaska 99501
907.276.6664 www.coffman.com
AECC249

April 2019

Revision History

Rev	Date	Comments	Author
A	March 26, 2019	Draft for Review	K. Cheesbrough
B	April 19, 2019	Issued for Phase 1	K. Cheesbrough

Table of Contents

Figures

Project Overview

The Alaska Highway Marine System (AMHS) intends to replace the existing heating oil Underground Storage Tanks (USTs) with Aboveground Storage Tanks (ASTs) at eight of their ferry terminals: Auke Bay (Juneau), Valdez, Cordova, Ketchikan, Skagway, Petersburg, Wrangell, and Sitka. Along with tank replacement, the associated piping and appurtenances will be installed at these locations.

The existing Valdez UST fuel tank is located on the west side of the terminal, near the vehicle staging area.

Figure 1: Fuel Tank Location in Valdez

The existing Cordova UST is located on the northwest of the terminal, adjacent to the FVF building.

Figure 2: Fuel Tank Location in Cordova

The existing Auke Bay UST fuel tank is located on the east side of the terminal, north of the maintenance building

Figure 3: Fuel Tank Location in Auke Bay

The Valdez underground storage tank is located west adjacent to the terminal building

Figure 4: Fuel Tank Location in Skagway

The Petersburg fuel tank is located south of the ferry terminal adjacent to the building.

Figure 5: Fuel Tank Location in Petersburg

The Wrangell underground storage tank is located east of the terminal building, just north

Figure 6: Fuel Tank Location in Wrangell

The Ketchikan underground storage tank is located east of the ferry terminal.

Figure 7: Fuel Tank Location in Ketchikan

The Sitka underground storage tank is located east of the ferry terminal.

Figure 8: Fuel Tank Location in Sitka

Design Standards, and Codes

The subject facilities will be designed in accordance with, but not limited to, the following standards, and codes.

- Alaska Department of Transportation and Public Facilities (ADOT&PF) - Standard Specifications for Highway construction
- International Building Code (IBC)
- National Electrical Code (NEC)
- National fire Protection Association (NFPA) 30 - Flammable and Combustible Liquids Code
- NFPA 110: Standard for Emergency and Standby Power Systems

Civil/Structural Design

Tank Locations

Tank locations will be in accordance with NFPA 30 Flammable and Combustible Liquids Code 2018 Chapters 21 and 22. A minimum setback distance of five feet will be maintained to important buildings and public ways. Existing utility infrastructure, travel ways, preserving efficient work flow, and future maintenance were considered in tank placement.

Tanks will be placed at the following locations for the eight AMHS facilities:

1) Valdez – The tank will be located in approximately the same location as the existing tank.

Bollards or jersey barriers will be placed around the tank. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.

2) Cordova – The tank will be located approximately 5' east of the FVF building carport. It will be placed with the long face parallel to the FVF Building. Bollards or jersey barriers will be placed around the tank. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.
3) Auke Bay (Juneau) – The tank will be located at the initial proposed tank location site south west of the existing terminal building. Bollards or jersey barriers will be placed around the tank. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.
4) Skagway – The tank will be located approximately 60' north east of the existing terminal building and approximately 10' south west of the existing generator building. No other changes to the site layout are anticipated. Bollards or jersey barriers will be placed around the tank. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.
5) Petersburg – The tank will be located in the current ADA access ramp parking stall, approximately 30' from the north east end of the terminal building. The ADA signage will be moved to the east and the sidewalk reconfigured with a new access ramp to accommodate this new layout. Bollards or jersey barriers will be placed around the tank. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.
6) Wrangell – The ferry terminal manger requested the new tank be located approximately 80' away from the terminal building. The new tank location will be as directed by DOT pending a determination of tank volume based on historical fuel consumption for the facility. Bollards or jersey barriers will be placed around the tank. The new proposed layout would not impact the existing parking layout. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.
7) Ketchikan – The tank will be located on the south east end of the terminal building, directly west of the existing tank location. The tank will be placed with the long face perpendicular to the Terminal building. Bollards or jersey barriers will be placed around the east, south, and west sides of the proposed tank. The new proposed layout would not impact the existing parking layout. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.
8) Sitka – The tank will be located 10' south east of the existing generator tank. The pictures from the site visit currently show a generator building with a generator tank located approximately 10' south east of the generator building and an existing shed in the proposed tank location. The shed appears to be sitting on cinder blocks and should be movable. We are proposing to move the existing shed to a new location 10' South East of the proposed tank location. Bollards or jersey barriers will be placed on the South West side abutting the existing drive lane. The new proposed layout would not impact the existing parking layout. Existing provided documentation does not show utilities, and it is assumed that there are no conflicts in the area.

Foundations

A thickened edge concrete slab will be used to support the tanks. The slab will be approximately 8 inches thick for each tank. The foundation is designed for the operational weight of the tank and the site-specific

environmental loads. The tank skids will be secured to the concrete foundations with drilled-in epoxy anchors and lag screws at the timber foundations. The tank skid will be bonded to the reinforcing steel within the tank foundation.

No geotechnical data was provided. Therefore, the following soils are assumed: sand, silty sand, clayey sand, silty gravel and clayey gravel with an allowable vertical soil bearing pressure of 2000psf, lateral bearing pressure of 150psf/ft, and a coefficient of friction of 0.25 per IBC Table 1806.2. Where classified fill is provided immediately under foundations, the coefficient of friction will be taken as 0.35.

Mechanical Design

The mechanical components of this project include the design of aboveground fuel storage tanks and connections to existing fuel oil piping at each facility. The existing buried tanks will be removed.

The new tanks will include integral secondary containment, interstitial leak detection, whistling atmospheric vents, primary & secondary emergency vents, clock level gages, and supply & return diptubes with foot valves. Tanks will meet the Steel Tank Institute's F921 fire resistance standard.

Fuel tank sizes will be determined by the Department based on historical fuel consumption rates.

Table 1: Tank Sizing Summary

Location	Existing Tank Size
Valdez	1,000gal
Cordova	500gal
Auke Bay	1,000gal
Skagway	1,100gal
Petersburg	1,100gal
Wrangell	680gal
Ketchikan	2,500gal
Sitka	1,000gal

Mechanical design considerations for each facility are provided below:

1) Valdez – Both fuel-fired furnaces have existing tiger loops, and a single pipe supply routed below grade in a common secondary containment pipe. The tiger loops will be re-used, and the buried pipe will likely be abandoned and replaced by new above-ground pipes to the new tank. Pipes would be run along the building, and overhead across the sidewalk, to the new tank. A day tank is not anticipated.
2) Cordova – A single fuel-fired boiler is supplied by a two-pipe supply/return from the buried tank. The new above ground tank will likely allow for the addition of a tiger loop in leu of a return pipe to the new tank. A day tank is not anticipated.
3) Juneau (Auke Bay) – A single fuel-fired boiler is served by an existing tiger loop, and a single supply pipe routed below grade in a common secondary containment pipe. The tiger loop will be re-used, and the buried pipe will likely be abandoned and replaced by a new above-ground pipe to the new tank. The pipe would be run along the building, and overhead across the sidewalk, to the tank. A day tank is not anticipated.
4) Skagway – A single fuel-fired boiler is supplied by a two-pipe supply/return from the buried tank. The proposed location for the new tank is a significant distance from the boiler and

will likely require a day tank to be located in the boiler room to ensure adequate fuel flow. Further analysis of the burner pump head vs. proposed routing will be performed during design to confirm this. If the existing burner can overcome the head loss of the piping run, a tiger loop will be added instead of a day tank. There appears to be room for a day tank to be installed below ductwork in the mechanical room.

5) Petersburg - A single fuel-fired furnace is supplied by a two-pipe supply/return from the buried tank. The new tank location will likely allow for a single supply pipe to be routed along the adjacent storage shed, overhead across the sidewalk, and along and into the building to a new tiger loop at the furnace. A day tank is not anticipated.
6) Wrangell - A single fuel-fired furnace is supplied by a two-pipe supply/return from the buried tank. The tank location proposed by the ferry terminal manager is a significant distance from the furnace and may require a day tank. The only location for the day tank is in the storage room adjacent to the furnace. Fuel pipe routing will be confirmed and coordinated with the Department during the design phase. Further analysis of the burner pump head vs. proposed routing will be performed during design to confirm system hydraulics. If the existing burner can overcome the head loss of the piping run, a tiger loop will be added instead of a day tank.
7) Ketchikan - A single fuel-fired boiler is supplied by a two-pipe supply/return from the buried tank. The new tank location will likely allow for a single supply pipe to be routed overhead across the sidewalk, and along and into the building to a new tiger loop at the boiler. A day tank is not anticipated. During design, Coffman will evaluate the possibility of utilizing a single aboveground storage tank to serve the building fuel needs as well as the existing generator.
8) Sitka - A single fuel-fired furnace is served by an existing tiger loop, and a single supply pipe routed below grade in a common secondary containment pipe. The tiger loop will be re-used, and the buried pipe will likely be abandoned and replaced by a new above-ground pipe to the new tank. The above ground pipe will be routed along the generator building, and overhead across the walkway, along the Terminal building, and into the furnace room. A day tank is not anticipated. During design, Coffman will evaluate the possibility of utilizing a single aboveground storage tank to serve the building fuel needs as well as the existing generator.

Electrical Design

A new tank monitoring system will be installed for each facility. The electrical/instrumentation design will be based on a Veeder Root TLS4c system. Each tank will include level sensors and interstitial leak detection, which will be monitored by a head end monitor console. Per NFPA 30, fuel oil is classified as a Class II combustible liquid. Per API 500, Class II liquids normally do not produce vapors of sufficient quantity to be considered for electrical area classification, except for points of release. At tank vent locations, a distance of 18" from the vent opening is considered to be a Class I Division 2 location. Conduit seals will be provided at instrument terminations to prevent vapors from traveling through conduit. Although the hazardous area does not extend to the buildings, conduit seals will be placed at the building exterior wall penetration to ensure vapors do not enter the building.

Generators for each facility are each fed from their own dedicated tanks with exception to the Skagway and Juneau terminals. It is assumed that generators for each facility are Level 2 Legally Required Standby sources per NEC article 701 and NFPA 110.

Design considerations for each facility have been provided below:

1) Valdez – The tank monitor console will be located within the mechanical room of the

terminal building. The existing tank high level monitor will be removed and replaced with a new Veeder Root system. Existing circuit wiring and conduit will be used. Instrumentation conduit and wiring will be routed alongside the mechanical fuel piping.

2) Cordova – The tank monitor console will be located within the maintenance area of the FVF building. Power will be provided from panel 'C' located within the same room. Instrumentation raceway from the console will be routed alongside the fuel piping to the tank.
3) Juneau (Auke Bay)- The tank monitor console will be located within the mechanical room. The existing tank high level monitor will be removed and replaced with a new Veeder Root system Circuit conduit and wiring from the existing system will be re-used for the new console. Instrumentation raceway from the console will be routed alongside the fuel supply piping to the tank.
4) Skagway - The tank monitor console will be located within the mechanical room and will replace the existing tank monitor. Power conduit and wiring from the demolished tank monitor will be used for the new monitor console. Instrumentation raceway from the console will be routed alongside the mechanical piping from the tank to the mechanical room.
5) Petersburg – An existing tank overfill monitor was not located at the Petersburg terminal. A new monitor will be provided in the mechanical room adjacent to panel A. Circuit wiring and conduit will be provided from panel A to the new monitor console. Instrumentation wiring and conduit will be routed alongside fuel piping from the tank to the console. If it is determined that additional fuel pumps will be required for this location, power to the pumps will be provided from panel A.
6) Wrangell – An existing tank overfill monitor was not located at the Wrangell terminal. A new monitor will be provided in the mechanical room. Power will be provided from existing panel P located in the adjacent electrical room. Instrumentation wiring will be installed buried alongside fuel piping to the tank. If it is determined that additional fuel pumps will be required for this site, power will be provided from panel P.
7) Ketchikan – An existing tank overfill monitor was not located at the Ketchikan terminal. A new monitor will be provided in the mechanical room in the location of the current analog meter. Power to the monitor will be provided from local panel P located in the mechanical room. Instrumentation wiring will be installed alongside fuel piping from the tank to the mechanical room.
8) Sitka – An existing tank overfill monitor was not located at the Sitka terminal. A new monitor will need to be provided for the terminal. Power distribution for the entire terminal building is provided by panel "P" located in the facility electrical/storage room. There is currently no physical space available in panel "P" for new electrical circuits. As an option, power for the new monitor, and pumps if required, can fed from panel A within the generator building.

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	T1.1	1.15

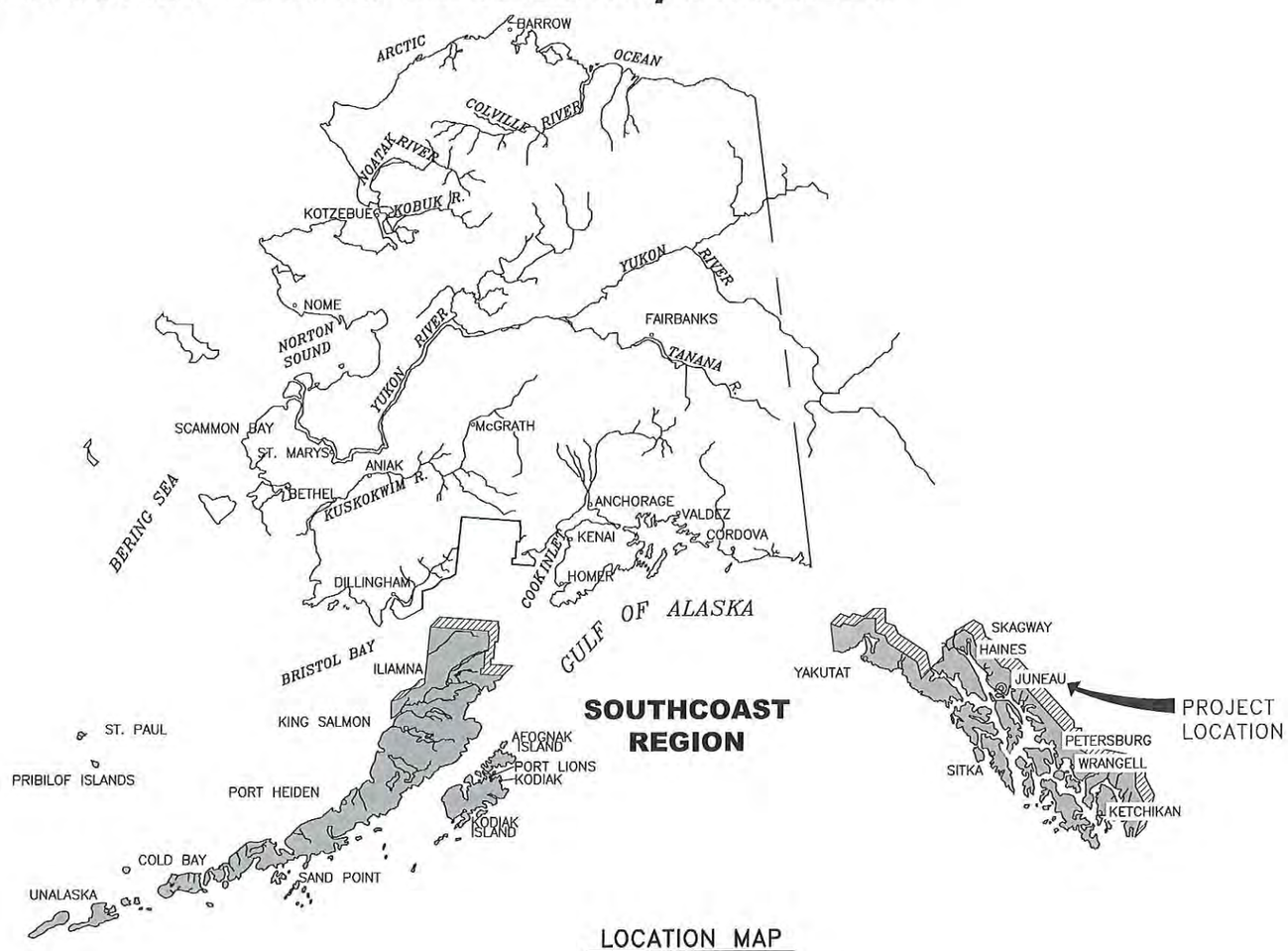
STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

PROPOSED FERRY TERMINAL UPLANDS PROJECT

AMHS WASTEWATER TREATMENT SYSTEM UPGRADES - AUKE BAY, ALASKA

PROJECT NO. Z701610000/9500139



LOCATION MAP
NOT TO SCALE

SHEET SET NO. 1 – INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
T1.1	COVER SHEET
T1.2	NOTES AND ABBREVIATIONS
G1.1	TEST PIT OBSERVATIONS
C1.1	SITE PLAN LAYOUT
C1.2	SITE PLAN 1
C1.3	SITE PLAN 2
C1.4	TREATMENT SCHEMATIC AND OPERATIONAL NOTES
C1.5	EXISTING CONDITIONS PICTURES 1
C1.6	EXISTING CONDITIONS PICTURES 2
C1.7	CONSTRUCTION DETAILS: TREATMENT PLANT AND PIPE
C1.8	CONSTRUCTION DETAILS: PIPING CONNECTIONS
C1.9	CONSTRUCTION DETAILS: SURGE TANK/DISTRIBUTION BOX
C1.10	CONSTRUCTION DETAILS: DRAINFIELD
C1.11	CONSTRUCTION DETAILS: CURB SIDEWALK AND BOLLARD
C1.12	DECOMMISSIONING EXISTING WASTEWATER TREATMENT SYSTEM

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AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

COVER SHEET

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design TPICW.dwg | DATE | LAYOUT | AMHS AUK WW T1.1 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS | 8/1/2019

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			ALASKA	Z701610000/9500139	2019	T1.2	1.15

CONSTRUCTION NOTES

1.0 GENERAL
SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PROJECT PLANS, ASSOCIATED DOCUMENTS, AND PERMITS. DEVIATIONS FROM PLANS SHALL HAVE APPROVAL BY ENGINEER PRIOR TO WORK.

2.0 WASTEWATER TREATMENT SYSTEM
TREATMENT SYSTEM DESIGN IS BASED ON POPULATION, FLOW, AND WASTE CALCULATIONS INCLUDED IN DESIGN SUBMITTAL; OWNER SHALL CONTACT ENGINEER REGARDING INCREASES IN POPULATION PRIOR TO OCCUPANCY.

2.1 FACILITY DETAILS
FACILITY IS FERRY TERMINAL FOR PASSENGER AND VEHICLE FERRIES, OPERATING YEAR ROUND. TREATMENT SYSTEM DESIGN IS BASED ON CALCULATIONS IN DESIGN SUBMITTAL; OWNER SHALL CONTACT ENGINEER REGARDING INCREASES IN POPULATION PRIOR TO OCCUPANCY.

2.2 WASTEWATER DISCHARGE
TREATED WASTEWATER EFFLUENT SHALL BE DISCHARGED TO MARINE OUTFALL, SUBSURFACE DRAINFIELD, LAND DISPOSAL SYSTEM, OR OTHER UNDER TERMS OF WASTEWATER DISCHARGE PERMIT SPECIFIC TO THIS SYSTEM.

3.0 COORDINATION WITH OWNER
CONTRACTOR SHALL COORDINATE WITH AMHS FERRY TERMINAL MANAGER SO AS NOT TO INTERFERE WITH TERMINAL OPERATIONS. CONTACT INFORMATION:
- AUKE BAY FERRY TERMINAL MANAGER: GEORGE COLE, 907-465-8853

4.0 CONTINUATION OF SERVICE
QUANTITY OF TEMPORARY TOILETS REQUIRED: THREE MINIMUM, AT LEAST ONE OF WHICH SHALL BE HANDICAP ACCESSIBLE.

5.0 UTILITIES
PROTECT ALL EXISTING UTILITIES. LOCATIONS OF EXISTING UTILITIES AS NOTED ON DRAWINGS ARE APPROXIMATE, AND NO ASSURANCE IS GIVEN THAT LOCATIONS ARE CORRECT OR COMPLETE. PRIOR TO BEGINNING WORK, CONTRACTOR SHALL VERIFY TRUE LOCATIONS TO AVOID DAMAGE AND DISRUPTION. DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT NO COST TO OWNER.

~ DIAL BEFORE YOU DIG! REQUEST UTILITY LOCATES PRIOR TO BEGINNING WORK.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

1. EROSION AND SEDIMENT CONTROL PLANS AND NOTES PROVIDED HEREIN ARE INTENDED AS A MINIMUM LEVEL OF EROSION CONTROL. CONTRACTOR SHALL DEVELOP SITE SPECIFIC PLANS TO RETAIN SEDIMENTATION FROM DRAINAGE AND GRADING ON PROJECT SITE. IF APPLICABLE, CONTRACTOR SHALL IMPLEMENT AND FOLLOW APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT.
2. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE TO ADJACENT PROPERTIES AND STREAMS FROM CONSTRUCTION RELATED EROSION AND SILTATION DURING COURSE OF WORK. DAMAGE RESULTING FROM SUCH EROSION AND SILTATION SHALL BE CORRECTED AT EXPENSE OF CONTRACTOR.
3. IN DEVELOPMENT OF SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLANS, CONTRACTOR SHALL REFERENCE ADOT&PF BEST MANAGEMENT PRACTICES (BMP) GUIDE FOR APPROVED BMP'S, AVAILABLE ONLINE AT www.dot.state.ak.us/stwddes/desenviron/resources/stormwater.shtml
4. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING WORK THAT MAY EXPOSE MATERIALS SUSCEPTIBLE TO EROSION OR TRANSPORT, SUCH AS PAVEMENT REMOVAL AND EXCAVATION.
5. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN EFFECTIVE OPERATING CONDITIONS AT ALL TIMES. ROCK CHECK DAMS, STRAW WATTLES, AND SILT FENCES SHALL BE CLEANED WHEN HALF-FILLED WITH SILT OR DEBRIS OR SOONER; OTHER ITEMS SHALL BE CLEANED, REPAIRED, OR REPLACED AS NECESSARY TO MAINTAIN EFFICACY.
6. TEMPORARY EROSION CONTROL DEVICES SHALL REMAIN IN PLACE AND MAINTAINED UNTIL GERMINATION OF SEEDING AND NO EROSION OR TRANSPORT POTENTIAL EXISTS.
7. RETAINED SEDIMENT SHALL BE DISPOSED OF OFF SITE AT AN APPROVED WASTE MATERIAL DISPOSAL SITE; IT MAY NOT BE USED AS EMBANKMENT.
8. WORK AREAS SHALL BE DEWATERED BY PUMP TO REDUCE IMPACTS TO WATER QUALITY. PRIOR TO DIRECT OR INDIRECT RELEASE INTO FISH HABITATS, PUMP DISCHARGES SHALL BE FILTERED THROUGH SEDIMENT CONTROL DEVICES.
9. CONTRACTOR SHALL KEEP CLEAN AND DISPOSE OF ALL TRACKED MATERIALS ONTO ALL PAVED SURFACES. THIS SHALL INCLUDE SWEEPING WITH POWER BROOM, VACUUMING, AND WATERING ON A DAILY BASIS DURING HAULING ACTIVITIES OR MORE FREQUENTLY AS DIRECTED BY ENGINEER.
10. TEMPORARILY COVER STOCKPILE WITH PLASTIC TARPS TO PREVENT EROSION AND SEDIMENT TRANSPORT, AND INSTALL SILT BARRIER AROUND BASE OF STOCKPILE TO RETAIN SEDIMENTATION ON PROJECT SITE.
11. EXCAVATED MATERIAL NOT SUITABLE FOR REUSE INTO WORK DUE TO QUALITY, GRADATION, QUANTITY, ETC. SHALL BE DISPOSED OF BY CONTRACTOR AT APPROVED WASTE MATERIAL DISPOSAL SITES ONLY, WITH WRITTEN PERMISSION BY OWNER OF DISPOSAL SITE, AND WITH ALL REQUIRED PERMITS SECURED.

ESTIMATE OF QUANTITIES – AUKE BAY

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	QUANTITY
202.0002.0000	REMOVAL OF PAVEMENT	SQUARE YARD	0
202.0003.0000	REMOVAL OF SIDEWALK	SQUARE YARD	8
301.0001.0001	AGGREGATE BASE COURSE, GRADING D-1	TON	4
401.0006.0002	HMA, TYPE II: CLASS B, ASPHALT PATCHING	SQUARE YARD	0
550.MF01.0000	CONCRETE PATCHING, CLASS B	SQUARE YARD	0
608.0001.0000	CONCRETE SIDEWALK, 4" THICK	SQUARE YARD	8
608.0006.0000	CURB RAMP	EACH	0
609.0002.0001	CURB AND GUTTER, TYPE 1	LINEAR FOOT	0
618.0004.0000	SEEDING	SQUARE YARD	323

ABBREVIATIONS AND ACRONYMS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABS	ACRYLONITRILE BUTADIENE STYRENE
ACI	AMERICAN CONCRETE INSTITUTE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASTM	ASTM INTERNATIONAL
BOD	BASIS OF DESIGN
BTWN	BETWEEN
CIP	CAST-IN-PLACE
CL or ℄	CENTERLINE
CLR	CLEAR
CO	CLEANOUT
CPP	CORRUGATED POLYETHYLENE PIPE
CTE	CONNECT TO EXISTING
DEC	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIA or Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DOT&PF	ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
(E), EXIST	EXISTING
EA	EACH
EJ	EJ (FORMERLY EAST JORDAN IRON WORKS EJIW)
EL	ELEVATION
EPS	EXPANDED POLYSTYRENE RIGID FOAM INSULATION
EQ	EQUAL
ESCP	EROSION AND SEDIMENT CONTROL PLAN
EW	EACH WAY
f'c	CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS
FT or '	FOOT/FEET
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN or "	INCH/INCHES
MAX	MAXIMUM
MFR	MANUFACTURER
MG/L	MILLIGRAMS PER LITER (=PPM)
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
NFS	NON-FROST SUSCEPTIBLE
NSF	NSF INTERNATIONAL (FORMERLY NATIONAL SANITATION FOUNDATION)
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
(P)	PROPOSED
PERF	PERFORATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
REQ'D	REQUIRED
SDR	STANDARD DIMENSION RATIO
SQ	SQUARE
SS	STAINLESS STEEL OR SANITARY SEWER, PER CONTEXT
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
TYP	TYPICAL
XPS	EXTRUDED POLYSTYRENE RIGID FOAM INSULATION

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AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

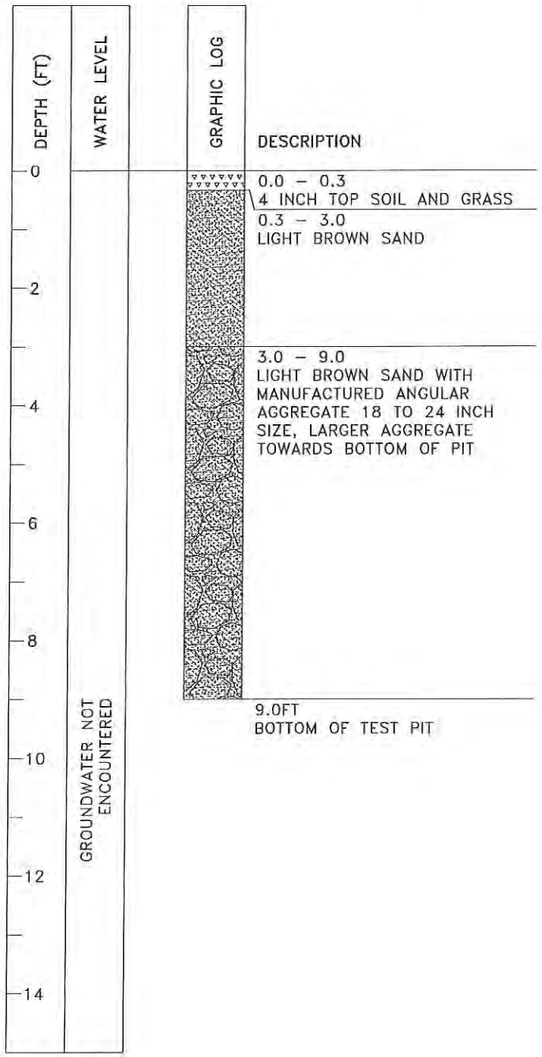
NOTES AND ABBREVIATIONS, ESTIMATE OF QUANTITIES

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW T1.2 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	G1.1	1.15

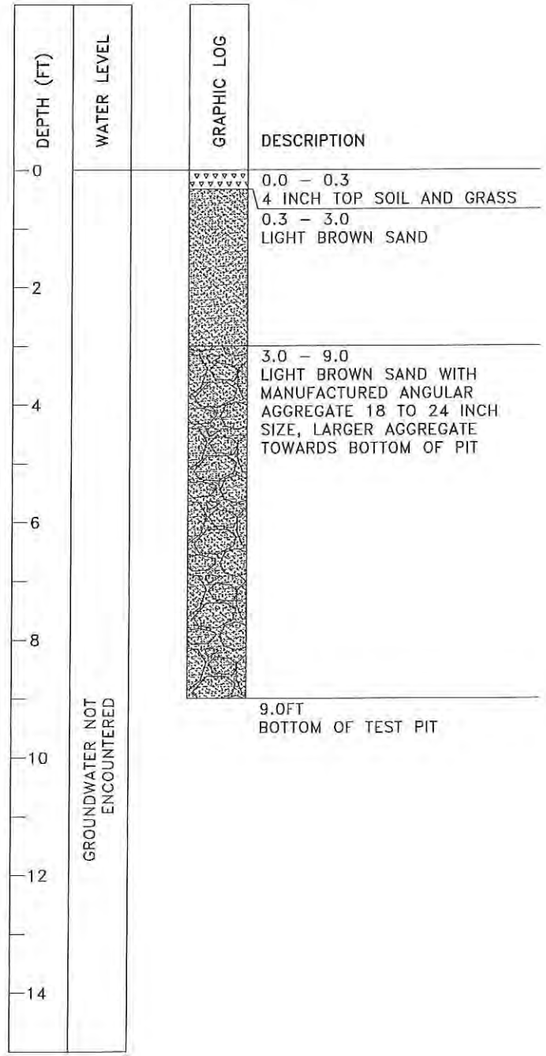
TEST PIT OBSERVATIONS

TEST PIT ID: TP-01
LOCATION: AMHS AUKE BAY FERRY TERMINAL JUNEAU, ALASKA
COORDINATES: 58.38179°N, 134.68760°W
PLACE: IN GRASS BETWEEN AMHS STORAGE BUILDING AND CONCRETE SIDEWALK
DESCRIPTION: NEAR PROPOSED TREATMENT PLANT
TEST PIT DATE: 12-11-2018



TEST PIT OBSERVATIONS

TEST PIT ID: TP-02
LOCATION: AMHS AUKE BAY FERRY TERMINAL JUNEAU, ALASKA
COORDINATES: 58.38182°N, 134.68707°W
PLACE: IN GRASS BETWEEN LANDSCAPING AND CONCRETE SIDEWALK
DESCRIPTION: AT PROPOSED DRAINFIELD
TEST PIT DATE: 12-11-2018



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AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

TEST PIT OBSERVATIONS

FILE | Attach 7 17501 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW G1.1 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

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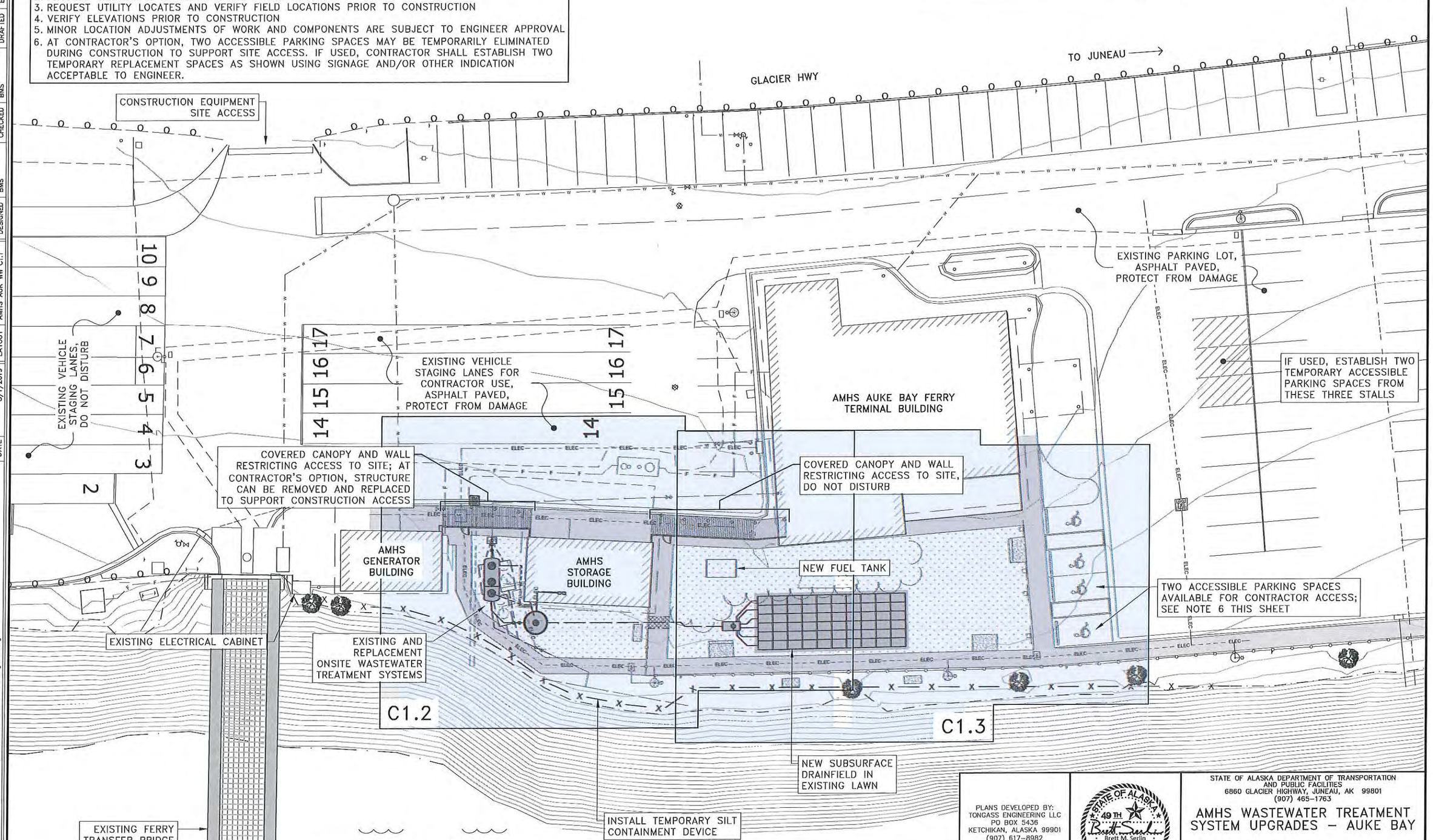
NOTES:
1. ITEM CALLOUTS: (E) = EXISTING (P) = PROPOSED
2. PROTECT EXISTING ITEMS AND FEATURES FROM DAMAGE
3. REQUEST UTILITY LOCATES AND VERIFY FIELD LOCATIONS PRIOR TO CONSTRUCTION
4. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION
5. MINOR LOCATION ADJUSTMENTS OF WORK AND COMPONENTS ARE SUBJECT TO ENGINEER APPROVAL
6. AT CONTRACTOR'S OPTION, TWO ACCESSIBLE PARKING SPACES MAY BE TEMPORARILY ELIMINATED DURING CONSTRUCTION TO SUPPORT SITE ACCESS. IF USED, CONTRACTOR SHALL ESTABLISH TWO TEMPORARY REPLACEMENT SPACES AS SHOWN USING SIGNAGE AND/OR OTHER INDICATION ACCEPTABLE TO ENGINEER.



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AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

SITE PLAN LAYOUT

FILE Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE 8/1/2019 | LAYOUT AMHS AUK WW C1.1 | DESIGNED BMS | CHECKED BMS | DRAFTED BMS

NO.	DATE	REVISION

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4. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION
5. MINOR LOCATION ADJUSTMENTS OF WORK AND COMPONENTS ARE SUBJECT TO ENGINEER APPROVAL
6. REMOVE "AUKE BAY TERMINAL WASTEWATER TREATMENT PLANT" SIGN AND HARDWARE ON SOUTH EXTERIOR WALL OF STORAGE BUILDING, RETURN ALL TO OWNER

STAGING LANE 14

(E) UNDERGROUND FUEL TANK, ACCESS LIDS IN CONCRETE PAD AT PAVEMENT GRADE, TANK AND FUEL LINES TO BE REMOVED

EXISTING PARKING LOT AND VEHICLE LINEUP STAGING LANES, ASPHALT PAVED, PROTECT FROM DAMAGE

(E) ELECTRICAL BOX

(E) STEEL PIPE BOLLARD, TYP

AMHS AUKE BAY FERRY TERMINAL BUILDING

(E) ABANDONED WATER LINE

(E) SIDEWALK CANOPY

(E) SIDEWALK CANOPY SUPPORT POST, TYP

(E) STORM DRAIN CATCH BASIN, INSTALL STORM DRAIN INLET SEDIMENT PROTECTION

(E) 4"ø DI GRAVITY SEWER SERVICE FROM TERMINAL BUILDING, LOCATION SHOWN IS APPROX

(E) CONCRETE CURB AND GUTTER

(E) SANITARY SEWER CLEANOUT FROM TERMINAL BUILDING

(E) SIDEWALK CANOPY

(E) SIDEWALK CANOPY SUPPORT POST, TYP

(E) ROOF DRAIN

(E) ELECTRICAL JUNCTION BOX

(E) WALL WITH PEDESTRIAN DOOR AND WINDOWS

(P) CONNECTION NEW 4"ø PVC PIPE TO EXISTING 4"ø DI PIPE

(E) CONCRETE VAULT DISTRIBUTION BOX, DECOMMISSION AND REMOVE

(P) DOUBLE CLEANOUT, TYP

AMHS GENERATOR BUILDING

AMHS STORAGE BUILDING
** PROVIDE TEMPORARY **
** SHORING AS NECESSARY **
** FOR EARTHWORK **

(E) CONCRETE SIDEWALKS, TYP

(E) BUILDING ROOF OVERHANG, TYP

(E) WALL WITH PEDESTRIAN DOOR AND WINDOWS

(P) ABOVEGROUND FUEL TANK, LOCATION APPROX, SEE PROJECT SAMHS00088

(E) CONC WASTEWATER TREATMENT PLANT AND PIPING, DECOMMISSION AND REMOVE; TYP OF (3); CAP BACKFILLS IN VICINITY WITH TOPSOIL AND SEED

(E) ELECTRIC TO IN-TANK AERATOR, LOCATION APPROX, REMOVE PER ELECTRICAL, TYP

(E) EDGE OF LANDSCAPING, DO NOT DISTURB

(P) SUBSURFACE DRAINFIELD WITH STRUCTURAL CHAMBERS AND SAND LINER BETWEEN EXISTING LANDSCAPING AND SIDEWALK

(E) 3.6FT HIGH GALV STEEL HANDRAIL, REMOVE AND REPLACE AS REQUIRED

(P) EFFLUENT FILTER AND TREATMENT PLANT CONTROL PANELS, AIR COMPRESSOR, COORDINATE LOCATION INSIDE OF BUILDING WITH OWNER

(E) CONCRETE SIDEWALK, REMOVE AND REPLACE AS REQUIRED AT JOINTS, MATCH EXISTING THICKNESS, 4" THICK MIN

(P) PRIMARY CLARIFIER DETENTION TANK

(P) 4"ø PVC PIPE WITH 45° BENDS AND CLEANOUTS

(P) SECONDARY AERATED WASTEWATER TREATMENT PLANT

(E) CONCRETE SIDEWALK, REMOVE AND REPLACE AS REQUIRED AT JOINTS, MATCH EXISTING THICKNESS

(P) 4"ø PVC GRAVITY PIPE

TP-01

(P) SURGE TANK/ DISTRIBUTION BOX

(E) ELECTRIC, REMOVE, LOCATION APPROX

(E) 18" CMP, TO REMAIN

(E) PK NAIL EL=28.39FT

(P) INSTALL CAP

(E) GRASS SURFACE

MIN REQ'D

(E) 4"ø PVC PIPE, DECOMMISSION AND REMOVE; TYP

(E) WASTEWATER UV LAMP DISINFECTION SYSTEM, DECOMMISSION AND REMOVE

(E) WASTEWATER SAMPLING PORT, DECOMMISSION AND REMOVE

(E) WASTEWATER DISCHARGE, REMOVE TO 1FT HORIZONTAL FROM CONCRETE SIDEWALK, ABANDON IN PLACE FOR REMAINDER, SECURELY CAP END TO PREVENT MATERIAL INSTRUSION

INSTALL TEMPORARY SILT CONTAINMENT DEVICE

TOP OF EXISTING RIP RAP SLOPE

(E) ELECTRICAL JUNCTION BOX

(E) PET WASTE BAGS POST

(E) HANDRAIL

(E) LUMINAIRE

(E) INFORMATIONAL WOOD SIGN "BIRDS" ON CONCRETE PAD, REMOVE AND REPLACE AS REQUIRED

N

SCALE IN FEET
0 5 10 20

PLANS DEVELOPED BY:
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STATE OF ALASKA 49TH
Brett M. Serlin
CE 12303
8/1/19
REGISTERED PROFESSIONAL ENGINEER

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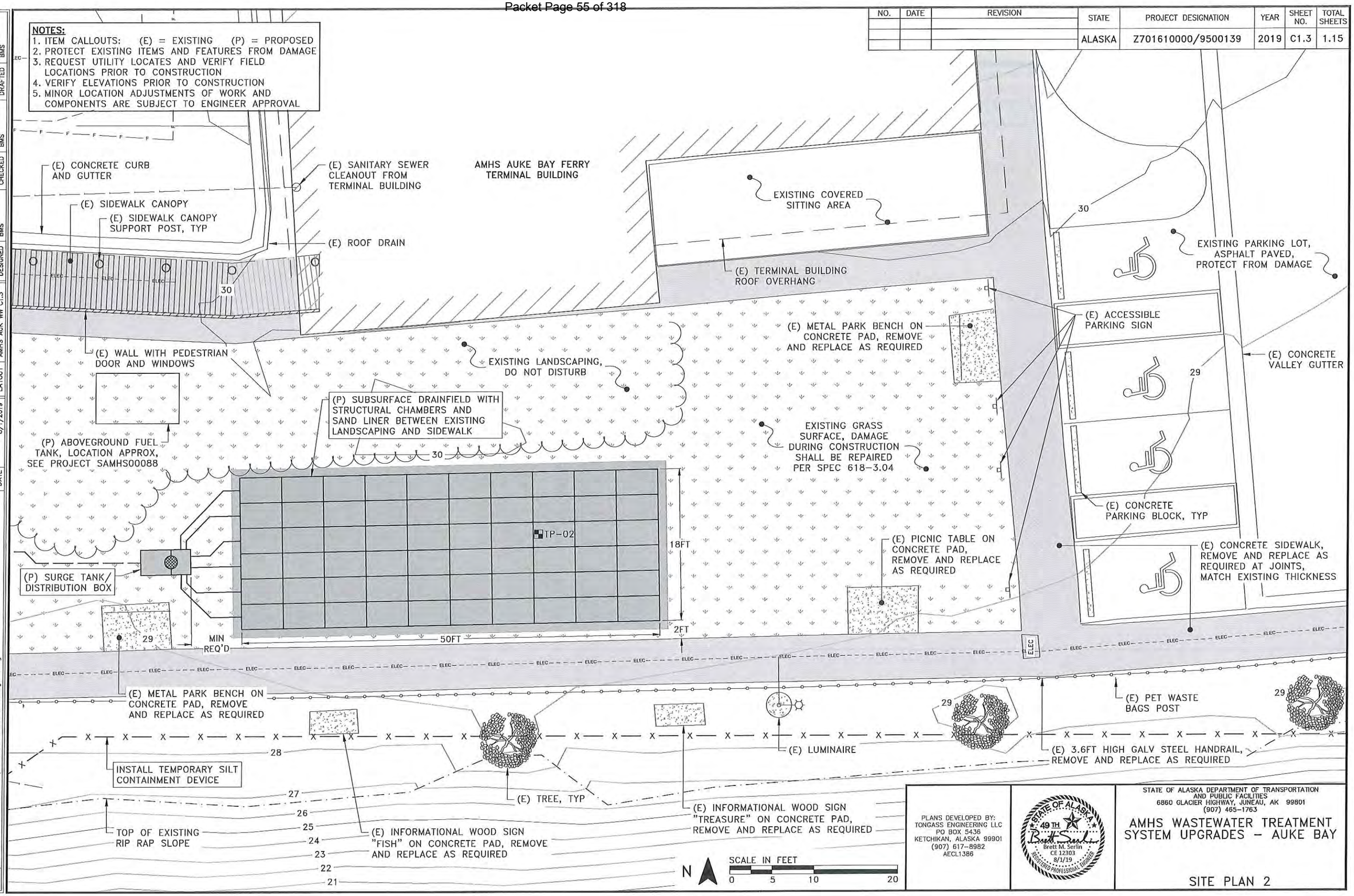
AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

SITE PLAN 1

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.2 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.3	1.15

NOTES:
1. ITEM CALLOUTS: (E) = EXISTING (P) = PROPOSED
2. PROTECT EXISTING ITEMS AND FEATURES FROM DAMAGE
3. REQUEST UTILITY LOCATES AND VERIFY FIELD LOCATIONS PRIOR TO CONSTRUCTION
4. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION
5. MINOR LOCATION ADJUSTMENTS OF WORK AND COMPONENTS ARE SUBJECT TO ENGINEER APPROVAL



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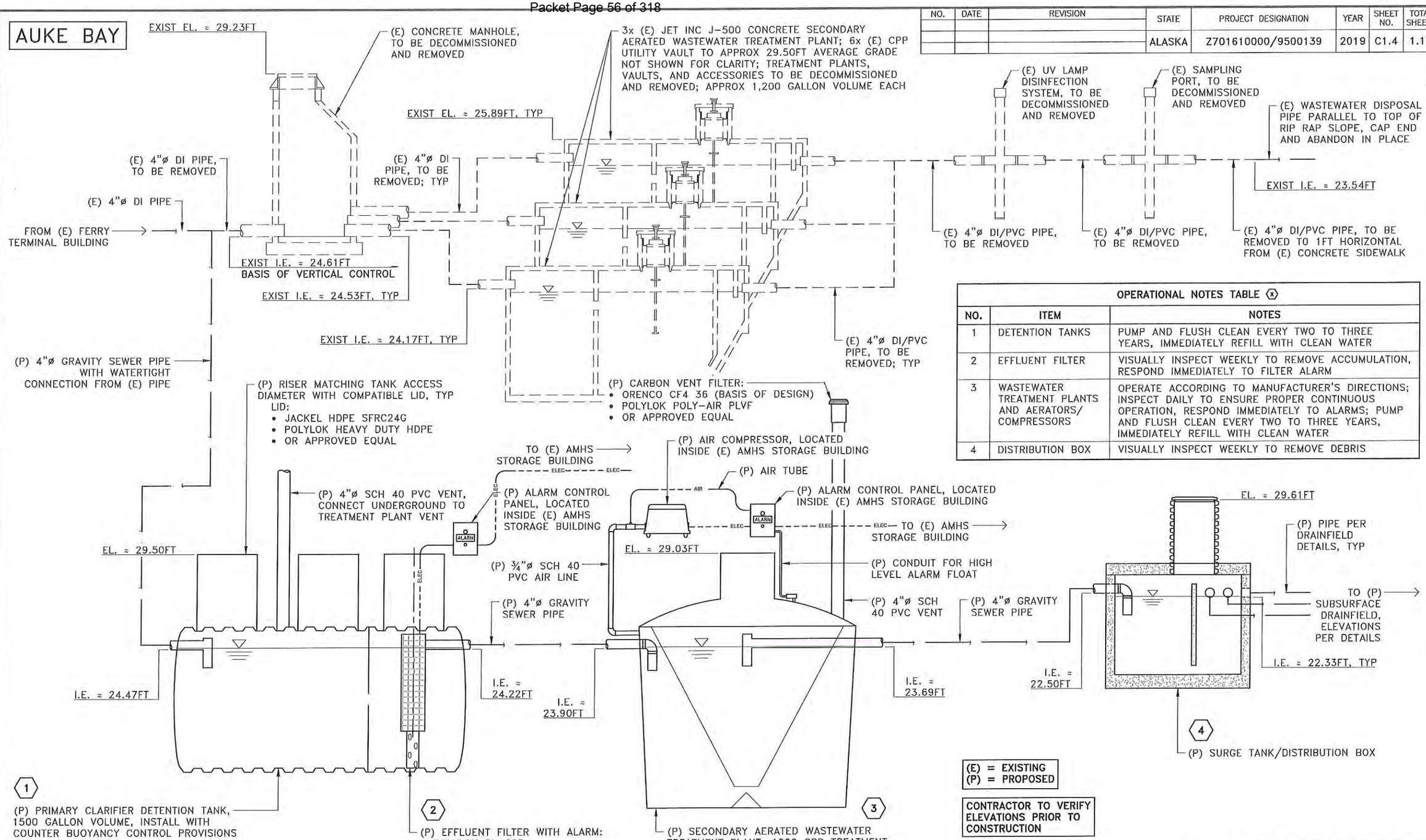
AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

SITE PLAN 2

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | LAYOUT | AMHS AUK WW C1.3 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS | DATE | 8/1/2019

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.4	1.15

AUKE BAY



OPERATIONAL NOTES TABLE (x)

NO.	ITEM	NOTES
1	DETENTION TANKS	PUMP AND FLUSH CLEAN EVERY TWO TO THREE YEARS, IMMEDIATELY REFILL WITH CLEAN WATER
2	EFFLUENT FILTER	VISUALLY INSPECT WEEKLY TO REMOVE ACCUMULATION, RESPOND IMMEDIATELY TO FILTER ALARM
3	WASTEWATER TREATMENT PLANTS AND AERATORS/ COMPRESSORS	OPERATE ACCORDING TO MANUFACTURER'S DIRECTIONS; INSPECT DAILY TO ENSURE PROPER CONTINUOUS OPERATION, RESPOND IMMEDIATELY TO ALARMS; PUMP AND FLUSH CLEAN EVERY TWO TO THREE YEARS, IMMEDIATELY REFILL WITH CLEAN WATER
4	DISTRIBUTION BOX	VISUALLY INSPECT WEEKLY TO REMOVE DEBRIS

(E) = EXISTING
(P) = PROPOSED

CONTRACTOR TO VERIFY ELEVATIONS PRIOR TO CONSTRUCTION

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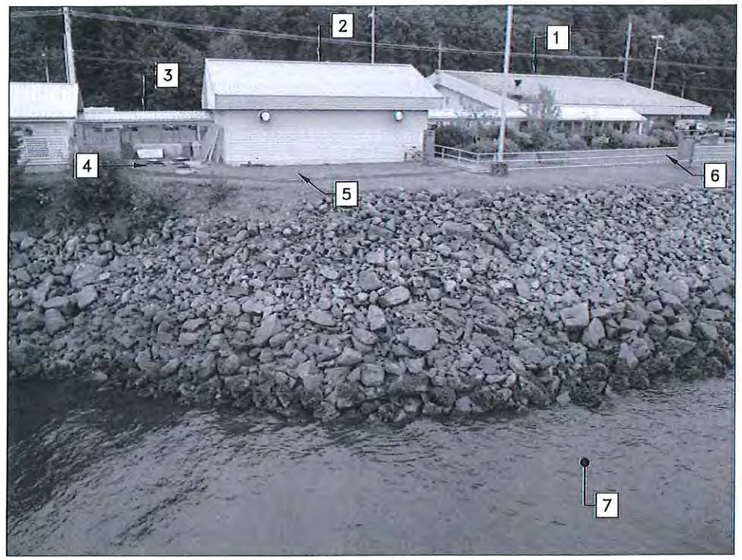
AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

TREATMENT SCHEMATIC AND OPERATIONAL NOTES

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.4 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

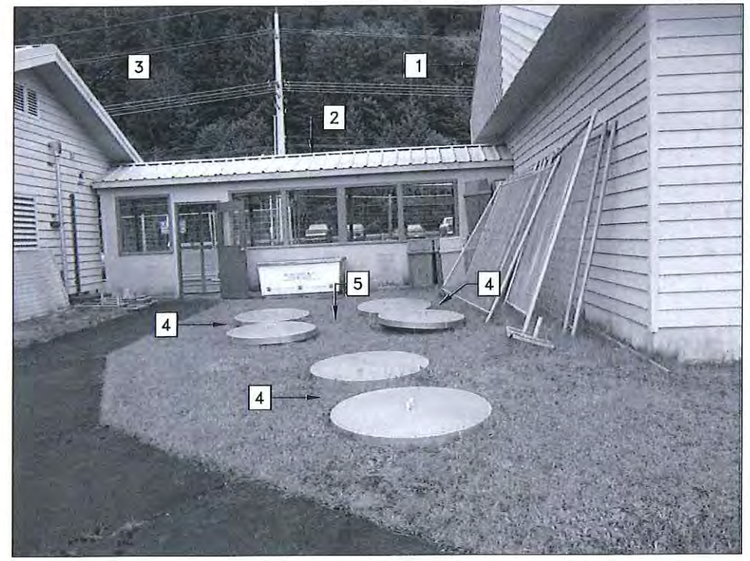
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.5	1.15



NOTES:

1. AMHS AUKE BAY FERRY TERMINAL BUILDING.
2. AMHS AUKE BAY STORAGE BUILDING.
3. COVERED CANOPY AND WALL RESTRICTING ACCESS TO SITE.
4. EXISTING WASTEWATER TREATMENT SYSTEM TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL. NEW PRIMARY CLARIFIER DETENTION TANK TO BE INSTALLED IN LOCATION WHERE EXISTING TANKS REMOVED. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.
5. NEW WASTEWATER TREATMENT PLANT TO BE INSTALLED IN EXISTING GRASS-COVERED AREA. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.
6. NEW DRAINFIELD TO BE INSTALLED IN EXISTING GRASS-COVERED AREA. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.
7. AUKE NU COVE.

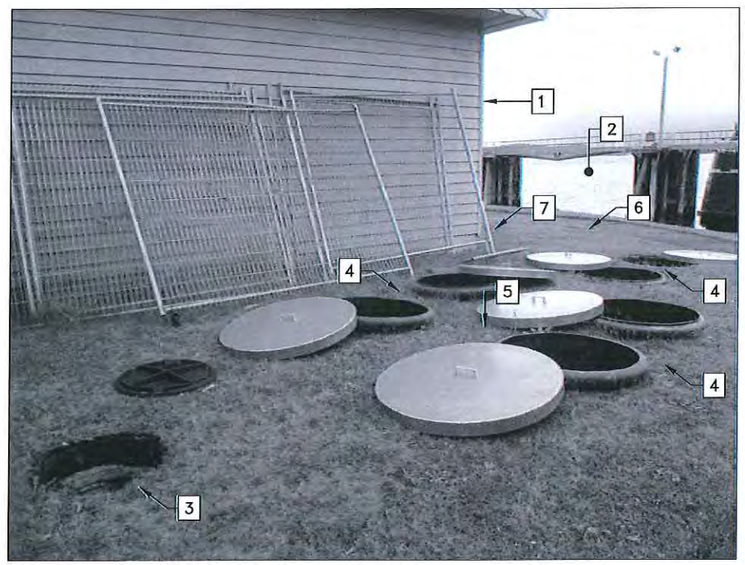
1 EXISTING CONDITIONS
NOT TO SCALE – USE DIMENSIONS
IMG_7120



NOTES:

1. AMHS AUKE BAY STORAGE BUILDING.
2. COVERED CANOPY AND WALL RESTRICTING ACCESS TO SITE. AT CONTRACTOR'S OPTION, STRUCTURE CAN BE REMOVED AND REPLACED TO SUPPORT CONSTRUCTION ACCESS.
3. AMHS AUKE BAY GENERATOR BUILDING.
4. EXISTING WASTEWATER TREATMENT SYSTEM TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL, TYPICAL OF THREE UNITS.
5. NEW PRIMARY CLARIFIER DETENTION TANK TO BE INSTALLED IN LOCATION WHERE EXISTING TANKS REMOVED. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.

2 EXISTING TREATMENT SYSTEM
NOT TO SCALE – USE DIMENSIONS
IMG_7102



NOTES:

1. AMHS AUKE BAY STORAGE BUILDING.
2. AUKE NU COVE.
3. EXISTING CONCRETE VAULT DISTRIBUTION BOX TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL.
4. EXISTING WASTEWATER TREATMENT SYSTEM TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL, TYPICAL OF THREE UNITS.
5. NEW PRIMARY CLARIFIER DETENTION TANK TO BE INSTALLED IN LOCATION WHERE EXISTING TANKS REMOVED. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.
6. EXISTING UV LAMP DISINFECTION SYSTEM AND SAMPLING PORT TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL.
7. NEW WASTEWATER TREATMENT PLANT TO BE INSTALLED.

3 EXISTING TREATMENT SYSTEM
NOT TO SCALE – USE DIMENSIONS
IMG_7109

NOTES:

1. AMHS AUKE BAY STORAGE BUILDING.
2. COVERED CANOPY AND WALL RESTRICTING ACCESS TO SITE. AT CONTRACTOR'S OPTION, STRUCTURE CAN BE REMOVED AND REPLACED TO SUPPORT CONSTRUCTION ACCESS.
3. AMHS AUKE BAY GENERATOR BUILDING.

4 EXISTING COVERED CANOPY AND WALL
NOT TO SCALE – USE DIMENSIONS
IMG_3410

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AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

EXISTING CONDITIONS PICTURES 1

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design TPICW.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.5 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

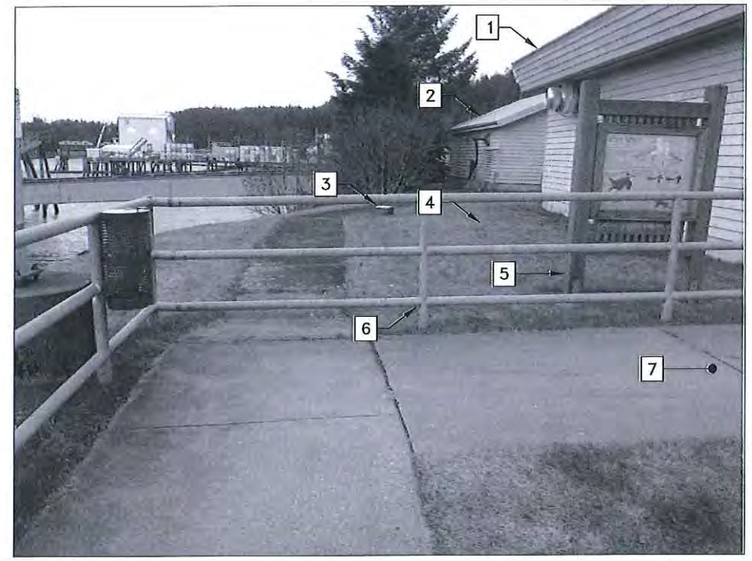
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.6	1.15

5A EXISTING UV AND SAMPLING PORT
NOT TO SCALE – USE DIMENSIONS IMG_7104

5B EXISTING AERATOR AND UV SYSTEM CONTROL PANELS
NOT TO SCALE – USE DIMENSIONS IMG_7124

NOTES:

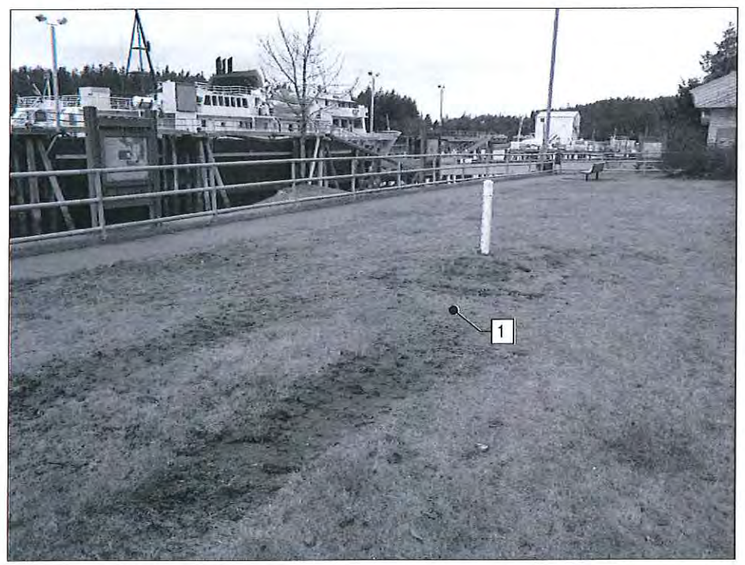
1. EXISTING UV LAMP DISINFECTION SYSTEM TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL.
2. EXISTING SAMPLING PORT TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL.
3. EXISTING CONTROL PANELS, SERVICES, AND CONDUITS FOR EXISTING WASTEWATER TREATMENT SYSTEM TO BE REMOVED. PHOTOGRAPH IS FROM INSIDE AMHS STORAGE BUILDING.



6 PROPOSED TREATMENT PLANT LOCATION
NOT TO SCALE – USE DIMENSIONS P1100505

NOTES:

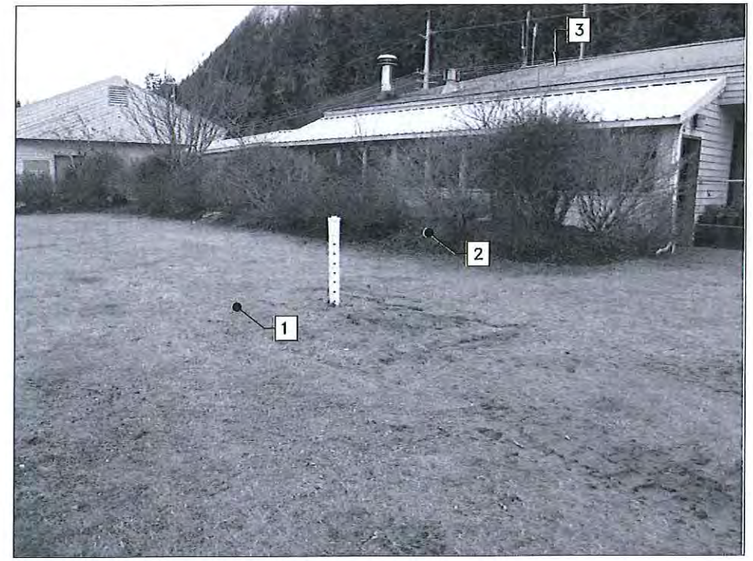
1. AMHS AUKE BAY STORAGE BUILDING.
2. AMHS AUKE BAY GENERATOR BUILDING.
3. EXISTING UV LAMP DISINFECTION SYSTEM AND SAMPLING PORT TO BE DECOMMISSIONED AND REMOVED FOR DISPOSAL.
4. NEW WASTEWATER TREATMENT PLANT TO BE INSTALLED IN EXISTING GRASS-COVERED AREA. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.
5. EXISTING INFORMATIONAL SIGN ON CONCRETE PAD, REMOVE AND REPLACE AS REQUIRED.
6. EXISTING GALVANIZED STEEL HANDRAIL, REMOVE AND REPLACE AS REQUIRED.
7. EXISTING CONCRETE SIDEWALK TO BE REMOVED AND REPLACED AS NECESSARY FOR INSTALLATION OF PIPING.



7 PROPOSED DRAINFIELD LOCATION
NOT TO SCALE – USE DIMENSIONS P1100581

NOTES:

1. NEW DRAINFIELD TO BE INSTALLED IN EXISTING GRASS-COVERED AREA. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.



8 PROPOSED DRAINFIELD LOCATION
NOT TO SCALE – USE DIMENSIONS P1100582

NOTES:

1. NEW DRAINFIELD TO BE INSTALLED IN EXISTING GRASS-COVERED AREA. GRASS TO BE RE-ESTABLISHED AT COMPLETION OF WORK.
2. EXISTING LANDSCAPING TO REMAIN, DO NOT DISTURB.
3. AMHS AUKE BAY FERRY TERMINAL BUILDING.

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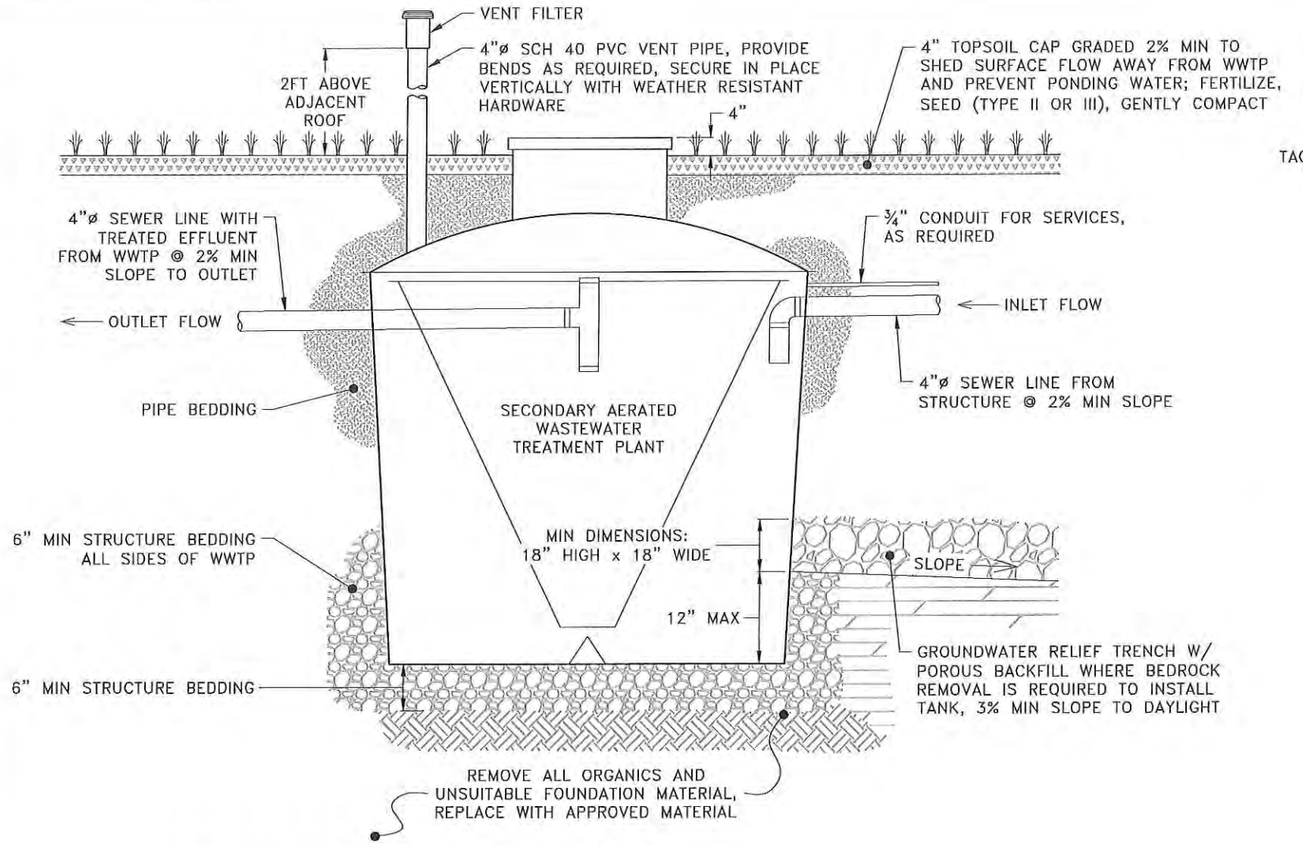
AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

EXISTING CONDITIONS PICTURES 2

FILE | Attach 7 17801 AMHS Ferry Terminal Onsite WW Design TPICW.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.6 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.7	1.15

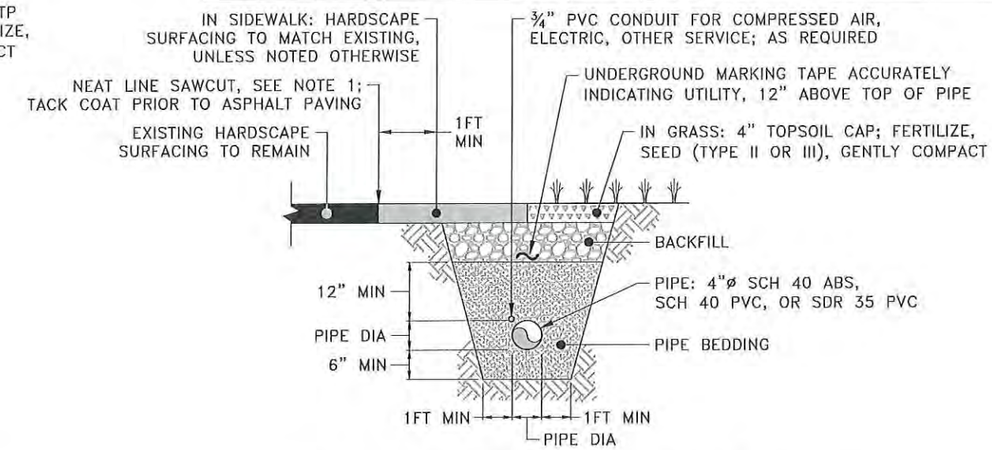


1 WASTEWATER TREATMENT PLANT INSTALLATION

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. CONTROL PANEL AND AIR COMPRESSOR SHALL BE PACKAGE UNIT FROM MANUFACTURER ACCOMPANYING TREATMENT PLANT. INSTALL AS SHOWN ON DRAWINGS, IN MECHANICAL ROOM, OR OTHER LOCATION PROTECTED FROM WEATHER AND ELEMENTS, WITHIN 100 FEET OF TREATMENT PLANT.
2. FOLLOW ALL MANUFACTURER'S WRITTEN INSTRUCTIONS FOR TANK AND EQUIPMENT INSTALLATION.
3. ALL ELECTRICAL SYSTEM INSTALLATIONS SHALL MEET NATIONAL ELECTRIC CODE REQUIREMENTS.
4. INSTALL ALL TANKS IN SIMILAR MANNER, INCLUDING HOLDING, DETENTION, SURGE, DISTRIBUTION, AND CONTACT TANKS, IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

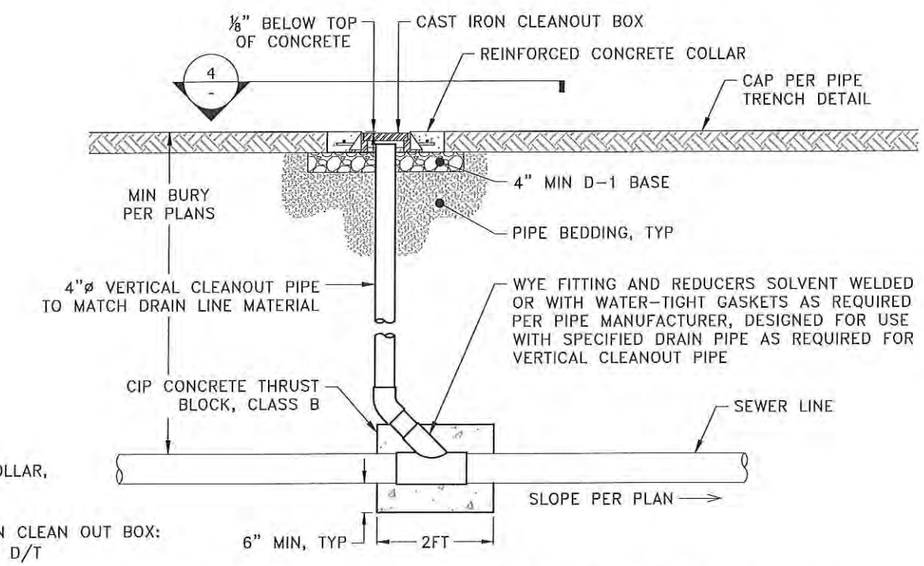


2 BURIED PIPE TRENCH SECTION

NOT TO SCALE – USE DIMENSIONS

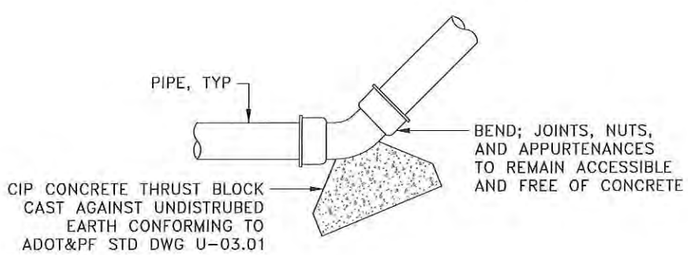
NOTES:

1. NEAT LINE SAWCUT IN EXISTING ASPHALT OR CONCRETE HARDSCAPE SURFACING SHALL NOT BE MADE UNTIL 24 HOURS PRIOR TO FINAL ASPHALT OR CONCRETE PLACEMENT.



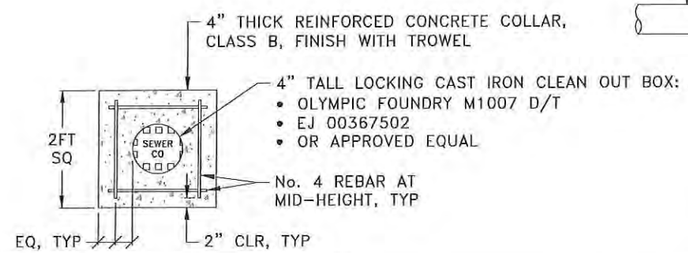
5 BURIAL AND CLEANOUT – ELEVATION VIEW

NOT TO SCALE – USE DIMENSIONS



3 CONCRETE THRUST BLOCK

NOT TO SCALE – USE DIMENSIONS



4 CLEANOUT – PLAN VIEW

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. DOUBLE CLEANOUTS CAN BE CAST INTO SINGLE CONCRETE COLLAR.

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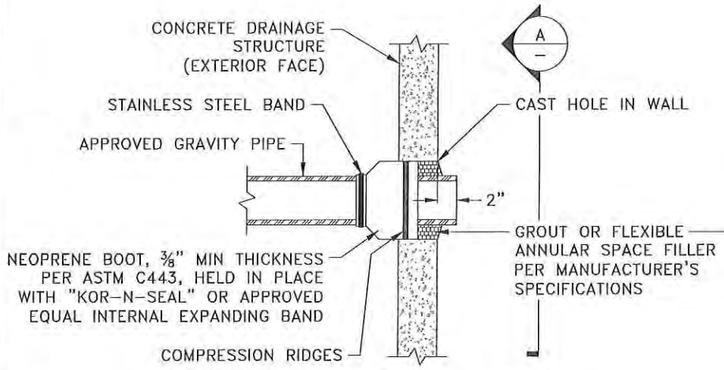
AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

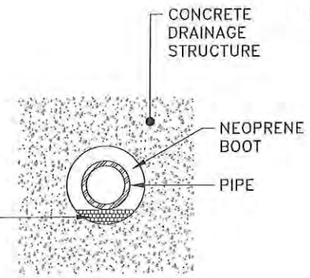
CONSTRUCTION DETAILS: TREATMENT PLANT AND PIPE

FILE Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE 8/1/2019 | LAYOUT AMHS AUK WW C1.7 | DESIGNED BMS | CHECKED BMS | DRAFTED BMS

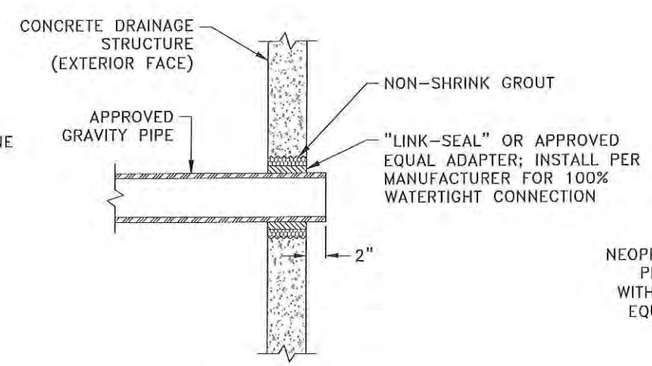
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.8	1.15



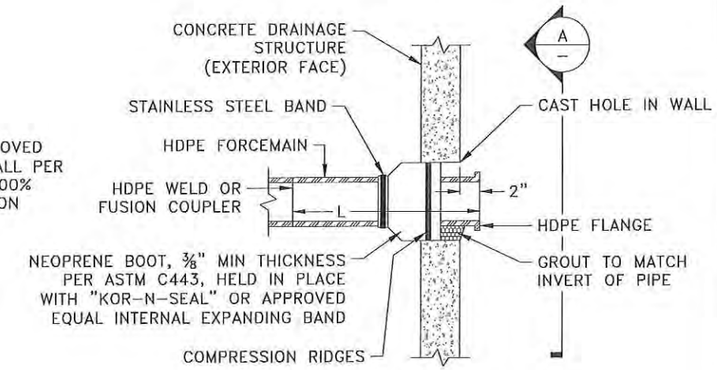
FLEXIBLE SEAL ADAPTER



SECTION A GROUT DETAIL



"LINK-SEAL" ADAPTER



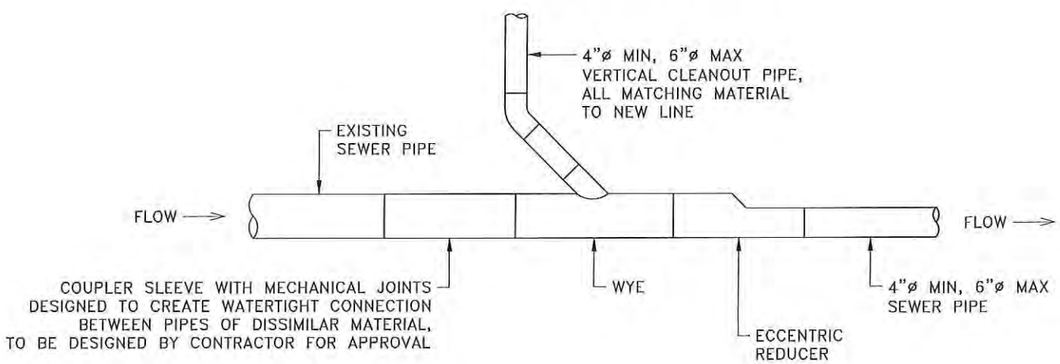
HDPE FORCEMAIN CONNECTION

1 PIPE CONNECTION TO CONCRETE STRUCTURE

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. ALTERNATIVE WATERTIGHT CONNECTIONS ARE SUBJECT TO ENGINEER APPROVAL.
2. INSTALL COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO ACHIEVE 100% WATERTIGHT CONNECTION.
3. HDPE FORCEMAIN FLANGE LENGTH "L" TO BE DETERMINED BY CONTRACTOR. HDPE FLANGE SHALL BE WELDED TO A SECTION OF PIPE AND INSERTED THROUGH FLEXIBLE SEAL FROM INSIDE OF CONCRETE STRUCTURE.
4. ROMAC HDPE PIPE STIFFENER OR APPROVED EQUAL MAY BE REQUIRED FOR HDPE GRAVITY MAIN INSTALLATION; CONTRACTOR TO VERIFY WITH ENGINEER PRIOR TO INSTALLATION.

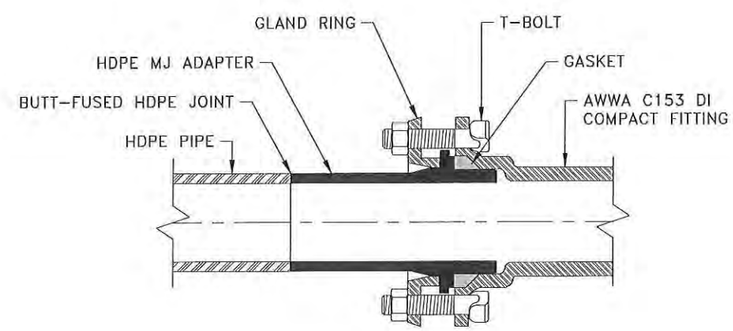


2 COUPLING FOR DISSIMILAR PIPE SIZE AND/OR MATERIAL

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. DETAIL TO BE USED AS OPTION FOR COUPLING SEWER PIPES OF DISSIMILAR SIZE AND/OR MATERIAL. CONTRACTOR SHALL DESIGN CONNECTION FOR APPROVAL BY ENGINEER.
2. INSTALL MECHANICAL JOINT FITTINGS AND CLAMPS WITH GASKETS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN DIRECTIONS TO ACHIEVE WATERTIGHT CONNECTION.
3. ALL HARDWARE, INCLUDING BOLTS, WASHERS, NUTS, LUGS, AND SHELLS, SHALL BE STAINLESS STEEL.
4. CONNECTED PIPES SHALL BE CUT PERPENDICULAR, CLEANED OF DEBRIS, AND INSERTED INTO COUPLERS SO THAT ENDS ARE FLUSH.



3 PIPE CONNECTION HDPE MJ FITTING TO DUCTILE IRON

NOT TO SCALE – USE DIMENSIONS

PLANS DEVELOPED BY:
TONGASS ENGINEERING LLC
PO BOX 5436
KETCHIKAN, ALASKA 99901
(907) 617-8982
AECL1386

STATE OF ALASKA 49TH Brett M. Serlin CE 12303 8/1/19 REGISTERED PROFESSIONAL ENGINEER

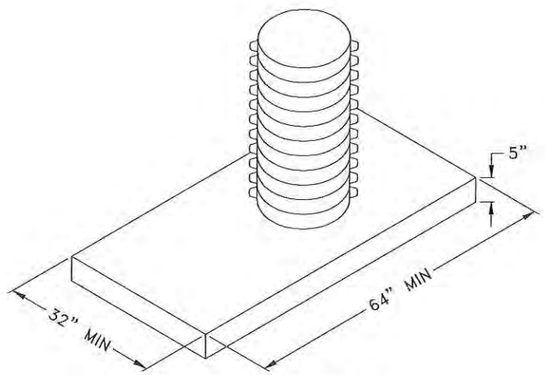
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

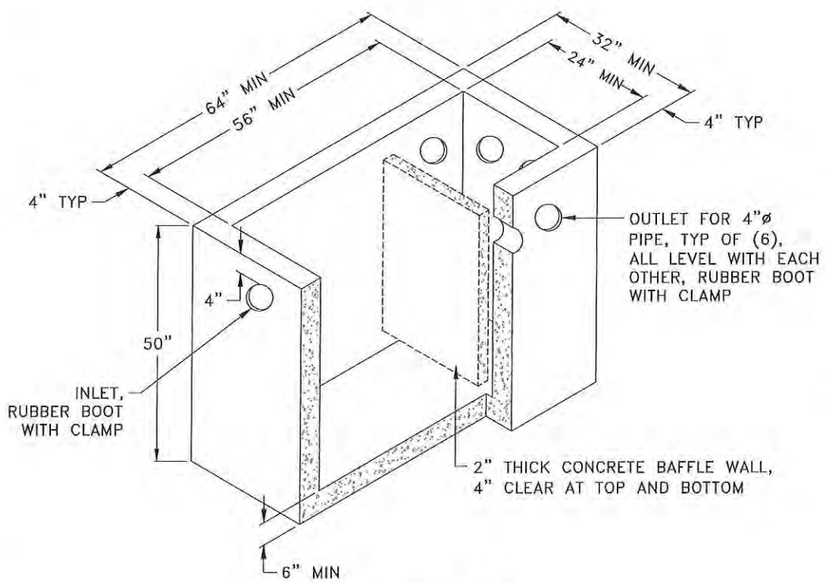
CONSTRUCTION DETAILS: PIPING CONNECTIONS

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.8 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

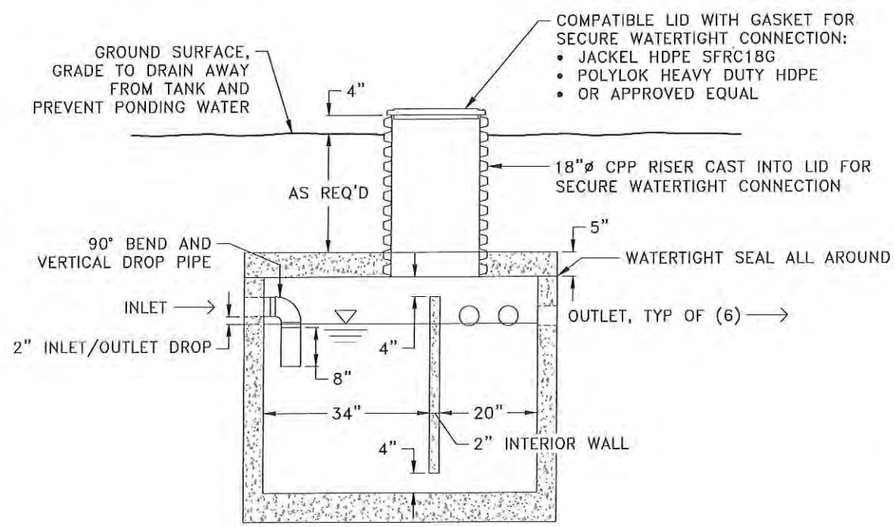
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.9	1.15



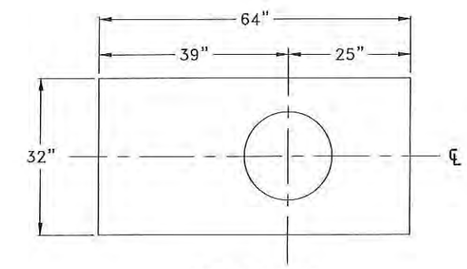
LID OBLIQUE VIEW



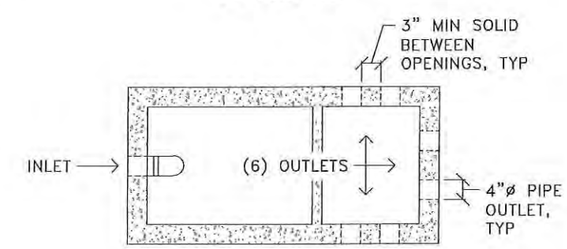
BASE OBLIQUE VIEW



ELEVATION VIEW



LID PLAN VIEW



BASE PLAN VIEW

(1) CONCRETE SURGE TANK/DISTRIBUTION BOX

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. INSTALL PER DETAIL 1, SHEET C1.7

PLANS DEVELOPED BY:
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STATE OF ALASKA 49TH Brett M. Serlin CE 12303 8/1/19 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
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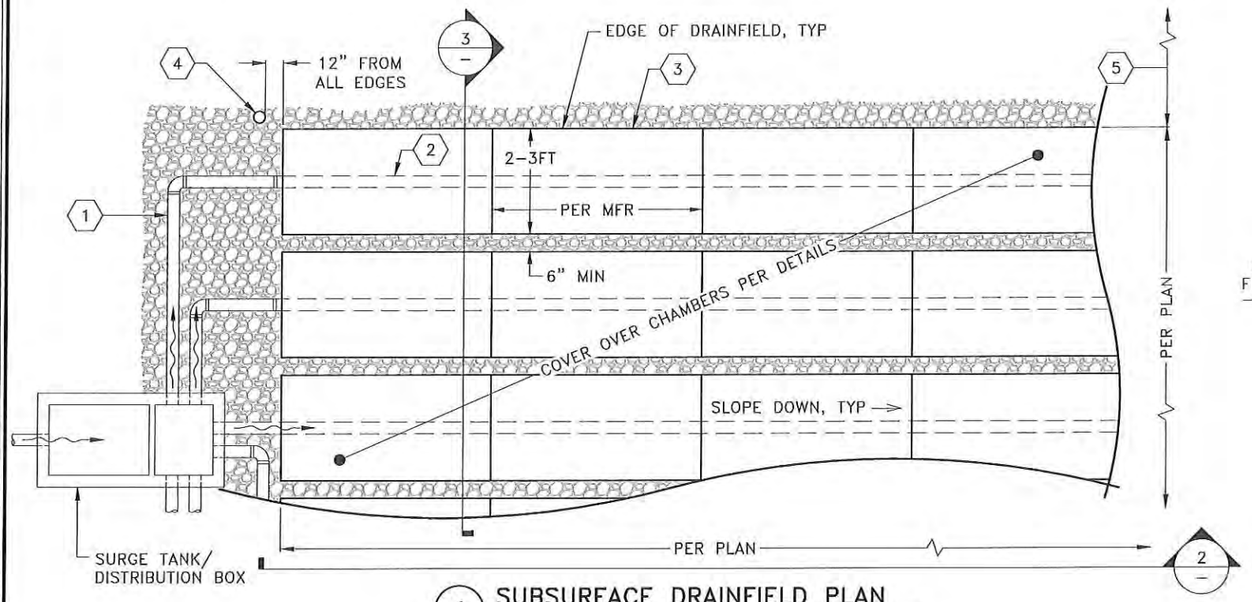
(907) 465-1763

AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

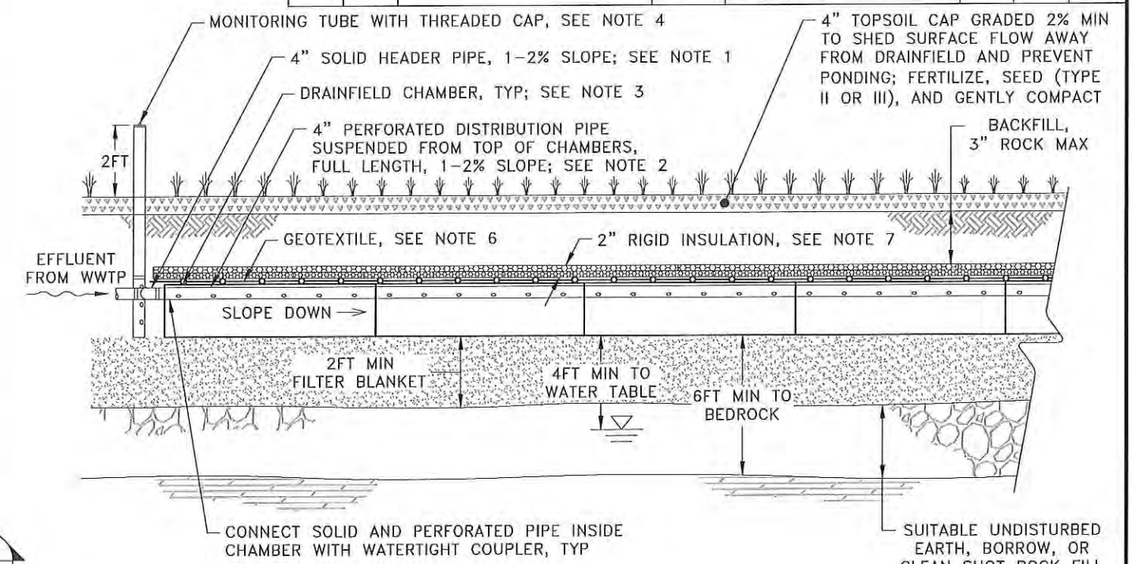
CONSTRUCTION DETAILS:
SURGE TANK/DISTRIBUTION BOX

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.9 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.10	1.15

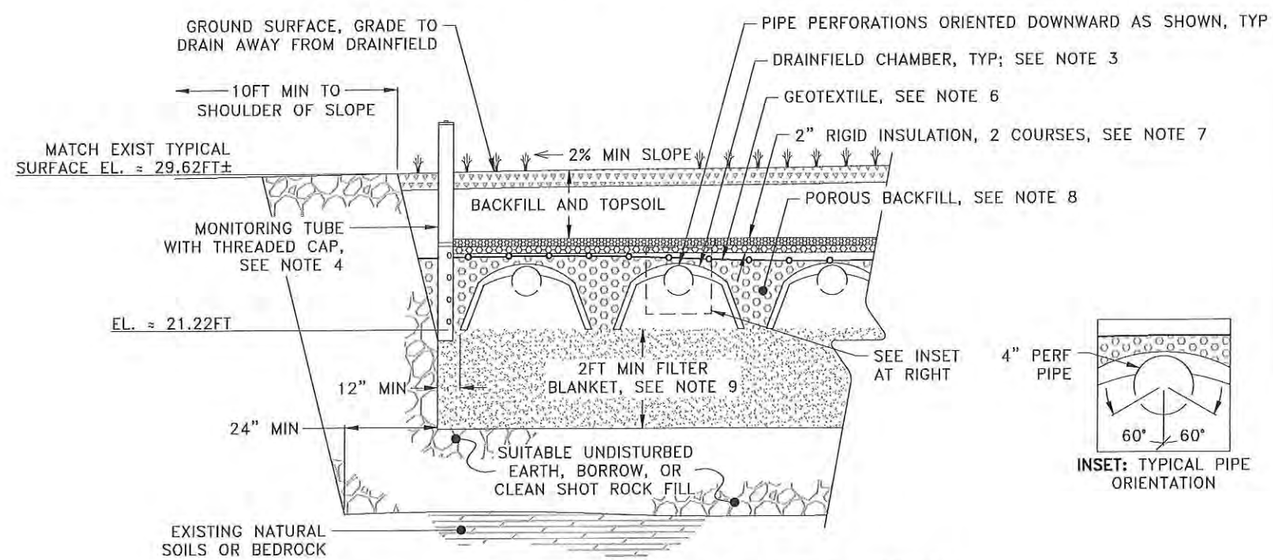


1 SUBSURFACE DRAINFIELD PLAN
NOT TO SCALE – USE DIMENSIONS



2 SUBSURFACE DRAINFIELD SECTION
NOT TO SCALE – USE DIMENSIONS

SHEET NOTES TABLE	
NO.	NOTES
1	4" SOLID HEADER PIPE FROM DISTRIBUTION BOX: SCH 40 ABS, SCH 40 PVC, SDR 35 PVC, OR OTHER APPROVED
2	4" RIGID PERFORATED DISTRIBUTION PIPE, FULL LENGTH OF CHAMBER: SCH 40 PVC, SDR 35 PVC, OR OTHER APPROVED
3	DRAINFIELD CHAMBER: HANCOR ARC 36 HC (BOD), INFILTRATOR H-20, OR APPROVED EQUAL FOR H-10 OR GREATER LOADING
4	4" SCH 40 PVC MONITORING TUBE, (2) MINIMUM, OPPOSITE CORNERS, PERFORATED WITHIN DRAIN ROCK, SOLID ABOVE, THREADED CAP AT END TO PERMIT REMOVAL FOR INSPECTION, WHITE OR OTHER BRIGHT COLOR FOR EASY DETECTION
5	10' MINIMUM FROM EDGE OF DRAINFIELD TO SHOULDER OF NEAREST SLOPE IN ALL DIRECTIONS
6	GEOTEXTILE: DEWITT 6OZ, MIRAFI 180N (BOD), APPROVED EQUAL
7	EPS OR XPS RIGID FOAM INSULATION, 40PSI MIN COMPRESSIVE STRENGTH, 2 COURSES, CROSS LAY TO COVER SEAMS; RIGID INSULATION NOT REQUIRED IF 3 FT COVER IS ATTAINED MEETING REQUIRED DIMENSIONS BELOW DRAINFIELD AS SHOWN
8	POROUS BACKFILL GRADATION PER SPECIFICATIONS
9	FILTER BLANKET GRADATION PER SPECIFICATIONS



3 SUBSURFACE DRAINFIELD SECTION
NOT TO SCALE – USE DIMENSIONS

PLANS DEVELOPED BY:
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STATE OF ALASKA 49TH Brett M. Serlin CE 12303 8/1/19 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
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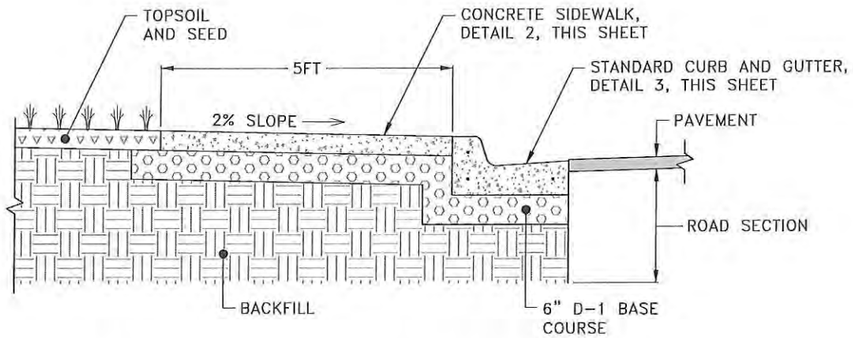
(907) 465-1763

AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

CONSTRUCTION DETAILS: DRAINFIELD

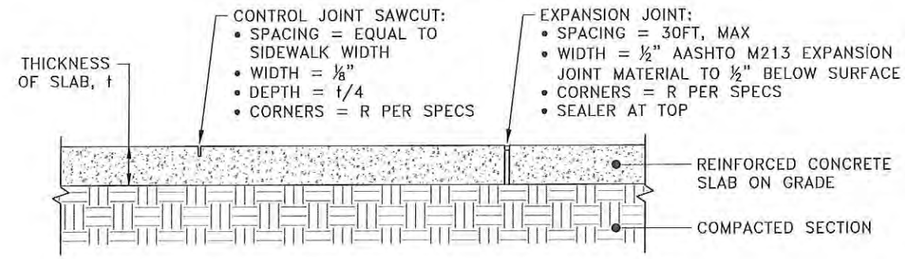
FILE Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE 8/1/2019 | LAYOUT AMHS AUK WW C1.10 | DESIGNED BMS | CHECKED BMS | DRAFTED BMS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.11	1.15



1 SIDEWALK, CURB AND GUTTER DETAIL

NOT TO SCALE – USE DIMENSIONS

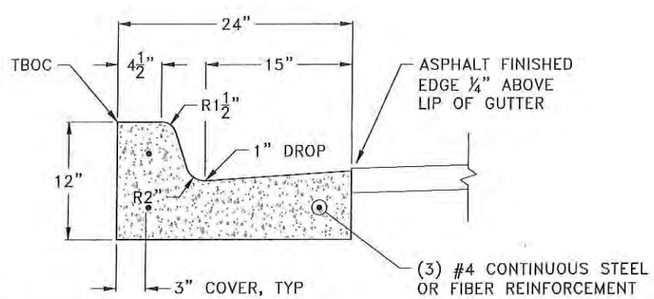


2 CONCRETE EXPANSION AND CONTROL JOINTS

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. BROOM FINISH PATTERN TO BE PERPENDICULAR TO DIRECTION OF TRAFFIC.

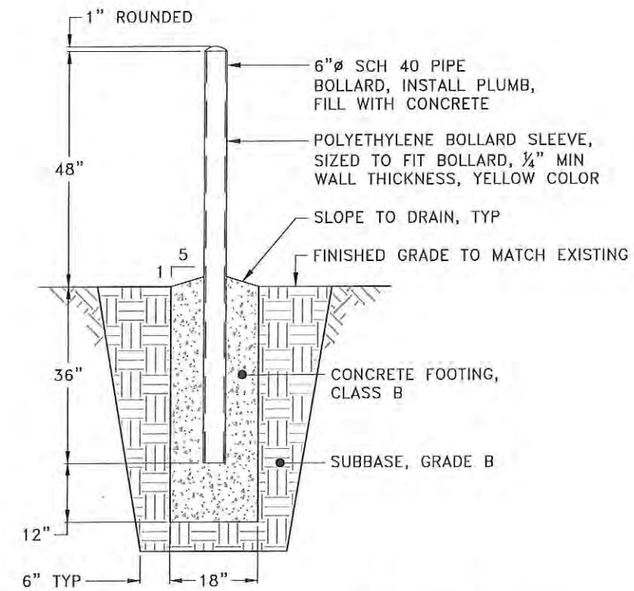


3 STANDARD CURB AND GUTTER

NOT TO SCALE – USE DIMENSIONS

NOTES:

1. CONTROL JOINTS IN CURB AND SIDEWALK SHALL BE MADE TO MATCH WHERE SIDEWALK ADJOINS CURB.



4 BOLLARD AT ASPHALT, GRAVEL, OR GRASS

NOT TO SCALE – USE DIMENSIONS

PLANS DEVELOPED BY:
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AECL1386

STATE OF ALASKA 49TH Brett M. Serlin CE 12303 8/1/19 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

AMHS WASTEWATER TREATMENT SYSTEM UPGRADES – AUKE BAY

CONSTRUCTION DETAILS:
CURB SIDEWALK AND BOLLARD

FILE | Attach 7 17601 AMHS Ferry Terminal Onsite WW Design C.dwg | DATE | 8/1/2019 | LAYOUT | AMHS AUK WW C1.11 | DESIGNED | BMS | CHECKED | BMS | DRAFTED | BMS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z701610000/9500139	2019	C1.12	1.15

WARNING

DOMESTIC WASTEWATER CONTAINS MICROORGANISMS, INCLUDING ENTERIC BACTERIA, VIRUSES, AND PROTOZOAN CYSTS, THAT CAN CAUSE DISEASES UPON EXPOSURE OF SUFFICIENT QUANTITY INTO THE BODY. DISEASES INCLUDE GASTROENTERITIS, HEPATITIS, GIARDIASIS, AND OTHERS, WHICH RESULT IN FEVER, DEHYDRATION, DIARRHEA, NAUSEA, AND VOMITING.

WORKERS SHOULD RECEIVE PROPER TRAINING AND EDUCATION REGARDING HAZARDS OF WORKING AROUND SEWAGE. PERSONAL PROTECTIVE EQUIPMENT (PPE) SHALL BE WORN, INCLUDING RUBBER GLOVES, WATERPROOF CLOTHING, RUBBER BOOTS, AND EYE PROTECTION. FACE SHIELD IS ADVISED WHILE SPRAYING TANK. EXPOSED CLOTHING SHOULD BE WASHED WITH SOAP IN HOT WATER.

THOROUGHLY WASH HANDS WITH SOAP AND CLEAN, RUNNING HOT WATER IMMEDIATELY AFTER EVERY EXPOSURE AND BEFORE EATING AND SMOKING. DO NOT TOUCH YOUR MOUTH, EYES, OR NOSE UNTIL HANDS ARE WASHED.

PERMITTING

PRIOR TO REMOVAL OF COMPONENTS AND MATERIALS FROM GROUND AND HAULING ON PUBLIC ROADS, CONTRACTOR SHALL CONSULT WITH STATE OF ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION AT 907-465-5167 AND LOCAL AUTHORITIES.

CONTRACTOR SHALL HAVE PERMISSION FROM OWNER OF RECEIVING LOCATION FOR DISPOSAL OF COMPONENTS AND MATERIALS PRIOR TO REMOVAL FROM GROUND.

DECOMMISSIONING OF COMPONENTS AND MATERIALS

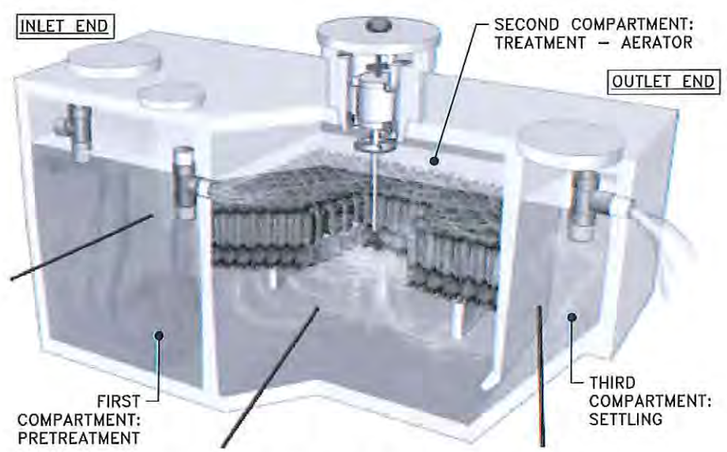
PROCEDURE

1. REVIEW WARNING AND PERMITTING NOTES, THIS SHEET.
2. OTHER COMPONENTS AND MATERIALS IN EXISTING WASTEWATER TREATMENT SYSTEM NOTED FOR DECOMMISSIONING AND/OR REMOVAL AND DISPOSAL SHALL BE DISINFECTED WITH HYDRATED LIME IN ACCORDANCE WITH TANK DECOMMISSIONING PROCEDURE PRIOR TO HAULING ON PUBLIC ROADS.
3. EXISTING ELECTRICAL SERVICES, CONDUITS, CONTROL PANELS, ALARMS, AND OTHER APPURTENANCES CONNECTED TO TREATMENT PLANTS SHALL BE REMOVED FOR DISPOSAL. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE (NEC) AND LOCAL CODES.
4. DO NOT LOOK DIRECTLY AT UV LIGHT; IT MAY CAUSE SERIOUS EYE DAMAGE.
5. HANDLE CHLORINE TABLETS AND CHLORINE TABLET HOUSINGS WITH CAUTION. WEAR PPE TO AVOID INJURY.

DECOMMISSIONING OF JET J-500 TREATMENT PLANT

PROCEDURE

1. REVIEW WARNING, PERMITTING, AND OTHER NOTES, THIS SHEET.
2. PUMP TANK CLEAR OF ALL CONTENTS AND DISPOSE OF AT MUNICIPAL WASTEWATER TREATMENT PLANT OR OTHER SYSTEM CERTIFIED TO ACCEPT HAULED WASTEWATER. FULL TANK IS APPROXIMATELY 1,200 GALLONS.
3. WASH DOWN TANK SURFACES WITH HIGH PRESSURE FRESH WATER.
4. PUMP TANK CLEAR OF ALL WASH DOWN WATER AND DISPOSE OF AT MUNICIPAL WASTEWATER TREATMENT PLANT OR OTHER SYSTEM CERTIFIED TO ACCEPT HAULED WASTEWATER.
5. LIBERALLY APPLY HYDRATED LIME SOLUTION SPRAY OF SUFFICIENT QUANTITY AND CONCENTRATION TO TANK SURFACES TO RAISE pH IN TANK TO 12 OR HIGHER FOR ONE HOUR MINIMUM TO DISINFECT SURFACES. TEST pH USING LITMUS PAPER OR OTHER METHOD APPROVED BY ENGINEER.
   - 5.1. ALTERNATIVE DISINFECTANTS AND METHODS PROTECTIVE OF PUBLIC HEALTH, PUBLIC AND PRIVATE WATER SYSTEMS, AND THE ENVIRONMENT ARE SUBJECT TO APPROVAL BY ENGINEER.
6. REMOVE TANK FROM GROUND AND DISPOSE OF AT SOLID WASTE FACILITY.
7. BACKFILL VOID SPACE WITH COMPACTED SELECTED MATERIAL, TYPE A OR B. CAP TO SURFACE GRADE WITH 4 INCHES TOPSOIL AND GRASS SEED OR COMPACTED D-1, AS NOTED IN DRAWINGS, GRADED TO MATCH EXISTING CONTOURS TO PREVENT PONDING OF WATER.



1 CUTAWAY SECTION VIEW JET J-500 TANK
COURTESY OF JET INC

PLANS DEVELOPED BY:
TONGASS ENGINEERING LLC
PO BOX 5436
KETCHIKAN, ALASKA 99901
(907) 617-8982
AECL1386

STATE OF ALASKA 49TH Brett M. Serlin CE 12303 8/1/19 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

AMHS WASTEWATER TREATMENT SYSTEM UPGRADES - AUKE BAY

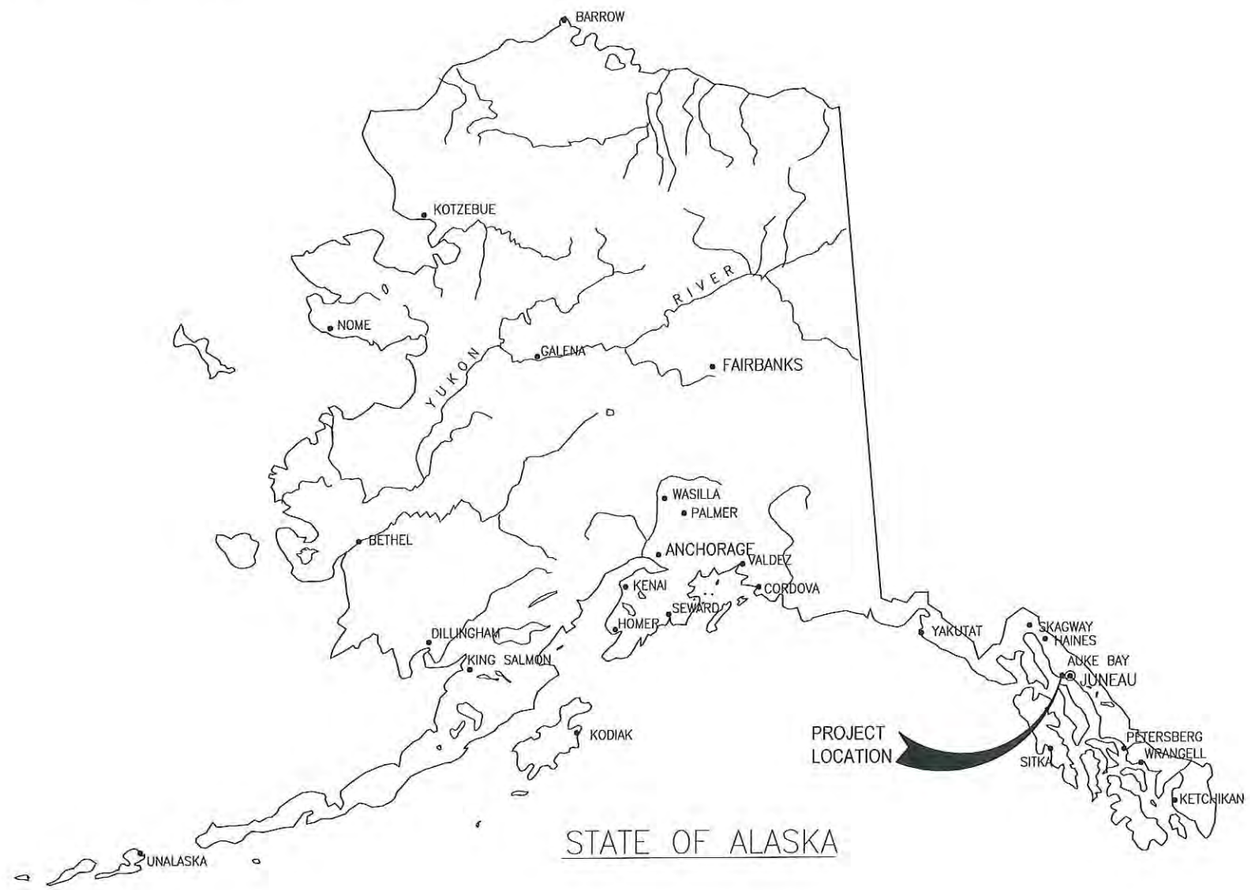
DECOMMISSIONING EXISTING WASTEWATER TREATMENT SYSTEM

FILE Attach 7 17601 AMHS Ferry Terminal Onsite WW Design TPICW.dwg | DATE 8/1/2019 | LAYOUT AMHS AUK WW C1.12 | DESIGNED BMS | CHECKED BMS | DRAFTED BMS

NO.	DATE	REVISION
A	06/03/19	PRELIMINARY DESIGN
B	07/08/19	ISSUED FOR REVIEW
C	07/16/19	ISSUED FOR PLAN REVIEW

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	SAMHS00088/000S896	2019	T1.0	-

AMHS FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL



SHEET INDEX

SHEET NO	SHEET TITLE
T1.0	TITLE SHEET AND DRAWING INDEX
T1.1	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
C1.0	OVERALL SITE PLAN
C1.1	DEMOLITION PLAN
C1.2	ENLARGED SITE PLAN
C1.3	CIVIL DETAILS
M1.0	MECHANICAL DETAILS
E1.0	ELECTRICAL RISER DIAGRAM

SHEET SET NO. 1

ISSUED FOR PLAN REVIEW

STATE OF ALASKA
49TH
MICHAEL K. FRISON
Jul 17, 2019
No. CE11057
REGISTERED PROFESSIONAL ENGINEER

800 E. Street
Anchorage, AK 99501
AECC249
907-278-6664
COFFMAN ENGINEERS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

TITLE SHEET AND DRAWING INDEX

DRAWING LOCATION
p:\Anc\19Jobs\190289 amhs fuel storage tank replacement\0.0 dwgs\190289_T1.0.dwg

DATE TIME
5/29/2018 10:19 AM

LAYOUT
ANSI D (22x34)

SCALE
AS NOTED

XREFS

DESIGNED BY AJH
CHECKED BY MAF
DRAFTED BY RNG

NO.	DATE	REVISION
A	06/03/19	PRELIMINARY DESIGN
B	07/08/19	ISSUED FOR REVIEW
C	07/16/19	ISSUED FOR PLAN REVIEW

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	SAMHS00088/000S896	2019	T1.1	–

LEGEND

EXISTING	NEW	
		PROPERTY LINE/APE LINE
		COASTLINE
		STRUCTURE
—E—	—E—	ELECTRIC LINE
—OHE—		OVERHEAD ELECTRIC LINE
		FUEL
	—POL—	PETROLEUM OIL LUBRICANTS
		STORM DRAIN
		SEWER
		WATER
		STORM DRAIN
		AC PAVEMENT
		CONCRETE
		MANHOLE
		POWER POLE
		BOLLARD
		MECHANICAL TIE-IN
		MANHOLE
		POWER POLE

ABBREVIATIONS:

&	AND
ø	DIAMETER
ℙ	PROPERTY LINE, PLATE
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ASPHALT CONCRETE
ADOT	ALASKA DEPARTMENT OF TRANSPORTATION
AMHS	ALASKA MARINE HIGHWAY SYSTEM
AST	ABOVEGROUND STORAGE TANK
BLDG	BUILDING
BOP	BOTTOM OF PIPE
CLR	CLEAR
CJP	COMPLETE JOINT PENETRATION
CO	CLEAN OUT
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUOUS
E	EAST
(E)	EXISTING
EL	ELEVATION
EOC	EDGE OF CONCRETE
EP	EDGE OF PAVEMENT
EW	EACH WAY
FG	FINISH GRADE
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FT	FEET
G	GAS
GAL	GALLON
GALV	GALVANIZED
GOV'T	GOVERNMENT
H	HEIGHT
HORIZ	HORIZONTAL
IN	INCH
INV	INVERT
LONG	LONGITUDINAL
MAX	MAXIMUM
M.E.	MATCH EXISTING
MIN	MINIMUM
N	NORTH
NE	NORTHEAST
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NW	NORTHWEST
OHE	OVERHEAD ELECTRIC
O.C.	ON CENTER
PCC	PORTLAND CEMENT CONCRETE
REC	RECORD
R.O.W.	RIGHT OF WAY
S	SOUTH
SE	SOUTHEAST
SEC	SECTION
SF	SQUARE FEET
SIM	SIMILAR
STL	STEEL
SW	SOUTHWEST
TC	TOP OF CONCRETE
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGC	UNDERGROUND COMMUNICATIONS
UST	UNDERGROUND STORAGE TANK
V.B.	VALVE BOX
VERT	VERTICAL
W	WATER, WEST
W/	WITH

CIVIL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT & PF) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, DATED 2017.
2. CONTRACTOR SHALL COORDINATE WITH ALL NECESSARY FEDERAL AND STATE DEPARTMENTS PRIOR TO START OF WORK TO OBTAIN ALL NECESSARY CLEARANCES TO ENTER FACILITIES.
3. ALL ADOT FACILITY SAFETY PROCEDURES SHALL BE OBSERVED. CONSTRUCTION INSIDE ADOT FACILITY WILL REQUIRE PERSONNEL TO BE CURRENT ON ALL ADOT SAFETY ORIENTATIONS, AND HAVE A TRANSPORTATION WORKER IDENTIFICATION CREDENTIAL (TWIC).
4. LOCATION OF CONTRACTOR LAYDOWN AND STOCKPILE AREAS SHALL BE COORDINATED WITH THE PROJECT MANAGER.
5. FACILITY TRAVELWAYS SHALL BE KEPT CLEAR AT ALL TIMES DURING CONSTRUCTION. IF TRAVELWAY BLOCKAGE IS REQUIRED, NOTIFY OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO WORK AND OBTAIN WRITTEN APPROVAL PRIOR TO BLOCKAGE.
6. CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED AND UNUSED MATERIALS OFFSITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
7. A SURVEY WAS NOT PERFORMED AS PART OF THIS PROJECT. KNOWN UNDERGROUND UTILITIES, FUEL LINES AND STRUCTURES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL VERIFY SIZE, DEPTH AND LOCATIONS OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES WITHIN THE PROJECT AREA. NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY CONFLICTS WITH THE CONSTRUCTION DRAWINGS. RECORD LOCATIONS AND CHANGES TO UTILITIES ON RED-LINED PLANS FOR SUBMITTAL WITH AS-BUILT PLANS. CONTRACTOR SHALL PROTECT UTILITIES/STRUCTURES FROM DAMAGE AND SHALL NOT DISTURB UNDERGROUND UTILITIES/STRUCTURES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES TO REMAIN SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITION OR BETTER AT NO CHARGE TO THE OWNER.
8. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND STRUCTURES AFFECTING THE WORK. NOTIFY THE PROJECT MANAGER IN WRITING OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN IN THE CONTRACT DOCUMENTS WHICH ADVERSELY IMPACT THE WORK. REFER TO SPECIFICATION SECTION 683.
9. ALL DISTURBED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION. NO SEPARATE PAYMENT WILL BE MADE FOR SURFACE RESTORATION.
10. SUBBASE GRADE B SHALL BE IN CONFORMANCE WITH ADOT & PF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (DATED 2017).
11. ALL FILL AND BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NO THICKER THAN 12 INCHES AND COMPACTED TO 95% MAXIMUM DENSITY UNLESS NOTED OTHERWISE.
12. CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO ACI AND ASTM SPECIFICATIONS AS FOLLOWS:
    COMPRESSIVE STRENGTH ASTM C39; 4500 PSI AT 28 DAYS.
    CEMENT ASTM C150; TYPE IA, IIA, OR IIIA.
    WATER POTABLE.
    WATER/CEMENT RATIO 0.45 MAXIMUM BY WEIGHT.
    AIR ENTRAINMENT 4.5%-7.5% FOR 3/4" MAX AGGREGATE.

    CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR REVIEW BY THE PROJECT STRUCTURAL ENGINEER.
13. ALL REINFORCING STEEL SHALL CONFORM TO ACI AND ASTM SPECIFICATIONS AS FOLLOWS:
    BARS, SHOP BENT ONLY ASTM A615, GRADE 60.
    BARS, FIELD BENT ASTM A706, GRADE 60.
    BARS, WELDED ASTM A706, GRADE 60.
14. ALL REINFORCEMENT SHALL BE RIGIDLY SUPPORTED ON CONCRETE BLOCKS OR APPROVED METAL ACCESSORIES SECURED USING 16 GA ANNEALED WIRE. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION. LAP ALL REINFORCING WITH CLASS B LAP SPLICE, PER ACI 318.
15. ALL DRILLED-IN ANCHORS AND DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS INCLUDING DRILL BIT SIZE, HOLE DEPTH AND CLEANING, MINIMUM EMBEDMENT, EDGE DISTANCES, MATERIAL PLACEMENT, TEMPERATURE AND MOISTURE CONTROL, AND FINAL TORQUING REQUIREMENTS.
16. DRILLED-IN ADHESIVE ANCHORS (DIAA) SHALL BE "HIT-HY 200" ADHESIVE ANCHOR SYSTEM FOR CONCRETE BY HILTI FASTENING SYSTEMS OR APPROVED EQUIVALENT. ICC CERTIFICATION REQUIRED. ANCHORS SHALL BE GALVANIZED THREADED ROD. DIAMETER AND EMBEDMENT AS NOTED ON THE DRAWINGS.
17. ALL STRUCTURAL STEEL SHALL CONFORM TO AISC AND ASTM SPECIFICATIONS AS FOLLOWS:
    PLATES ASTM A36, FY = 36 KSI
    STRUCTURAL PIPE ASTM A53, GRADE B
    COMMON BOLTS ASTM A307
    HIGH STRENGTH HEAVY HEX NUTS ASTM A194 OR A563
    THREADED ROD ASTM F1554, GR. 36
18. STEEL SHALL BE CLEAN AND HAVE A UNIFORM SURFACE. GOUGES SHALL BE FILLED AND GROUND SMOOTH. SCALE AND MILL MARKS SHALL BE REMOVED.
19. ALL STRUCTURAL WELDING SHALL BE PRE-QUALIFIED AND CONFORM TO AISC AND AWS SPECIFICATIONS AS FOLLOWS:
    WELDERS CERTIFIED FOR ROD AND POSITION
    ELECTRODES SMAW-E70XX; HEAVY COATED; LOW HYDROGEN
    MINIMUM WELD CONT. FILLET PER AISC TABLE J2.4.
20. CONTRACTOR SHALL SUBMIT WELDER QUALIFICATIONS AND PROCEDURE QUALIFICATIONS. WHERE NOT SHOWN, USE MIN. WELD SIZE PER AISC AND AWS.
21. WELDS EXPOSED IN FINISHED WORK SHALL BE FREE OF SLAG, SPATTER, AND GOUGES. SHARP EDGES SHALL BE GROUND SMOOTH.
22. ALL STEEL SHALL BE HOT-DIP GALVANIZED. ALL BOLTS, NUTS, WASHERS AND OTHER HARDWARE SHALL BE GALVANIZED.
23. THE FOLLOWING ARE TO BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION:
    CONCRETE REINFORCEMENT SHOP DRAWINGS
    DRILLED-IN ANCHOR DATA SHEETS
    WELDER QUALIFICATIONS AND WELD PROCEDURES
24. SPECIAL INSPECTORS SHALL BE QUALIFIED AND APPROVED BY ADOT & PF. THE FOLLOWING ITEMS SHALL BE INSPECTED IN ACCORDANCE WITH CHAPTER 17 OF IBC:
    POST-INSTALLED ANCHORS AND DOWELS.
    CONTINUOUS INSPECTION OF ADHESIVE ANCHORS AND DOWELS
25. TOPSOIL SHALL MEET THE REQUIREMENTS OF SECTION 726. THICKNESS OF TOPSOIL SHALL BE A MINIMUM OF 4" UNLESS NOTED OTHERWISE.
26. SEED SHALL MEET THE REQUIREMENTS OF SECTION 724. DRY METHOD.

ISSUED FOR PLAN REVIEW

STATE OF ALASKA 49TH MICHAEL A. PARSON JULY 17, 2019 No. CE11097 REGISTERED PROFESSIONAL ENGINEER

600 F. Street Anchorage, AK 99501 AECC239 907-276-6503
COFFMAN ENGINEERS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

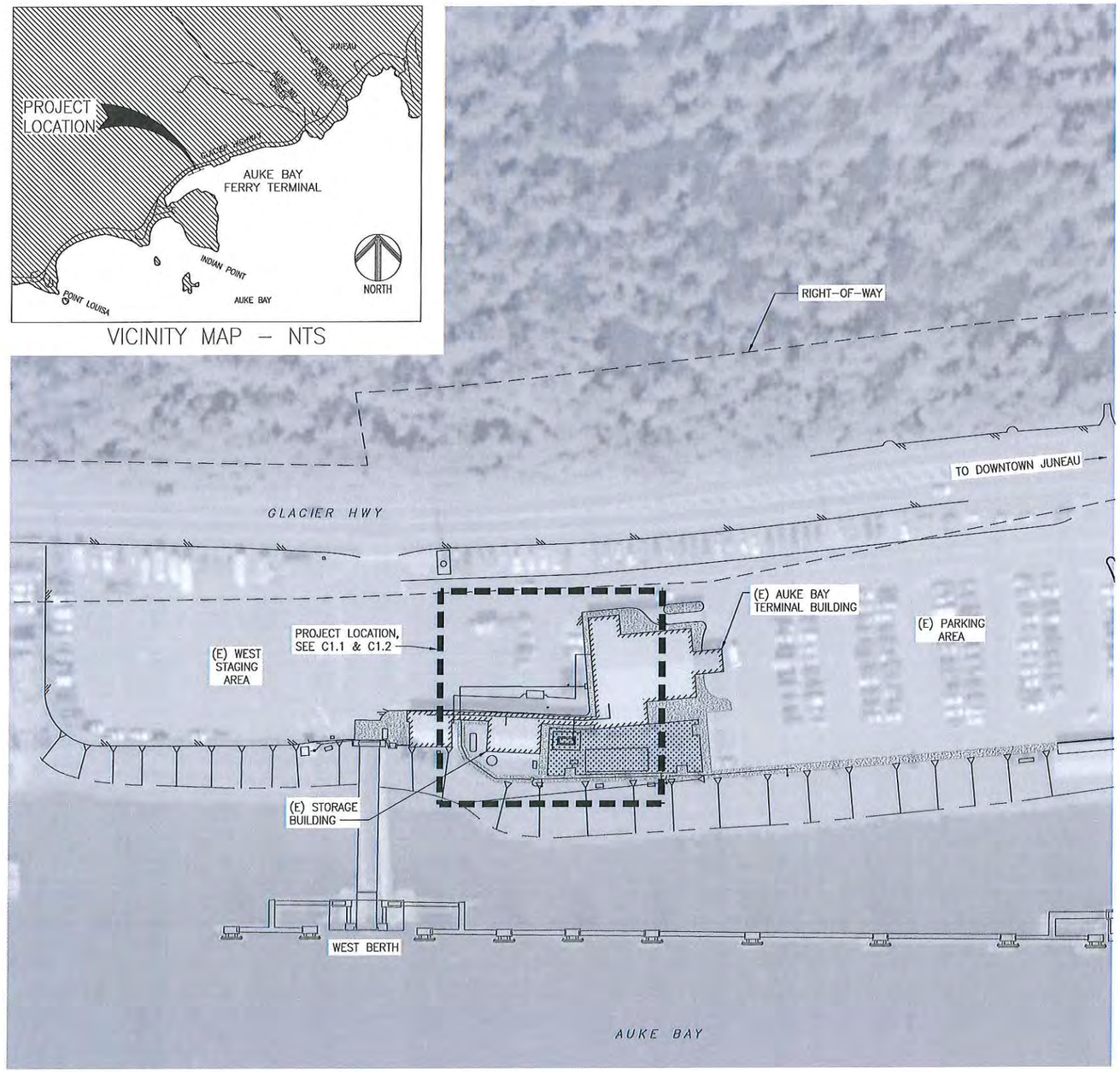
GENERAL NOTES, LEGEND, AND ABBREVIATIONS

DRAWING LOCATION: D:\Anc\19Jobs\190289 amhs fuel storage tank replacement\0.0 dwgs\190289_T1.1.dwg
DATE TIME: 6/29/2018 10:19 AM
LAYOUT: ANSI D (22x34)
SCALE: AS NOTED
XREFS:
DESIGNED BY: AJV
CHECKED BY: MAP
DRAFTED BY: RMG

NO.	DATE	REVISION
A	06/03/19	PRELIMINARY DESIGN
B	07/08/19	ISSUED FOR REVIEW
C	07/16/19	ISSUED FOR PLAN REVIEW

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	SAMHS00088/000S896	2019	C1.0	–

VICINITY MAP – NTS



1 – OVERALL SITE PLAN
SCALE: 1" = 50'-0"

1"=50'-0" 0 25 50 100 150 NORTH

SHEET NOTES:

1. FOR GENERAL NOTES AND LEGEND, SEE T1.1.

ISSUED FOR PLAN REVIEW

STATE OF ALASKA
MICHAEL K. FRISON
July 17, 2019
No. CE1097
REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

OVERALL SITE PLAN

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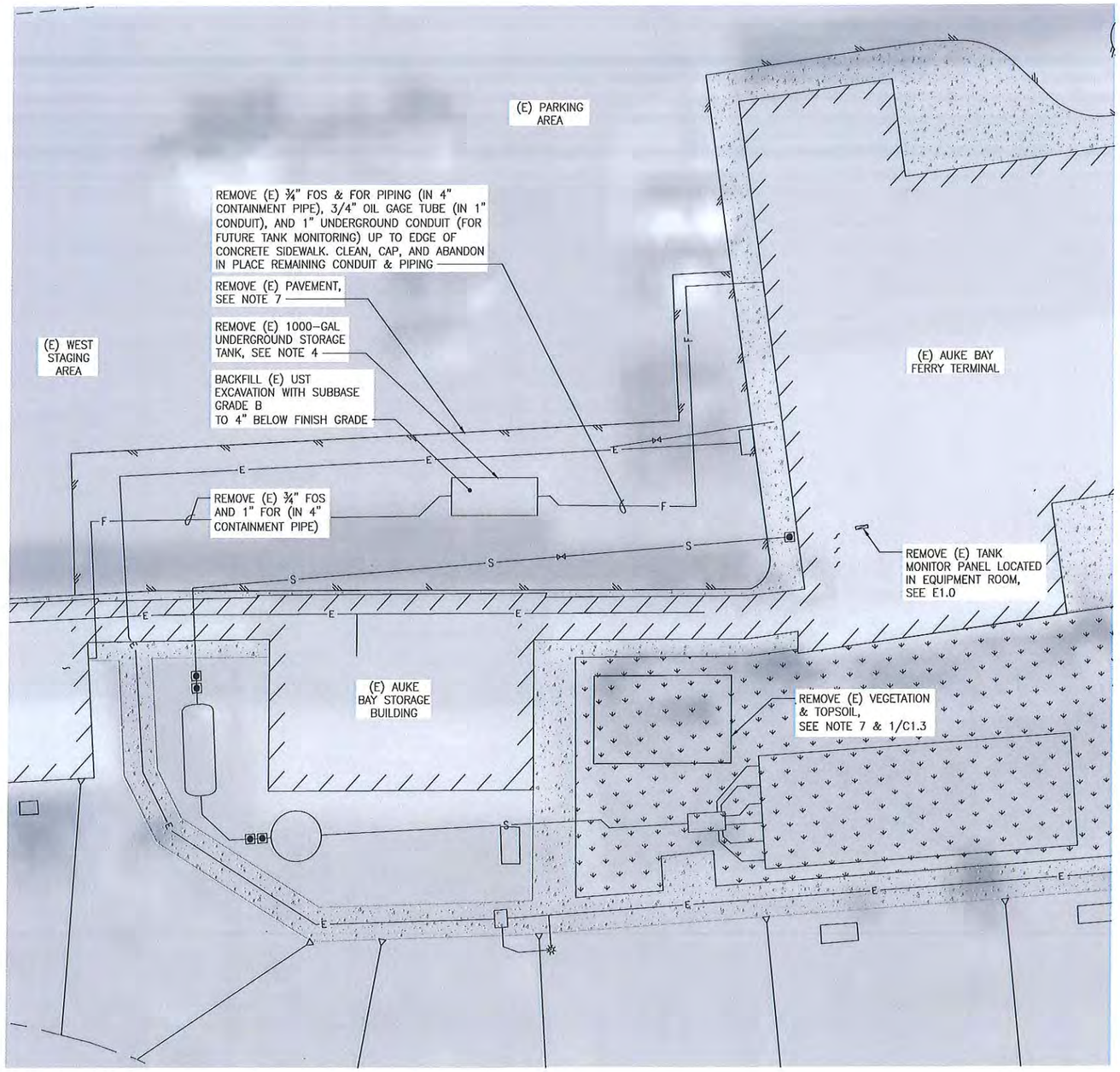
ALASKA	SAMHS00088/000S896	2019	C1.1	–



1 DEMOLITION PLAN
SCALE: 1" = 10'-0"

1"=10'-0" 0 5 10 20 30

NORTH

SHEET NOTES:

1. CONTRACTOR SHALL REMOVE FUEL OIL FROM THE EXISTING UST. STARTING AT THE TOP OF THE FUEL LEVEL, THE CONTRACTOR SHALL DRAW DOWN AND FILTER TO REMOVE WATER AND PARTICULATES.
2. CONTRACTOR SHALL TEMPORARILY STORE FUEL OIL FOR FUTURE TRANSFER TO NEW ABOVEGROUND STORAGE TANK (AST) OR TRANSFER TO OTHER AST AT THE DIRECTION OF THE OWNER.
3. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING 1,000 GALLON UST, CONCRETE SLAB, UTILITIES, AND APPURTENANCES PER SPECIFICATIONS. (E) CONCRETE TANK BALLAST TO REMAIN. SEE SPECIFICATION SECTION 801 FOR REQUIREMENTS PERTAINING TO REMOVAL OF UNDERGROUND STORAGE TANK AND UTILITIES.
4. CONTRACTOR SHALL PROVIDE A TEMPORARY FUEL OIL SUPPLY OF 400 GALLONS THROUGHOUT CONSTRUCTION.
5. CONTRACTOR SHALL USE AIR OR VACUUM EXCAVATION METHODS WITHIN 5 FEET OF THE EXISTING BUILDINGS.
6. CONTRACTOR SHALL REMOVE EXISTING LANDSCAPING & TOPSOIL AS REQUIRED TO FACILITATE REMOVAL OF EXISTING UST AND INSTALLATION OF AST. CONTRACTOR SHALL PROTECT STRUCTURES AND UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING STRUCTURES AND UTILITIES SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITION OR BETTER AT NO COST TO THE OWNER.

ISSUED FOR PLAN REVIEW

STATE OF ALASKA 49TH MICHAEL K. FRISON Jul 17, 2019 No. CE11057 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

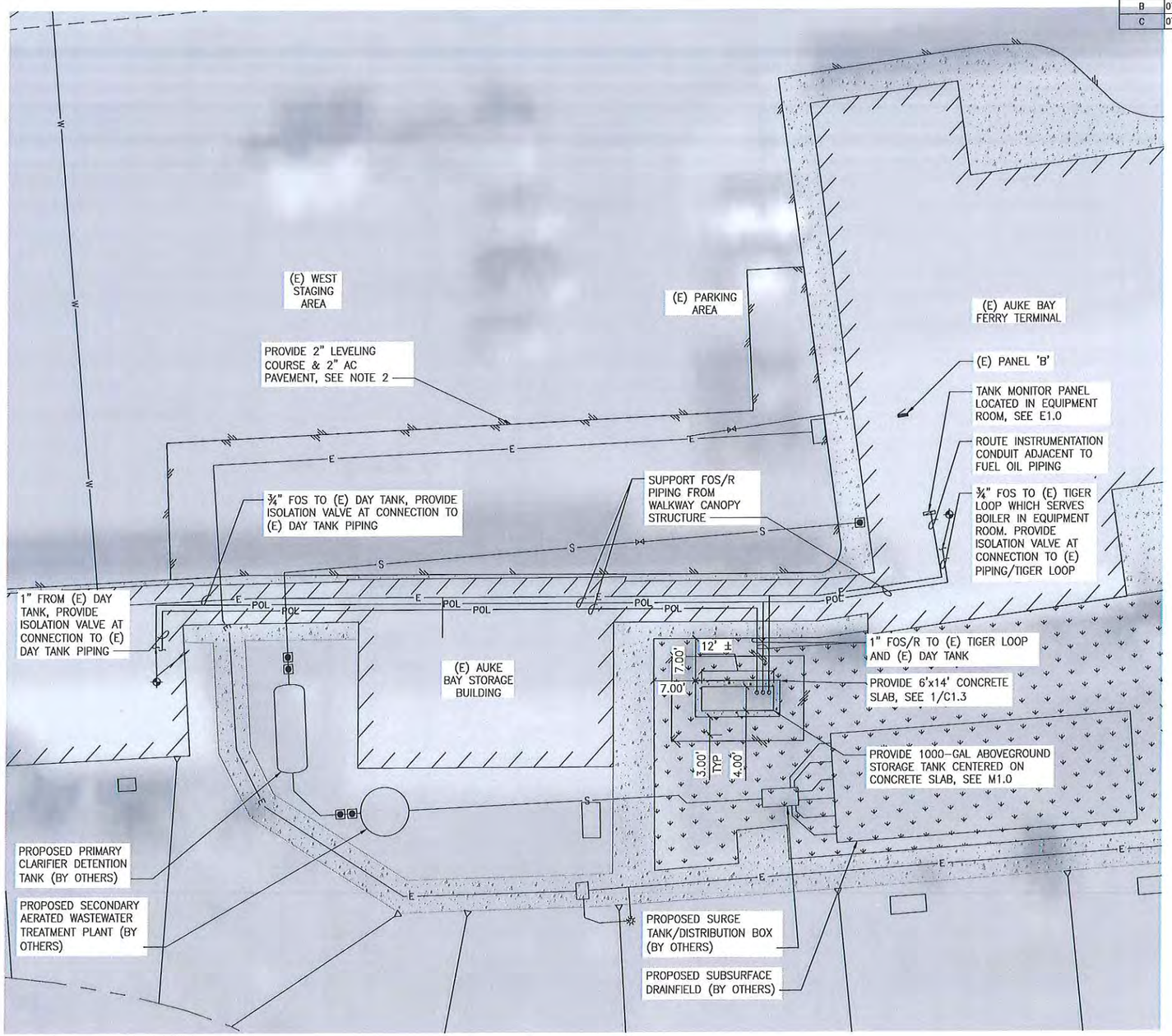
ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

DEMOLITION PLAN

DRAWING LOCATION p:\Anc\19Jobs\190289 amhs fuel storage tank replacement\0.0 dwgs\190289_C1.1.dwg
DATE TIME 6/29/2018 10:19 AM
LAYOUT ANSI D (22x34)
SCALE AS NOTED
XREFS
DESIGNED BY AJN
CHECKED BY MAF
DRAFTED BY RMG

NO.	DATE	REVISION
A	06/03/19	PRELIMINARY DESIGN
B	07/08/19	ISSUED FOR REVIEW
C	07/16/19	ISSUED FOR PLAN REVIEW

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	SAMHS00088/000S896	2019	C1.2	–



1 – ENLARGED SITE PLAN
SCALE: 1" = 10'-0"

1"=10'-0" 0 5 10 20 30

NORTH

SHEET NOTES:

1. BOND TANK SKID AT OPPOSITE ENDS OF THE TANK TO CONCRETE ENCASED ELECTRODES LOCATED IN CONCRETE SLAB WITH #2/0 AWG CONDUCTOR. CONCRETE ENCASED ELECTRODE TO COMPLY WITH NEC 250.52(A)(3). SEE C1.3 FOR DETAIL.
2. FINISH GRADE SHALL MATCH EXISTING GRADE ELEVATIONS. SEE SPECIFICATION SECTION 401 FOR ASPHALT PATCHING REQUIREMENTS.
3. ALL FUEL OIL PIPING SHALL BE ROUTED ABOVE GRADE.
4. PIPING AND EQUIPMENT LOCATIONS ARE APPROXIMATE. FIELD VERIFY LOCATION AND PIPING QUANTITIES.

ISSUED FOR PLAN REVIEW

STATE OF ALASKA
MICHAEL K. FRISON
Jul 17, 2019
No. CE11097
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

ENLARGED SITE PLAN

DESIGNED BY AJN
CHECKED BY MAP
DRAFTED BY RMG

XREFS

SCALE AS NOTED

LAYOUT ANSI D (22x34)

DATE TIME 6/29/2018 10:19 AM

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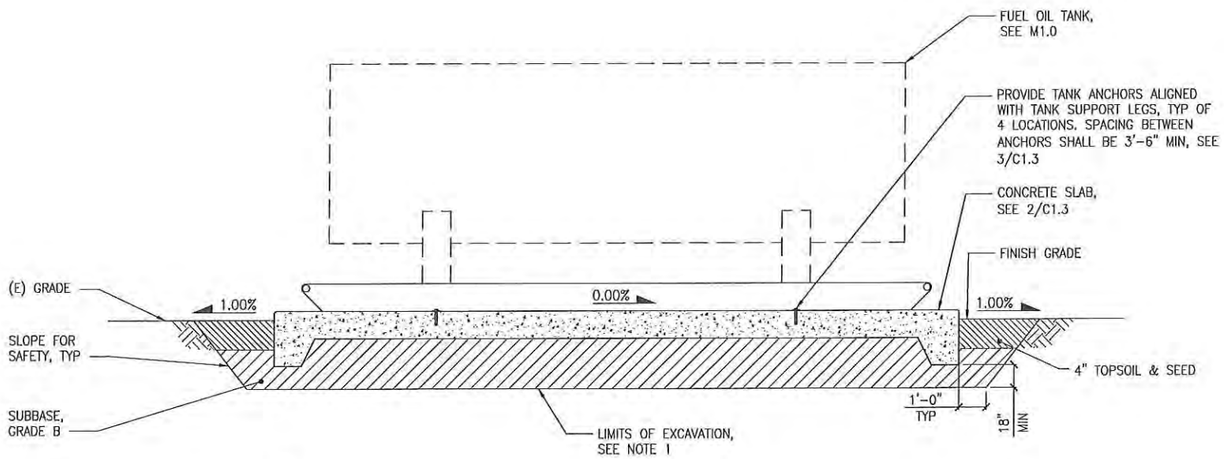
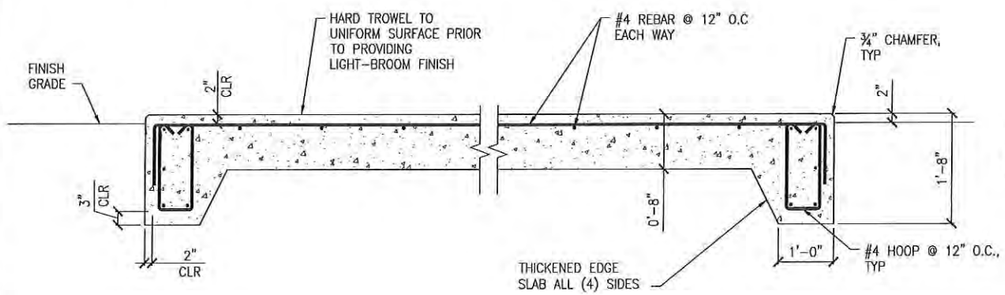


NOTES:

1. REMOVE ALL ORGANICS AND SOFT, YIELDING SOIL DOWN TO FIRM SOIL AND COMPACT TO 95% MAXIMUM DENSITY.

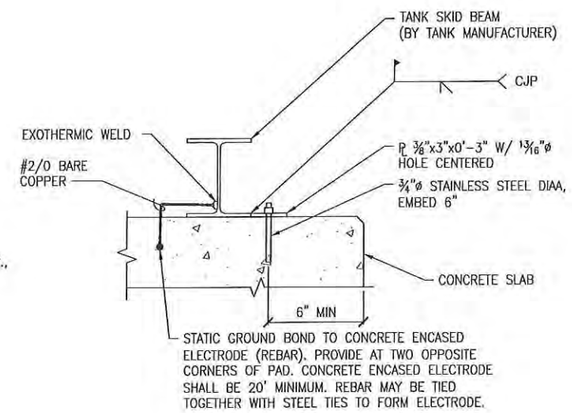
1 FUEL TANK CONCRETE SLAB SECTION

SCALE: NTS



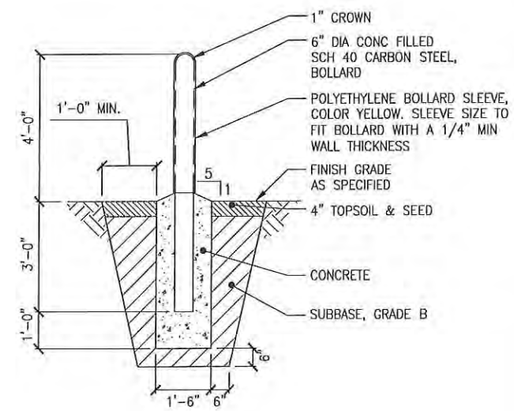
2 CONCRETE SLAB REINFORCEMENT DETAIL

SCALE: NTS



3 CONNECTION DETAIL

SCALE: NTS



4 BOLLARD DETAIL

SCALE: NTS

ISSUED FOR PLAN REVIEW

STATE OF ALASKA
MICHAEL A. FRISON
July 17, 2019
No. CE11167
REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

CIVIL DETAILS

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LAYOUT: ANSI D (22x34)
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XREFS:
DESIGNED BY: MJK
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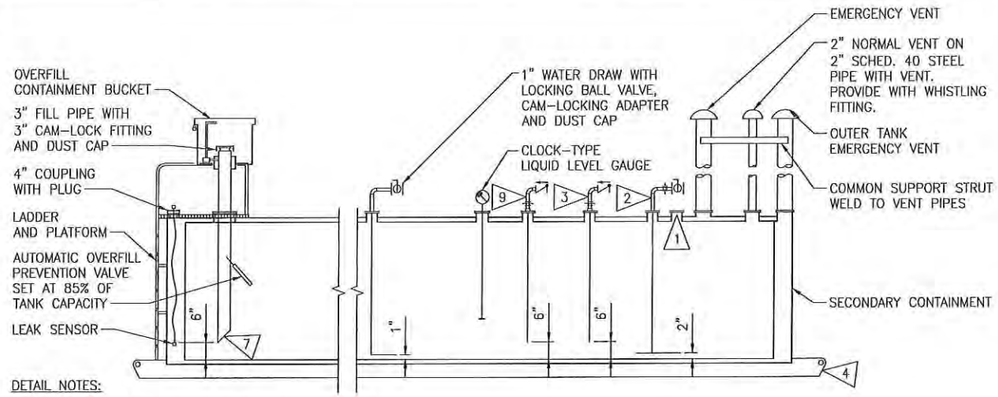

DETAIL NOTES:

1 4" COUPLING WITH PLUG FOR TANK LEVEL SENSOR

2 SUPPLY, 1", DIPTUBE TO 2" FROM BOTTOM

3 1" SPARE WITH CAP.

4 SKID

5. SUPPLY LINES SHALL INCLUDE REMOVABLE JOINT (UNION OR FLANGE) SHUT OFF VALVE, AND ANTI-SUCTION VALVE.

6. LENGTH GIVEN IS APPROXIMATE. VENTS TERMINATE 12' ABOVE ADJACENT GROUND LEVEL. OVERFILL CONTAINMENT BUCKET INSTALLED TO FIT SERVICE PLATFORM.

7 CUT BOTTOM OF FILL DIPTUBE AT 45° ANGLE AT 6" FROM BOTTOM.

8. AREAS WITHIN 18" OF ALL TANK HATCHES AND VENTS ARE CLASSIFIED AS CLASS I DIVISION 2 LOCATIONS PER API 500.

9 3/4" RETURN.

1 – FUEL OIL STORAGE TANK
SCALE: NTS

MECHANICAL NOTES:

1. FOR ALL ACCESSORIES, APPURTENANCES, COMPONENTS, AND COATINGS, FOLLOW ALL MANUFACTURER'S INSTRUCTIONS.
2. ALL BUILDING PENETRATIONS SHALL BE APPROPRIATELY SEALED TO MAINTAIN THE INTEGRITY OF THE WALL SYSTEM.

CORROSION PROTECTION NOTES:

1.01 COATINGS FOR EXTERNAL SURFACES (TANKS, PIPING, ETC.)

A. PRODUCTS AND EXECUTION
1. SOLVENT CLEAN PER SSPC-SP1
   a. USE DEVOE DEVPREP 88 OR ENGINEER APPROVED EQUAL.
2. PREPARE SURFACES PER SSPC-SP10
   a. SURFACES SHALL HAVE A 2 TO 3 MIL SURFACE PROFILE.
   b. BLAST PROFILE SHALL BE OF A SHARP, JAGGED NATURE AS OPPOSED TO A "PEENED" PATTERN.
3. COATING LAYERS
   a. THE PRIMER SHALL BE DEVOE CATHA-COAT 302H OR ENGINEER APPROVED EQUAL. THE DFT SHALL BE 2-4 MILLS. THE COLOR SHALL BE GREEN.
   b. TWO INTERMEDIATE COATS SHALL BE DEVOE BAR-RUST 235 OR ENGINEER APPROVED EQUAL. THE DFT FOR EACH COAT SHALL BE 4-8 MILLS. THE COLOR SHALL BE BUFF.
   c. THE TOP COAT SHALL BE DEVOE DEVTHANE 389 OR ENGINEER APPROVED EQUAL. THE DFT SHALL BE 2-3 MILLS. THE COLOR SHALL BE WHITE.
4. FIELD REPAIRS.
   a. ABOVE GROUND REPAIRS AND WELD AREAS SHALL USE THE MATERIALS SPECIFIED IN ITEMS 3. a, b AND c ABOVE.
   b. BELOW GROUND REPAIRS SHALL USE THE MATERIALS SPECIFIED IN ITEMS 3. a, b AND c ABOVE OR BY USING A DENSO PETROLATUM TAPE SYSTEM. WELD AREAS, ELBOWS, FITTINGS OR OTHER IRREGULAR SURFACES SHALL BE COATED WITH A DENSO PETROLATUM TAPE SYSTEM. THE SYSTEM SHALL INCLUDE DENSYL MASTIC AND TAPE AND DENSO FIBER MESH OUTER WRAP.

1.02 COATING FOR INTERNAL TANK SURFACES

A. PRODUCTS AND EXECUTION
1. SOLVENT CLEAN PER SSPC-SP1
   a. USE DEVOE DEVPREP 88 OR ENGINEER APPROVED EQUAL.
2. PREPARE SURFACES PER SSPC-SP10
   a. SURFACES SHALL HAVE A 2 TO 3 MIL SURFACE PROFILE
   b. BLAST PROFILE SHALL BE OF SHARP, JAGGED NATURE AS OPPOSED TO A "PEENED" PATTERN.
3. COATING LAYERS
   a. COAT THE BOTTOM 24" OF THE INTERIOR SURFACES OF THE TANK.
   b. APPLY THREE COATS OF DEVOE BAR RUST 236 OR ENGINEER APPROVED EQUAL. EACH COAT DFT SHALL BE 4-8 MILS. EACH COAT SHALL BE DIFFERENT COLORS. TOP COAT SHALL BE WHITE.
   c. REPAIR ALL COATING DEFECTS PER MANUFACTURER'S INSTRUCTIONS.
   d. INSPECT ALL COATED SURFACES FOR CONFORMANCE TO THE SPECIFICATIONS.
   e. PERFORM HOLIDAY TESTING ON ALL INTERNAL FULLY CURED COATINGS USING METHODS AND VOLTAGES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND LEVEL 3 NACE RP 0188.

1.03 COATING EXECUTION

A. DO NOT COAT GALVANIZED OR STAINLESS STEEL SURFACES.
B. COAT ALL BARE STEEL UNLESS NOTED OTHERWISE.
C. REPAIR ANY COATING AS SPECIFIED ABOVE ON ANY AND ALL COMPONENTS THAT IS DAMAGED DURING SHIPPING.
E. PIPE COATINGS:
1. SHOP APPLY PIPE COATING SYSTEM (PRIMER, INTERMEDIATE COAT, TOP COAT). LEAVE 2 INCHES AT PIPE ENDS UN-COATED FOR FIELD WELDS.
2. PROTECT COATINGS AND PIPE ENDS DURING SHIPPING.
3. APPLY HEAT SHRINK SLEEVES AND TAPE SYSTEMS A MINIMUM OF 3 INCHES BEYOND THE FIELD REPAIR AREA.
F. TANK COATINGS:
1. FIELD OR SHOP APPLY COATING SYSTEM AS SPECIFIED ABOVE.
G. COATING INSPECTION:
1. INSPECT ALL COATED SURFACES FOR CONFORMANCE TO THE SPECIFICATIONS. IF COATINGS FAIL INSPECTION OR TEST, REPAIR COATING UNTIL INSPECTION OR TEST IS PASSED.
2. ALL COATINGS INSPECTIONS SHALL BE ACCOMPLISHED BY A NACE CERTIFIED COATINGS INSPECTOR.
3. A FINAL COATINGS INSPECTION REPORT SHALL BE SUBMITTED TO THE OWNER AFTER ALL OF THE COATINGS HAVE BEEN TESTED AND FOUND TO BE SATISFACTORY.

MECHANICAL SCHEDULE

TAG	EQUIPMENT NAME	BASIS OF DESIGN			NOTES
		MANUFACTURER	MODEL	DESCRIPTION	
FOT-1	FUEL OIL TANK	ANCHORAGE TANK	FLAMESHIELD	1,000 GAL	UL 142 CONSTRUCTION, STI F921 "FIRE RESISTANT" 1,000 GAL ABOVEGROUND FUEL STORAGE TANK. TANK SHALL HAVE ALL VENTS, APPURTENANCES, AND CONNECTIONS REQUIRED BY IFC AND NFPA 30, INCLUDING BUT NOT LIMITED TO PRIMARY TANK NORMAL VENT (WHISTLING), PRIMARY AND SECONDARY EMERGENCY VENTS, CLOCK LEVEL GAUGE, OVERFILL CONTAINMENT BUCKET, INTERSTITIAL LEAK DETECTION, FOS/FOR DIPTUBES, FOOT VALVES, MANHOLE, WATER DRAW. PROVIDE WITH STRUCTURAL SKID. VENTS SHALL TERMINATE 12' ABOVE GRADE.
TM-1	TANK MONITORING SYSTEM	VEEDER ROOT	–	–	CLASS 1 DIV 2 LIQUID LEVEL MONITORING AND LEAK DETECTION CONTROLS. TANK MONITORING SYSTEM SHALL BE CAPABLE OF MONITORING TANK LEVEL, INCLUDE LEAK DETECTION, AND DISPLAY THE LEVEL OF PRODUCT IN THE TANK AND THE STATUS OF THE LEAK DETECTION PROBE.

ISSUED FOR PLAN REVIEW

STATE OF ALASKA 49TH BRENT L. LITTLE Jul 17, 2019 No. ME12298 REGISTERED PROFESSIONAL ENGINEER

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COFFMAN ENGINEERS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

MECHANICAL DETAILS

DESIGNED BY NEK
CHECKED BY BLL
DRAFTED BY RMG

XREFS:

SCALE AS NOTED

LAYOUT ANSI D (22x34)

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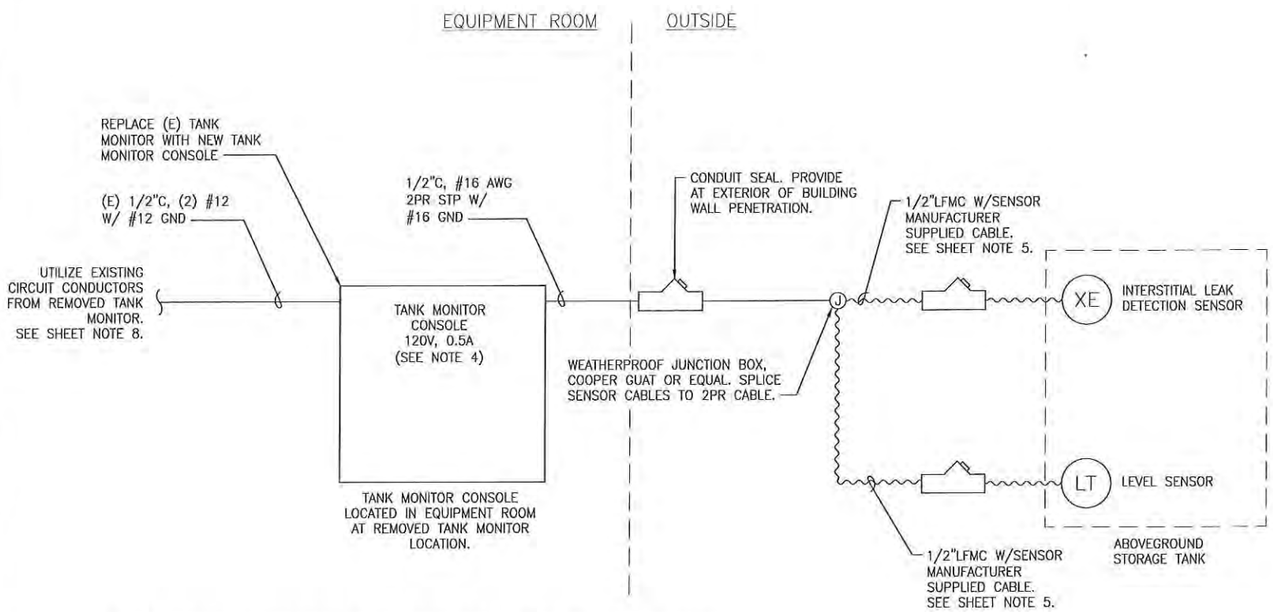


1 / – TANK MONITORING SYSTEM RISER DIAGRAM
SCALE: NTS

LEGEND:

- (J) JUNCTION BOX
- LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC)
- CONDUIT SEAL

ABBREVIATIONS:

AWG	AMERICAN WIRE GAUGE
GND	GROUND
LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT
PR	PAIR
STP	SHIELDED TWISTED PAIR

SHEET NOTES:

1. ALL CONDUIT SHALL BE GALVANIZED RIGID STEEL (GRS) UNLESS OTHERWISE NOTED.
2. REFER TO MECHANICAL DRAWINGS FOR TANK LAYOUT AND INSTRUMENTATION LOCATIONS.
3. PROVIDE UNISTRUT RACK ADJACENT TO TANK FOR SUPPORT OF CONDUIT AND JUNCTION BOX. CONDUIT SHALL BE SUPPORTED A MAXIMUM OF EVERY 10 FT PER NEC 344.30.
4. REMOVE EXISTING TANK MONITOR IN EQUIPMENT ROOM. PROVIDE NEW TANK MONITOR CONSOLE TO REPLACE REMOVED CONSOLE. PROVIDE INTERSTITIAL LEAK SENSOR AND LEVEL PROBE AS SHOWN.
5. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER OF SENSOR TO PROVIDE SUFFICIENT CABLE LENGTH BETWEEN SENSOR AND JUNCTION BOX.
6. DO NOT SPLICE CONDUCTORS FOR SENSORS BETWEEN JUNCTION BOX AND TANK MONITOR CONSOLE.
7. CONTRACTOR SHALL PROVIDE AND COORDINATE INSTALLATION OF CONCRETE ENCASED ELECTRODE WITHIN TANK SLAB. BOND CONCRETE ENCASED ELECTRODE TO TANK STRUCTURAL STEEL. SEE CIVIL FOR ADDITIONAL INFORMATION.
8. IT IS ASSUMED THAT THE EXISTING TANK MONITOR CONSOLE IS CIRCUITED FROM EXISTING 208/120V PANEL 'B'. CONTRACTOR TO FIELD VERIFY EXISTING CIRCUIT. EXTEND CONDUIT AND WIRING AS REQUIRED.
9. REMOVED AND ADDED TANK MONITORS ARE IDENTICAL IN ELECTRICAL LOAD. TOTAL NET LOAD ADDED TO THE FACILITY ELECTRICAL SYSTEM IS ZERO.

ELECTRICAL NOTES:

1. THE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE, STATE AND LOCAL AMENDMENTS, AND NECA STANDARDS OF INSTALLATION.
2. ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED AND LABELED FOR THEIR INTENDED APPLICATION BY A NATIONALLY RECOGNIZED TESTING LABORATORY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
3. CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED AND UNUSED EQUIPMENT AND MATERIALS OFFSITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
4. ALL WIRING INSTALLED IN UNHEATED OR EXTERIOR SPACES SHALL BE XHHW-2. INTERIOR WIRING MAY BE THWN/THHN UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS OR CABLING.
6. ALL CONDUIT AND CABLE SHALL BE INSTALLED ORTHOGONAL TO THE STRUCTURE.
7. OUTAGES OF THE ELECTRICAL SYSTEM SHALL OCCUR AT AN ABSOLUTE MINIMUM. COORDINATE SCHEDULED OUTAGES WITH THE OWNER AND GENERAL CONTRACTOR.
8. ALL CONDUCTOR SIZES SHOWN ARE BASED ON COPPER UNLESS NOTED OTHERWISE.
9. MAINTAIN A MINIMUM 6" CLEARANCE BETWEEN CONDUIT AND PIPING. MAINTAIN A 12" CLEARANCE BETWEEN CONDUIT AND HEAT SOURCES SUCH AS FLUES, HEATING PIPES, AND HEATING APPLIANCES.
10. ANY PENETRATION OF THE BUILDING VAPOR BARRIER SYSTEM SHALL BE APPROPRIATELY SEALED TO RETAIN THE INTEGRITY OF THE WALL SYSTEM. THIS INCLUDES, BUT IS NOT LIMITED TO, CONDUITS AND BACKS OF ELECTRICAL BOXES.
11. CUT AND PATCH THE EXISTING CEILING AND WALLS AS REQUIRED TO INSTALL NEW BRANCH CIRCUITS. ANY PATCHES SHALL BE FINISHED TO MATCH THE EXISTING ADJACENT SURFACES.
12. PROVIDE TYPED, UPDATED PANEL SCHEDULES FOR NEW PANELS AND PANELS MODIFIED BY THIS PROJECT.
13. DRAWINGS ARE SCHEMATIC ONLY AND DO NOT SHOW ALL CONDUIT AND CONNECTIONS BETWEEN RESPECTIVE DEVICES AND FIXTURES. CONTRACTOR SHALL DETERMINE THE EXACT ROUTING OF CONDUIT, CABLE, AND WIRING CONNECTIONS BETWEEN RESPECTIVE DEVICES AND FIXTURES FOR A COMPLETE AND OPERATIONAL SYSTEM.
14. THE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE, ARTICLE 500. PROVIDE CONDUIT SEALS WITHIN 10 FEET OF ALL HAZARDOUS AREA BOUNDARY LOCATIONS AS REQUIRED. AREAS WITH A RADIUS OF 18" FROM ALL TANK VENTS ARE CLASSIFIED AS CLASS I DIVISION 2 HAZARDOUS LOCATIONS.

ISSUED FOR PLAN REVIEW

STATE OF ALASKA 49TH LOGAN R. HINES Jul 17, 2019 No. EE12048 REGISTERED PROFESSIONAL ENGINEER
600 E. Bluff Anchorage, AK 99501 AECC249 907-276-6614
COFFMAN ENGINEERS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST ALASKA REGION

ALASKA MARINE HIGHWAY SYSTEM
FUEL STORAGE TANK REPLACEMENT
AUKE BAY FERRY TERMINAL

ELECTRICAL RISER DIAGRAM

DESIGNED BY LGB
CHECKED BY DPH
DRAFTED BY RWG
XREFS
SCALE AS NOTED
LAYOUT ANSI D (22x34)
DATE TIME 6/29/2018 10:19 AM
DRAWING LOCATION p:\Anc\SJobs\190289 cmhs fuel storage tank replacement\0.0 dwgs\190289_E1.0.dwg

49.70.400 - Floodplain.

(a) *Purpose.* The purpose of this article is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas. Other purposes are to:

(1) Reserved;

(2) Prevent the erection of structures in areas unfit for human usage by reason of danger from flooding, unsanitary conditions, or other hazards;

(3) Minimize danger to public health by protecting the water supply and promoting safe and sanitary drainage;

(4) Reduce the financial burdens imposed on the community, its governmental units, and its individuals by frequent and periodic floods and overflow of lands;

(5) Reserved;

(6) Ensure that potential buyers are notified that property is in a special flood hazard area; and

(7) Ensure that those who occupy the special flood hazard area assume financial responsibility for their development.

(b) *Interpretation.*

(1) In the interpretation and application of this article, all provisions shall be considered as minimum requirements and shall be liberally construed in favor of the governing body.

(2) This article is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where the provisions of this article and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(3) This article shall apply to all areas of special flood hazard areas within the jurisdiction of the City and Borough of Juneau.

(4) The special flood hazard areas are identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study" and the flood insurance rate maps, effective dated, August 19, 2013, for the City and Borough of Juneau, Alaska are adopted. The flood insurance study and flood insurance rate maps shall be on file with the department.

(c) *Methods of reducing losses.* In order to accomplish its purpose, this article includes methods and provisions for:

(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate or channel floodwaters;

(4) Controlling filling, grading, dredging and other development which may increase flood damage; and

(5) Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

(d) *General standards for flood hazard protection.* In special flood hazard areas the following standards shall be met:

(1) Anchoring.

(A) All new construction and substantial improvements shall be designed, modified, and adequately anchored, to prevent flotation, collapse, or lateral movement of the structure.

(B) All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

(C) An alternative method of anchoring may be used if the system is designed to withstand a wind force of 90 miles per hour or greater. Certification must be provided to the building official that this standard has been met.

(2) Construction materials and methods.

(A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(B) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

(C) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(D) Within Zones AH and AO, all new construction and substantial improvements shall require adequate drainage paths around structures on slopes to guide floodwaters around and away from existing and proposed structures.

(3) Utilities.

(A) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

(C) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(4) Subdivision proposals shall:

(A) Be designed to minimize flood damage;

(B) Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

(C) Have adequate drainage provided to reduce exposure to flood damage; and

(D) Include base flood elevation data if the development consists of at least 50 lots or five acres, whichever is the lesser.

(5) Review of building permits shall include:

(A) The review of the flood insurance rate map and flood insurance study for flood zone determinations for all new or substantially improved structures;

(B) For new or substantially improved structures:

(i) In Zones A1-30, AE, AO, and AH, the submittal of the proposed and finished lowest floor elevations; or

(ii) In Zones V1-30, and VE, the submittal of the proposed and finished bottom elevation of the lowest horizontal structural member of the lowest floor and its distance from the mean lower low water mark; and

(C) In Zones A and V, where elevation data are not available through the flood insurance study or from another authoritative source, applications for building permits shall be reviewed to ensure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and may be based on historical data, high water marks, photographs of past flooding, and other similar or relevant data. Failure to elevate construction at least two feet above grade in these zones may result in higher insurance rates.

(6) Other permits. All development permits shall be reviewed to determine that all necessary permits have been obtained from those federal or state governmental agencies from which prior approval is required.

(7) Alteration of watercourses. Altered or relocated portions of a watercourse shall be maintained so that the flood-carrying capacity is not diminished. Any alteration of a special flood hazard area mapped watercourse shall be submitted to the flood insurance administrator.

(e) *Specific standards for flood hazards protection.* In special flood hazard areas where base flood elevation data has been provided, the following provisions are required:

(1) New structures or substantial improvements. Fully enclosed areas below the lowest floor of new construction or substantial improvements, that are useable solely for parking of vehicles, building access, or storage in an area other than a basement, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

(A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;

(B) The bottom of all openings shall be no higher than one foot above grade; and

(C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(2) Residential construction. New construction and substantial improvement of any residential structure:

(A) Within Zones A1-30, AE, or AH, shall have the lowest floor, including basement, elevated to, or above, the base flood elevation; or

(B) Within Zone AO, shall have the lowest floor elevated to the base flood depth number specified on the flood insurance rate map, or higher, or if no depth number is specified, at least two feet above the highest adjacent natural grade.

(3) Manufactured homes. All new or substantially improved manufactured homes:

(A) Within Zones A1-30, AH, or AE, shall be elevated to, or above, the base flood elevation, and comply with subsection (d); or

(B) Within Zone AO, shall have the lowest floor elevated to the depth number specified on the flood insurance rate map, or higher, or if no depth number is specified, at least two feet above the highest adjacent natural grade; and meet the provisions of subsection (d)(1).

(4) Recreational vehicles placed within any special flood hazard area shall:

(A) Be on site for fewer than 180 consecutive days;

(B) Be fully licensed and ready for highway use; or

(C) Meet the requirements of subsection (e)(3).

(5) Nonresidential construction. New construction or substantial improvement of any nonresidential structure:

(A) Within Zones A1-30, AE, and AH, shall have the lowest floor, including basement, elevated to, or above, the base flood elevation;

(B) Within Zone AO, shall have the lowest floor elevated to the depth number specified on the flood insurance rate map, or higher, or if no depth number is specified, at least two feet above the highest adjacent natural grade; or

(C) Within Zones A1-30, AE, AH and AO, may have the area below the base flood elevation be floodproof so that:

(i) The structure and utility and sanitary facilities are watertight with walls substantially impermeable to the passage of water;

(ii) Structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(D) A floodproof structure shall be designed by an engineer or architect licensed in the State of Alaska, certifying that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on the engineer's or architect's development or review of the structural design, specifications, and plans. Such certification shall be provided to the building official;

(E) Applicants proposing to floodproof nonresidential buildings shall be notified at the time of building permit application that flood insurance premiums shall be based on rates that are one foot below the floodproofed level.

(6) Industrial uses.

(A) Sand and gravel operations, recreation activities, open space, and parking lots may be allowed in 100-year floodplains only if they do not increase the flood hazard.

(B) Industrial equipment and raw materials stored in 100-year floodplains shall be adequately bermed or otherwise protected.

(C) Disposal of hazardous materials in 100-year floodplains is prohibited. No new development which will involve storage of hazardous materials will be permitted in the 100-year floodplain unless there is no feasible and prudent alternative and unless safety measures are provided to prevent accidental discharge.

(D) Establishment of sanitary landfills in floodplains is prohibited.

(7) Increasing water surface elevation in special flood hazard area mapped watercourses where floodways are not mapped. Notwithstanding any other provisions of this section, development in Zones A1-30, AE, and AH may increase the water surface elevation of the base flood:

(A) Up to one foot with the submittal of an analysis completed by an engineer licensed in the State of Alaska demonstrating the cumulative effects of the proposed, existing and anticipated, development to the base flood; or

(B) By more than one foot only after a letter of map revision is approved by the flood insurance administrator.

(f) *Additional provisions in floodways.* Floodways are areas designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point. Floodways are shown in the flood insurance rate map.

(1) Residential and nonresidential buildings are prohibited in floodways. Culverts and bridges are not subject to this prohibition.

(2) Encroachments, including fill, new construction, substantial improvements, and other development, except subdivisions, within a floodway is prohibited unless an engineer licensed in the State of Alaska submits a hydrologic and hydraulic analyses to the director indicating that the encroachment would not result in any increase in flood levels during the occurrence of the

base flood discharge. The hydrologic and hydraulic analyses shall be performed in accordance with standard engineering practice acceptable by the Federal Emergency Management Agency.

(3) Unless a letter of map revision that revises the floodway is approved by the Federal Emergency Management Agency, development along a floodway shall not increase the water surface elevation.

(g) *Additional provisions in Zones V1-V30, VE and V.*

(1) All new construction and substantial improvements in Zones V1-V30, VE, and V shall be elevated on pilings and columns so that:

(A) The bottom of the lowest horizontal structural member of the lowest floor, excluding the pilings or columns, is elevated to or above the base flood elevation; and

(B) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval). Wind loading values used shall be those required by applicable state statute and local code. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of subsections (g)(1)(A) and (B) of this section.

(2) In Zones V1-V30, VE, and V, all new habitable construction shall be located landward of the reach of mean high tide.

(3) In Zones V1-V30, VE, and V, all new construction and substantial improvements shall have the space below the lowest floor either free of obstruction or constructed with nonsupporting breakaway walls, open wood latticework, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system.

(4) Breakaway walls shall have a design safe loading resistance of not less than ten pounds per square foot and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

(A) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and

(B) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval). Wind loading values used shall be those required by applicable state statute and local code.

(C) Enclosed space within breakaway walls shall be limited to parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

(Serial No. 87-49, § 2, 1987; Serial No. 90-46, §§ 2—9, 1990; Serial No. 2013-19(b), § 2, 7-15-2013)

Community Development

City & Borough of Juneau • Community Development
155 S. Seward Street • Juneau, AK 99801
(907) 586-0715 Phone • (907) 586-4529 Fax

PLANNING COMMISSION
NOTICE OF DECISION
Date: November 12, 2019
File No.: CSP2019 0010

State of Alaska DOT & PF
ATTN: Loren Gehring
P.O. Box 112506
Juneau, AK 99811

Proposal:	State Project Review for Auke Bay Ferry Terminal site improvements
Property Address:	13445 Glacier Highway
Legal Description OR ROW name:	ATS 1526
Parcel Code No.:	4B3001020030
Hearing Date:	November 12, 2019

The Planning Commission, at a regular public meeting, adopted the analysis and findings listed in the attached memorandum dated October 28, 2019, and approved Auke Bay Ferry Terminal site improvements to be conducted as described in the project description and drawings submitted with the application.

Attachments: October 28, 2019 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding CSP2019 0010.

Effective Date: The permit is effective upon approval by the Commission, November 12, 2019. This decision is final 90 days from the date the application was received unless modified or disapproved by the Assembly.

This Notice of Decision does not authorize construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

Project Planner: _____ _____
Irene Gallion, Planner
Community Development Department

Benjamin Haight, Chair
Planning Commission

Elizabeth J McEwen 11/25/2019

Filed With City Clerk 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 State Government 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.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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

DATE: November 4, 2019

TO: Planning Commission

FROM: Laurel Christian, Planner I
Community Development Department

FILE NO.: SMP2019 0004

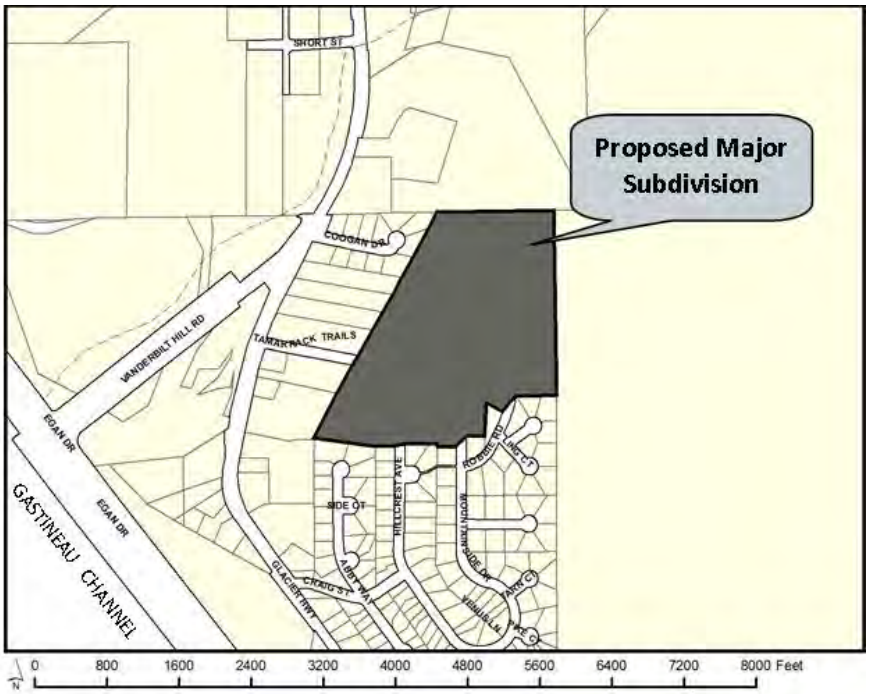
PROPOSAL: Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)

GENERAL INFORMATION

Applicant:	Michael & William Heumann
Property Owner:	Michael & William Heumann
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Site Size:	30.67 Acres (1,335,985 square feet)
Comprehensive Plan Future Land Use Designation:	Medium Density Residential (MDR)
Zoning:	D15
Utilities:	Public Water & Sewer Proposed
Access:	Mountainside Drive, Hillcrest Avenue, and Robbie Road through Craig Street
Existing Land Use:	Vacant

Surrounding Land Use:
- North – D18 Multi-family
- South – Mountainside Estates Subdivision (D5 Single-family Residential)
- East – Vacant forested RR
- West – D5 and D15 Single-family Residential and Multi-family

VICINITY MAP



ATTACHMENTS

Attachment A – Application
Attachment B – Preliminary Plat
Attachment C – Sketch Plat
Attachment D – Zoning Map and Comprehensive Plan Future Land Use Designation Map
Attachment E – Preliminary Construction Drawings
Attachment F – Agency Comments
Attachment G – Public Comments
Attachment H – Preliminary Plat Corrections MEMO Dated November 1, 2019
Attachment I – Preliminary Drainage Plan
Attachment J – Water Report
Attachment K – Wetlands Delineation
Attachment L – APL20190003 Settlement Agreement

BACKGROUND

The subject parcel was originally platted through US Survey 4807. Over time, US Survey 4807 was subdivided into the Mountainside Estates Subdivision, Vanderbilt Hill Subdivision, and the remaining tract was called Richland Manor. The parcel was originally planned to be developed with the Mountainside Estates Subdivision, however no development has been completed on the parcel and it has remained vacant.

In 2018, the applicants purchased the subject parcel intending to subdivide and develop the parcel in multiple phases for single-family homes and multifamily developments. The applicants applied, and received approval, for a preliminary plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total) in February of 2019 for the Richland Manor subdivision (SMP20180002). The approved preliminary plat was appealed to the CBJ Assembly (APL20190003). As a result of this appeal, the appellants and the applicants came to a settlement agreement, which resulted in the submittal of a new preliminary plat application. The applicants submitted a new preliminary plat application on September 19, 2019 (Attachment A), preliminary plat (Attachment B) and sketch plat (Attachment C).

It should be noted that the applicants have chosen to change the subdivision name from Richland Manor 2 to Chilkat Vistas.

APL20190003 SETTLEMENT

As stated above, the applicants received preliminary plat approval in February of 2019 for SMP20180002. This Planning Commission decision was appealed to the CBJ Assembly (APL20190003). The applicants, Mountainside Estates Neighborhood Association (MENA), and the CBJ worked developed a settlement agreement, which would suit all parties. This settlement agreement may be found in Attachment L. This settlement agreement resulted in this preliminary plat application (SMP20190004). The settlement agreement is provided as certain aspects of the agreement have guided subdivision development.

Please note that the Planning Commission is not reviewing this settlement agreement and must review the preliminary plat according to CBJ 49.15.400.

PROPOSAL

The applicant requests preliminary plat approval for Phase 1 of the Chilkat Vistas Subdivision (formerly known as the Richland Manor 2 Subdivision). Phase 1 consists of 14 lots for single-family development and one (1) large tract for future development (15 lots total). Phase 1 includes the extension of Hillcrest Avenue and the installation of public water and sewer. For Phase 1, the applicant proposes a mix of bungalow lots, panhandle lots, and standard D15 lots. Future phases

may include a mix of single-family and multi-family development.

ANALYSIS

Phasing – The proposed subdivision is creating 15 total parcels (14 lots for single-family development and one (1) large tract for future development). Phasing is allowed through the major subdivision process, as long as the infrastructure provided accommodates future phases. A sketch plat has been provided to demonstrate the future potential for the remaining tract of land (Attachment C).

According to CBJ 49.15.410(a), the sketch plat serves the following purposes:

> *(1) To inform the applicant of the City and Borough's subdivision requirements, public improvement requirements, and platting procedures before substantial costs are incurred by the developer in preparation of a subdivision application;*
>
> *(2) To inform the department of the applicant's development plans; and*
>
> *(3) To identify issues with the proposed subdivision, such as issues with the subdivision layout, the extent and nature of required improvements, the location and protection of sensitive areas, impacts to adjoining properties, and traffic, platting, drainage, and utilities requirements.*

The settlement agreement (APL2019 0003) resulted in a revised sketch plat, which contains the following features:

- The extension of Hooter Lane;
- Robbie Road terminates and is not to be a point of access to Chilkat Vistas subdivision. Robbie Road may serve as an emergency service access, but not a public through street;
- Hillcrest Avenue terminates at Hooter Lane; and
- Greenbelt buffers are depicted along the property lines shared by the Mountainside Estates and Chilkat Vistas subdivisions.

Zoning – The subject parcel is located in the D15 zoning district, which allows up to 15 dwelling units per acre. The subject parcel is currently 30.67 acres and the total density for the parcel, un-subdivided, is 460 dwelling units. This density does not take into account any land required for roads, utilities, setbacks, parking or other dimensional standard requirements.

A current zoning map zoning map may be found in Attachment D. The subject parcel is zoned D15, and is surrounded by other zoning districts. The Tamarack Trails Condominiums parcel to the west

is zoned D15, while the neighboring parcels to the south, within the Mountainside Estates subdivision, are zoned D5. To the north, parcels are zoned D18 and General Commercial.

Table of Dimensional Standard Excerpts:

Dimensional Standard		D5	**D15**	D18
Min. Lot Size				
	Single-Family	7,000	**5,000**	5,000
	Bungalow	3,500	**3,000**	2,500
	Duplex	10,500	**5808***	4840*
	Commonwall	7,000	**3,500**	2,500
Min. Lot Width				
	Single-family	70’	**50’**	50’
	Bungalow	35’	**25’**	25’
	Commonwall	60’	**30’**	30’
Min. Lot Depth				
	All Uses	85’	**80’**	80’
Setbacks**				
	Front	20’	**20’**	20’
	Rear	20’	**15’**	10’
	Side	5’	**5’**	5’
	Street Side	13’	**13’**	13’

Table Notes: *Minimum lot size for duplex calculated by allowable density. 1 Acre = 43,560 sq. ft. Minimum lot size required for a duplex in D15 is 5,808sq. ft. (43,560 / 15 = 2,904 X 2). **Per CBJ 49.25.400 Table of Dimensional Standards Note 3, *when one zoning district abuts another, the greater of the two setbacks is required for both uses on the common property line*.

All lots created in Phase 1 meet the required dimensional standards for the D15 zoning district. Future phases are required to meet the dimensional standards for the zoning district. The sketch plat shows future phases may feasibly be developed.

The D15 multifamily zoning district allows for residential construction with densities up to 15 units per acre. A lot that measures 5,000 square feet in the D15 zoning district may have one single-family dwelling. Additionally, per CBJ 49.25.510(k)(2)(G)(i) if a lot in the multifamily zoning district is used primarily for a single-family dwelling, that lot may be permitted to have one accessory apartment under certain conditions.

For multifamily development in the D15 zoning district, 2,904 sq. ft. are required per dwelling unit, as density is measured based on 15 units per acre (43,560 sq. ft. / 15 DU per acre = 2,904 sq. ft.

per DU). The following table demonstrates the dwelling units allowed on each lot created through phase 1:

Phase 1 Lot Number	Lot Size	Total # of Dwellings per lot
1, 2, 3	3,080 sq. ft.	1 dwelling unit
5, 6, 10, 11, 12, 13	5,000 sq. ft.	1 Single-family and 1 accessory apartment
14	5,137 sq. ft.	1 Single-family and 1 accessory apartment
4, 7	7,600 sq. ft.	2 dwelling units
8	9,438 sq. ft.	3 dwelling units
9	6,355 sq. ft.	2 dwelling units
Tract B1	28.80 acres	421 dwelling units**

**Note: this does not take into account any land required for roads, utilities, setbacks, parking or other dimensional standard requirements; this count is strictly based on 15 units per acre x 28.80 acres.

Lot Design

Bungalow Lots – CBJ 49.65 Article IV establishes standards for bungalow lots and bungalow lot subdivisions. These standards include the requirement for public utilities and roads, ratios of bungalow to standard lots, and the process for creating a bungalow lot subdivision. Staff finds all conditions of this chapter can be reasonably met. A standard plat note identifying the proposed bungalow lots and the specified use requirements has been added:

> LOTS 1, 2, AND 3 ARE BUNGALOW LOTS. AT TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1, 2, AND 3 BLOCK B WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

Note: Block information may be removed from this plat note. The note may be revised to include lot and phases information.

Panhandle Lots – CBJ 49.15.423 establishes requirements for panhandle lots; through this chapter, panhandle lots may be created through the subdivision process. Dimensional standards, setbacks, and access and parking standards specific to panhandle lots are established in this section. Staff finds all conditions of this chapter can be reasonably met. Two standard plat notes identifying the

panhandle lots have been added:

> LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.
>
> ACCESS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IIN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.

Note: Block information may be removed from these plat notes. The notes may be revised to include lot and phase information.

Drainage – CBJ Engineering and Public Works Department (E&PW) has reviewed the preliminary drainage plan and found that the plan is not complete though the plan appears to be feasible (Attachment F). E&PW would like to review a final drainage plan prior to the approval of construction plans. The preliminary drainage plan and report may be found in Attachment I.

The following are recommended conditions of approval:

1. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.
2. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.
3. The developer shall submit a final drainage plan to be approved by CBJ Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

Water – The applicant has submitted a water report completed by Jim Dorn of Carson Dorn, Inc. (Attachment J). The purpose of the technical memorandum was to evaluate the water booster pump station at the corner of Craig Street and Hillcrest Avenue and determine if there would be adequate pressure with the addition of the proposed homes. It was determined that an additional 80 residential units could be constructed without significantly reducing water pressures.

E&PW has reviewed this report and believes that there is adequate water pressure for Phase I of development using the above referenced pump station (Attachment F).

Wetlands – The 2008 and 2016 Juneau Wetlands Management Plans did not include the subject

parcel in the study area. The applicant has performed wetlands delineation for Phase 1 and found that there are approximately 3.61 total acres of wetlands (Attachment K). The need for a wetlands delineation will be determined at the pre-application conference for each future phase of development. Additionally a standard plat note has been added:

> WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KAREN BOSWORTH NOVEMBER 2018.

The previous preliminary plat approval application (SMP20180002) was taken to the Wetlands Review Board on February 21, 2019. Phase 1 of the proposed subdivision has not significantly changed, so staff does not recommend an additional review by the Wetlands Review Board. Future phases may require additional review. The Wetlands Review Board made the following recommendation on the previous preliminary plat:

> "The applicant use control measures or storm water best management practices that cause the runoff from the development to infiltrate the ground on-site. Conventional storm water systems transport water into impervious surfaces like streets and driveways which concentrates flow of water and pollutants. On-site infiltration treats water naturally."

Under the drainage section of this report, staff recommends conditions that speak to storm water best management practices. The applicant may need an Army Corps of Engineers (ACOE) permit to fill wetlands on the subject parcel. The applicant is aware of this and is working directly with ACOE.

Habitat – There are no known habitat concerns on the subject parcel. The Alaska Department of Fish and Game (ADF&G) was invited to review the proposed subdivision. ADF&G found no issues with the proposed development (Attachment F).

Access – The subject parcel abuts four CBJ rights-of-way: Hillcrest Avenue, Mountainside Drive, Robbie Road, and Hooter Lane. Phase 1 of the proposed subdivision extends Hillcrest Avenue. Future phases of development extend Hillcrest Avenue and Mountainside Drive to form a connected loop, which then connects to Hooter Lane and feeds out onto Glacier Highway. All lots created through Phase 1 have access and frontage on the extension of Hillcrest Avenue.

The applicants request that the right-of-way width be reduced by 10 feet for the extension of Hillcrest Avenue. Per CBJ 49.35.240(a)(3) streets other than arterials and collectors are required to have a minimum right-of-way width of 60 feet; the applicant proposes 50 feet. This right-of-way width may be reduced in accordance with CBJ 49.35.240(b). According to E&PW, this is an acceptable request and *remaining phases shall also be constructed at a width of 50' unless further engineering indicates this is not feasible* (Attachment F).

In Phase 1, the applicants will construct Hillcrest Avenue to standards that are acceptable for public acceptance and maintenance, as required by CBJ 49.250(a). Preliminary construction drawings may

be found in Attachment E. According to E&PW, *the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49* (Attachment F). Preliminary construction drawings for the extension of Hillcrest Avenue show a 50' wide right-of-way containing a 26' wide travel way with sidewalk on one side of the street. Based on the Average Daily Trips (ADTs) generated by the entire development shown on the sketch plat, sidewalks on two sides of the streets should be required.

Per CBJ 49.35.130(b) the Director of E&PW may prescribe different construction standards than those required in the Table of Roadway Construction Standards. E&PW has reviewed the request for sidewalk on one side of the street and approves this request due to the following:

> *"This request is consistent with the other recent local subdivision determinations of similar size developments and is also consistent with the infrastructure within the Mountainside Subdivision, with sidewalk only constructed on one side of the two main access roads, Mountainside Drive and Craig Street (and no sidewalks on the side streets). The previously platted Hooter Lane right-of-way (ROW), which will provide pedestrian connection from the development to Glacier Highway, is only required to have one sidewalk, making the requirement of two sidewalks within the new development an unnecessary redundancy."*(Attachment F)

Prior to final plat approval, the applicant is required to submit construction drawings to be approved by E&PW for all required improvements, this has been added as a condition of approval.

Traffic Analysis – CBJ 49.40.300 states that a traffic impact analysis is required for developments that are projected to generate 500 or more average daily trips. The proposed development for Phase 1 includes 14 single-family homes and one (1) tract for future development. A single-family home generates 9.52 average daily trips and an accessory apartment generates 6.65 average daily trips.

The below table demonstrates the ADTs generated:

Phase 1 Lot Number	**Total # of Dwellings per lot**	**ADTs**
1, 2, 3 (Bungalow Lots)	1 Single-family	9.52 x 3 = 28.56
4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	1 Single-family and 1 accessory apartment	16.17 x 11 = 177.87
		TOTAL: 206.43 ADTs

The 14 single-family homes and potential accessory apartments would generate 206 ADTs, so

no traffic impact analysis is required for Phase 1. The potential ADTs generated by the large remaining tract (for future development) is not taken into consideration at this time, because future development of that parcel has not been applied for. All existing phases of the Chilkat Vistas subdivision should be taken into consideration when calculating the ADTs generated by the project as each phase is applied for.

Non-motorized Access – As discussed above, the developer is required to install sidewalks within the subdivision. Sidewalk on one side of the street for Phase 1 of development is required. CBJ 49.35.610(b)(1) requires a minimum width of 5 feet for sidewalks. Dimensional standards for sidewalks will be reviewed with construction drawings after preliminary plat approval.

Street Lighting – E&PW Standard Detail 118 requires street lighting at all intersections with spacing between lights not to exceed 250 feet. This is reviewed as part of the construction drawings, after preliminary plat approval.

Hillside Development – The subject parcel contains slopes that are greater than 18%. According to CBJ 49.70.210 (a), *this article applies to all development on hillsides in the City and Borough that involves the following:*

> *(1) Removal of vegetative cover;*
> *(2) Excavation of any slope in excess of 18 percent;*
> *(3) Creation of new slope in excess of 18 percent for a vertical distance of at least five feet; or*
> *(4) Any hazard area identified on the landslide and avalanche maps dated September 9, 1987…*

At this time, final construction plans have not been submitted. A Hillside Development Permit may be required if any of the above listed activities occur within slopes in excess of 18%. CBJ 49.70.220(b) states that, "*The developer shall apply for and obtain a hillside development endorsement prior to any site work other than land and engineering surveys and soils exploration.*" The requirement for a Hillside Development Permit will be reviewed with construction plans for roads and utilities, and again upon submittal of building plans for the single-family dwellings.

AGENCY REVIEW

The proposed subdivision application was sent for review to Capital City Fire & Rescue; Building Division, Assessors Office, Parks and Recreation, Lands and Resources Division, E&PW; the Alaska Department of Transportation and Public Facilities; the Alaska Department of Fish and Game; Army Corps of Engineers; and AEL&P. Agency review comments may be found in Attachment F and are summarized below.

CBJ Assessors Office – Does not anticipate a negative effect on neighboring property values.

Capital City Fire & Rescue (CCFR) – Due to the number of dwellings accessed by a single point (Craig Street) CCFR requires that all homes constructed through Phase 1 be sprinkled. Once there are 200 dwelling units accessed by Craig Street, a second access is required. The requirement for sprinkling has been added as a condition of approval.

CBJ Engineering and Public Works – Comments received from E&PW have been discussed throughout this report.

Alaska Department of Fish and Game (ADF&G) – Found no issues with the proposed development, but recommends employing best management practices for managing waste. Additionally, ADF&G recommends the applicants maintain existing hydrology and drainage channels. No anadromous waterbodies were found on the subject parcel during site visits performed by ADF&G.

Alaska Department of Transportation and Public Facilities (DOT) – No issues at this time. A Traffic Impact Analysis may be required in the future.

PUBLIC COMMENTS

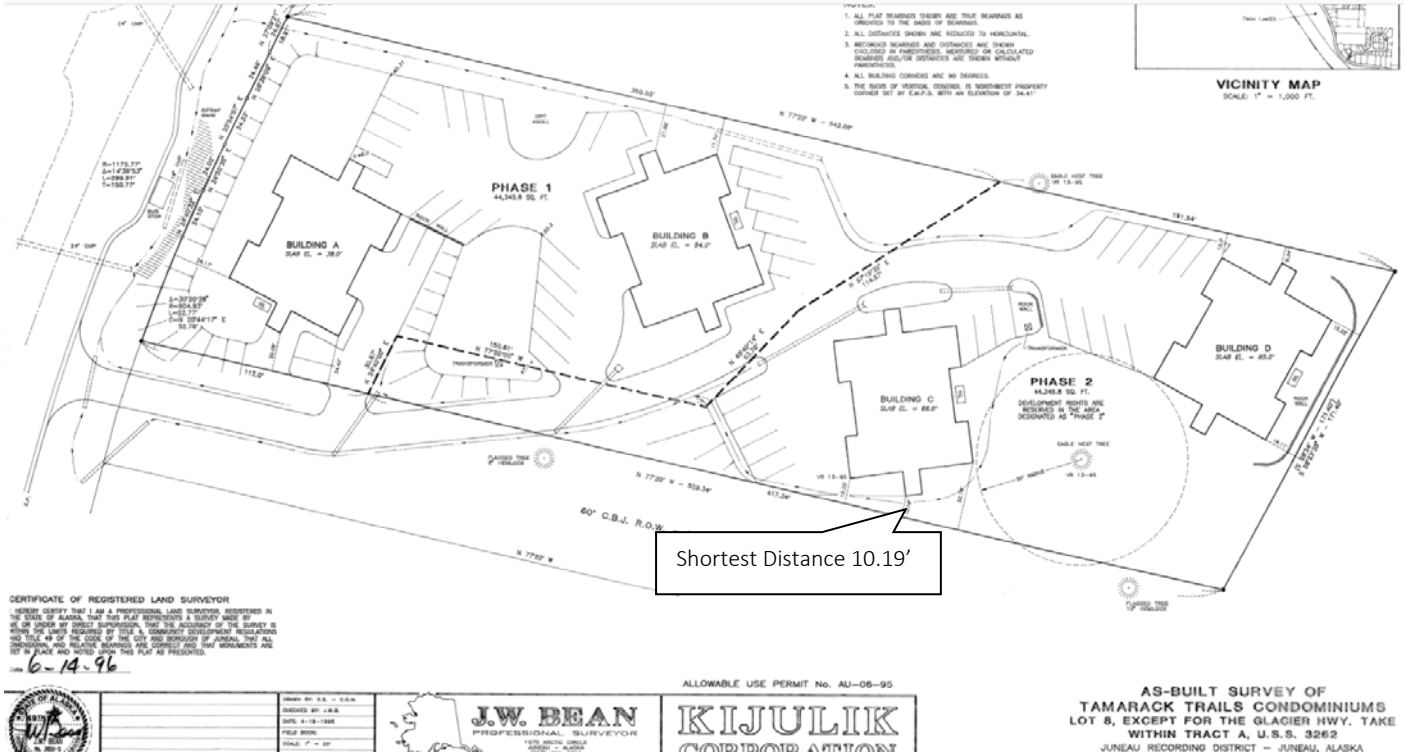
At time of writing this staff report, staff received two (2) public comments (Attachment G).

> *Joan Shorey 10/21/2019* – Ms. Shorey raised concerns over the use of the Hooter Lane right-of-way as an access point for the subdivision. Specific concerns included the loss of parking for the condominium complex and the close proximity of a roadway to buildings within the condominium complex and the potential for impacts on the residents.
>
> *Mountainside Estates Neighborhood Association (MENA) 10/25/2019* – A letter of support for the proposed subdivision was submitted through Paul Grant, representing MENA, in response to the settlement agreement reached between the Applicant and MENA.

Hooter Lane Right-of-Way

The Hooter Lane right-of-way was originally platted in 1971 and re-platted in 1980. The Tamarack Trails Condominiums were permitted in 1995. The undeveloped Hooter Lane right-of-way currently contains the driveway for the Tamarack Trails Condominiums.

According to CDD records, when the Tamarack Trails Condos were constructed, a surveying error was made and one of the buildings was built into the required setback from the Hooter Lane right-of-way (VR-06-96). A variance was approved for this encroachment (VR-06-96). The as-built survey on file for Tamarack Trails Condos shows one building to be within the required setback from Hooter Lane right-of-way and it shows that no structure and no parking are within the Hooter Lane right-of-way. Parking is directly adjacent to the Hooter Lane right-of-way. The following image is a clip from the 1996 as-built survey CDD has on file for Tamarack Trails Condos:



It should be noted that the construction of a public street in the Hooter Lane right-of-way is not proposed in Phase 1 of this subdivision. Hooter Lane is planned to be used as a future second access to the development. During Phase 1, the applicant plans to run a sewer line in the Hooter Lane right-of-way, and use it for construction purposes, but not to construct a full city street at this time.

FINDINGS

CBJ 49.15.402(4) Major Subdivisions, the Director shall prepare and submit a report to the Planning Commission noting any conditions of approval or plat notes recommended, and addressing the following criteria:

(A) Does the preliminary plat comply with CBJ 49.15.411?

Yes. With the conditions listed below, and the plat revisions required, staff finds that the preliminary can comply with CBJ 49.15.411. Required plat corrections can be found in Attachment H, these corrections are required as a condition of approval.

(B) The applicable subdivision development standards of this title are met, or can reasonably be met with conditions?

Yes. Staff finds that applicable subdivision development standards can be reasonably met with conditions.

(C) Will the proposed subdivision will provide building sites suitable for the zoning district?

Yes. Staff finds the proposed subdivision can, with conditions, provide building sites suitable to the D15 zoning district.

(D) Are the proposed street names unique in the City and Borough or are continuations of existing streets and are otherwise acceptable?

Yes. Hillcrest Avenue, platted through Phase 1 of the proposed subdivision is an extension of an existing street.

(E) Has the director of Engineering and Public Works (E&PW) reviewed the application and determined that:

(i) The subdivision can be constructed to conform to applicable drainage and water quality requirements;

Yes. E&PW found drainage and water quality requirements can reasonably be met with conditions (Attachment F).

(ii) The streets, pioneer paths, and pedestrian ways as proposed accommodate anticipated traffic, align, and, where appropriate, connect with streets and pedestrian ways serving adjacent properties;

Yes. E&PW finds the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49 (Attachment F).

(iii) Any proposed improvements conform to the requirements of this title and can feasibly be constructed in accordance with this title; and

Yes. E&PW finds improvements can reasonably be constructed in accordance with this title (Attachment F).

(iv) Where public sewer is not required, the applicant has shown that soils are suitable for individual on-lot wastewater treatment and disposal or has shown the feasibility of alternative methods for wastewater treatment and disposal.

Not Applicable.

CBJ 49.35.240(b)(5) The director shall make written findings supporting right-of-way minimum width reductions granted under this section. The director's findings shall state that:

(A) The applicant has provided room for electric utility features and demonstrates that if the road is upgraded in the future to include additional sidewalks that there is sufficient right-of-way for construction of the sidewalks without need for retaining walls over two feet in height.

(B) There is sufficient right-of-way or easements to allow for drainage improvements required by construction of the sidewalks.

(C) That any driveways shall be constructed to accommodate the elevations of future sidewalks.

(D) No additional right-of-way width will be required in order to provide for sufficient access to abutting lands.

(E) There is sufficient room for snow storage**.**

The Director approves the right-of-way reduction request and finds the above listed conditions can be reasonably met. Additionally, E&PW agrees to this request (Attachment F).

CBJ 49.15.402(5) Major Subdivisions, in issuing its notice of decision on a preliminary plat, the commission may accept, amend, or reject the director's proposed recommendations. The decision of the commission approving or denying a preliminary plat application will be set forth in a notice of decision, and will specify any conditions or plat notes required for final plat approval. If the preliminary plat is denied, the applicant may submit a revised plat application, without paying additional application fees, within 180 days from the date of the notice of decision.

RECOMMENDATION

Staff recommends that the Planning Commission adopt the Director's analysis and findings and **APPROVE** the Preliminary Plat for Phase 1 of the Chilkat Vistas Subdivision. This approval would allow the applicant to submit for the Final Plat Application. The approval is subject to the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from CDD to Michael Heumann (Applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing

that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the Community Development Department (CDD) and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant

PROPERTY LOCATION

Physical Address
4506 Hillcrest Ave; 4508 Hillcrest Ave; 4510 Hillcrest Ave

Legal Description(s) (Subdivision, Survey, Block, Tract, Lot)
Richland Manor Tract B, A Fraction of US Survey 4807

Parcel Number(s) 7B1001160010

☐ This property located in the downtown historic district
☐ This property located in a mapped hazard area, if so, which _____

LANDOWNER/ LESSEE

Property Owner
William Heumann (50%), Michael Heumann (50%)

Contact Person
Michael Heumann

Mailing Address
6000 Thane Rd Juneau, AK 99801

Phone Number(s)
971-261-8014

E-mail Address
mpheumann@hotmail.com

LANDOWNER/ LESSEE CONSENT

Required for Planning Permits, not needed on Building/ Engineering Permits

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 _____ Landowner/Lessee Signature — 9-19-19 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

If the same as OWNER, write "SAME"

Applicant
SAME

Contact Person

Mailing Address

Phone Number(s)

E-mail Address

X _____ Applicant's Signature — 9-19-19 Date of Application

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Intake Initials
LC

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number	Date Received
SMP 2019 0004	9/19/19

Attachment A - Application

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

SUBDIVISION APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Number of Existing Parcels 4 Total Land Area 30.67 Number of Resulting Parcels 15

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

(X) NO ( ) YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

MINOR SUBDIVISION
(changing or creating 13 or fewer lots)

- ( ) Preliminary Plat (MIP)
- ( ) Final Plat (MIF)
- ( ) Panhandle Subdivision
- ( ) Accretion Survey
- ( ) Boundary Adjustment
- ( ) Lot Consolidation (SLC)
- ( ) Bungalow Lot Subdivision
- ( ) Common Wall/Zero Lot Subdivision
- ( ) Other _____

MAJOR SUBDIVISION
(changing or creating 14 or more lots)

- (X) Preliminary Plat (SMP)
- ( ) Final Plat (SMF)
- ( ) Preliminary Development Plan - PUD (PDP)
- ( ) Final Development Plan – PUD (PDF)
- ( ) Bungalow Lot Subdivision
- ( ) Common Wall/Zero Lot Subdivision
- ( ) Other _____

ALL REQUIRED DOCUMENTS ATTACHED

- [x] Pre-application conference notes
- [x] Narrative including:
  - [x] Legal description(s) of property to be subdivided
  - [x] Existing structures on the land
  - [x] Zoning district
  - [x] Density
  - [x] Access
  - [x] Current and proposed use of any structures
  - [x] Utilities available
  - [x] Unique characteristics of the land or structure(s)
- [x] Preliminary Plat checklist

----------DEPARTMENT USE ONLY BELOW THIS LINE----------

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	$ 1650.00			
Admin. of Guarantee	$			
~~Adjustment~~ Sign	$ 50 + 100 deposit			
Total Fee	$ 1800.00			

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

For assistance filling out this form contact the Permit Center at 586-0770.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
SMP20190004	LC

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SEP 19 2019
PERMIT CENTER/CDD

PROJECT NARRATIVE September 18, 2019

Michael Heumann and William Heumann purchased Richland Manor (zoned D15), a subdivided tract of land to the North of Mountainside Estates at Vanderbilt Hill (Tract B, Richland Manor, A Fraction of US Survey 4807).

In our first phase we are applying to subdivide a portion of the tract into 14 lots at the end of Hillcrest Drive. Later phases will include additional single and multi-family as shown in our sketch plat. Mountainside Estates (MENA). Following approval of our preliminary plat in February 2019, MENA appealed our subdivision and we have since reached settlement terms that satisfy both city code and the concerns of the appellants. The sketch plat shows a configuration that reflects that settlement. As part of the settlement process, new elevation points were collected by our surveyor and used to confirm the validity of existing LIDAR elevation data. Based on this data, we have confirmed that the roadways depicted in our sketch plat can be constructed at grades of 12% or less.

Other issues of note include:

1. Water System. What is the capacity of the water system to deliver water to additional dwellings without falling below the DEC and Fire Department requirements? Included with this Application is a Memorandum prepare by James Dorn, a local engineer in which he reaches the conclusion that the existing system can meet the demands of an additional 80 residences. As part of our settlement with MENA, we agree to extend a water line to connect with the one on Mountainside Drive. This connection will provide a loop which will reduce frictional pressure losses and thereby increase available flow rates in the upper reaches of Mountainside Estates.
2. Fire Code requirements. The fire code allows for the construction of additional dwellings on extensions of the street system servicing Mountainside Estates, if the water available at the hydrants is 500 gpm and if the new dwellings are provided with residential sprinkler systems. It, also, allows for the construction of new dwellings without sprinkler systems where 1,000 gpm is available. We will provide residential sprinkler systems where necessary.
3. Access. The property is accessed by Hillcrest Avenue, Mountainside Drive, and Robbie Road, as well an undeveloped right-of-way, Hooter Lane. We will develop Hooter Lane as fire access in the near future, and fully develop it as a city street as necessary in a future phase of development.
4. Wetlands. We obtained a Wetlands Delineation and have met with the U.S. Army Corps of Engineers several times. They have stated that the uplands areas should be fully developed in order to justify build within areas designated to delineated to be Wetland. The Preliminary Plat incorporates this into the design. We have requested that the Hillcrest Drive ROW be reduced to 50' to reduce the fill requirements on the back of the downhill lots. Since our February we have made great headway on obtaining permits and expect to have them in hand prior to year's end.

Utilities:

Water. An 8" ductile iron pipe extends onto Richland Manor at the end of Hillcrest Drive and is sufficient to provide for the water requirements of the proposed 14 lots.

RECEIVED

SEP 19 2019

PERMIT CENTER/CDD

Sewer. The planned means to connect to the CBJ sewer system will be to extend the sewer line in Hooter Lane to the proposed lots. It is possible to connect to the manhole between Lot 7 and Lot 8 on Hillcrest drive on the ROW. This would require a sewer lift station.

Unique Characteristics of the land or structure(s). – None

Existing Structures. There is an existing foundation on the land located on the western side of the proposed Hillcrest Avenue extension. This is the only current structure. We hope to use a portion of this foundation for construction of a house in the future.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

PRELIMINARY PLAT CHECK LIST

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SEP 19 2019
PERMIT CENTER/CDD

Name of Proposed Subdivision: Chilkat Vistas

The following items must be included with the initial submittal of a Preliminary Plat:

- ☑ Application, filled out completely
- ☑ Application fee (see fee schedule)
- ☑ Project Narrative
- ☑ Five (5) – 24" by 36" Copies
- ☑ Pre-application Conference Report
- ☑ Lot Closure Report
- ☑ Disclosure of all known environmental hazards and any proposed mitigation measures recommended in the applicable environmental document.
- ☑ Preliminary Plat Checklist: I have reviewed the checklist and all submittals for completeness and accuracy.

Applicant or Surveyor - Signature _____ Date 9-19-19

Applicant or Surveyor - Print Name _____

GENERAL REQUIREMENTS

- ☑ The preliminary plat shall be prepared by a professional land surveyor, registered in the State of Alaska
- ☑ The preliminary plat shall be submitted on 22 by 34 inch sheets. The director of engineering and public works may approve alternate sheet sizes
- ☑ The preliminary plat shall be drawn with black ink to a scale of one-inch to 100 feet or less, or other suitable scale approved by the director of engineering and public works
- ☑ The preliminary plat shall be oriented with north toward the top of the sheet.
- ☑ A vicinity map shall be located in the upper right-hand corner of the sheet
- ☑ The vicinity map shall be oriented in the same direction as the plat
- ☑ A suitable north arrow shall be shown for the plat and vicinity map
- ☑ All line work and lettering must be of professional quality, and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion

GRAPHIC REQUIREMENTS - A preliminary plat shall contain the following information:

Title block - An enclosed title block in the lower right-hand corner containing the following information:

- ☑ The proposed name of the subdivision
- ☑ The legal description of the parcel to be subdivided including U.S. Survey, U.S. Mineral Survey, A.T.S. number or section, township, and range number, as applicable
- ☑ "City and Borough of Juneau, Alaska"
- ☑ "State Recorder's Office at Juneau"
- ☑ The date the preliminary plat was prepared and revised
- ☑ The horizontal scale
- ☑ The name and address of the owner of record
- ☑ The name, address, and telephone number of the surveyor preparing the preliminary plat

Lot, block, and street information:

- ☑ The area of each lot
- ☑ The dimensions in feet and hundredths of a foot
- ☑ An identifying number and letter for lots and blocks
- ☑ Lots numbered consecutively, commencing with the number "1," with no omissions or duplications
- ☑ If the remainder of an original parcel being subdivided is relatively large, it shall be designated as a "tract" with an identifying number
- ☑ All parcels of land intended to be dedicated for public use or reserved for the use of all of the property owners in the proposed subdivision shall be shown as lots, and consecutively numbered. The purpose and any conditions or limitations on the use of the parcel shall be noted on the plat
- ☑ Abutting properties shall be shown with dashed lines, numbers, and/or letters
- ☑ For resubdivisions or public way vacations, the lines and legal description of the previous lots shall be shown with light dashed lines, numbers, and/or letters, or by a separate plat on the same sheet showing the previous lot lines
  - ☑ The minimum data shown for each curve shall be as follows:
    - ☑ Length
    - ☑ Central angle
    - ☑ Radius
    - ☑ Bearing and distance of long chord
  - ☑ Setbacks shall be shown on all corner lots and any lots with multiple frontage. Setbacks shall be shown on typical lots

Boundary lines:

- ☑ All boundary lines of the subdivision with bearings and distances described
- ☑ All retraced boundary lines shall show record and measured bearings and distances where they differ. Record dimension information shall be shown within parentheses and include a record source identification
- ☑ The exterior boundary lines of the subdivision shall be a solid black opaque line that is of a width that distinguishes it from all other property lines shown on the plat
- ☑ If phasing is proposed, then the boundaries and number of each phase, sequential lot numbering, and a subdivision name consistent with previous phases shall be shown

Monumentation:

- ☑ The monuments used to establish the basis of bearing
- ☑ Each monument found or set shall be identified on the plat by a symbol
- ☑ A complete description of the monument, including type and all information printed on the cap. A typical drawing shall be shown for each type of monument cap set
- ☑ A legend showing the symbols for all the types of monuments
- ☑ The identification, description location, elevation, and datum of the benchmark used to establish vertical control

Site access, circulation, and utilities:

- ☑ The widths and names of existing rights-of-way within the subdivision and within 100 feet of the subdivision boundary
- ☑ Proposed rights-of-way, including their widths and proposed names
- ☑ The grades of existing and proposed streets within these rights-of-way
- ☑ The width, ownership, use, and record reference of all proposed and existing easements within the subdivision and within 100 feet of the subdivision boundary
- ☑ The width, ownership, and use of all proposed easements

- ☑ All proposed and existing easements shall have sufficient dimensions shown to determine their location on the ground
- ☑ Existing trails or pathways within the subdivision and within 100 feet of the subdivision boundary, including the width of any associated rights-of way or easements
- ☑ Proposed trails or pathways and widths of their rights-of-way
- ☑ If the plat submitted covers only a part of the tract under the control of the applicant, a sketch plat of the prospective street system of the unplatted part shall be submitted
- ☑ The location of any existing or proposed driveways/curb cuts that access or are proposed to access any existing or proposed street

Topographic information:

- ☑ For slopes of less than five percent, show one foot contour lines and include spot elevations at all breaks in grade, along all drainage channels or swales, and at selected points not more than 100 feet apart in all directions
- ☑ For slopes between five percent and ten percent, show two foot contour lines
- ☑ For slopes greater than ten percent, show five foot contour lines
- ☑ Every fifth elevation contour shall be distinctive and clearly labeled
- ☑ Dashed lines shall represent existing contours
- ☑ Mapping shall include any significant features which can materially affect the design of the subdivision, including, but not limited to, structures, fences, walls, and utility poles
- ☑ If irregular slopes or special features are present, additional contour information may be required by the director of engineering and public works for planning or construction purposes. Additional required information may include projecting the topography of the site after grading has taken place, showing such items as:
  - ☑ Pad elevations and drainage patterns for each lot
  - ☑ Tops and toes of all manufactured slopes, including daylight lines
  - ☑ Existing and proposed retaining wall locations and heights
- ☑ For subdivisions located in hillside areas with slopes greater than eighteen percent, additional requirements apply in accordance with CBJ 49.70, Article II

Sewer and water:

- ☑ Existing sewer and water mains within the tract with pipe sizes and grades
- ☑ A draft plan for proposed water and sewer lines showing the size, approximate slope, and connection points with elevations for the purpose of determining the feasibility of construction

Multisheet plats:

- ☐ When a plat requires more than one sheet, exclusive of a certificate sheet, an index sheet shall be included. When a plat requires more than three sheets, a cover sheet shall also be included, showing the subdivision title, a key map, and all certificates. Each additional sheet shall include the following data:
  - ☑ North arrow
  - ☑ Legend
  - ☑ Surveyor's seal and signature
  - ☑ Title block
  - ☑ Sheet _____ of _____
  - ☑ Scale
  - ☑ All plat notes
  - ☑ Vicinity map

***ADDITIONAL MAPPING OR REPORTS**- At the pre-application meeting, it will be determined if any of the following additional mapping or reports are required to be submitted with the preliminary plat. If required, the following additional mapping or reports shall be submitted:*

Hazard and Special Habitat Areas:

- ☑ Any portion of a special flood hazard area, landslide or avalanche area, habitat area as defined by CBJ 49.70.310, or watersheds, either existing at the proposed subdivision site or shown on the overlay maps, adopted pursuant to this title, to exist at the proposed subdivision site, must be depicted on the preliminary plat
- ☑ The boundaries of any wetland areas must be depicted on the preliminary plat. Boundaries must be determined by a person qualified to perform wetland delineations

Soils report:

N/A

- ☐ A soils report prepared by an engineer licensed by the State of Alaska shall be required if the proposed subdivision is located farther from the existing public sewer system than specified in CBJ 49.35, and the applicant chooses to provide on-lot waste disposal rather than to connect to the public system. A soils report shall include the following:
  - ☐ Certification that the proposed lots are large enough and have soil of sufficient permeability to permit the construction of approved waste treatment systems for on-lot waste disposal
  - ☐ The location and size of drain fields for each lot
  - ☐ The locations and logs of test borings, percolation test results, and a hydrological evaluation of on-site sewage disposal
  - ☐ If the soils report indicates that the soils found on the site are not of sufficient permeability or the lots are not large enough to permit the construction of systems for on-lot waste disposal, the size of the proposed lots must be increased or alternate methods for waste disposal proposed
  - ☐ The soils report shall describe the nature of the subsurface soils and any soil conditions that would affect the design of the proposed development. The soils report shall state whether the proposed subdivision plan is feasible and provide general solutions for all known geotechnical conditions or problems

Drainage report:

- ☑ A preliminary report specifying the method by which the applicant proposes to manage surface and subsurface drainage for the subdivision and the effect of such method on adjacent areas. Unlike the drainage plan required by CBJ 49.35.510, the preliminary drainage report does not need to be prepared by a licensed engineer. The report must address the following:
  - ☑ A calculation of the increase in stormwater runoff resulting from the proposed development as well as the runoff from all drainage areas associated with the site. Runoff calculations shall be based on a fully-developed subdivision and a 25-year storm event
  - ☑ How drainage from the proposed subdivision will join an established drainage channel or channels, unless the director of engineering and public works approves use of an alternative drainage way
  - ☑ An evaluation of existing drainage ways and structures located between the subdivision and the receiving water body, and verification that the existing drainage ways can accommodate the increased runoff. If the increased runoff cannot be handled, the plan must propose solutions to the problem
  - ☑ All required improvements, on or off site, that are shown on the construction plans in accordance with CBJ 49.35, Article V, and that will be constructed as part of the subdivision

Water:

- ☑ For subdivisions of five or more lots, including major subdivisions, the following shall be included, where applicable, in accordance with CBJ 49.15.412:
  - ☐ If a proposed subdivision is located at greater distance from the existing public water system than specified in CBJ 49.35, Article III, and the applicant chooses not to connect to the public system, a statement that the applicant will provide a community water system or that individual wells will be used

☑ A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, Article III

☐ A copy of the State application for a permit to appropriate water in the quantity required to meet the subdivisions demands

☐ This does not apply to remote subdivisions unless: the subdivider of the remote subdivision chooses to provide potable water, a public water system is available and the subdivision falls within the criteria outlined in CBJ 49.35.310(a), or the subdivision has four or fewer lots.

☐ The director for minor subdivisions, and the planning commission for major subdivisions, may, for good cause, temporarily waive the requirement to provide a water report and proof of water, and condition the approval of the preliminary plat upon the provision of both documents as part of the final plat application and approval process.

Erosion control:

☑ A report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

Traffic study:

☑ A traffic impact analysis may be required with the preliminary plat in accordance with CBJ 49.40.300. N/A

Shadow plats:

☑ For subdivisions of five or more lots in transition areas, a shadow plat shall be submitted according to CBJ 49.70.710. The shadow plat shall consist of a sketch superimposed on the proposed subdivision layout. This sketch shall reflect any future resubdivision of the parcels into smaller lots consistent with the higher density and the lot size allowed under the transition zoning. N/A

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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

Richland Manor Proposed Subdivision – UPDATED REPORT

Case Number: **PAC2018 0054**

Applicant: **William Heumann**

Property Owner: **Richland Corporation**

Property Address: **4506, 4508, 4510 Hillcrest Avenue**

Parcel Code Number: **7B1001160010**

Site Size: **30.67 acres**

Zoning: **D-15, Multi-family, 15 du/acre**

Comprehensive Plan Land Use Designation: **MDR (Medium Density Residential, 5 – 20 du/acre)**

Existing Land Use: **Vacant**

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SEP 19 2019
PERMIT CENTER/CDD

Conference Date: **August 29, 2018 (Follow up meeting with Gen. Eng., Fire, and Planning – Nov. 14, 2018)**

Report Issued: September 13, 2018 (Updated Report Issued: November 20, 2018)

List of attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Name	Title	Email address
Autumn Sapp	Eng. & Public Works Business Manager	Autumn.Sapp@juneau.org
Laura Boyce	Senior Planner, CDD	Laura.boyce@juneau.org
Sven Pearson	Deputy Fire Marshall	Sven.pearson@juneau.org
Laurel Bruggeman	Planner, CDD	Laura.bruggeman@juneau.org
Dan Jager	Fire Marshall	Dan.jager@juneau.org

Conference Summary

Questions/issues/agreements identified at the conference that were not already identified in the attached reports.
The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

Planning Division:

A major subdivision application is required for the proposed subdivision. A major subdivision is a two-step process – the preliminary plat and the final plat. Both steps require a public hearing and approval by the Planning Commission. Due to the overall potential number of dwelling units on the parcel and the trips generated, a Traffic Impact Analysis will be needed and is required with submittal of the preliminary plat. Additionally, due to the slopes shown on the property, a Hillside Endorsement Development application may also be needed for proposed development in these areas. The slope map is attached to this report.

Requirements for the preliminary plat are listed at CBJ 49.25.411 and final plat requirements are at CBJ 49.25.412. Because this project is projected to be part of a major subdivision development, pursuant to CBJ49.15.401(a) (1) (A), a major subdivision must be applied for.

Because the property is zoned D-15, uses would need to be consistent with the Table of Permissible Uses, CBJ 49.25.300. If single-family development is proposed, as the applicant indicates that some of the development would be adjacent to Mountainside Estates, then lots would need to be consistent with the Table of Dimensional Standards, CBJ 49.25.400. Minimum lot size in the D-15 zone district is 5,000 square feet with lots meeting the minimum lot width and depth of 50 feet and 80 feet, respectively. Common wall lot sizes in D-15 are a minimum of 3,500 square feet and can be a minimum of 30 feet in width and 80 feet in depth.

1. **Zoning** – D-15, a multi-family zone district
2. **Maximum Density** – 460 dwelling units (30.67 acres X 15 du/ac)
3. **Setbacks** – Front – 20 feet, Rear - 15 feet, Side – 5 feet. The property abuts some D-5 zoned lands in Mountainside. When two differing zone districts abut one another, the greater setback of the districts applies. The front and side yards are the same in D-5 and D-15; however, the rear yard is greater in the D-5 zone district, requiring a minimum of a 20 foot setback.
4. **Height** – Maximum height of structures in the D-15 zone district is 35 feet for permissible uses and 25 feet for accessory uses.

Access – Access to the property is via Hillcrest Avenue, Mountainside Drive, Robbie Lane, and Hooter Lane which is an undeveloped right-of-way. The Planning Commission at its 12/8/1998 meeting stated that any permit for further development must include plans for access/egress as it relates to Mountainside Subdivision, Hooter Lane, and for drainage. Connection to Hooter Lane from development in Mountainside Estates will be required. Platting the right-of-way to it will be required for the first phase of development; however, construction of the ROW will not be required until triggered by Fire Code requirements. CBJ 49.15.400(a)(3), CBJ 49.35.120(a), and CBJ 49.35.210 require a connected street system and connectivity to adjoining unsubdivided lands. Additionally, previous subdivision approvals for Mountainside Estates required future

second access for the subdivision.

Roadway Construction Standards may be waived by the director or Planning Commission as stated in CBJ 49.35.240(i)(4) if the request is for a street reconstruction or new street construction located in a right-of-way platted before 1987 and the waiver request meets the criteria of said chapter. Requests for such waivers shall be in writing.

Privately maintained access in the right-of-way is not allowed as the criteria set forth in CBJ 49.35.273(b) have not been met because the property is located within the Urban Service Area.

The Comprehensive Plan's Land Use Map H shows a future road (alignment not specific) from Tract B to the property to the north. Connection will not be required until that portion of the tract is proposed for development.

6. **Parking** – Parking for multifamily is generally two parking spaces per unit
7. **Lot Coverage** – The maximum lot coverage in the D-15 zone district is 50%.
8. **Vegetative Coverage** – The minimum vegetative cover is 30% in the D-15 zone district.
9. **Lighting** – N/A
10. **Noise** – Noise during construction must not exceed CBJ Code requirements.
11. **Flood** – Flood Zone X, Not in a Floodway
12. **Hazard/Mass Wasting/Avalanche/Hillside Endorsement** – Some portions of the site appear to exceed 18% slope. A Hillside Endorsement may be needed for development in these areas. See attached map.
13. **Wetlands** – According to the applicant, portions of the site contain wetlands. Initial development plans would be on the areas that do not contain wetlands.
14. **Habitat** – The applicant will need to check with Federal Authorities if any eagle nests appear to be on the site. No anadromous streams are located on the property.
15. **Plat or Covenant Restrictions** – The Planning Commission at its 12/8/1998 meeting stated that any permit for further development must include plans for access/egress as it relates to Mountainside Subdivision, Hooter Lane, and for drainage. An overall Tract B master plan will be required.

Building Division:

16. **Building** – N/a
17. **Outstanding Permits** – n/a

General Engineering/Public Works:

18. **Engineering** –
    a. At the time of preliminary plat submittal, submit an erosion control report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

b. Construction plans to be submitted after the approval of the preliminary plat and before final plat submission. Construction plans must adhere to 49.35.140 and must be signed and stamped by Alaskan licensed engineers for each discipline. Construction plans for this layout of development does not need to include all phases of full buildout of development. For specific requirements, please refer to CBJ code by visiting: http://www.juneau.org/cddftp/ordinances.php and referencing chapter 49.35 – Public and Private Improvements.

c. Prior to final plat, an Engineer's estimate for the installation of public improvements must be submitted. Once this is received, a performance bond amount will be determined and must be paid/posted prior to recording of the final plat. Further discussion regarding the bond can take place once the project phasing is determined. For all options regarding the financial guarantee please refer to 49.55 – Financial Responsibility.

d. Dependent on the construction plan and schedule an inspection deposit will be required and a private inspector may be hired.

e. Street lighting is required and shall not exceed 250' between poles.

19. **Drainage –**

a. Drainage report with the submittal of the preliminary plat does not need to be engineered. At time of construction plan submittals a drainage plan must be submitted and must be signed and stamped by an Alaskan licensed engineer.

b. Preliminary plat requirements do need to be followed see 49.15.411 - Preliminary plat requirements for full listing. Please do note that topographic information shall be shown as outlined under 48.15.411, (6) – Topographic information.

20. **Utilities** – (water, power, sewer, etc.) –

a. At time of preliminary plat, a draft plan for the proposed water and sewer lines shall be submitted showing existing installed utilities including line sizing and connection points with elevations.

b. A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, article III. Specifically for your project, it may require additional upgrades to the existing water system. It is recommended that a point of contact would be the original designer, Jim Dorn, of the water pump station located on Hillcrest Avenue near the intersection of Craig Street.

c. A copy of the state application for a permit to appropriate water in the quantity required to meet the subdivisions demands will need to be obtained and must be submitted prior construction plan approval.

Fire Marshal:

21. **Fire Items/Access** – Because there is only one access to all of Mountainside Estates, each dwelling will need to be sprinkled. There are approximately 157 lots within Mountainside Estates with only one access road into the subdivision.

Other Applicable Agency Review:

22. The applicant will need to check with Alaska Department of Transportation to see if they have any requirements for this development.

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

1. Major Subdivision Application, include Preliminary Plat Checklist
2. Hillside Development Permit
3. Conditional Use permit is required for development of nine or more dwelling units.

Additional submittal requirements:

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

1. A copy of this pre-application conference report.
2. A preliminary plat checklist for the preliminary plat.
3. Traffic Impact Analysis.
4. A final plat checklist will be needed at the final plat stage.

Exceptions to submittal requirements:

Submittal requirements staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

1. N/A

Fee estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

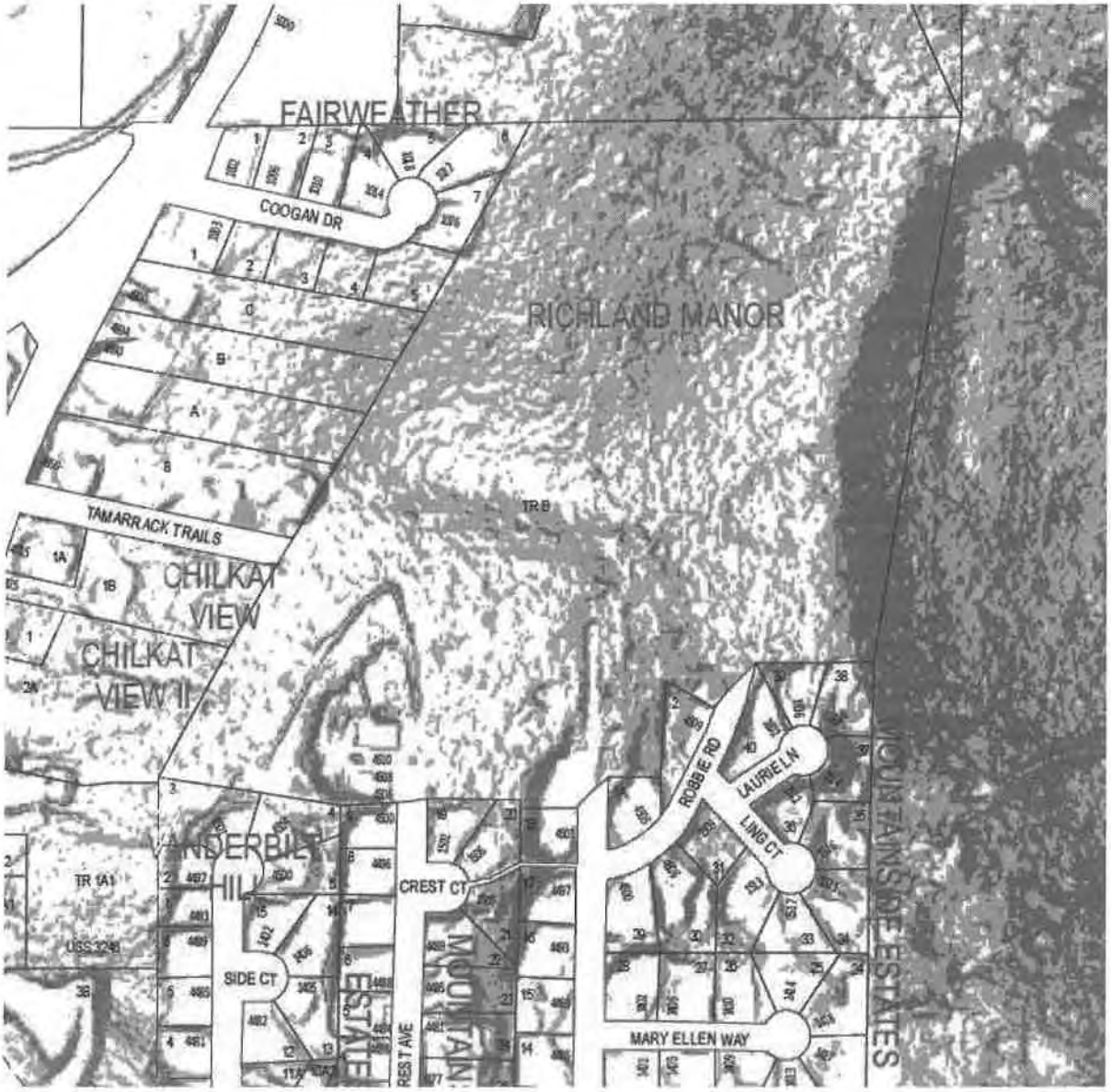
1. Major Subdivision Application (for subdivisions of 14 or more lots) - $110 per resulting lot
    a. Preliminary Plat - $110 for each resulting lot; Public Notice Sign Fee - $150
    b. Final Plat - $70 for each resulting lot; Public Notice Sign Fee (may be required) - $150
2. Hillside Development Endorsement - $60 gross hourly rate for professional review and inspection
3. Prior to plat recording, if the improvements are not in place, a financial guarantee that meets the requirements of CBJ 49.55, Financial Responsibility will be required.

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/cdd.

Submit your completed application
You must submit your application(s) in person with payment to:

City/Borough of Juneau
Permit Center
230 S. Franklin Street,
Fourth Floor Marine View Center
Juneau, AK 99801

Phone: (907) 586-0715
Fax: (907) 586-4529
Web: www.juneau.org/cdd



Slopes

18% - 37%

>37%

RECORD OF REVISIONS			
No.	DATE	DESCRIPTION	BY

proHNS LLC

CERTIFICATE OF AUTHORIZATION #100662

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

1945 ALEX HOLDEN WAY #101
JUNEAU, AK 99801

solutions@proHNS.com
www.proHNS.com

Attachment A - Application

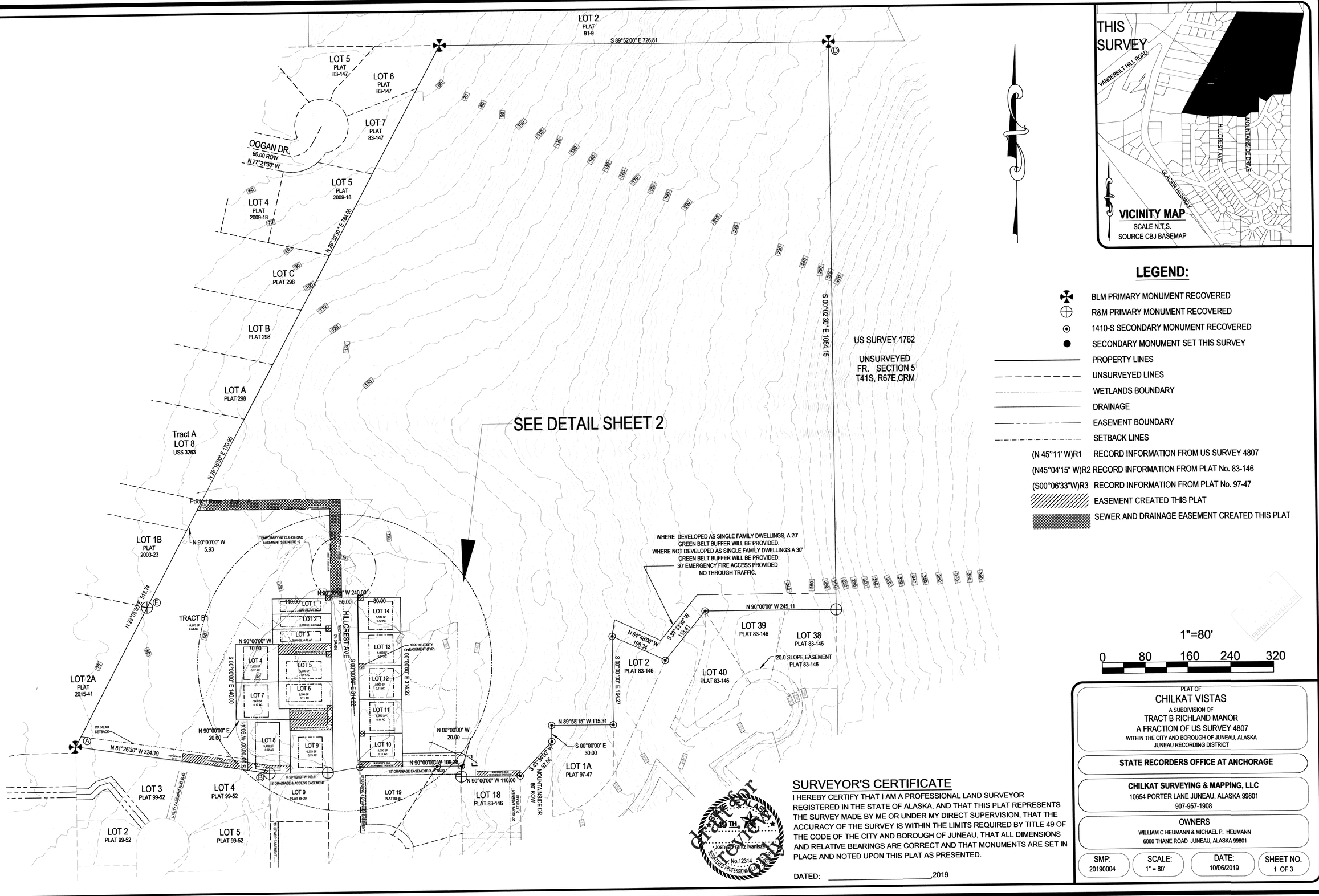
RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

ROAD GRADES

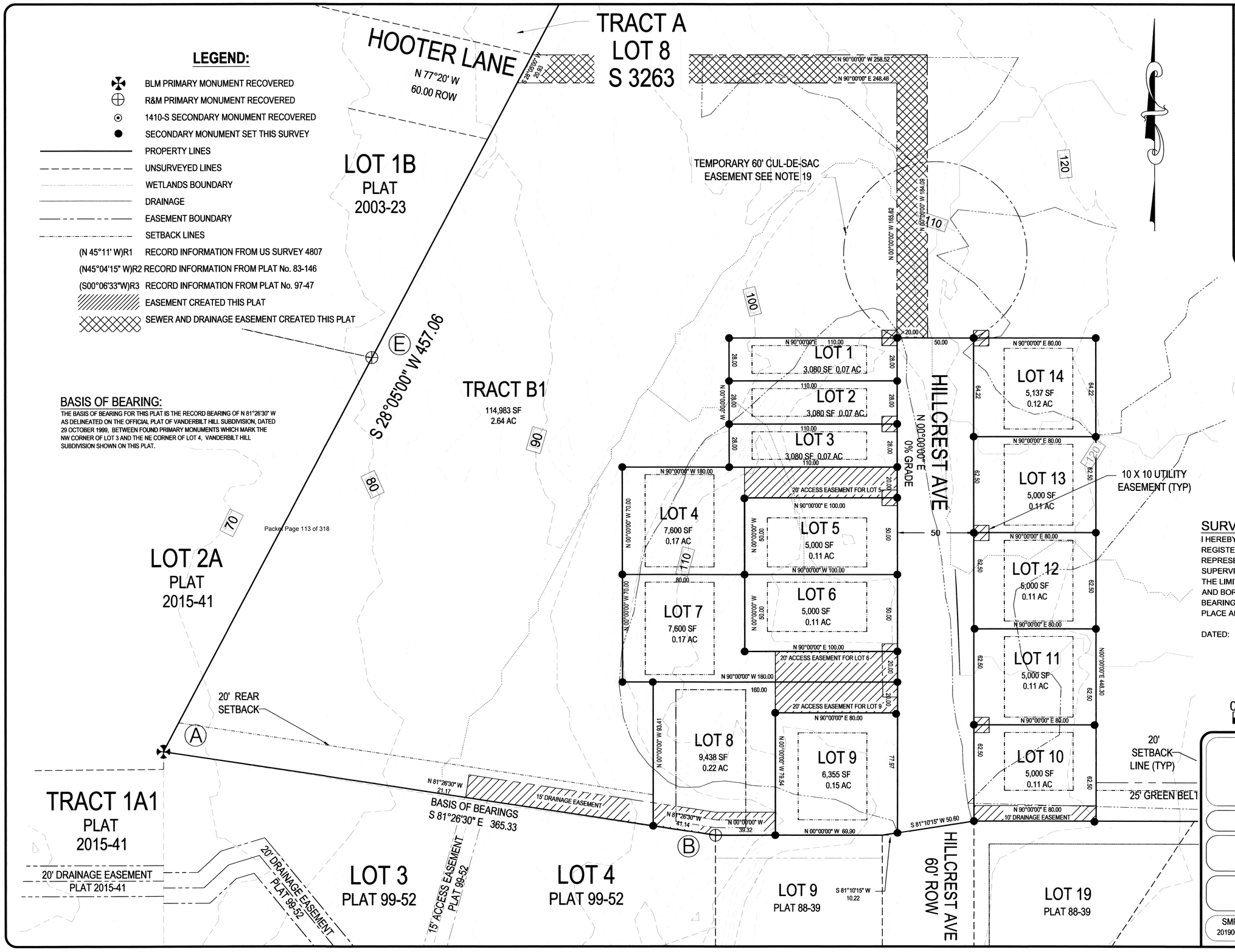
SHEET NUMBER 1 OF 1

November 1, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\C3D Richland Manor\Sheets\Richland Manor_Road Grades.dwg


LOT 2
PLAT
91-9
S 89°52'00" E 726.81
LOT 5
PLAT
83-147
LOT 6
PLAT
83-147
LOT 7
PLAT
83-147
OOGAN DR.
60.00 ROW
N 77°21'30" W
LOT 5
PLAT
2009-18
LOT 4
PLAT
2009-18
N 28°30'00" E 784.08
LOT C
PLAT 298
LOT B
PLAT 298
LOT A
PLAT 298
Tract A
LOT 8
USS 3263
N 28°16'00" E 170.95
S 00°02'30" E 1054.15
US SURVEY 1762
UNSURVEYED
FR. SECTION 5
T41S, R67E,CRM
SEE DETAIL SHEET 2
LOT 1B
PLAT
2003-23
N 90°00'00" W
5.93
N 28°16'00" E 513.74
TRACT B1
LOT 2A
PLAT
2015-41
N 81°26'30" W 324.19
N 90°00'00" W 240.00
HILLCREST AVE
S 00°00'00" E 140.00
N 90°00'00" E
20.00
N 90°00'00" W 93.41
S 00°00'00" E 314.22
N 00°00'00" W
20.00
N 90°00'00" W 109.28
N 90°00'00" W 110.00
S 43°34'00" W
60.00
MOUNTAINSIDE DR.
60 ROW
N 89°58'15" W 115.31
S 00°00'00" E
30.00
LOT 1A
PLAT 97-47
LOT 3
PLAT 99-52
LOT 4
PLAT 99-52
LOT 2
PLAT 99-52
LOT 5
PLAT 99-52
LOT 9
PLAT 99-39
LOT 19
PLAT 99-39
LOT 18
PLAT 83-146
WHERE DEVELOPED AS SINGLE FAMILY DWELLINGS, A 20' GREEN BELT BUFFER WILL BE PROVIDED.
WHERE NOT DEVELOPED AS SINGLE FAMILY DWELLINGS A 30' GREEN BELT BUFFER WILL BE PROVIDED.
30' EMERGENCY FIRE ACCESS PROVIDED
NO THROUGH TRAFFIC.
N 90°00'00" W 245.11
N 64°48'00" W
109.34
S 38°33'30" W
118.41
S 00°00'00" E 164.27
LOT 2
PLAT 83-146
LOT 39
PLAT 83-146
LOT 38
PLAT 83-146
LOT 40
PLAT 83-146
20.0 SLOPE EASEMENT
PLAT 83-146
THIS
SURVEY
VANDERBILT HILL ROAD
HILLCREST AVE
MOUNTAINSIDE DRIVE
GLACIER HIGHWAY
VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP
LEGEND:
BLM PRIMARY MONUMENT RECOVERED
R&M PRIMARY MONUMENT RECOVERED
1410-S SECONDARY MONUMENT RECOVERED
SECONDARY MONUMENT SET THIS SURVEY
PROPERTY LINES
UNSURVEYED LINES
WETLANDS BOUNDARY
DRAINAGE
EASEMENT BOUNDARY
SETBACK LINES
(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
EASEMENT CREATED THIS PLAT
SEWER AND DRAINAGE EASEMENT CREATED THIS PLAT
1"=80'
0 80 160 240 320
PLAT OF
CHILKAT VISTAS
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT
STATE RECORDERS OFFICE AT ANCHORAGE
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801
SMP: 20190004
SCALE: 1" = 80'
DATE: 10/06/2019
SHEET NO. 1 OF 3
SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.
DATED: _____,2019
STATE OF ALASKA
49TH
Joshua Franz Ivanisevich
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

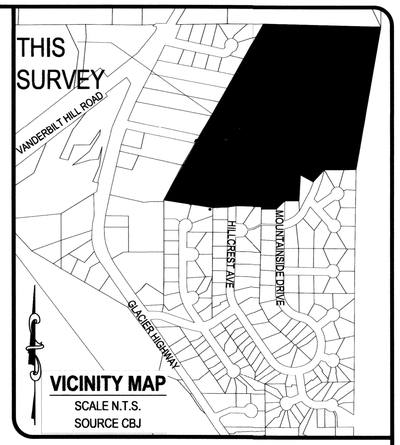
LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- EASEMENT BOUNDARY
- SETBACK LINES
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- EASEMENT CREATED THIS PLAT
- SEWER AND DRAINAGE EASEMENT CREATED THIS PLAT



BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF N 81°26'30" W AS DELINEATED ON THE OFFICIAL PLAT OF VANDERBILT HILL SUBDIVISION, DATED 29 OCTOBER 1999, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK THE NW CORNER OF LOT 3 AND THE NE CORNER OF LOT 4, VANDERBILT HILL SUBDIVISION SHOWN ON THIS PLAT.



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ

CHILKAT SURVEYING
BLK B
ROW L2 / L1
2019
PLS 12314

TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 36" REBAR WITH 2.5" ALUMINUM CAP

STATE OF ALASKA 49TH
Joshua Fratz Ivanisevich
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

RECEIVED

1"=30'

0 30 60 90 120

PLAT OF
CHILKAT VISTAS
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

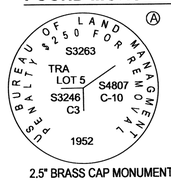
STATE RECORDERS OFFICE AT ANCHORAGE

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

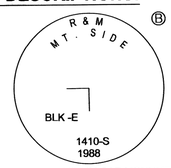
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 30'	10/06/2019	2 OF 3

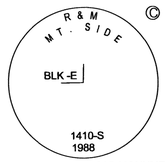
FOUND MONUMENT DESCRIPTIONS:



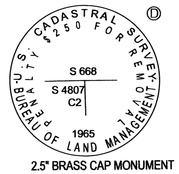
2.5" BRASS CAP MONUMENT



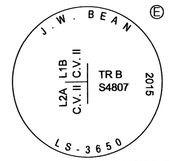
3.25" ALUMINUM CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT



2.5" BRASS CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFRENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER CHILKAT VISTAS SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET. ALL REQUIRED CHILKAT VISTAS SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12.120 BEST MANAGEMENT PRACTICES.

8) LOTS 1 , 2, AND 3 ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 BLOCK B WERE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

9) LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE ALTERNATIVE PLAT, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS, IN CBJ 49.35.

12) HOOTER LANE FROM GLACIER HIGHWAY TO HILLCREST AVENUE, AND HILLCREST AVENUE AND MOUNTAINSIDE DRIVE SHALL BE DEVELOPED WITH A A SIDEWALK ON ONE SIDE. THE NUMBER OF SIDEWALKS IN THE REMAINDER OF RICHLAND MANOR WILL BE DETERMINED AT THE TIME OF FUTURE DEVELOPMENT APPLICATIONS.

13) DENSITY: IT IS AGREED THAT THE LOOP ROAD OF HILLCREST AVE. AND MOUNTAINSIDE DRIVE WILL BE DEVELOPED AS SINGLE FAMILY HOMES, AS DEPICTED ON THE ATTACHED ALTERNATIVE PLAT.

14) ROBBIE ROAD DEVELOPMENT THAT IS CONNECTED TO MOUNTAINSIDE ESTATES SHALL BE LIMITED TO NOT MORE THAN 7 SINGLE FAMILY HOMES, 3 OF WHICH MAY HAVE ACCESSORY APARTMENTS.

15) ROBBIE ROAD SHALL TERMINATE AND SHALL NOT BE A POINT OF ACCESS TO RICHLAND MANOR, UNLESS REQUIRED, AND GATED, FOR FIRE/EMERGENCY SERVICE ACCESS ONLY.

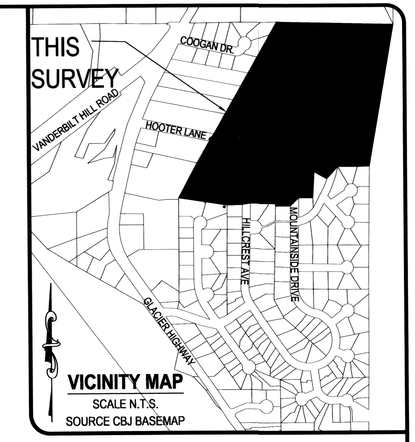
16) HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE ALTERNATIVE PLAT (EXHIBIT C). ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF TRACT B-1 MAY CONNECT TO THE EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTRANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

17) GREENBELT BUFFERS WILL BE IMPLEMENTED AND PRIVATELY MAINTAINED BY LOT OWNERS AS DELINEATED ON THE ALTERNATIVE PLAT, EXHIBIT B (AND AS MORE CLEARLY DRAWN FOR ILLUSTRATIVE PURPOSES IN EXHIBIT C) TO SEPARATE SINGLE FAMILY HOMES FROM MULTI-FAMILY DEVELOPMENT. EXCAVATION FOR PURPOSES OF SLOPE STABILIZATION MAY TAKE PLACE IN THE GREENBELT BUFFERS PROVIDED THEY ARE ALLOWED TO REVEGETATE FOLLOWING CONSTRUCTION. IN THE EVENT THIS BECOMES NECESSARY HEUMANN WILL CONSULT WITH ADJACENT HOMEOWNERS ABOUT THE IMPACTS.

18) OTHER THAN SHOWN, THERE IS AN IMPLIED PRIVATE DAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10 FEET IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

19) TEMPORARY CUL-DE-SAC EASEMENT SHALL BE VACATED UPON EXTENSION OF HILLCREST AVENUE UNLESS THE DIRECTOR DETERMINES ALL OR A PORTION OF THE CUL-DE-SAC MAY REMAIN.

20) ACCESS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. ACCESS TO PANHANDLE LOTS CREATED THIS SUBDIVISION SHALL BE RESTRICTED TO A SINGLE DRIVEWAY APRON IN THE RIGHT OF WAY UNLESS A SECOND DRIVEWAY TO IS APPROVED BY CBJ. USE OF THE ACCESS EASEMENT DELINEATED ON THIS PLAT IS SUBJECT TO THE REQUIREMENTS SET FORTH IN THE COMMON DRIVEWAY ACCESS, JOINT USE AND HOLD HARMLESS AGREEMENT RECORDED WITH THIS SUBDIVISION.



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

STATE OF ALASKA
49TH
Joshua Franz Ivanisze
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

RECEIVED

1"=80'

0 80 160 240 320

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2019 DATE:_____,2019

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS___ DAY OF _____, 2019, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2019, AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, ANCHOORAGE, ALASKA.

_____DATED _____, 2019

CHAIRMAN OF THE PLANNING COMMISSION
CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK
CITY AND BOROUGH OF JUNEAU

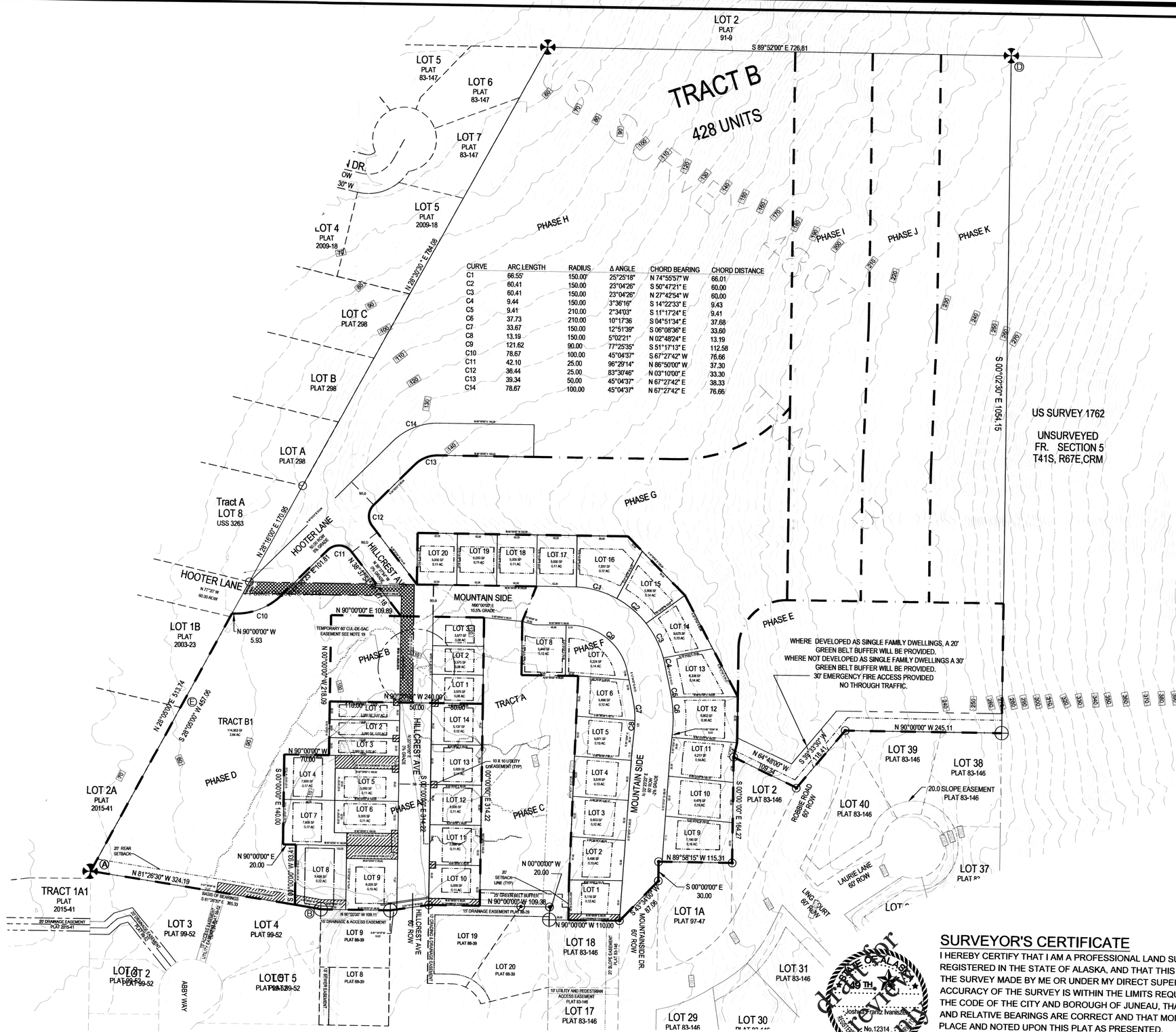
PLAT OF
CHILKAT VISTAS
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT ANCHORAGE

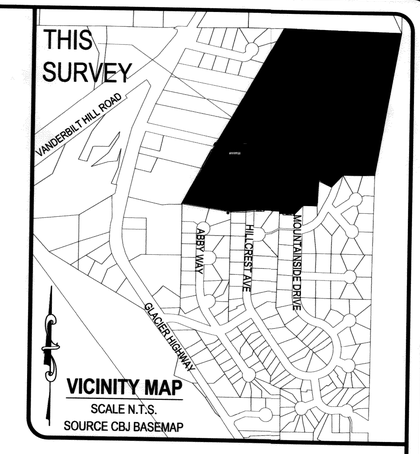
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 80'	10/06/2019	3 OF 3



CURVE	ARC LENGTH	RADIUS	Δ ANGLE	CHORD BEARING	CHORD DISTANCE
C1	66.55'	150.00'	25°25'18"	N 74°55'57" W	66.01
C2	60.41	150.00	23°04'26"	S 50°47'21" E	60.00
C3	60.41	150.00	23°04'26"	N 27°42'54" W	60.00
C4	9.44	150.00	3°36'16"	S 14°22'33" E	9.43
C5	9.41	210.00	2°34'03"	S 11°17'24" E	9.41
C6	37.73	210.00	10°17'36	S 04°51'34" E	37.68
C7	33.67	150.00	12°51'39"	S 06°08'36" E	33.60
C8	13.19	150.00	5°02'21"	N 02°48'24" E	13.19
C9	121.62	90.00	77°25'35"	S 51°17'13" E	112.58
C10	78.67	100.00	45°04'37"	S 67°27'42" W	76.66
C11	42.10	25.00	96°29'14"	N 86°50'00" W	37.30
C12	36.44	25.00	83°30'46"	N 03°10'00" E	33.30
C13	39.34	50.00	45°04'37"	N 67°27'42" E	38.33
C14	78.67	100.00	45°04'37"	N 67°27'42" E	76.66



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- EASEMENT BOUNDARY
- SETBACK LINES
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
- EASEMENT CREATED THIS PLAT
- SEWER AND DRAINAGE EASEMENT CREATED THIS PLAT

1"=80'

0 80 160 240 320

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

STATE OF ALASKA
49 TH
Joshua Franz Ivanisze
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

DATED: _____,2019

SKETCH PLAT OF
CHILKAT VISTAS
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
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OWNERS
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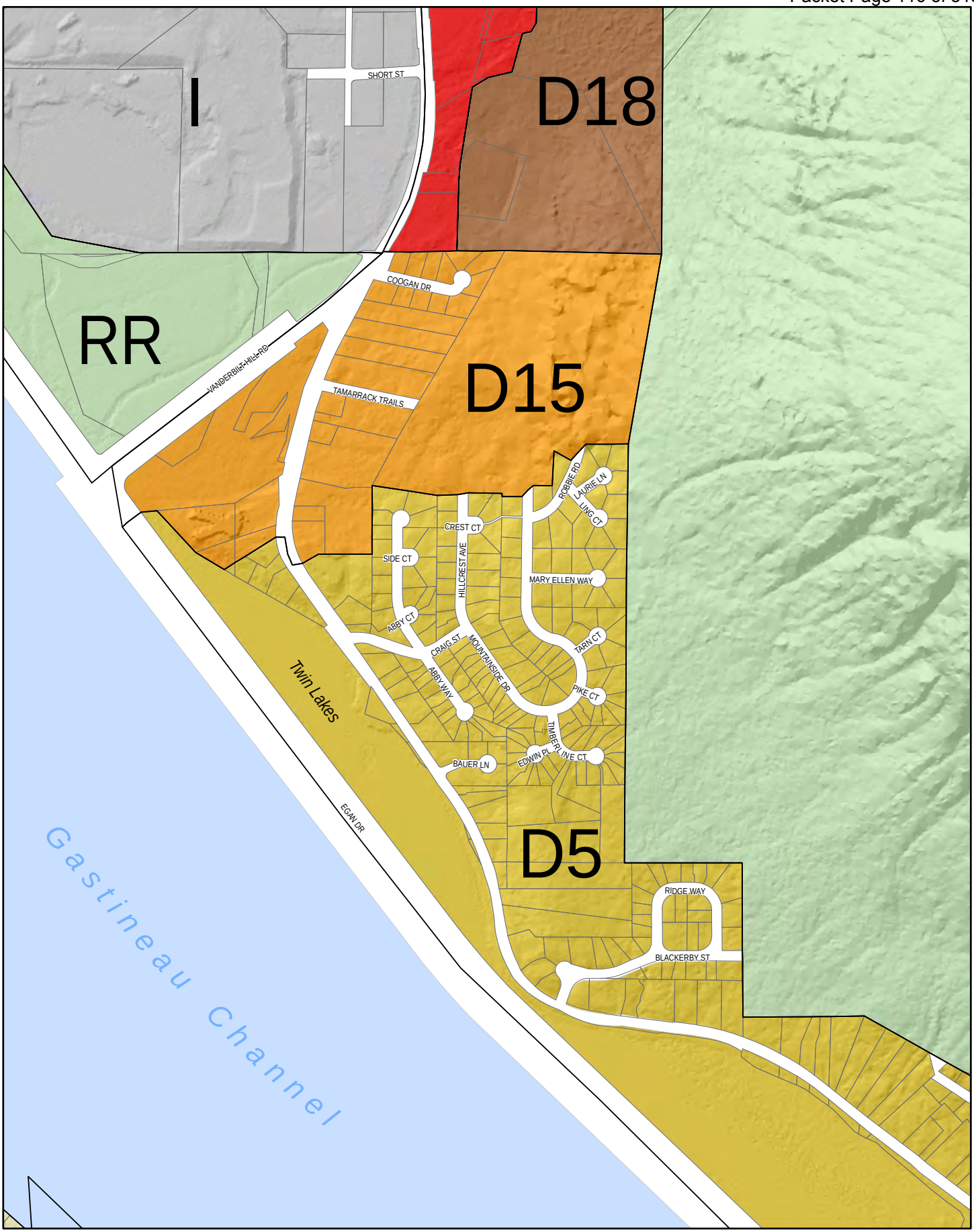
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20190004	1" = 80'	10/06/2019	1 OF 1

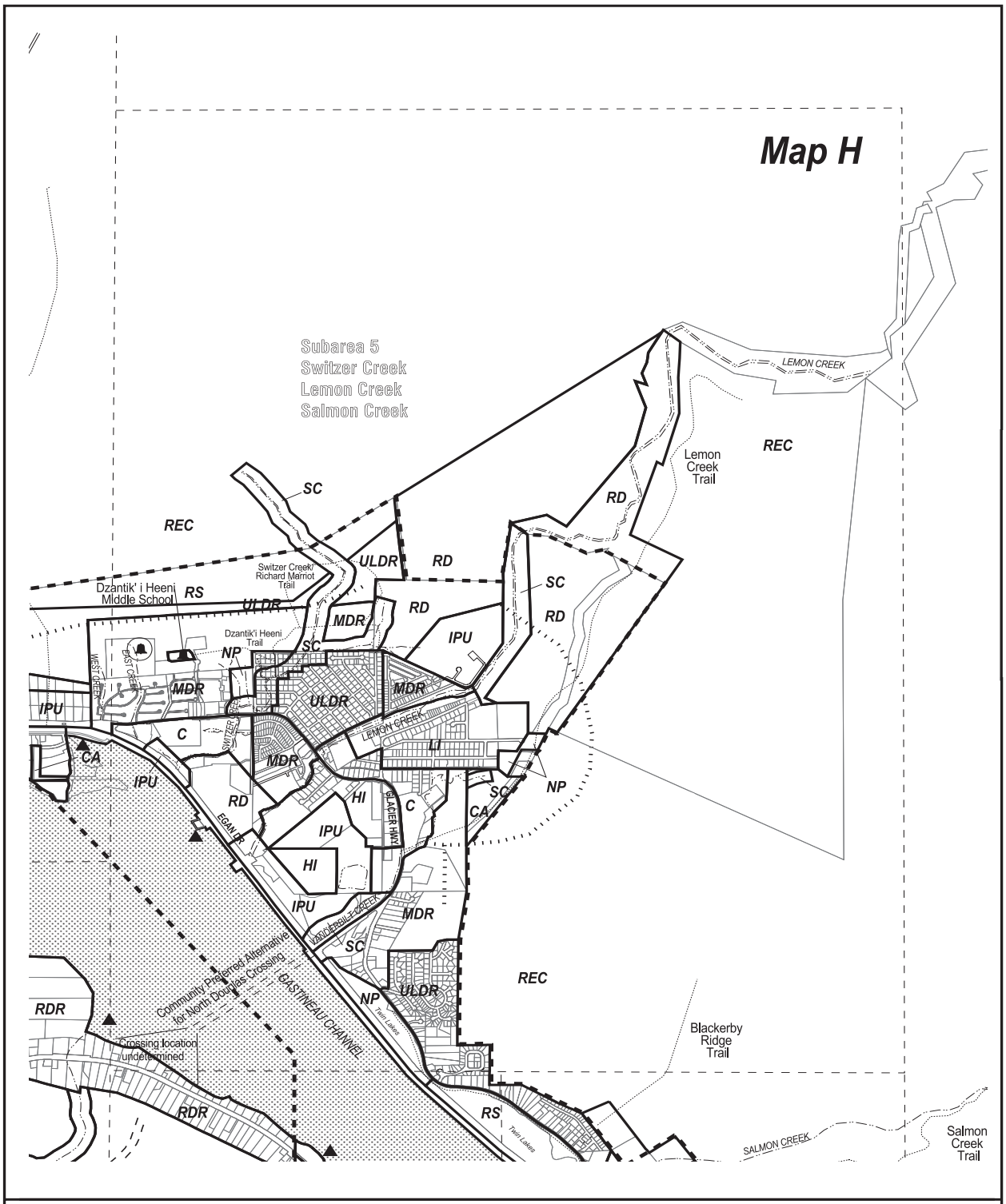


ZONING

0 500 1,000 Feet

N

Attachment D - Zoning Maps

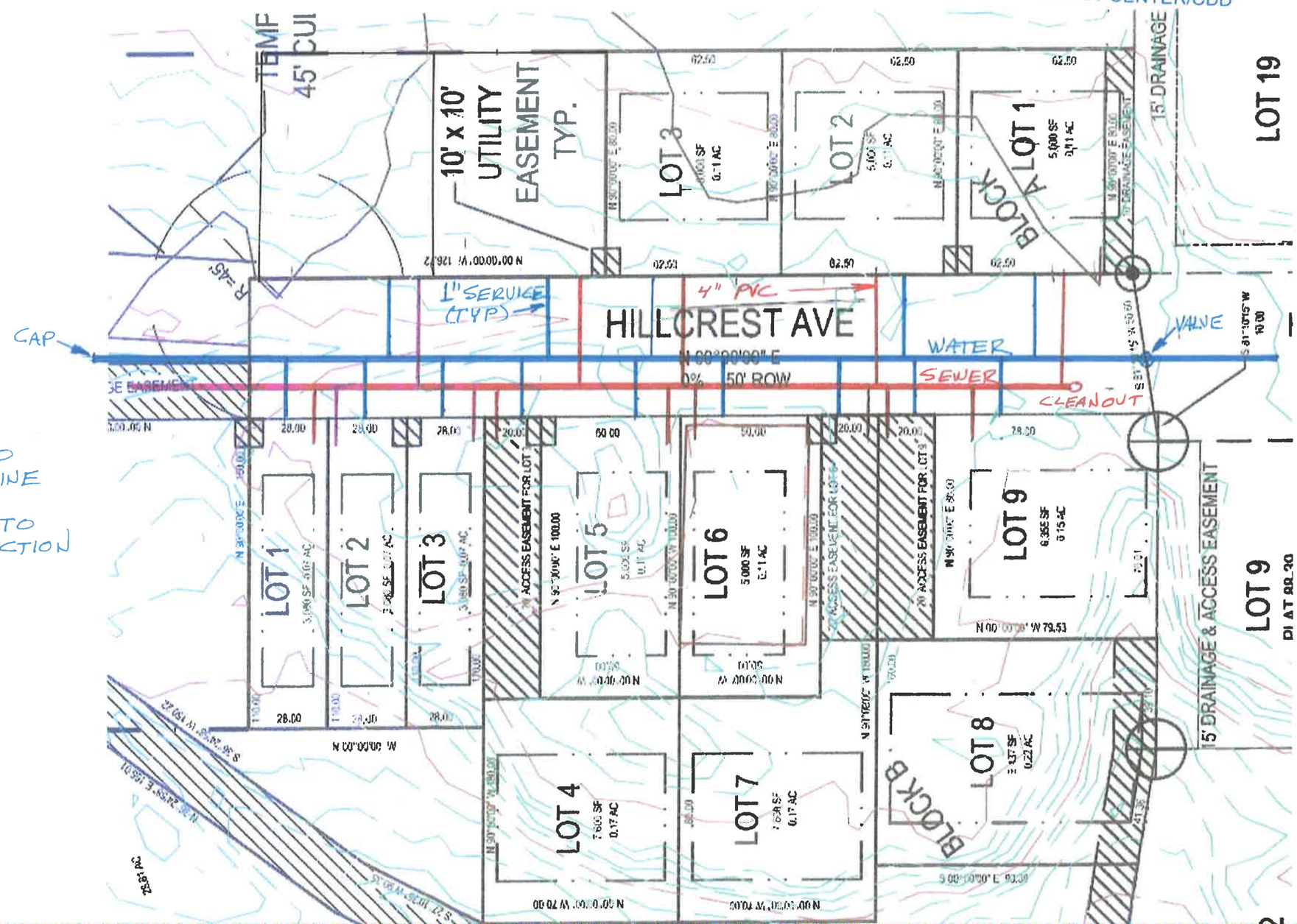

Map H
Subarea 5
Switzer Creek
Lemon Creek
Salmon Creek
LEMON CREEK
Lemon Creek Trail
REC
RD
SC
ULDR
MDR
IPU
NP
RS
C
CA
LI
HI
RDR
Dzantik' i Heeni Middle School
Switzer Creek/ Richard Marriot Trail
Dzantik'i Heeni Trail
WEST OREE
EAST OREE
SWITZER
LEMON CREEK
GLACIER HWY
EGAN DR
VANDERBILT CREEK
Community Preferred Alternative for North Douglas Crossing
Crossing location undetermined
GASTINEAU CHANNEL
Twin Lakes
Blackerby Ridge Trail
SALMON CREEK
Salmon Creek Trail
City & Borough of Juneau
COMPREHENSIVE PLAN
Adopted October 20th, 2008
Ordinance No. 2008-30
NATURAL RESOURCE
REC Recreational Resource
RD Resource Development
SP State Park
NP CBJ Natural Area Park
RS CBJ Recreational Service Park
CA CBJ Conservation Area
SC Stream Protection Corridor
COMMERCIAL INDUSTRIAL
C Commercial
MC Marine Commercial
WCI Waterfront Commercial Industrial
LI Light Industrial
HI Heavy Industrial
RESIDENTIAL
RDR Rural Dispersed Residential
RLDR Rural Low Density Residential
ULDR Urban Low Density Residential
MDR/SF Medium Density Residential- Single Family
MDR Medium Density Residential
HDR High Density Residential
TTC Traditional Town Center
M/MU Marine Mixed Use
PUBLIC
IPU Institutional and Public Use
Existing School
Potential School Location
ROADS TRAILS
Potential Arterial (alignment not specific)
Potential Road (alignment not specific)
Trails
OTHER
New Growth Areas
Mendenhall Wetlands State Game Refuge
Subarea Boundary
Urban Service Area
Beach Access
Streams
NOTE: Potential geophysical hazards, wetlands, flood zones, natural resource setbacks or other features which can affect properties may be present. CONTACT THE COMMUNITY DEVELOPMENT DEPARTMENT FOR DETAILED INFORMATION.
2000 0 2000 Feet
Prepared by: Community Development Department

Map 11.9

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

WATER AND SEWER LATERAL LAYOUT

RECEIVED
PERMIT CENTER/CDD

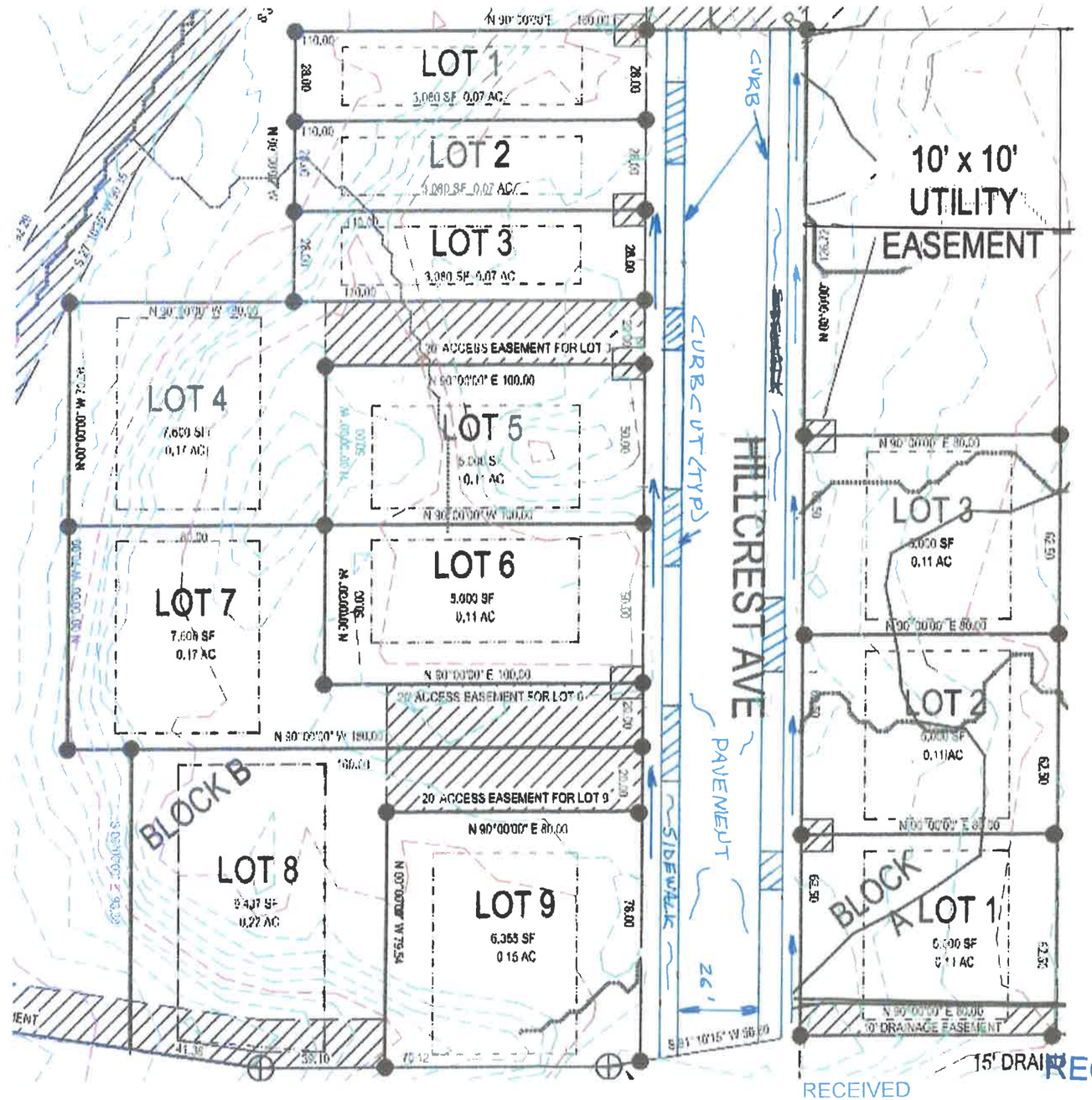


NOTE:
NEW 8" WATER LINE TO
EXISTING 8" WATER LINE

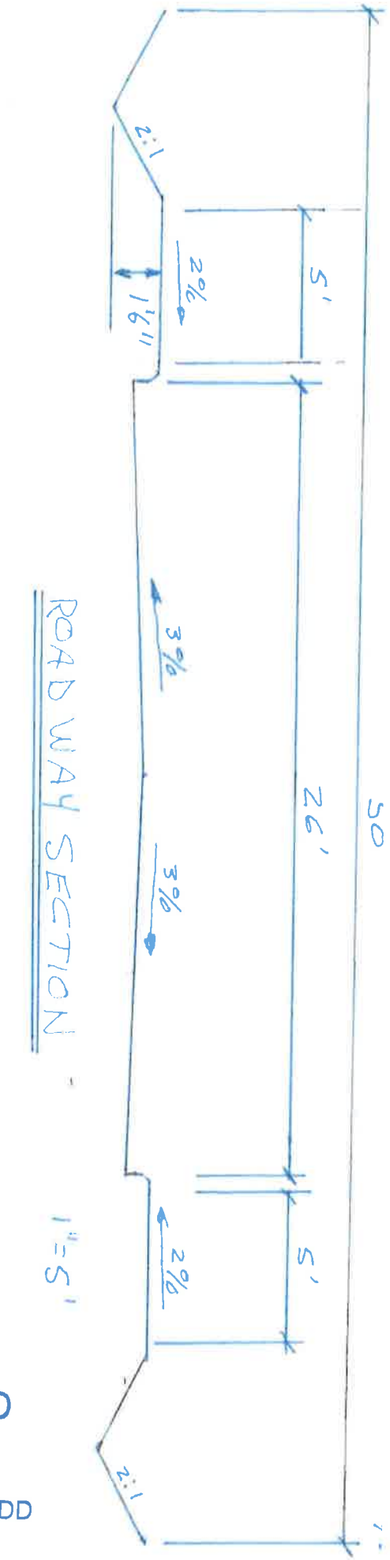
NEW 8" SEWER LINE TO
HOOTER LANE CONNECTION

1"=40'
12/26/18
WCH

1"=40'
WCH
12/27/18



ROADWAY LOCATION IN HILLCREST ROW.



RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

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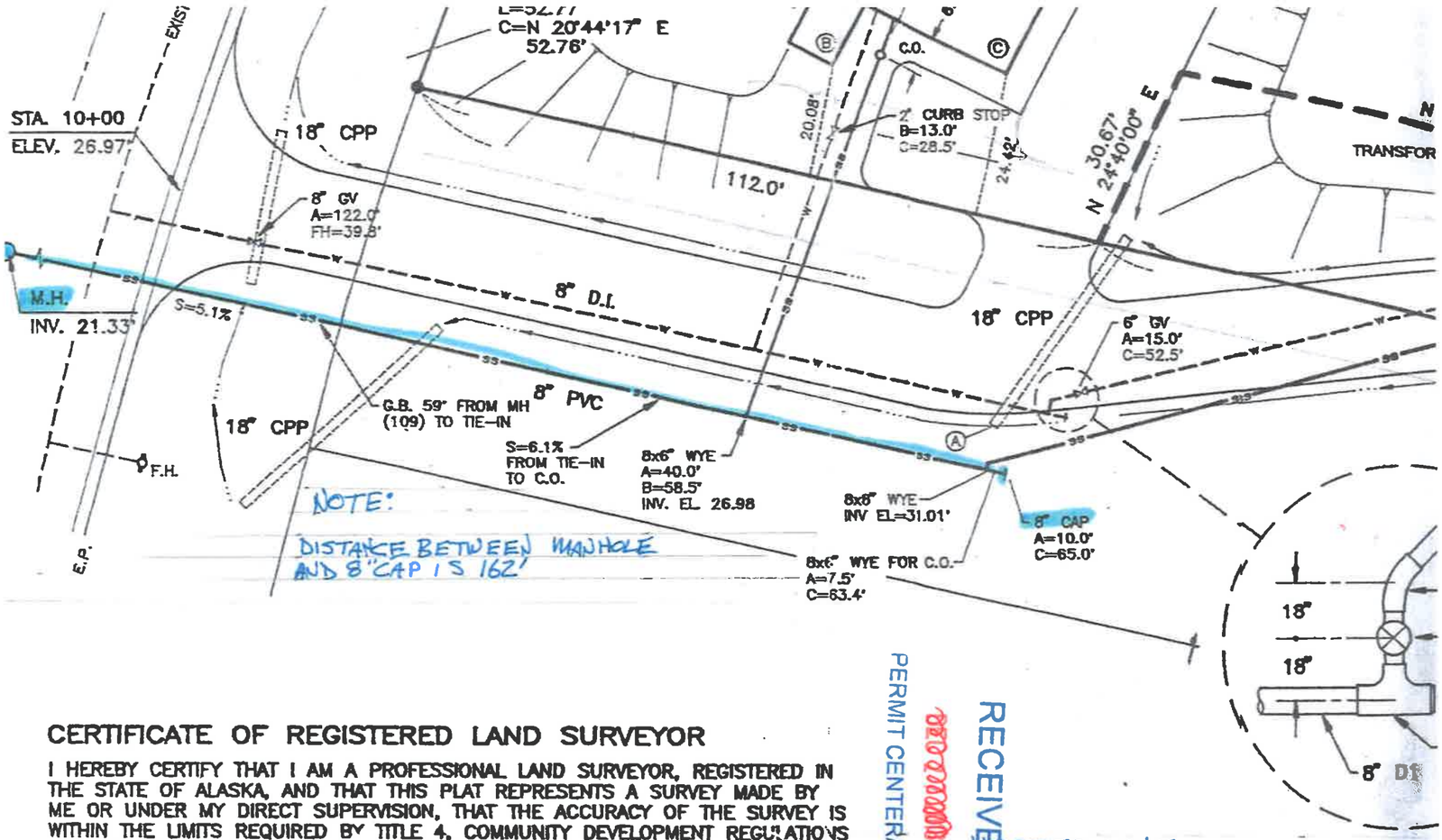

CERTIFICATE OF REGISTERED LAND SURVEYOR

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 4, COMMUNITY DEVELOPMENT REGULATIONS AND TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONAL AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

Date 2-14-96

RECEIVED
PERMIT CENTER/CDD

OOTER LANE
WATER AND SEWER AS-BUILT

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

Engineering & Public Works Department
155 South Seward Street
Juneau, Alaska 99801
Phone: 907-586-0800 | Fax: 907-463-2606

DATE: September 27, 2019

TO: Laurel Christian, CDD

FROM: Autumn Sapp, Engineering & Public Works Department
John Bohan, Engineering & Public Works Department

RE: SMP20190004 – Chilkat Vistas Subdivision (formerly known as Richland Manor 2 Subdivision), Major Subdivision Engineering & Public Works Department Review

Engineering and Public Works Department has completed a preliminary review of the proposed Chilkat Vistas Subdivision to create a total of 15 lots. The following has been determined as required by CBJ code 49.15.402(c)(4)(e):

1. The preliminary drainage plan is incomplete. It appears feasible; however, it does not delineate all the runoff conveyed into the Hooter Lane drainage system by the construction of Phase A.
    a. The plan does not account for the additional runoff from the areas uphill of the development when determining the capacity of the 24" culvert crossing Glacier Highway at Hooter Lane.

    b. Revise and resubmit the drainage plan upon full delineation of all runoff conveyed by the Hooter Lane drainage, including a determination of the proper culvert sizing necessary at the Hooter Lane - Glacier Highway culvert crossing prior to approval of the construction plans.

2. The Chilkat Vistas Subdivision proposed street and sidewalk plan is acceptable. The following request are also acceptable as noted:
    a. Reduced right-of-way width of 50'. Remaining phases shall also be constructed at a width of 50' unless further engineering indicate this is not feasible.

3. The proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49.

Other concerns-

4. As outlined in a memo dated 12/11/2018 by Carson Dorn, Inc., an additional 80 residential units could be constructed in the Mountainside Estates water zone that fed by the existing pump station. Additionally, capacity would still be preserved for fire flows. For more detailed information please review the memo which is attached for your reference.

Laurel Christian

From: John Bohan
Sent: Tuesday, October 15, 2019 5:28 PM
To: Laurel Christian
Cc: Autumn Sapp; Alexandra Pierce; Jill Maclean; Mike Vigue
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Hi Laurel

After reviewing the sketch plat for Chilkat Vistas Subivision, I concur with the applicant's request to install sidewalks on one side of the street. This request is consistent with the other recent local subdivision determinations of similar size developments and is also consistent with the infrastructure within the Mountainside Subdivision, with sidewalk only constructed on one side of the two main access roads, Mountainside Drive and Craig Street (and no sidewalks on the side streets). The previously platted Hooter Lane ROW, which will provide pedestrian connection from the development to Glacier Highway, is only required to have one sidewalk, making the requirement of two sidewalks within the new development an unnecessary redundancy.

Future development plans should be evaluated to determine the need for sidewalks on one or both sides, based on the density and type of development planned.

Thanks
John Bohan,
Acting Director Engineering and Public Works

From: Laurel Christian <Laurel.Christian@juneau.org>
Sent: Monday, October 14, 2019 10:35 AM
To: John Bohan <John.Bohan@juneau.org>
Cc: Autumn Sapp <Autumn.Sapp@juneau.org>; Alexandra Pierce <Alexandra.Pierce@juneau.org>; Jill Maclean <Jill.Maclean@juneau.org>
Subject: FW: SMP20190004 Preliminary Plat Approval - Agency Review

Hi John,

The applicant has requested to place sidewalks on one side of the street for this development, rather than two. Based on the ADTs generated by the development as a whole (upon reviewing the sketch plat), and according to CBJ 49.35.240 Table of Roadway Construction Standards, a 26' travel way width is required with sidewalks on both sides of the street.

Per *CBJ 49.35.130(b) The director of engineering and public works may prescribe different or additional standards if unusual or unforeseen conditions exist in a particular development, and the alternative meets or exceeds the intent of the original standard.*

Can you verify the "unusual or unforeseen" conditions which exist for the development, and verify that Engineering & Public Works approves this change as required by 49.35.130(b)?

Thanks for your help on this,

Laurel Christian | Planner
Community Development Department| City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Office: 907.586.0761
Please note name change (Bruggeman to Christian) and new email: Laurel.christian@juneau.org

---

From: Laurel Christian <Laurel.Christian@juneau.org>
Sent: Tuesday, October 8, 2019 12:51 PM
To: Dan Jager <Dan.Jager@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>; General Engineering <General_Engineering@juneau.org>; Mary Grant <Mary.Grant@juneau.org>; Charlie Ford <Charlie.Ford@juneau.org>; George Schaaf <George.Schaaf@juneau.org>; Ed Foster <Ed.Foster@juneau.org>; John Bohan <John.Bohan@juneau.org>; Greg Chaney <Greg.Chaney@juneau.org>; Dan Bleidorn <Dan.Bleidorn@juneau.org>; 'Skagerberg, Verne R (DOT)' <verne.skagerberg@alaska.gov>; 'kate.kanouse@alaska.gov' <kate.kanouse@alaska.gov>; 'Dubour, Adam J (DFG)' <adam.dubour@alaska.gov>; 'randal.p.vigil@usace.army.mil' <randal.p.vigil@usace.army.mil>; 'Darrell Wetherall' <Darrell.Wetherall@aelp.com>; Quinn Tracy <Quinn.Tracy@juneau.org>
Subject: SMP20190004 Preliminary Plat Approval - Agency Review

Good afternoon,

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by **October 22, 2019**.

Please note that the plat notes on page 3 of the preliminary plat are subject to change and some plat notes are not subject to CBJ enforcement.

Let me know if you have any questions or need additional information.

Thank you,

Laurel Christian | Planner
Community Development Department| City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Office: 907.586.0761
Please note name change (Bruggeman to Christian) and new email: Laurel.christian@juneau.org

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

(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: Alaska Department of Fish and Game

STAFF PERSON/TITLE: Adam DuBour/Habitat Biologist

DATE: October 22, 2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

The Alaska Department of Fish and Game (ADF&G) has reviewed SMP20190004, the application materials submitted by Michael and William Heumann for preliminary plat approval for Phase A of a major subdivision located within Section 5, T41S, R67E, CRM, to be known as Richland Manor II. The applicant proposes to create 14 lots for single-family development and one large tract for future development. ADF&G previously reviewed and commented on a preliminary plat for Richland Manor in January of 2019 in which the applicant proposed to create 12 lots for single-family development and one large tract for future development.

During the above mentioned review, ADF&G indicated that there were not any objections to the plat as proposed. However, we would like to reiterate our previous recommendations. In January 2019, ADF&G Habitat Biologists performed a site visit to document fish habitat on the subject parcel (report attached). While the subject parcel does not contain fish habitat, drainages on the property flow into Twin Lakes and Vanderbilt Creek. Vanderbilt Creek is cataloged within ADF&G's Anadromous Waters Catalog (AWC #111-40-10125) as providing habitat for Dolly Varden and chum, coho and pink salmon. Twin Lakes support resident Dolly Varden.

Best practices should be employed to prevent sediments and contamination from construction activities from entering the waters of Vanderbilt Creek and drainages that flow into Twin Lakes. Existing hydrology and drainage patterns on site should be maintained to reduce the impact on downstream fish habitat.

AGENCY COMMENTS (CONTINUED):

The currently proposed plat eliminates a drainage easement that was included on the previous plat (SMP20180002) west of the proposed lots. The easement incorporated a highly altered stream channel that flowed into Twin Lakes. The elimination of this easement is consistent with our previous recommendations.

The subject property is adjacent to large portions of undeveloped land and black bears are common in the area. During construction activities, care should be taken in securing all potential wildlife attractants, including petroleum products. Any wildlife conflicts should be reported to ADF&G Division of Wildlife Conservation.

The applicants have previously been in contact with ADF&G Habitat Biologists regarding this project and we request that they maintain this contact. For more information on best practices for protecting fish habitat during design and construction of this development, please contact ADF&G Habitat Biologist Greg Albrecht, 907-465-6384, greg.albrecht@alaska.gov.

Thank you for the opportunity to review and comment on this preliminary plat.

Adam DuBour
Access Defense Program
Alaska Department of Fish and Game
Division of Wildlife Conservation
333 Raspberry Road
Anchorage, Alaska 99518
(907)267-2292
adam.dubour@alaska.gov

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Alaska Department of Fish and Game

STAFF PERSON/TITLE: Greg Albrecht, ADF&G Habitat Biologist

DATE: October 11, 2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

Hello Laurel,

This site provides habitat for bear, deer, coyote, and other wildlife. As with most development in Juneau, it is important the owner/developers manage and store waste in garages or bear proof containers so as not to create an attractant. I have attached documentation focused on fish resources in the area, originally submitted to CBJ through the Department of Natural Resources in 2018.

Thank you for the opportunity to comment.

Greg Albrecht
ADF&G Habitat Biologist
802 3rd St
Douglas, AK 99824
465-6384

MEMORANDUM

State of Alaska

Department of Fish and Game
Division of Habitat

TO:	Adam DuBour Habitat Biologist Division of Wildlife Conservation	DATE:	January 9, 2019
THRU:	Kate Kanouse Acting Regional Supervisor	SUBJECT:	Richland Manor II Development Comments
FROM:	Greg Albrecht Habitat Biologist	PHONE NO:	(907) 465-6384

I reviewed Michael and William Heumann's application to the City and Borough of Juneau (CBJ) for the proposed 30-acre Richland Manor II residential development and completed stream surveys with a backpack electrofisher on October 8, 2018[a] and January 4, 2019 (Table 1; Figure 1). The main drainage on the south end of the property feeds into the north end of Twin Lakes and does not support fish; the 8% gradient culvert under Glacier Highway prevents upstream fish passage, as does a 100 ft long perched culvert on private property 110 ft upstream of Glacier Highway. Within the proposed development, the stream appears to have been rerouted and is shallow, straight, and void of overwintering fish habitat and fish habitat complexity (Figures 2, 3). Potential resident fish habitat is present downstream of the proposed development area (Figures 4, 5), though overwintering habitat remains limited.

Drainages on the north side of the property reporting to Vanderbilt Creek[b] and one of its tributaries[c] would be too steep to provide fish habitat, based on topography.

[a] Greg Albrecht, Habitat biologist, ADF&G Division of Habitat, to Jackie Timothy, Southeast Regional Supervisor, ADF&G Division of Habitat. Memorandum: Twin Lakes Culvert Slip Line Investigations Trip Report; dated 10/9/2018.

[b] Stream No. 111-40-10125; provides habitat for chum, coho and pink salmon and Dolly Varden char.

[c] Stream No. 111-40-10125-2010; provides habitat for coho salmon and is a cite of recent fish habitat enhancement. Greg Albrecht, Habitat Biologist, ADF&G Division of Habitat, to Jackie Timothy, Southeast Regional Supervisor, ADF&G Division of Habitat. Memorandum: Baumgartner Pond Dredging Trip Report; dated 8/22/2017.

Table 1.–Field survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
127	58.3455	-134.4951	Culvert outlet at alder grove bordering north Twin Lakes wetland. 1 Dolly Varden char captured here. Culvert is about 8% gradient. Moving upstream electrofishing continuously.	Electrofish	1 Dolly Varden char
128	58.3454	-134.4943	Straight channel, with steep eroded banks, knowtweed, no overwintering habitat, 9% gradient.	Electrofish	
129	58.3452	-134.4940	Culvert outlet perched 3 ft, relief culvert perched at 4 ft.	Electrofish	
130	58.3451	-134.4938	Knotweed forest at culvert inlets. Tributary enters river left about 10 ft upstream.	Electrofish	
131	58.3450	-134.4935	8% gradient up to here, 2 step pools present, river right bank is fill slope, river left is second growth forest.	Electrofish	
132	58.3449	-134.4930	Forested strip on river right about 75 ft to the clearing. Gradient is 9% looking upstream. Dolly Varden char spawning habitat is present, minimal overwintering, no fish. Stream is unstable and banks absent, looks flashy.	Electrofish	
133	58.3450	-134.4926	Iron stained tributary enters river left, no fish habitat. 7% gradient to here in main channel.	Electrofish	
134	58.3450	-134.4922	Gradient increases to 14% here and river left bank is fill from 20-30 year old homes.	Electrofish	
135	58.3451	-134.4917	Fork here with divided flow, river left wraps around homes and forks again about 10 ft upstream, minimal Dolly Varden char habitat, not investigating due to private property, 10-16% gradient. River right channel steps up a few feet, then 3% through alder grove, from	Electrofish	
136	58.3457	-134.4911	The channel appears to have been moved to the toe of the clearing. It is straight at	Electrofish	
137	58.3462	-134.4902	Ending here, No fish, stream is at toe of slope, minimal habitat, originates from hill seeps.	Electrofish	

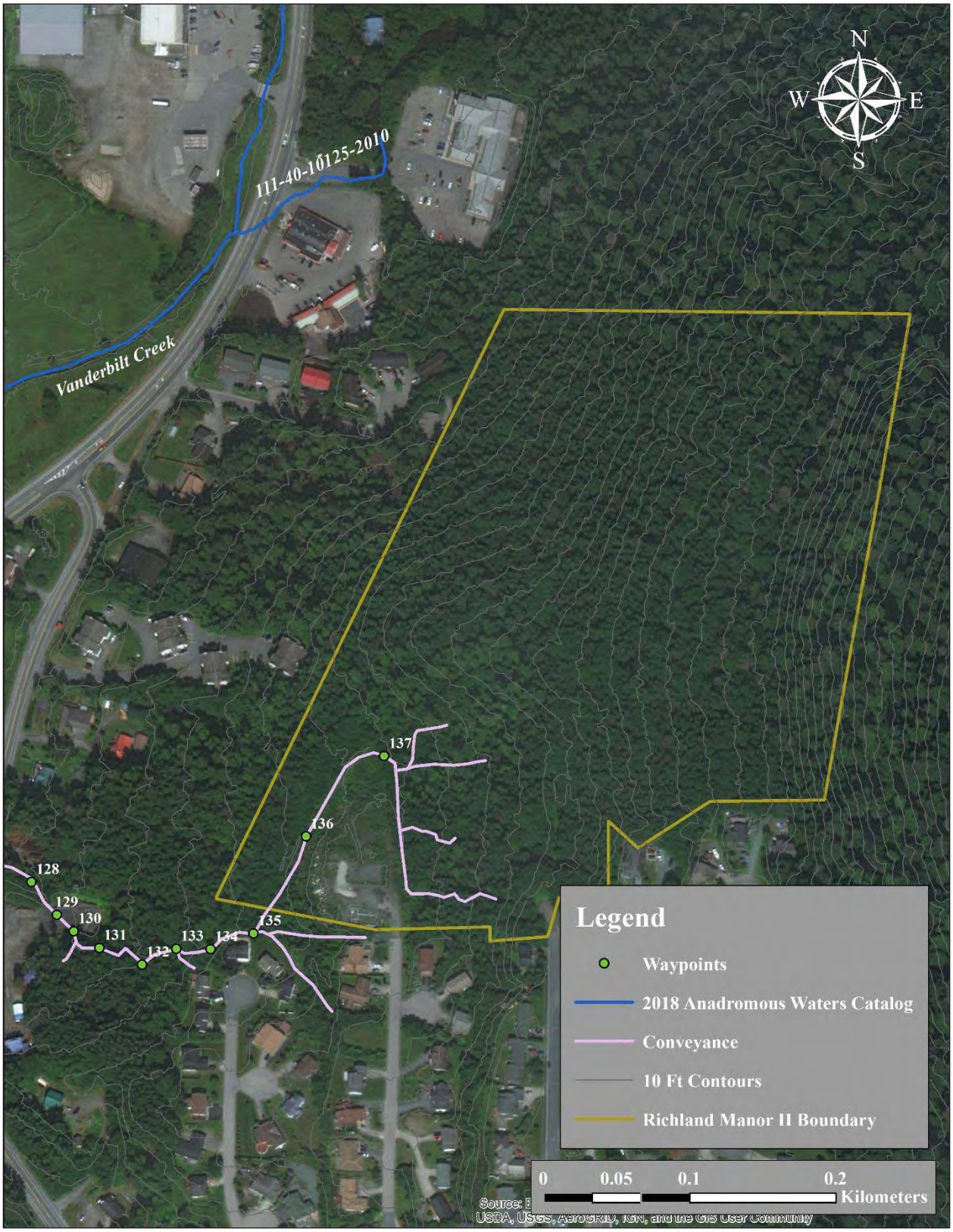

Figure 1.–Survey map.

Figure 2.–Channel at toe of fill.

Figure3.–Straightened channel.

Figure 4.–Step-pool reach downstream of property.

Figure 3.–Downstream of property.

Recommendations

I recommend the CBJ consider measures to maintain existing hydrology and drainage patterns, especially for water bodies reporting to Vanderbilt Creek and its tributary.

Email cc:

Al Ott, ADF&G Habitat, Fairbanks
ADF&G Habitat Staff, Douglas
Dan Teske, ADF&G SF, Douglas
Dave Harris, ADF&G CF, Douglas
Roy Churchwell, ADF&G WC, Douglas
Neil Stichert, USFWS, Juneau
Cindy Hartmann Moore, NMFS, Juneau

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www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: AEL&P

STAFF PERSON/TITLE: Darrell Wetherall/Asst. T&D Engineer

DATE: 10/8/2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

We don't have any issues with the proposed plat.

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www.juneau.org/CDD
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COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Assessor

STAFF PERSON/TITLE:

DATE: 10/17/2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

The proposed subdivision is not likely to have a negative impact on the value of neighboring properties.

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www.juneau.org/CDD
155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Capital City Fire Rescue

STAFF PERSON/TITLE: Dan Jager, Fire Marshal

DATE: 10/22/2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

All fire code comments and requirements were already made apart of pre-app meetings and conversations with the applicants.

Laurel Christian

From: Dan Jager
Sent: Tuesday, October 22, 2019 11:08 AM
To: Laurel Christian; Sven Pearson
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Yes, that is all correct Laurel. Thanks!
Dan

From: Laurel Christian
Sent: Tuesday, October 22, 2019 10:54 AM
To: Dan Jager <Dan.Jager@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Thanks Dan, just to be clear (for my staff report) – sprinklers are required for all homes constructed with this phase of development and a secondary access to the entire neighborhood is triggered at 200 Dwelling units (being accessed through Craig street)? This 200 dwelling units includes existing homes that use Craig Street for access to Glacier Highway AND the homes constructed through the proposed subdivision?

Thanks!

Laurel Christian | Planner
Community Development Department| City & Borough of Juneau, AK
Location: 230 S. Franklin Street, 4th Floor Marine View Building
Office: 907.586.0761
Please note name change (Bruggeman to Christian) and new email: Laurel.christian@juneau.org

---

From: Dan Jager <Dan.Jager@juneau.org>
Sent: Tuesday, October 22, 2019 9:15 AM
To: Laurel Christian <Laurel.Christian@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>
Subject: RE: SMP20190004 Preliminary Plat Approval - Agency Review

Hi Laurel, here is the comments form. Thanks.
Dan

From: Laurel Christian
Sent: Tuesday, October 22, 2019 8:43 AM
To: Dan Jager <Dan.Jager@juneau.org>; Sven Pearson <Sven.Pearson@juneau.org>
Subject: FW: SMP20190004 Preliminary Plat Approval - Agency Review

Hello Dan and Sven,

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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155 S. Seward Street • Juneau, AK 99801

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: DOT&PF, Southcoast Region

STAFF PERSON/TITLE: Joanne Schmidt, Planner

DATE: October 22, 2019

APPLICANT: Michael and William Heumann

TYPE OF APPLICATION: Major Subdivision Preliminary Plat Approval

PROJECT DESCRIPTION:

Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels).

LEGAL DESCRIPTION: Richland Manor Tract B

PARCEL NUMBER(S): 7B1001160010

PHYSICAL ADDRESS: 4506 Hillcrest Avenue

SPECIFIC QUESTIONS FROM PLANNER:

We have received an application for preliminary plat approval for a phased major subdivision. SMP20190004 will address Phase A, which will create 14 lots for single-family development and one large tract for further development (15 lots total). Please review the attached preliminary plat and associated application materials and return your comments to me by October 22, 2019.

AGENCY COMMENTS:

DOT does not have any comments or concerns at this time. However, if the development as currently proposed has in fact scaled back the scope from 450 apartments/condos to just 15 SF homes, then there is no need for a TIA at this time. However, there is potential for a TIA requirement to be triggered in the future should the developer move forward with plans to construct up to 400+ units at the proposed project location.

Ms. Christian,

I am a Tamarack Trails Condominium owner, writing this email to submit my concerns regarding the proposed development of the Hooter Lane ROW that is part of the Tamarack Trails entrance driveway. Here are my concerns.

If Hooter Lane is developed as a roadway to the proposed major subdivision (7B1001160010), the road would be in extremely close proximity to the Tamarack Trails buildings A and C. This will substantially effect the lifestyle, safety, security and overall sense of well-being of all of the 32 families residing at Tamarack Trails. It will result in the loss of property use and parking, an increase of traffic, noise, and dust, and loss of the tree buffer surrounding the property.

Tamarack Trails Condominiums will be the most impacted community of homeowners of the Richland Manor subdivision project if Hooter Lane is allowed to be developed as a new roadway to that project. The development will drastically alter the quality of life and sense of community that now exists at Tamarack Trails, not for the better.

Please do NOT approve a Hooter Lane as a new roadway to the Richland Manor Subdivision.

Respectfully,
Joan Shorey
(907) 321-5823

Paul H. Grant
Counselor at Law

313 Coleman Street, Juneau, Alaska 99801
(907)586-2701 (v) (907) 586-2722 (fax)
paul@paulgrantjuneau.com

October 25, 2019

Juneau Planning Commission
155 S. Seward Street
Juneau, Alaska 99801

Re: Mountainside Estates,
Appeal No. SMP2018-0002

I represent the Mountainside Estates Neighborhood Association (MENA) and individual appellants who appealed the Planning Commission's approval of a preliminary plat for the development of the Richland Manor subdivision. Following lengthy negotiations between appellants and the developers, William and Michael Heumann, a settlement agreement was reached. The settlement consists of a "Stipulated Settlement Agreement", dated September 23, 2019, as well as plat drawings, Exhibits A-C. All parties to the appeal have signed the Agreement. Under its terms, upon approval of the Heumann's modified plat application (and the expiration of any appeal periods) the MENA appeal will be dismissed.

The purpose of this letter is to provide MENA's support of the modified plat application. While the plat of Phase I of the project is not significantly different than the originally-approved design, there are significant modifications and improvements to future phases of the project that are set out in the Agreement and the attachments. In

particular, the subdivision access and desired separations between single and multi-family homes have been modified for future phases, as set out in the Exhibits to the Agreement. In addition, the Agreement itself contains a number of conditions that are enforceable privately between the parties in the event of non-compliance. Further, the CBJ has agreed to incorporate certain safety measures into the project, and a number of the conditions have been adopted as plat notes in the application.

Provided the terms of the Agreement and the design considerations set out in the modified alternative plats are implemented, this agreement satisfactorily resolves MENA's concerns which prompted the appeal. While not perfect, the Agreement is a good faith compromise by all parties which MENA unreservedly supports.

Cordially,

Paul H. Grant
Attorney for MENA and Individual Appellants

CITY AND BOROUGH OF JUNEAU
COMMUNITY DEVELOPMENT

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155 S. Seward Street • Juneau, Alaska 99801

November 1, 2019

MEMORANDUM

To: **Michael Heumann**

From: **Laurel Christian, CDD**

Case Number: **SMP20190004**

Legal Description: **Tract B Richland Manor**

Parcel No.: **5B1401020071**

RE: SMP20190004 Preliminary Plat V2 Corrections

The following is a consolidated list of review comments received regarding the preliminary plat for SMP20190004, Chilkat Vistas Subdivision Phase 1. Prior to final plat approval, the following changes should be made to the plat:

GENERAL ENGINEERING

All Sheets

1. Drainage from Lot 4 and Lot 7 will require a drainage easement across Tract B1 to an established drainage way or will need to engineered to drain uphill.
2. For the final plat, remove contours, building setbacks, and wetland boundaries.
3. Add subdivision or USS information including tract, lot, and/or block information to all adjacent properties.

Sheet 1

4. Adjust viewport or move text of Coogan Dr.
5. Label Hooter Ln. and Abby Wy. rights-of-way and list widths.
6. List width of the existing portion of Hillcrest Ave.
7. Remove leaders without text or add text to the existing leaders.
8. Add leaders to indicate where bearings and distances along westerly property line of Tract B1 begin and end.
9. Add bearing and distance for Tract B1's property line at rear of Lots 1, 2, and 3.
10. Trim easement and lines from bearing of Tract B1 at end of Hillcrest Ave.
11. Show monument detail letter "C" for corresponding monument.

12. Remove road grade from Hillcrest ROW.

<u>Sheet 2</u>

13. Standardize adjacent lot labels.
14. Remove road grades from ROW labeling.
15. Submit a new closure report to all for verification that the following inconsistencies have been addressed:
    a. Verify the following distances for the following bearings as they do not correlate with the closure report:
        i. Northern boundary of phase I: N 90°00’00” E – 160.00, closure lists 160.12
        ii. Southern lot line of Lot 7: N 90°00’00” E – 160.00, closure lists 160.12
        iii. Southern lot line of Lot 8: N 81°26’30” W – 41.36, closure lists 41.47
    b. Verify the acreage of Lot 14 as it does not correlate with the closure report.
    c. Verify the square footage of Lot 8 as it does not correlate with the closure report.
16. Modify the line type scale of the easement boundary lines so they match the line type shown in the legend.
17. Move the labels and leaders of the 25’ Greenbelt and 20’ Setback Line (Typ) to allow for legibility.

PLANNING

Sketch Plat

1. Above Robbie Road, change “30’ EMERGENCY FIRE ACCESS” to “30’ EMERGENCY SERVICE ACCESS”

All Sheets

2. Verify the square footage and acreage of Tract B1 (large remaining tract)

Sheet 1

3. Above Robbie Road, change “30’ EMERGENCY FIRE ACCESS” to “30’ EMERGENCY SERVICE ACCESS”
4. Label adjacent Lot 20 Plat 88-39
5. Label the Robbie Road right-of-way

Sheet 2

6. Label the drainage and sewer easement that connects to the Hooter Lane right-of-way

Plat Notes

7. Remove block information from notes 8 and 9 and use “Lot X, Phase 1” typical language.
8. Amend note 11 to read:

   HOOTER LANE WILL BE DEVELOPED AS A PUBLIC TWO-WAY STREET, AS SET OUT IN THE SKETCH PLAT SUBMITTED WITH SMP20190004, SUBJECT TO CBJ PUBLIC IMPROVEMENT STANDARDS IN CBJ 49.35.
9. In note 12 change “RICHLAND MANOR” to “CHILKAT VISTAS”.
10. Amend note 13 to read:

    *DENSITY: IT IS AGREED THAT THE LOOP ROAD OF HILLCREST AVENUE AND MOUNTAINSIDE DRIVE WILL BE DEVELOPED AS SINGLE-FAMILY HOMES, AS DEPICTED ON THE SKETCH PLAT SUBMITTED WITH SMP20190004.
11. Add an asterisk to note 14: “*ROBBIE ROAD”
12. In note 15, change “RICHLAND MANOR” to “CHILKAT VISTAS”
13. Amend note 16 to read:

    HILLCREST AVENUE SHALL TERMINATE AT HOOTER LANE. HILLCREST AVENUE MAY CONNECT TO HOOTER LANE WEST OF THE EXISTING HILLCREST ALIGNMENT AS SHOWN IN THE SKETCH PLAT SUBMITTED WITH SMP20190004. ALTERNATIVELY ROAD ACCESS TO THE NORTHEAST PORTION OF TRACT B-1 MAY CONNECT TO THE

EAST/WEST PORTION OF MOUNTAINSIDE DRIVE ACROSS FROM THE ENTERNANCE TO THE "POCKET" BETWEEN HILLCREST AND MOUNTAINSIDE.

14. In note 16, verify lot name for Tract B-1 based on naming options outlined in the "Cartography" section of this MEMO.
15. Amend note 17 to read:

    GREENBELT BUFFERS WILL BE IMPLEMENTED AND PRIVATELY MAINTAINED BY LOT OWNERS AS DELINEATED ON THE SKETCH PLAT SUBMITTED WITH SMP20190004 AND AS DELINEATED THIS PLAT, TO SEPARATE SINGLE FAMILY HOMES FROM MULTI-FAMILY DEVELOPMENT. EXCAVATION FOR PURPOSES OF SLOPE STABILIZATION MAY TAKE PLACE IN THE GREENBELT BUFFERS PROVIDED THEY ARE ALLOWED TO REVEGETATE FOLLOWING CONSTRUCTION. IN THE EVENT THIS BECOMES NECESSARY THE PROPERTY OWNER WILL CONSULT WITH ADJACENT HOMEOWNERS ABOUT THE IMPACTS.
16. Plat notes 13, 14, and 17 should be moved to their own section at the bottom of the notes section with their own heading that reads:

    <u>*NOTES BELOW REFLECT PRIVATE OBLIGATIONS ASSUMED BY THE DEVELOPER:</u>

    1. *DENITY…
    2. *ROBBIE ROAD…
    3. *GREENBELT…

CARTOGRAPHY

All Sheets

1. Contours, wetlands areas, and setbacks will be removed from final plat prior to recording.
2. Label previous TRACT B with dashed font.
3. Rename phases 1, 2, 3, etc. instead of A, B, C, etc. to maintain consistency with other phased subdivisions within CBJ.
4. Delete the centerline for Coogan Dr from sheet 1. It's the same line type as the unsurveyed lines. Also correct the label so it doesn't say "OOGAN".
5. Use a consistent line symbol for unsurveyed lot lines. Preferably the darker line type.
6. Label all adjacent lots with a gray or lighter font, and with a consistent font size (sheets 1 and 2). Show complete labels.
7. There's a line on the Hillcrest Ave ROW that serves an unknown purpose.
8. Remove the percent grade label and add bearing and distance annotation to the east and west sides of Hillcrest Ave ROW.

Sheet 1

9. Label HOOTER LN.
10. Move the TRACT A LOT 8 label onto the lot so it isn't covering the easement and decrease the font size.
11. Half of the line type for the easement north of LOT 39 uses a solid surveyed line type. Revise to the dashed easement line type.
12. Increase font size or remove the tiny.

Sheet 2

13. Use an annotation arrow to point to the west boundary of the 15' drainage easement, or orient the label so it aligns to the boundary line.
14. The "20' SETBACK LINE (TYP)" label is pointing to the title block. Correct as needed.
15. Move the "25' GREEN BELT" label so the "T" isn't covered by the title block.

Sheet 3

16. Remove the scale bar.
17. In note 12 on sheet 3, there is an extra "A" next to "SIDEWALK".
18. In the Planning Commission Plat Approval, there is an extra "O" in "ANCHORAGE".

Title Block

19. Title block option 1 (if we keep TRACT B1 as part of Richland Manor, it needs to be included in the title block):

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
AND
TRACT B1 RICHLAND MANOR
A SUBDIVISION OF
TRACT B RICHLAND MANOR
WITHIN CITY & BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

_____

_____
STATE RECORDER'S OFFICE AT ANCHORAGE

20. Title block option 2 (if we do away with Richland Manor altogether, rename TRACT B to TRACT A and include it as a part of Chilkat Vistas Subdivision):

PLAT OF
CHILKAT VISTAS SUBDIVISION PHASE 1
A SUBDIVISION OF
TRACT B RICHLAND MANOR
WITHIN CITY & BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

_____

_____
STATE RECORDER'S OFFICE AT ANCHORAGE

proHNS LLC

1945 Alex Holden Way #101 | Juneau, AK 99801 | 907-780-4004 | solutions@proHNS.com
219 Main Street #13 | Haines, AK 99827 | 907-419-6070 | www.proHNS.com

September 19, 2019

Michael and William Heumann
6000 Thane Rd
Juneau, AK 99801
mpheumann@hotmail.com
(971) 261-8014

RECEIVED
SEP 19 2019
PERMIT CENTER/CDD

RE: Richland Manor Subdivision - Drainage Plan

To Whom It May Concern,

The following Drainage Plan has been prepared for the Richland Manor Subdivision in Juneau, AK, a proposed development of single and multi-family residential units on a 30-acre site at 4506, 4508, and 4510 Hillcrest Avenue.

Attached sheets depict survey data, proposed phase A development, as-built information and rainfall data used for the proposed drainage analysis for this subdivision.

NOTE This report only accounts for the area being developed. The intent of this report is to show that the increased runoff due to development of the site can be handled by the existing drainage system on Glacier Highway. This report will be revised and updated as necessary during the design and layout of the conveyance system.

Site Runoff Calculation Method:

To calculate site runoff from the proposed development and through existing drainage structures, we have elected to use the Rational Method. Utilizing Appendix D of the "2010 CBJ Manual of Stormwater Best Management Practices" as a guide[1], the Rational Method equation employed for calculating stormwater runoff flows is as follows:

$$Q = CIA$$

Q = peak flow in cubic feet per second (cfs) *C = runoff coefficient*
I = rainfall intensity (inches per hour) *A = catchment area (acres)*

[1] There are no current municipal code requirements dictating adherence with the "2010 CBJ Manual of Stormwater Best Management Practices" when preparing a drainage plan that complies with 49.35.510. Regardless, we have elected to utilize portions of this Manual as a guide in the preparation of this Drainage Plan for the proposed development.

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Catchment Areas (A):

There is an existing 24" CMP culvert that crosses Glacier Highway at the location where the proposed subdivision runoff will tie into Hooter Lane's existing ditch. This report analyzes the converted areas for the proposed subdivision. A delineation of all contributing flows should be performed before sizing or constructing any conveyance devices for this project.

Runoff Coefficient (C):

Catchment Areas contain multiple land cover types within the sub-division area. The existing catchment area for the 24" CMP culvert and coefficients were determined by analyzing CBJ 2014 Lidar data, aerial photos and field investigations. The calculations in this report use developed area quantities provided by the client. We have selected runoff coefficients based on a 25-year storm event, based on both "2010 CBJ Manual of Stormwater Best Management Practices" as well as "AK DOT & PF Highway Drainage Manual".

The following formula, taken from Page D-9 of the CBJ Stormwater Manual, was used to compute composite runoff coefficients for each Catchment Area (also tabulated below):

$$C_c = (C_1A_1 + C_2A_2)/A_t$$

C_c = composite runoff coefficient
A_t = total area (acres)
$C_{1,2}$ = runoff coefficient for each area land cover type
$A_{1,2}$ = areas of land cover types (acres)

Composite Runoff Coefficients for Existing Subdivision Conditions					
Catchment Area	**Total Basin**	**Forest**	**Lawn**	**Gravel**	**Cc**
Size (Acres)	2.26	0.23	0.45	1.58	**0.62**
Runoff Coefficient[2]	n/a	0.10	0.25	0.8	

Composite Runoff Coefficients for Developed Subdivision Conditions					
Catchment Area	**Total Basin**	**Roof**	**Pavement**	**Lawn**	**Cc**
Size (Acres)	2.26	0.41	0.70	1.15	**0.57**
Runoff Coefficient[3]	n/a	0.9	0.9	0.25	

[2] Runoff coefficients utilized for Composite Runoff Coefficient calculations were obtain from Table D-4 for a 25-year Return Period (2010 CBJ Manual of Stormwater Best Management Practices).
[3] Runoff coefficients utilized for Composite Runoff Coefficient calculations were obtain from Table D-4 for a 25-year Return Period (2010 CBJ Manual of Stormwater Best Management Practices).

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Composite Runoff Coefficients for Existing 24" CMP Culvert					
Catchment Area	Total Basin	Forest	Lawn	Pavement/Roof	Cc
Size (Acres)	2.31	0.88	0.25	1.12	0.502
Runoff Coefficient[4]	n/a	0.10	0.25	0.9	

Rainfall Intensity (I):

The peak rainfall intensity is determined by calculating the time of concentration from the most hydraulically distant location in the drainage basin and applying the duration to the annual exceedance probability.

$$T_c = T_1 + T_2 + \cdots + T_n$$

T_c = time of concentration (min) *$T_{1,2}$ = travel time across separate flow path segments (min)*

$$T_t = L/60V$$

T_t = travel time (min)
L= the distance of flow across a given segment (feet)
$V=k_R Sqrt(S_0)$=average velocity (feet/sec) across land cover
k_R= time of concentration velocity factor (CBJ Manual of Storm Water BMP 2010, Table D-5, PG. D-10)
S_0= slope of flow path (feet/feet)

Time of Concentration Existing Sub. Conditions	
Flow Segments	T_n (min)
Gravel (nearly bare ground)	1.2
Forest	2.1
T_c	**3.3**

Time of Concentration Developed Sub. Conditions	
Flow Segments	T_n (min)
Lawn	1.3
Paved Area/Roof	0.4
T_c	**1.7**

Time of Concentration Existing 24" CMP Culvert	
Flow Segments	T_n (min)
Sheet Flow	37.5
Shallow Concentrated Flow	78.0
Open Channel	0.5
T_c	**116.0**

[4] Runoff coefficients utilized for Composite Runoff Coefficient calculations were obtain from Table D-4 for a 25-year Return Period (2010 CBJ Manual of Stormwater Best Management Practices).

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Per CBJ Manual of Storm Water BMP 2010, Table 5-1, page. 5-1, design event frequencies are specified. For storm sewer feeder lines, a 25-year storm event is the required design return period. We will base our analysis on a 25-year design return period for all drainage structures and catchment areas.

Existing Conditions	Design Return Period
Tc Duration 10 (min)	25-year
Intensity (in/hr) =	**2.03**

Developed Conditions	Design Return Period
Tc Duration 10 (min)	25-year
Intensity (in/hr) =	**2.03**

Existing 24" CMP Culvert	Design Return Period
Tc Duration 120 (min)	25-year
Intensity (in/hr) =	**0.534**

Anticipated Site Runoff (Q):

Using the Rational Method equation and site data listed above, the amount of stormwater runoff per catchment area can be determined:

Catchment Area	**Cc**	**I**	**A**	**Q (cfs)**
Existing Conditions	0.62	2.03	2.26	**2.84**
Developed Conditions	0.57	2.03	2.26	**2.61**
Existing 24" CMP Culvert	0.50	0.53	2.31	**0.62**

Conveyance/Discharge Structure Capacities:

The following equations were used to calculate the capacity of an existing AK DOT & PF owned drainage system on Glacier Highway at the bottom of Hooter Lane and were obtained from "Urban Drainage Design Manual: Hydraulic Engineering Circular No. 22, Third Edition".

$$A = \pi \times \frac{d^2}{4}$$

A = cross sectional area in ft² *d = diameter in ft*

$$R = \frac{d}{4}$$

R = hydraulic radius

$$S = \frac{\Delta z}{L}$$

S = slope *Δz = change in elevation* *L = length of pipe in ft*

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$$Q = (K/n) \times A \times R^{0.67} \times S^{0.5}$$

Q = discharge rate in ft³/sec K = coefficient for English units (1.486) n = Manning's coefficient of roughness[5]

Existing Glacier Highway 24" CMP Cross Culvert:

Existing 24" CMP Cross Culvert; Inlet Invert = 24.33', Outlet Invert = 24', Length = 46', n = 0.028. The Manning's n value of 0.028 was determined by the pipe type (Annular Corrugated Metal Pipe: plain or fully coated), all other values obtained from the attached DOT & PF Salmon Creek to Vanderbilt Hill Storm Drain System Summary (Project No. 70469; Sheets 10, 27, and 83).

$$A_{culvert} = 3.14 \times \frac{2^2}{4} = 3.14\ ft^2$$

$$R = \frac{2}{4} = 0.5\ ft$$

$$S = \frac{24.33 - 24}{46} = 0.717\%$$

$$Q_{culvert} = \frac{1.486}{0.028} \times 3.14 \times 0.5^{0.67} \times 0.00717^{0.5} = 8.87\ ft^3/sec$$

Summary:

Drainage Basin	Post Development Runoff Q (cfs)	Capacity Check	Flow Capacity Q (cfs)	Conveyance/Discharge Structures
Existing 24" CMP Culvert	0.62	<	8.87	Existing 24"CMP Culvert
Existing 24" CMP Culvert + Proposed Subdivision	3.23	<	8.87	To Be Determined

The results show that the development will result in a reduction in overall runoff from the developed area. This is due to replacing large portions of the existing gravel with lawn, which will absorb and slow the runoff more effectively than in the existing conditions. Current discharge from the area to be developed enters existing drainage channels not currently eased for upland drainage. As a result, runoff from the proposed development will be conveyed to developable ROW of Hooter lane and directed into the existing drainage system on Glacier Hwy. Our analysis shows that there is more than enough capacity in the existing Glacier Hwy. drainage system to handle increased flows from the proposed development.

[5] Manning's "n" values for culverts obtained from Table 5-3, Page 5-5, of the CBJ Stormwater Manual.

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Respectfully,

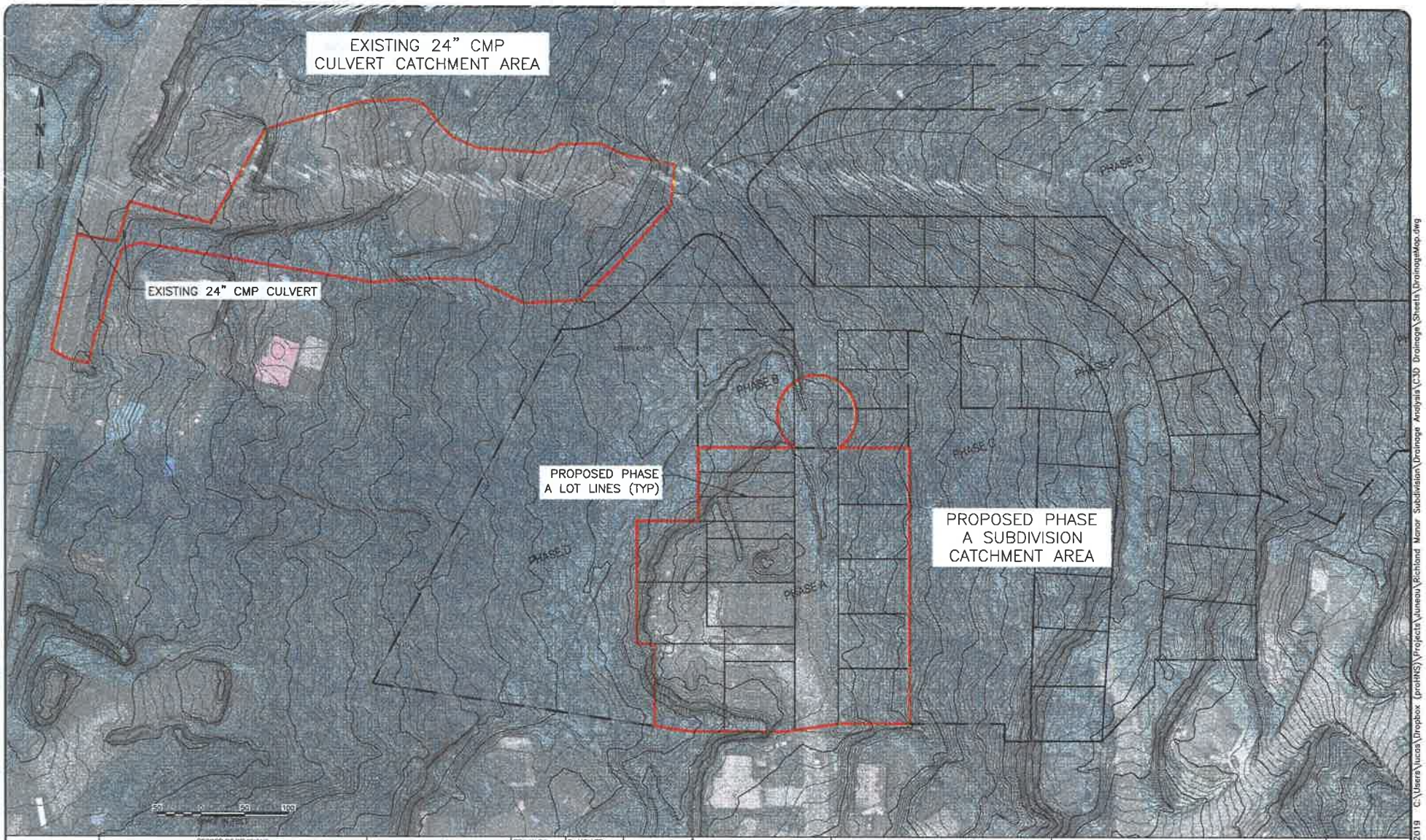
Lucas Chambers

Lucas Chambers, P.E.
Principal Engineer – proHNS LLC Juneau

Attachments: Drainage Overview Graphic

Glacier Hwy As-built Plans

NOAA Precipitation Frequency Data



RECORD OF REVISIONS			
No	DATE	DESCRIPTION	BY

proHNS LLC
CERTIFICATE OF AUTHORIZATION #100662
1945 ALEX HOLDEN WAY #101 JUNEAU, AK 99801
solutions@proHNS.com
www.proHNS.com

DRAWN BY:	S. MOLLER
DESIGNED BY:	L. CHAMBERS
CHECKED BY:	L. CHAMBERS

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
ENGINEERING & PUBLIC WORKS

RICHLAND MANOR SUBDIVISION

WILLIAM & MICHAEL HUMEAN

DRAINAGE OVERVIEW

SHEET NUMBER 1 OF 1

September 19, 2019 C:\Users\lucas\Dropbox (proHNS)\Projects\Juneau\Richland Manor Subdivision\Drainage Analysis\C3D Drainage\Sheets\DrainageMap.dwg

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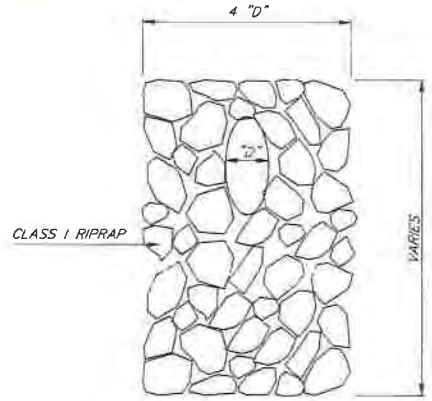
Attachment I - Preliminary Drainage Plan

STORM DRAIN SYSTEM SUMMARY

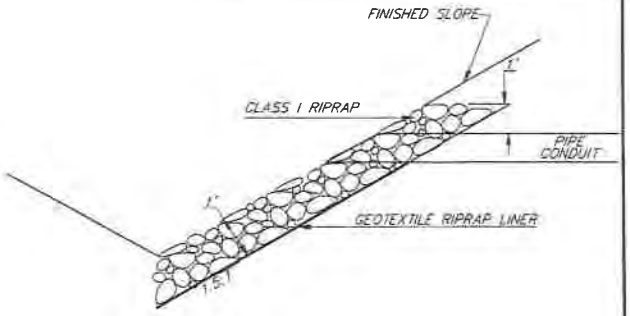
STRUCTURE NO.	INLET TYPE	LOCATION STATION	LOCATION OFFSET	TOP OF GRATE ELEVATION	INVERT ELEVATION	[illegible] ELEV.	[illegible] REMARKS ELEV.	PIPE NO.	DESIGN LENGTH	PIPE SIZE	FROM STRUCTURE NO.	FROM INVERT ELEVATION	TO STRUCTURE NO.	TO INVERT ELEVATION	REMARKS
S-1	A	140+32	RT	27.77	23.52	22.62	23.41	P-1	8'-14"	18"	S-1	25.62 13	OUTFALL		SPILLWAY
S-2	A	142+18	LT	26.11	21.36		19.22	P-2	54'-60	24"	S-2	22.86	OUTFALL		SPILLWAY
S-3	A	144+35	LT	27.23	22.48		20.76	P-3	56'	24"	S-3	23.98	OUTFALL		
S-4	A	146+58	LT	28.66	24.41			P-4	10'	18"	S-4	25.91	OUTFALL		
S-5	A	148+38	LT	30.48	26.23		25.23	P-5	24'-13"	18"	S-5	26.23	OUTFALL	25.9	
S-6	A	148+39	RT	30.67	25.92		25.97	P-6	32'	24"	S-6	27.42	S-7	27.32	
S-7	A	148+72	RT	30.26	25.45			P-7	10'	24"	S-7	27.22	S-8	26.25	
S-8	FIELD	"W" 10+28	LT	29.00	25.60			P-8	62'-60	24"	S-8	26.20	OUTFALL		DELETED
S-9	FIELD	"W"11+65	LT	48.00	44.30			P-9	138'	18"	S-9	45.80	S-7	27.42	
								P-10	24'-24	24"	DITCH		S-9	46.00	
S-10	A	152+00	LT	30.43	26.18		25.18	P-11	12'-6"	18"	S-10	26.27.68	OUTFALL		SPILLWAY
S-11	A	153+16	LT	29.96	25.71		24.71	P-12	12'-8"	18"	S-11	26.27.21	OUTFALL		SPILLWAY
S-12	A	154+93	RT	29.85	25.40			P-13	30'-35	24"	S-12	26.68 40	S-13	26.49	
S-13	A	154+93	LT	22.85	24.70		24.66	P-14	12'-11"	24"	S-13	26.27.90	OUTFALL	26.30	SPILLWAY
S-14	A	156+42	RT	20.50	26.25		25.17	P-15	8'-11"	18"	S-14	27.28.21	OUTFALL	27.00	
S-15	A	158+05	LT	30.86	26.61			P-16	14'-11"	18"	S-15	28.11	OUTFALL	27.80	SPILLWAY
S-16	A	160+70	RT	31.08	26.83		26.21	P-17	18'-11"	18"	S-16	28.33	OUTFALL	25.00	
S-17	A	161+98	LT	30.46	26.21		25.21	P-18	12'-10	18"	S-17	26.27.71	OUTFALL	26.50	SPILLWAY
S-18	A	163+88	RT	29.96	25.21			P-19	48'	24"	S-18	26.71	OUTFALL	26.00	SPILLWAY
								P-19A	16'-10	18"	DITCH	28.00	S-18	28.40	
S-19	A	165+29	LT	29.42	25.17		24.17	P-20	28'-15	18"	S-19	25.26.67	OUTFALL	25.50	SPILLWAY
S-20	A	167+02	LT	29.83	25.58		24.68	P-21	14'-10	18"	S-20	26.27.08	OUTFALL	25.90	
S-21	A	169+48	LT	30.52	26.27		25.27	P-22	16'-9"	18"	S-21	26.27.77	OUTFALL	26.50	SPILLWAY
S-22	A	172+04	LT	29.70	25.45		24.47	P-23	14'-9"	18"	S-22	25.26.85	OUTFALL	25.70	
S-23	A	173+33	LT	29.70	24.60		23.60	P-24	16'-9"	24"	S-23	25.26.10	S-23	24.70	
S-24	A	173+48	RT	29.71	24.96			P-25	38'	24"	S-24	26.46	S-23	26.20	
S-25	A	174+02	LT	29.63	25.38		24.38	P-26	12'-11"	18"	S-25	2026.88	OUTFALL	25.60	SPILLWAY
S-26	A	175+52	RT	30.17	25.42			P-27	36'	24"	S-26	26.92	S-27	26.75	SPILLWAY
S-27	A	175+52	LT	30.17	25.15		24.15	P-28	12'-11"	24	S-27	25.26.65	OUTFALL	25.50	
								P-29A	10'	18"	DITCH	29.00	S-28	27.50	
S-28	A	177+98	RT	30.07	25.32		25.04	P-29	62'-80	24"	S-28	26.28.59	OUTFALL	25.50	SPILLWAY
S-28A	A	"B"10+34	RT	28.66	23.70		24.40	P-29B	14'-16	24"	S-28A	25.29.40	S-28B	25.40	
S-28B	A	"B"10+34	LT	28.49	23.60		24.50	P-29C	6'-7"	24"	S-28B	25.40.30	DITCH	25.05	
								P-29A	10'	24"	DITCH	25.30	S-28A	25.25	
S-29	A	180+85	RT	28.56	23.81		23.81	P-30	84'-88	24"	S-29	25.31	OUTFALL		
S-30	B	182+56	RT	29.13	22.40			P-31	44'-7"	24"	S-30	23.90	OUTFALL	17.20	
								P-32	12'-11"	18"	INLET	24.25	S-30	24.00	
S-31	A	185+00	RT	30.96	26.21			P-33	45'-56	24"	S-31	27.71	OUTFALL	20.70	SPILLWAY
S-32	A	185+88	RT	31.29	27.04		26.04	P-34	10'-9"	18"	S-32	27.28.45 54	OUTFALL	27.30	SPILLWAY
S-33	A	187+22	LT	31.35	27.10		26.10	P-35	12'-8"	18"	S-33	27.28.60	OUTFALL	27.30	SPILLWAY
S-34	A	188+98	LT	31.54	27.29		26.29	P-36	12'-9"	18"	S-34	27.28.79	OUTFALL	27.60	SPILLWAY
S-35	A	191+00	LT	31.07	26.22		25.22	P-37	26'-8	18"	S-35	26.27.72	OUTFALL	26.50	
								P-37A	46'-40	24"	DITCH	30.00	S-35	22.82	
S-36	A	192+72	LT	30.03	25.78		24.78	P-38	12'-6"	18"	S-36	26.27.28	OUTFALL	26.00	SPILLWAY
S-37	A	194+39	RT	31.11	26.16			P-39	36'	24"	S-37	27.86	S-38	27.31	
S-38	A	194+39	LT	31.11	26.06		25.06	P-40	14'-9"	18"	S-38	26.27.56	OUTFALL	26.36	SPILLWAY
S-39	A	198+00	RT	30.86	26.11			P-41	36'	24"	S-39	26.27.61	S-40	27.413	
S-40	A	198+00	LT	30.86	25.81		24.81	P-42	14'-8"	18"	S-40	26.27.31	OUTFALL	26.00	
S-41	A	200+70	RT	29.62	24.87			P-43	36'	24"	S-41	26.37	S-42	26.20	
S-42	A	200+70	LT	29.52	24.67		23.67	P-44	10'-8"	24"	S-42	25.26.17	OUTFALL	25.00	SPILLWAY
								P-45	8'-10"	18"	DITCH	27.00	S-41	26.50	
~~S-43~~	~~A~~	~~201+02~~	~~LT~~	~~29.69~~	~~25.14~~	DELETED									
S-44	A	203+13	RT	32.93	27.98			P-46	36'	24"	S-44	29.68	S-45	29.48	
S-45	A	203+13	LT	32.93	27.88		26.88	P-47	20'	18"	S-45	28.29.38	OUTFALL	28.00	SPILLWAY
S-44A	A	"C"10+43	RT	33.26	29.01	1'+SUMP		P-47A	12'	18"	S-44A	29.80	OUTFALL		
S-46A	A	"C"10+50	LT	33.38	29.13			P-47B	26.35	18"	S-46A	30.43	S-44A	30.00	
								~~P-47C~~	~~6'~~	~~18"~~	~~DITCH~~	~~30.70~~	~~S-46A~~	~~30.53~~	
S-46	A	204+18	RT	36.40	31.65			~~P-48~~	~~56'~~	~~24"~~	~~S-46~~	~~33.15~~	~~OUTFALL~~		~~SPILLWAY~~
								P-49	12'-16"	18"	INLET S-46	33.15	~~S-46 INLET~~	~~33.65~~ 33.70	
S-47	A	206+50	RT	45.64	41.39			P-50	10'	18"	S-47	43.42.89	OUTFALL	43.00	
S-48	A	212+60	RT	45.60	41.35			P-51	14'-12"	18"	S-48	42.85	OUTFALL	42.00	
S-49	A	216+00	RT	32.80	28.55			P-52	14'-12"	18"	S-49	30.05	OUTFALL	28.50	
S-50	A	217+47	LT	29.33	25.00		24.00	P-53	12'-14"	18"	S-50	25.26.58	OUTFALL	25.00	
S-51	A	218+53	RT	27.58	22.83			P-54	42'-36	24"	S-51	24.33	OUTFALL	24.00	
S-52	A	220+65	RT	26.09	21.34			P-55	46'-60	24"	S-52	22.84	OUTFALL	18.00	
S-53	A	223+~~86~~ 00	RT	~~25.33~~	~~21.08~~	25.22	21.02	P-56	14'	18"	S-53	22.58.52	OUTFALL	22.00	
S-54	A	223+26	LT	24.71	20.38	24.65	20.32	P-57	18'-10	18"	S-54	21.88	OUTFALL	21.00	

TOTALS: 54– A 1– B 2– F

TOTALS: 18" – ~~615~~ 639' 24" – ~~1,138~~ 1,099'



SPILLWAY PLAN



SPILLWAY SECTION

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BY:	DATE:	DESCRIPTION OF CHANGE

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

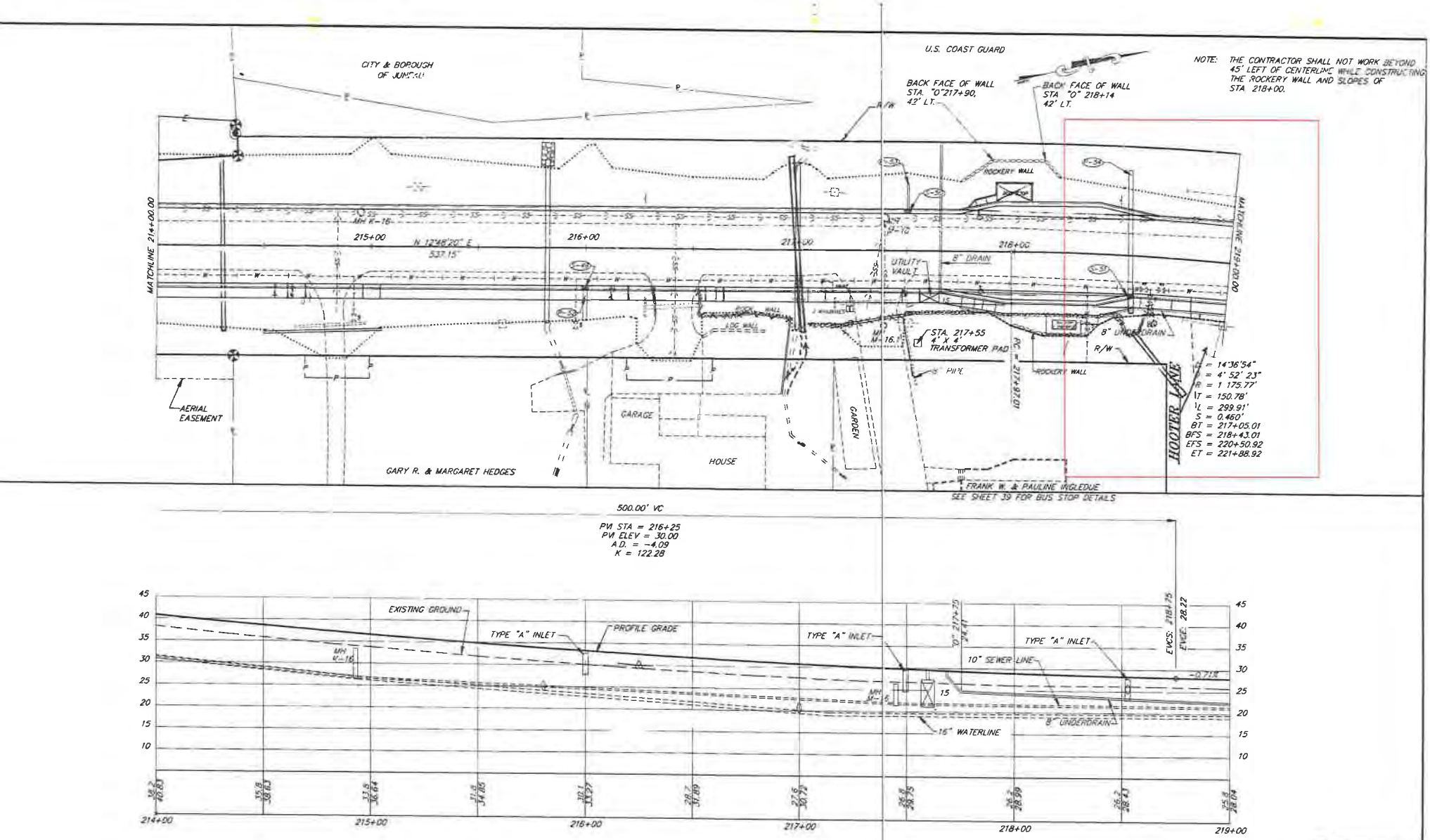
JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STORM DRAIN SYSTEM SUMMARY

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 6/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 10 OF 85

ENGINEER'S SEAL
STATE OF ALASKA 49th P. BEDNAROWICZ 01-504 REGISTERED PROFESSIONAL ENGINEER

Attachment I - Preliminary Drainage Plan



NOTE: DO NOT SCALE FROM THESE PLANS–USE DIMENSIONS

DATE:	DESCRIPTION OF CHANGE:

RECORD OF REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA

SALMON CREEK TO VANDERBILT HILL
PROJECT NO. RS-M-0955(8) (70469)
STA. "0" 214+00.00 TO STA. "0" 219+00.00

DESIGNED BY: D. KROMAREK	PROJECT NO. 70469
DRAWN BY: C. ANDERSON	DATE: 5/1993
CHECKED BY: P. BEDNAROWICZ	SHEET 27 OF 85

ENGINEER'S SEAL

R:\JNU\SALMON\DR\P214 1=20

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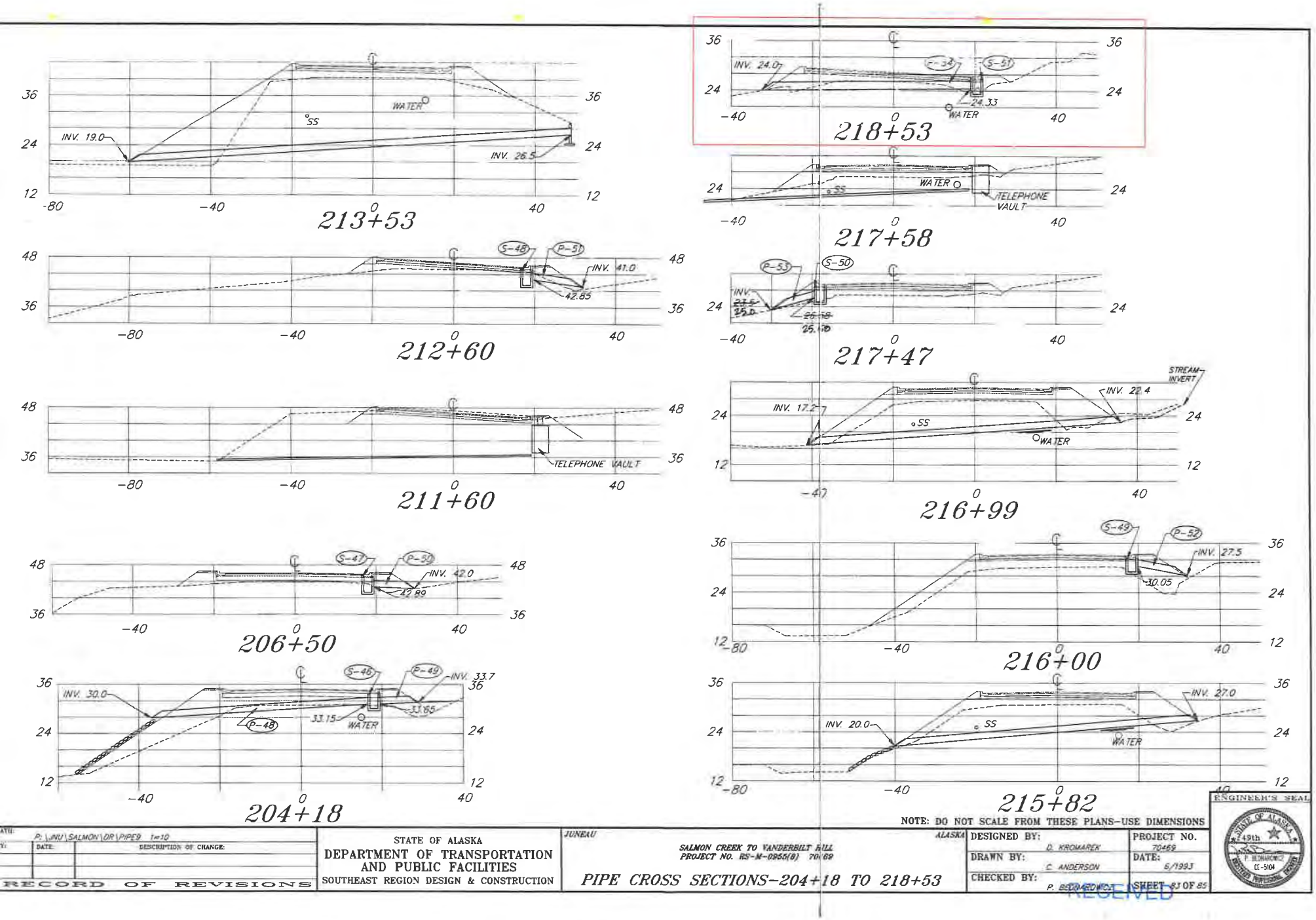
Attachment I - Preliminary Drainage Plan



NOTE: DO NOT SCALE FROM THESE PLANS–USE DIMENSIONS

ENGINEER'S SEAL

STATE OF ALASKA 49th P. BEDNAROWICZ CE-5104 REGISTERED PROFESSIONAL ENGINEER

PATH: P:\JNU\SALMON\DR\PIPE9 1=10	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SOUTHEAST REGION DESIGN & CONSTRUCTION	JUNEAU ALASKA SALMON CREEK TO VANDERBILT HILL PROJECT NO. RS-M-0955(8) 70169 PIPE CROSS SECTIONS–204+18 TO 218+53	DESIGNED BY: D. KROMAREK DRAWN BY: C. ANDERSON CHECKED BY: P. BEDNAROWICZ
BY: DATE: DESCRIPTION OF CHANGE:			PROJECT NO. 70469 DATE: 6/1993 SHEET 83 OF 85
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Attachment I - Preliminary Drainage Plan

6/14/2019

Precipitation Frequency Data Server

NOAA Atlas 14, Volume 7, Version 2
Location name: Juneau, Alaska, USA*
Latitude: 58.3454°, Longitude: -134.4905°
Elevation: 101.1 ft**
* source: ESRI Maps
** source: USGS

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POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Douglas Kane, Sarah Dietz, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Svetlana Stuefer, Amy Tidwell, Carl Trypaluk, Dale Unruh, Michael Yekta, Erica Betts, Geoffrey Bonnin, Sarah Heim, Lillian Hiner, Elizabeth Lilly, Jayashree Narayanan, Fenglin Yan, Tan Zhao

NOAA, National Weather Service, Silver Spring, Maryland
and
University of Alaska Fairbanks, Water and Environmental Research Center

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.57 (1.27-1.99)	1.84 (1.46-2.36)	2.24 (1.75-2.95)	2.58 (1.98-3.44)	3.04 (2.27-4.15)	3.38 (2.48-4.72)	3.74 (2.70-5.30)	4.20 (2.98-6.06)	4.80 (3.32-7.08)	5.26 (3.59-7.88)
10-min	1.06 (0.852-1.34)	1.24 (0.984-1.59)	1.51 (1.17-1.98)	1.73 (1.32-2.31)	2.03 (1.52-2.78)	2.27 (1.67-3.17)	2.51 (1.81-3.55)	2.82 (2.00-4.07)	3.22 (2.23-4.75)	3.53 (2.41-5.29)
15-min	0.824 (0.664-1.04)	0.964 (0.768-1.24)	1.17 (0.912-1.54)	1.35 (1.03-1.80)	1.59 (1.19-2.17)	1.77 (1.30-2.47)	1.96 (1.41-2.78)	2.20 (1.56-3.16)	2.52 (1.74-3.71)	2.76 (1.88-4.13)
30-min	0.546 (0.440-0.692)	0.640 (0.510-0.822)	0.778 (0.606-1.02)	0.894 (0.684-1.19)	1.05 (0.788-1.44)	1.18 (0.864-1.64)	1.30 (0.938-1.84)	1.46 (1.03-2.10)	1.67 (1.16-2.46)	1.83 (1.25-2.74)
60-min	0.374 (0.302-0.474)	0.438 (0.349-0.563)	0.533 (0.415-0.700)	0.613 (0.469-0.819)	0.722 (0.539-0.988)	0.806 (0.592-1.12)	0.890 (0.642-1.26)	0.999 (0.708-1.44)	1.14 (0.792-1.69)	1.25 (0.853-1.88)
2-hr	0.276 (0.222-0.350)	0.324 (0.258-0.416)	0.394 (0.307-0.518)	0.453 (0.346-0.606)	0.534 (0.399-0.730)	0.596 (0.438-0.830)	0.658 (0.474-0.932)	0.738 (0.523-1.06)	0.844 (0.586-1.25)	0.925 (0.630-1.39)
3-hr	0.243 (0.196-0.308)	0.284 (0.226-0.366)	0.347 (0.270-0.455)	0.398 (0.305-0.532)	0.469 (0.351-0.642)	0.523 (0.384-0.729)	0.577 (0.417-0.818)	0.648 (0.460-0.935)	0.742 (0.514-1.09)	0.813 (0.554-1.22)
6-hr	0.195 (0.158-0.248)	0.229 (0.182-0.294)	0.279 (0.217-0.366)	0.320 (0.245-0.428)	0.377 (0.282-0.516)	0.421 (0.309-0.586)	0.465 (0.335-0.659)	0.522 (0.370-0.753)	0.597 (0.414-0.881)	0.654 (0.446-0.981)
12-hr	0.146 (0.118-0.185)	0.171 (0.136-0.220)	0.208 (0.162-0.273)	0.238 (0.182-0.318)	0.280 (0.210-0.384)	0.314 (0.231-0.438)	0.349 (0.252-0.495)	0.393 (0.278-0.566)	0.450 (0.312-0.664)	0.493 (0.336-0.740)
24-hr	0.106 (0.096-0.118)	0.124 (0.111-0.141)	0.150 (0.131-0.173)	0.171 (0.147-0.201)	0.201 (0.169-0.242)	0.226 (0.186-0.277)	0.252 (0.204-0.314)	0.283 (0.225-0.359)	0.324 (0.252-0.420)	0.354 (0.272-0.467)
2-day	0.072 (0.065-0.081)	0.084 (0.075-0.095)	0.100 (0.087-0.116)	0.113 (0.097-0.133)	0.131 (0.110-0.158)	0.146 (0.120-0.179)	0.161 (0.131-0.201)	0.179 (0.143-0.227)	0.202 (0.158-0.263)	0.220 (0.169-0.290)
3-day	0.057 (0.051-0.064)	0.066 (0.059-0.074)	0.078 (0.068-0.090)	0.088 (0.075-0.103)	0.101 (0.085-0.122)	0.112 (0.092-0.137)	0.123 (0.099-0.153)	0.135 (0.108-0.171)	0.152 (0.118-0.197)	0.164 (0.126-0.216)
4-day	0.048 (0.044-0.054)	0.055 (0.049-0.063)	0.065 (0.057-0.076)	0.073 (0.063-0.086)	0.084 (0.071-0.101)	0.093 (0.076-0.114)	0.101 (0.082-0.126)	0.111 (0.089-0.141)	0.124 (0.097-0.161)	0.134 (0.103-0.177)
7-day	0.036 (0.032-0.040)	0.041 (0.036-0.046)	0.048 (0.042-0.055)	0.053 (0.046-0.063)	0.061 (0.051-0.073)	0.067 (0.055-0.082)	0.073 (0.059-0.091)	0.080 (0.064-0.101)	0.089 (0.069-0.115)	0.096 (0.074-0.127)
10-day	0.029 (0.027-0.033)	0.034 (0.030-0.038)	0.039 (0.034-0.046)	0.044 (0.038-0.052)	0.050 (0.042-0.060)	0.055 (0.045-0.067)	0.060 (0.048-0.074)	0.065 (0.052-0.083)	0.072 (0.057-0.094)	0.078 (0.060-0.103)
20-day	0.022 (0.020-0.025)	0.025 (0.022-0.029)	0.029 (0.026-0.034)	0.032 (0.028-0.038)	0.037 (0.031-0.044)	0.040 (0.033-0.049)	0.043 (0.035-0.054)	0.047 (0.037-0.059)	0.051 (0.040-0.067)	0.055 (0.042-0.073)
30-day	0.019 (0.018-0.022)	0.022 (0.020-0.025)	0.026 (0.022-0.030)	0.028 (0.024-0.033)	0.032 (0.027-0.038)	0.035 (0.028-0.042)	0.037 (0.030-0.046)	0.040 (0.032-0.051)	0.044 (0.034-0.057)	0.047 (0.036-0.061)
45-day	0.017 (0.015-0.019)	0.020 (0.017-0.022)	0.023 (0.020-0.026)	0.025 (0.021-0.029)	0.028 (0.023-0.034)	0.030 (0.025-0.037)	0.032 (0.026-0.040)	0.034 (0.027-0.044)	0.037 (0.029-0.048)	0.039 (0.030-0.052)
60-day	0.015 (0.014-0.017)	0.018 (0.016-0.020)	0.020 (0.018-0.024)	0.022 (0.019-0.026)	0.025 (0.021-0.030)	0.027 (0.022-0.033)	0.028 (0.023-0.035)	0.030 (0.024-0.038)	0.032 (0.025-0.041)	0.033 (0.026-0.044)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

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PDS-based intensity-duration-frequency (IDF) curves
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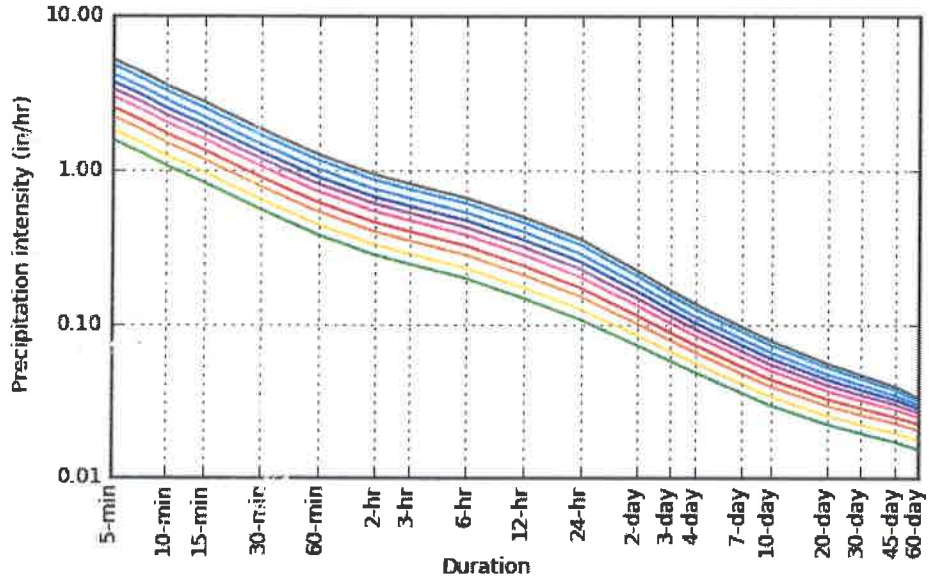

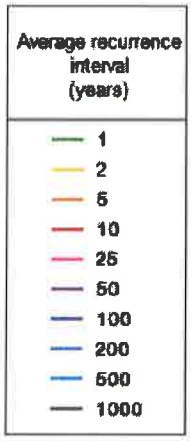

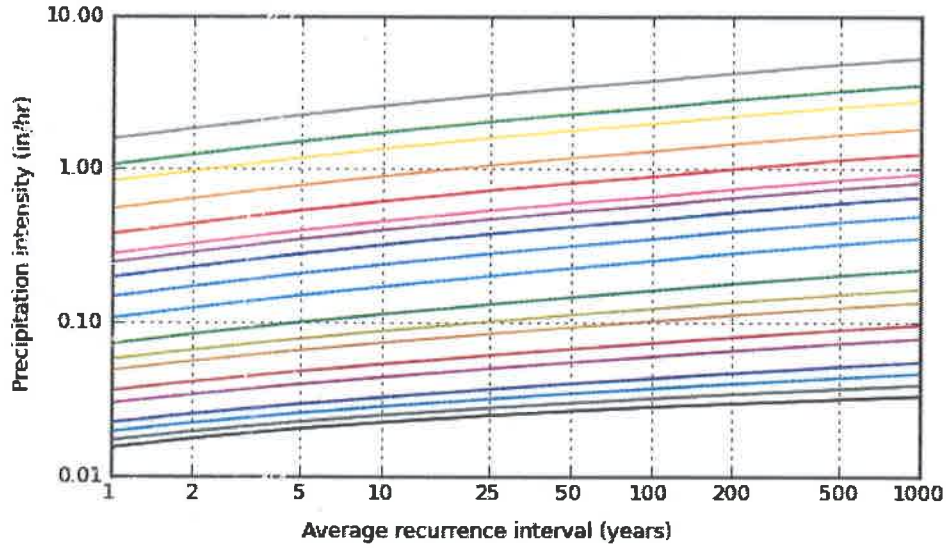

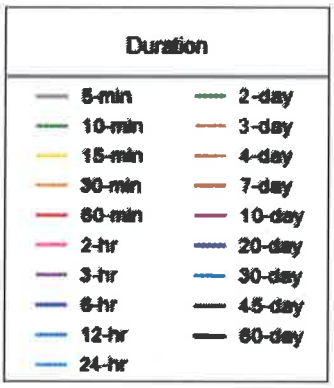

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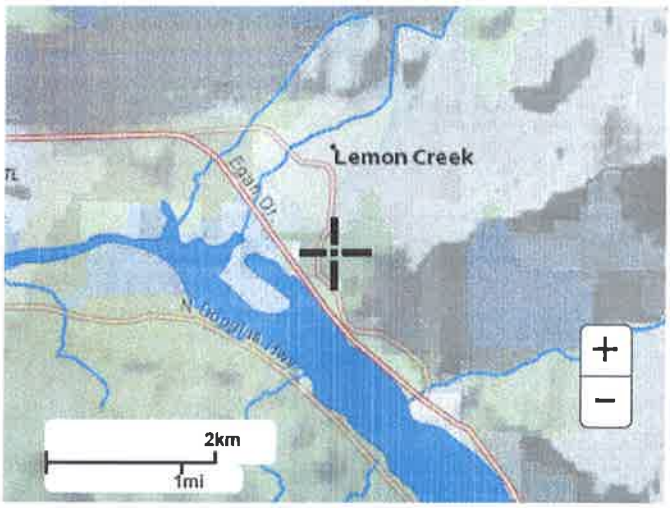
Maps & aerials

Small scale terrain



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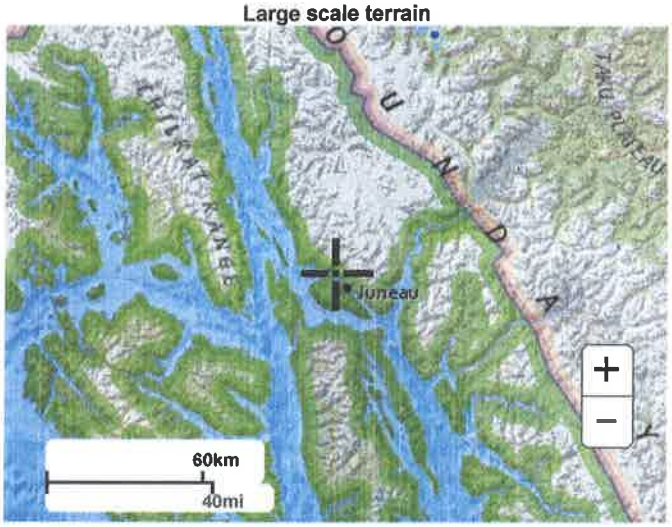
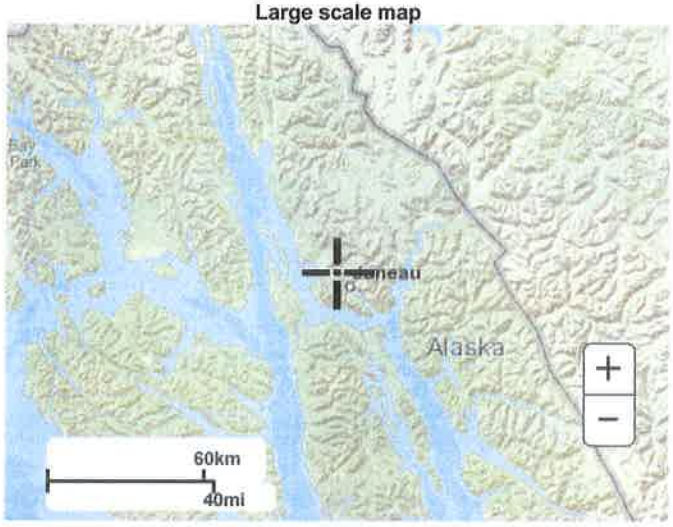
Large scale terrain

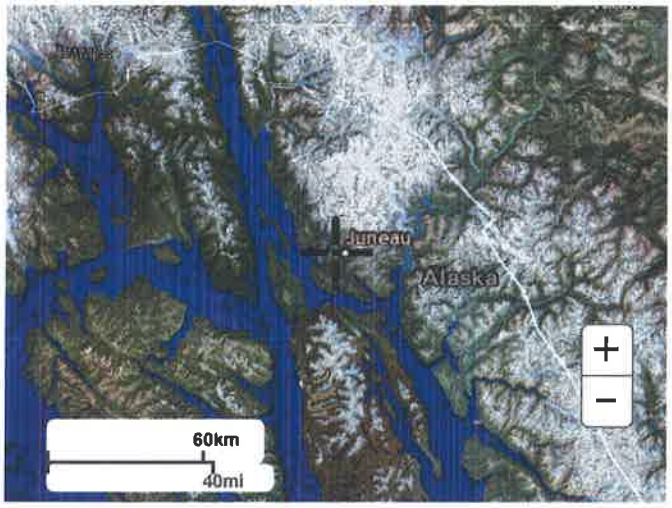


Large scale map



Large scale aerial

Attachment I - Preliminary Drainage Plan



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Technical Memorandum

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Date: 12/11/2018

To: Bill Heumann

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Reference:

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Subject: Mountainside Estates High Elevation Water System Evaluation

PURPOSE OF TECH MEMO

The purpose of this technical memorandum is to evaluate the water booster pump station and water distribution system piping serving the high elevation water system in the Mountainside Estates Subdivision with regards to the possibility of constructing new residences off the end of Hillcrest Avenue, Mountainside Drive and Robbie Road.

SUMMARY OF FINDINGS AND CONCLUSIONS

- The existing Mountainside Estates water booster pump station has 3 – 10 hp pumps each of which is designed to pump 200 gpm. The total design capacity of the pump station is therefore 600 gpm.
- The original design intent for the existing Mountainside Estates water booster pump station was to have sufficient capacity to meet a peak hourly domestic water demand of 100 gpm while simultaneously providing 500 gpm for fire flows.
- 18 AAC 80.205 (a) (5) of the Alaska Department of Environmental Conservation's Drinking Water Regulations requires "...that at least 20 psi of service pressure at the highest elevation or pressure zone of a distribution main be maintained under peak design demand."
- The water pressure provided by the Mountainside Estates water booster pump station is 95 psi. The lowest elevation in the service area is at the end of Hillcrest Avenue and it has a static water pressure of about 96 psi. The highest elevation in the service area is at the upper end of Ling Court and it has the lowest static water pressure in the Mountainside Estates subdivision of about 42 psi.

- Water demand in the high elevation water system in 2018 has averaged about 16,400 gpd. This is equal to about 140 gpd per residence.
- Greatest water demand was in July. In July the daily demand was 20,423 gpd. The CBJ Water Department reviewed the historic water demand trend charts for July, 2018 and peak flows recorded during this period were consistently in the 50 to 60 gpm range.
- There are about 120 residences currently served by the Mountainside Estates Water Booster Pump Station. With current Peak Hourly Flows of 60 gpm, the average per residence Peak Hourly Flow is 0.5 gpm (60 gpm peak hourly flow/120 residential units = 0.5 gpm peak hourly flow/residential unit).
- With the pump station designed to provide peak hourly domestic water flows of 100 gpm, and 60 gpm is currently being used to meet Peak Hourly Domestic demand, there remains 40 gpm of pump station capacity available to meet peak hourly water demands from future residential development. This preserves 500 gpm of pump station capacity for fire flows.
- With average peak hourly flow per residence in Mountainside Estates of 0.5 gpm, if an additional 80 residential units are constructed it would result in a projected 40 gpm increase in the peak hourly flow (80 residential units x 0.5 gpm peak hourly flow/residential unit = 40 gpm). This uses the remaining domestic peak hourly water flow design capacity of the Mountainside Estates pump station.
- Using a computer model of the Mountainside Estates water system, water pressure in the water main at the upper end of Ling Court (the area with the lowest water system pressure) is projected to be as follows for the following conditions:
    - Static Pressure No Water Demand = 41.79 psi
    - 60 gpm Existing Peak Hourly Water Demand = 41.69 psi
    - 100 gpm Future Peak Hourly Water Demand = 41.56 psi
    - 60 gpm Existing Peak Hourly and 500 gpm Fire @ Robbie Rd. = 31.59 psi
    - 100 gpm Future Peak Hourly and 500 gpm Fire @ Robbie Rd. = 30.70 psi
- It appears that an additional 80 residential units could be constructed in the Mountainside Estates high elevation water zone without exceeding the existing pump station design capacity of 100 gpm for peak hourly domestic water demand or reducing pressures in the distribution main to below 20 psi. This also preserves additional pump station capacity of 500 gpm for fire flows without reducing water pressures in the water main to below 20 psi.

MOUNTAINSIDE ESTATES HIGH ELEVATION WATER SYSTEM BACKGROUND

The higher elevations of the Mountainside Estates Subdivision are at an elevation that is too high for it to be served by the low elevation water system which serves much of Juneau. High elevation developments in Juneau, like Mountainside Estates, are typically supplied water using water booster pumps. In some instances, these water booster pumps fill water storage reservoirs that provide higher elevation areas with adequate water pressure and flows using

water stored in the reservoirs. In other instances, the pumps are constant pressure pumps that maintain water pressure in higher elevation areas by varying pump speed to ensure a constant pressure is provided to residents under varying water demand conditions.

The Mountainside Estate Pump Station, located at the intersection of Craig Street and Hillcrest Avenue is a constant pressure pump station that was constructed in 1994. It has three 10 hp pumps each capable of producing 200 gpm. Two of the pumps are controlled by variable frequency drives (VFDs) that adjust pump speed to maintain a constant output pressure of 95 psi at the pump station. For the Mountainside Estates pump station one of the VFD controlled pumps typically operates continuously to maintain water pressure and other is a standby in case water demand exceeds the 200 gpm capacity of a single pump. The two VFD controlled pumps alternate operation each day. The third pump is a constant speed pump and it only operates when the two VFD controlled pumps are unable to maintain a pump station output pressure of 95 psi. The combined output of the three pumps is about 600 gpm. The design flow of the pump station was based on a fire flow of 500 gpm and a peak hourly domestic demand of 100 gpm. These design flows were the result of meetings and conversations between the CBJ Public Utilities, CBJ Engineering and CBJ Fire Departments in 1994.

Mountainside Estates Pump Station

The desired static water pressure (the no flow condition) in water mains within the Juneau Areawide Water System is typically a low of 40 psi and a high of 95 psi. The Mountainside Estates pump station is at elevation 108' and its output pressure is 95 psi. The lowest elevation in the Mountainside Estates high elevation water service area is at the end of Hillcrest Avenue.

Its elevation is 106' and it has a static operating pressure of about 96 psi. The highest elevation in the Mountainside Estates high elevation water service area is at the end of Ling Court. Its elevation is 231' and it has a static operating pressure of about 42 psi. Houses that are higher or lower than the water main in the road may have pressures that are higher or lower than these calculated pressures.

The water distribution system piping in the Mountainside Estates high elevation service area consists of 8" ductile iron pipe. The service area includes:

- Hillcrest Avenue
- Mountainside Drive
- Timberline Court
- Edwin Place
- Pike Court
- Tarn Court
- Mary Ellen Way
- Robbie Road
- Laurie Lane
- Ling Court

A drive through survey of the service area counted 118 residences in the service area.

MOUNTAINSIDE ESTATES DOMESTIC WATER DEMAND EVALUATION

As discussed earlier, the Mountainside Estates pump station was designed to provide 100 gpm for peak hourly domestic water demand and 500 gpm for fire flows.

There are currently about 118 residences in the service area. Water usage is recorded at the Mountainside Estates pump station a couple of times each week (see Appendix A – 2018 Mountainside Estates Pump Station Flows). From the recorded water usage, daily usage is calculated by dividing the recorded usage by the number of days between each recording. The Average Gallons per Day per Residence is calculated by dividing the calculated daily usage by the number of residences. Average Daily Flow rate is calculated by dividing the daily usage by 1,440 minutes, the number of minutes in a day.

Water demand constantly changes throughout a day. Generally, there are peak water demand periods in the morning and again in the evening. Since water demand is not constant over a day it is typical to evaluate water systems based on the Peak Hourly Flow. Peak Hourly Flows are usually estimated to be between 3 and 4 times the Average Daily Flow. Since Mountainside is a relatively small subdivision, we have used a peaking factor of 4 to calculate the estimated peak hourly flows. Table 1 is a summary of the monthly flows for the Mountainside Estates Pump Station.

Table 1
2018 Mountainside Estates Water Flow Summary

Month	Average Daily Use (GPD)	Avg. GPD Per Residence	Avg. Daily Flow (gpm)	Estimated Peak Hourly Flow (gpm)[1]
January	16,116	136.6	11.2	44.8
February	17,460	148.0	12.1	48.5
March	14,884	126.1	10.3	41.3
April	15,135	128.3	10.5	42.0
May	15,202	128.8	10.6	42.2
June	18,932	160.4	13.1	52.6
July	20,423	173.1	14.2	56.7
August	16,931	143.5	11.8	47.0
September	14,276	121.0	9.9	39.7
October	14,515	123.0	10.1	40.3
November	16,511	139.9	11.5	45.9
December				
Annual Avg.	**16,399**	**139.0**	**11.4**	**45.6**

1. Estimated Peak Hourly Flow is 4.0 times the Average Daily Flow

The CBJ Water Department was contacted to discuss the estimates of peak hourly flow and they were able to review water flow trends at the Mountainside Estates pumps station using their areawide water monitoring system. They reported that in June and July the peak water flow rates recorded by their system for the Mountainside Estates pump station were constantly varying between 50 and 60 gpm. They believe 60 gpm is a good estimate of the current peak hourly flows at Mountainside Estates.

During Peak Hourly Water Demand periods not all residences will be using water simultaneously. Some will be using water at high rates and some will not be using any water at all. To evaluate future peak hourly water demands it is helpful to consider the current average contribution to the peak hourly flow rate per residence. Since there are about 120 current residences in Mountainside and the current peak hourly flows are estimated at 60 gpm, the average peak hourly flow per residence is 0.5 gpm (60 gpm peak hourly flow/120 residential units = 0.5 gpm peak hourly flow/residential unit).

Of the 100 gpm of the pump station capacity dedicated to meeting peak hourly domestic flows, there remains 40 gpm if 60 gpm is currently being used to meet peak hourly flows. Assuming new residences have similar peak hourly water demands as the existing residences, each new residence would add about 0.5 gpm to the peak hourly water demand. On that basis the remaining 40 gpm of pump station capacity available for meeting peak hourly domestic water demand is sufficient to meet the demand from an additional 80 homes (40 gpm/0.5 gpm per residence = 80 residences).

MOUNTAINSIDE ESTATES WATER PRESSURE EVALUATION

During periods of high water demand such as during a fire, the Alaska Department of Environmental Conservation's (ADEC) Drinking Water Regulations (18 AAC 80.205 (a) (5))

requires a minimum residual pressure of 20 psi in water distribution systems after accounting for pressure losses due to flow conditions.

In a water system, highest water pressures occur at the lower elevations and the lowest pressures occur at the highest elevations. ADEC's expectation is that water system pressures will be above 20 psi under conditions of peak hourly demand plus fire flows. A computer model of the Mountainside Estates water system was developed based on as-built record drawings of the water system layout, elevations and water line sizes. A number of different water system scenarios were evaluated including combinations of existing and future peak hourly water demand and fire flows to see what the impact would be on water system operating pressures. The fire flows were modeled with a 500 gpm fire flow at the end of Robbie Road. This is the location that will result in the greatest pressure losses under conditions of fire flow because it has the fire hydrant that is the furthest away from the pump station and at the highest elevation.

An additional scenario was modelled that included a future 1,000' extension to Robbie Road at the same elevation of the existing end of Robbie Road, to see the impact on water system pressure in any future development under fire flow conditions. Table 2 is a summary of the results from the computer modelling of the system.

TABLE 2
MOUNTAINSIDE ESTATES PROJECTED WATER PRESSURES AT SELECTED LOCATIONS FOR DIFFERENT WATER DEMAND SCENARIOS

Water Demand Scenario	End of Hillcrest Ave.	Pump Station	Timberline Court	Pike Court	Tarn Court	Mary Ellen Way	End of Mtnside Drive	Robbie Road	Laurie Lane	Ling Court
Static Pressures (No Flow) (95 psi at Pump Station)	95.95	95.09	74.29	60.42	50.89	43.96	68.22	50.89	44.39	41.79
Peak Hourly Flow 60 gpm (Existing 118 Residences)	95.95	95.09	74.23	60.36	50.82	43.87	68.12	50.79	44.29	41.69
Peak Hourly Flow 100 gpm (Total 200 Residences)	95.95	95.09	74.18	60.30	50.75	43.76	68.00	50.65	44.16	41.56
Existing Peak Hour (60 gpm) Plus 500 gpm Fire @ Robbie Road	95.95	95.09	70.99	56.30	45.74	36.35	59.17	39.73	34.19	31.59
New Peak Hour (100 gpm) Plus 500 gpm Fire @ Robbie Road	95.95	95.09	70.69	55.93	45.27	35.64	58.33	38.79	33.30	30.70
New Peak Hour (100 gpm) Plus 500 gpm Fire @ End of 1000' Extension to Robbie Road	95.95	95.09	70.69	55.93	45.27	35.64	58.33	34.78	33.30	30.70

In general, it appears that there is a very small decrease in operating system pressures during periods of either existing or future peak hourly flows when compared to the static pressure. When evaluated in combination with fire flow conditions of 500 gpm at the upper end of Robbie Road, a more notable pressure drop of up to about 12 psi is expected in the existing Robbie Road, Ling Court and Laurie Lane area. However, none of the conditions of peak hourly demand in combination with 500 gpm fire flows result in water system pressures less than the ADEC minimum of 20 psi.

APPENDIX A

MOUNTAINSIDE ESTATES PUMP STATION

2018 WATER FLOW RECORDS

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

January, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1040	45	95	718,752	74,500	18,625	12.9
3							
4							
5							
6							
7							
8							
9	1000	46	94	720,837	108,500	15,500	10.8
10							
11							
12	0930	48	94	721,312	47,500	15,833	11.0
13							
14							
15							
16	1000	45	95	721,987	67,500	16,875	11.7
17							
18							
19	1000	48	95	722,417	43,000	14,333	10.0
20							
21							
22							
23	1520	48	94	723,097	68,000	17,000	11.8
24							
25							
26	1100	49	94	723,512	41,500	13,833	9.6
27							
28							
29							
30	0900	51	94	724,189	67,700	16,925	11.8
31							
					Averages	**16,116**	**11.2**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

February, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1005	50	94	724,678	48,900	16,300	11.3
3							
4							
5							
6	1040	38	92	725,428	75,000	18,750	13.0
7							
8							
9							
10							
11							
12							
13	0940	53	94	726,712	128,400	18,343	12.7
14							
15							
16	1130	49	93	727,196	48,400	16,133	11.2
17							
18							
19							
20	1033	48	94	727,907	71,100	17,775	12.3
21							
22							
23							
24							
25							
26							
27							
28							
					Averages	**17,460**	**12.1**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

March, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	0830	49	93	729,680	177,300	14,775	10.3
3							
4							
5							
6	1150	49	94	730,365	68,500	17,125	11.9
7							
8							
9	1200	49	94	730,815	45,000	15,000	10.4
10							
11							
12							
13	0915	49	95	731,463	64,800	16,200	11.3
14							
15							
16	1115	48	95	731,905	44,200	14,733	10.2
17							
18							
19							
20	1020	47	94	732,491	58,600	14,650	10.2
21							
22							
23	1000	48	95	732,874	38,300	12,767	8.9
24							
25							
26							
27							
28	0900	48	95	733,565	69,100	13,820	9.6
29							
30							
					Averages	**14,884**	**10.3**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

April, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3	1040	48	94	734,444	87,900	14,650	10.2
4							
5	1545	49	94	734,730	28,600	14,300	9.9
6							
7							
8							
9							
10	1000	48	95	735,488	75,800	15,160	10.5
11							
12	1505	49	94	735,839	35,100	17,550	12.2
13							
14							
15							
16							
17							
18							
19							
20	1110	48	94	736,992	115,300	14,413	10.0
21							
22							
23							
24	0936	46	94	737,629	62,700	15,675	10.9
25							
26							
27	1430	47	94	738,055	42,600	14,200	9.9
28							
29							
30							
					Averages	**15,135**	**10.5**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

May, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3							
4	1135	46	94	739,141	108,600	15,514	10.8
5							
6							
7							
8	1000	48	93	739,783	64,200	16,050	11.1
9							
10	1310	45	94	740,092	30,900	15,450	10.7
11							
12							
13							
14							
15	1020	47	95	740,859	49,700	9,940	6.9
16							
17							
18	1445	47	95	741,337	47,800	15,933	11.1
19							
20							
21	1520	46	94	741,868	53,100	17,700	12.3
22							
23							
24							
25	1015	45	94	742,437	56,900	14,225	9.9
26							
27							
28							
29	0935	48	93	743,109	67,200	16,800	11.7
30							
31							
					Averages	**15,202**	**10.6**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

June, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1	1230	49	93	743,662	55,300	18,433	12.8
2							
3							
4							
5	1015	47	95	744,419	75,700	18,925	13.1
6							
7							
8	1320	47	94	744,896	47,700	15,900	11.0
9							
10							
11							
12	0935	48	92	745,545	64,900	16,225	11.3
13							
14							
15	1335	49	93	746,032	48,700	16,233	11.3
16							
17							
18	1315	48	95	746,524	49,200	16,400	11.4
19							
20							
21							
22	0915	47	95	747,462	93,800	23,450	16.3
23							
24							
25							
26	1000	47	93	748,651	118,900	29,725	20.6
27							
28							
29	0912	47	94	749,106	45,300	15,100	10.5
30							
					Averages	**18,932**	**13.1**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

July, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1020	47	93	749,642	53,600	17,867	12.4
3							
4							
5							
6	0825	50	91	750,490	84,800	21,200	14.7
7							
8							
9							
10							
11	1300	46	94	751,470	98,000	19,600	13.6
12							
13	1050	47	92	751,796	32,600	16,300	11.3
14							
15							
16							
17	1030	48	93	752,545	74,900	18,725	13.0
18							
19							
20	1135	47	94	753,065	52,000	17,333	12.0
21							
22							
23							
24	1245	47	93	754,016	95,100	23,775	16.5
25							
26							
27	1505	47	94	754,647	65,800	21,933	15.2
28							
29							
30							
31	1030	46	94	755,730	108,300	27,075	18.8
					Averages	**20,423**	**14.2**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

August, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3	1020	47	94	756,274	54,400	18,133	12.6
4							
5							
6							
7	1020	46	93	756,982	76,800	19,200	13.3
8							
9							
10	1010	50	94	757,435	45,300	15,100	10.5
11							
12							
13							
14	1000	45	93	758,089	65,400	16,350	11.4
15							
16							
17	1010	47	94	758,683	59,400	19,800	13.8
18							
19							
20							
21	1030	47	95	759,377	69,400	17,350	12.0
22							
23							
24	1245	48	94	759,842	46,500	15,500	10.8
25							
26							
27							
28	1340	47	93	760,497	65,500	16,375	11.4
29							
30							
31	0825	48	94	760,934	43,700	14,567	10.1
					Averages	**16,931**	**11.8**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

September, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3							
4	1435	42	94	761,661	72,700	18,175	12.6
5							
6							
7	0930	46	93	762,065	40,400	13,467	9.4
8							
9							
10							
11	1020	49	94	762,637	57,200	14,300	9.9
12							
13							
14	0955	45	94	763,041	40,400	13,467	9.4
15							
16							
17							
18	1055	50	93	763,656	61,500	15,375	10.7
19							
20							
21	1020	45	94	764,057	40,100	13,367	9.3
22							
23							
24							
25	1205	47	93	764,618	56,100	14,025	9.7
26							
27							
28	0930	46	94	764,979	36,100	12,033	8.4
29							
30							
					Averages	**14,276**	**9.9**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

October, 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2	1000	47	93	765,571	76,551	19,138	13.3
3							
4							
5	0955	47	93	765,996	42,500	14,167	9.8
6							
7							
8							
9	1010	47	94	766,616	62,000	15,500	10.8
10							
11							
12	1400	47	93	767,005	38,900	12,967	9.0
13							
14							
15							
16	1015	46	94	767,567	56,200	14,050	9.8
17							
18							
19	0910	47	93	767,952	38,500	12,833	8.9
20							
21							
22							
23	1450	46	94	768,552	60,000	15,000	10.4
24							
25							
26	1010	47	93	768,926	37,400	12,467	8.7
27							
28							
29							
30							
31							
					Averages	**14,515**	**10.1**

MOUNTAINSIDE ESTATES PUMP STATION FLOWS

November 2018

Date	Time	PSI In	PSI Out	Meter Reading	Usage (Gal.)	Daily Use (GPD)	Avg. Daily Flow (gpm)
1							
2							
3							
4							
5							
6	1030	48	93	770,616	169,200	15,382	10.7
7							
8							
9	1010	47	95	771,102	48,600	16,200	11.3
10							
11							
12							
13	1020	48	93	771,820	71,800	17,950	12.5
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
					Averages	**16,511**	**11.5**

Wetland Delineation Report for the Richland Manor, Section 1, Mountainside Estates, Juneau, AK

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November 2018

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Table of Contents

Introduction

William Heumann & Associates is exploring the option of developing a 4.74-acre property at the end of Hillcrest Ave in Mountainside Estates, Old Glacier Highway, Juneau, Alaska. This wetland delineation report and maps are in support of the US Army Corps of Engineers wetland permit for development of this project.

Photo 1 – Location map for Richland Manor Project Area.

Methods

The project area was visited for delineation and mapping on November 14, 2018. The weather at that time was light rain and temperatures were in the lower 50's °F. The month before fieldwork had had slightly lower rainfall than average for October and daily high temperatures were between 45°F and 60°F. Plants were senesced but still recognizable.

Wetlands areas were mapped using the "triple parameter" method described in the U.S. Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) as supplemented by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region - November 2007*. Wetlands are required to have a prevalence of wetland hydrology, hydric soils, and hydrophytic vegetation. Wetlands are determined when positive indicators of all of these three criteria are present. The "routine determination delineation" methodology was used. The wetland boundaries and classifications described herein represent best professional opinion.

Sample points were done at either side of any significant changes in vegetation, soils or hydrology. At each sample point, the wetland status of that point was determined by observing indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. Once representative sample points were done for all wetland/upland types wetland boundaries along the transects were marked with a GPS waypoint.

Sample plot vegetation was divided into three strata; tree, shrub, and forb, and each layer was classified using the dominance test (more than 50% of the dominant plant species across all strata are rated obligate, facultative wet, or facultative) and the prevalence index (a weighted-average wetland indicator status of all plant species in the sample plot). The 2012 U.S. Army Corps of Engineers *National Wetland Plant List –Alaska Region* was used to classify plants.

Hydrology was determined using two methods: (1) visually, if the water table is at or above the surface, or (2) with a soil pit. The presence of standing water, depth to free water in the soil pit, and depth to saturated soils was recorded. Other primary and secondary hydrology indicators were recorded, such as presence of watermarks, sediment deposits, drift deposits, iron deposits, hydrogen sulfide odor, geomorphic position, and drainage patterns in wetlands.

Soil pits were dug to a depth of 12-16 inches, or to bedrock or glaciomarine sediment refusal, to determine if indicators of hydric soils were present. Soil colors were determined from a moist sample with the Munsell Soil Color Chart. Sample point data sheets are included in Appendix A. The project area has young and disturbed soils and so have been treated as "problematic " soils.

The base for the delineation maps was 2013 lidar and photography imagery flown by Aerometrics, Inc. Polygon acreages and stream lengths were calculated in GIS. Final delineation maps were done in ArcMap 10.5. Modeled stream locations were checked in the field.

Project Area

The project area is 4.74 acres of fill and disturbed forest at the end of Hillcrest Ave.

The project area slope before disturbance and fill was gently sloping with a much steeper slope above and flatter below.

Streams on most of the project area have been channelized with one main perennial ditch draining the uphill edge of the fill pad (**R3UB1** – Riverine Upper-Perennial Unconsolidated-Bottom Cobble Gravel) and arching around to drain the lower edge of the fill pad. The ditch then drains into a deeply entrenched, perennial stream that flows along the southern edge of the project area and to Gastineau Channel via the Pioneer marsh. The other smaller tributaries to these streams are seasonal or ephemeral streams (**R4SB3/6** – Riverine Intermittent Streambed Cobble-gravel/Organic)

The fill pad at the end of Hillcrest Ave is two feet of well drained course gravel fill over mixed fill of gravel, sand, and silt. The fill pad is sparsely vegetated with red alder saplings, Sitka willow and reed canary grass. There are two house foundations on the fill pad that are 4-5 feet below the level of the fill. One of the foundations (northern) had the water table at the surface at the time of the survey and patchy wetland vegetation (**PEM1A** – Palustrine Emergent Persistent Seasonally Flooded). There is a small, seasonal, created, drainage coming out of this foundation hole. The other foundation (southern) is at the edge of the fill pad near a deep stream channel and is well-drained. The foundations are both dominated by red alder saplings and horsetail.

The area surrounding the fill pad has disturbed vegetation, soils and hydrology. The vegetation has been cleared and regrown with patchy red alder and western hemlock forest. and the native organic soil is mixed or covered with eroded fill material and the hydrology is altered by channelization (**PFO1B** – Palustrine Forested Broad-Leaved Deciduous Saturated) (**PFO4B** – Palustrine Forested Needle-Leaved Evergreen Saturated).

Photo 2 – The lower part of the perennial ditched stream that surrounds the fill pad.

Photo 3 – Seasonal streams entering the channelized stream east of the fill pad.

Photo 4 – Course gravel on the surface of the fill pad.

Photo 5 – Eroded fill material with silts and gravels over native organic soils at the toe of the fill pad.

Photo 6 – Saturated organic soils uphill of the fill pad.

Photo 7 – Disturbed area with red alder sapling forest.

Photo 8 – steep slope at the south edge of the fill pad. Red alder saplings dominate.

Photo 9 – Western foundation site with the water table at the surface and vegetation dominated by horsetail and red alder saplings.

Table 0-1 - Plant Species List (Lichvar, 2014)

Scientific name	Common name	Indicator status[1]
Alnus rubra	red alder	FAC
Alnus sinuata	Sitka alder	FAC
Athyrium felix-femina	lady fern	FAC
Calamagrostis canadensis	Canada blue-joint	FAC
Carex sitchensis	Sitka sedge	OBL
Cornus canadensis	dwarf dogwood	FACU
Deschampsia beringensis	Bering hair-grass	FAC
Dryopteris dilatata	spiny wood fern	FACU
Equisetum arvense	horsetail	FACU
Gymnocarpium dryopteris	oak fern	FACU
Lysichiton americanum	skunk cabbage	OBL
Menziesia ferruginea	false azalea	FACU
Oplopanax horridus	devil's club	FACU
Picea sitchensis	Sitka spruce	FACU
Rubus pedatus	trailing raspberry	FAC
Rubus spectabilis	salmonberry	FACU
Salix sitchensis	Sitka willow	FAC
Scirpus microcarpus	Bulrush	OBL
Tsuga heterophylla	western hemlock	FAC
Vaccinium ovalifolium	early blueberry	FAC

[1] See Table 2 for abbreviation definitions

Table 0-2 - Indicator code table (Lichvar, 2012)

Indicator Code	Type	Comment
OBL	Obligate Wetland	Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.
FACW	Facultative Wetland	Usually occur in wetlands, but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
FAC	Facultative	Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
FACU	Facultative Upland	Usually occur in non-wetlands, but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
UPL	Obligate Upland	Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.
NI	No indicator	Insufficient information was available to determine an indicator status.

Results

Table 0-1 - Sample point table

Sample point	Dominant vegetation/ Hydrology / Geomorphology	Cowardin Classification	PJD[2]	Rationale for PJD
1	Fill pad set 5ft. below grade with water table at the surface, seasonal drainage to perennial stream and scattered red alder saplings and horsetail.	PEM1A	Yes	Wetland on RPW[3] that flows into TNW[4]
2	Fill pad set 5 ft. below grade at the edge of deep stream channel - so well-drained. Patchy red alder saplings and horsetail.	upland	No	
3	Toe of fill pad slope, mixed fill and organics, red alder, creeping buttercup, bulrush and reed canary grass dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
4	Toe of fill pad slope, mixed fill and organics, red alder, saplings, creeping buttercup, lady fern, skunk cabbage, bulrush and reed canary grass dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
5	Toe of fill pad slope, mixed fill and organics, Sitka spruce and cottonwood saplings, and lady fern dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
6	Disturbed, gentle hillside with saturated organic soils mixed with uplifted silts, Western hemlock, blueberry and dwarf dogwood dominant.	PFO4B	Yes	Wetland on RPW that flows into TNW
7	Disturbed, gentle hillside with saturated organic soils mixed with uplifted beach deposits. Red alder, salmonberry and skunk cabbage dominant.	PFO1B	Yes	Wetland on RPW that flows into TNW
8	Disturbed, gentle hillside with saturated organic soils mixed with uplifted beach deposits. Western hemlock, blueberry and alse azalea dominant.	PFO4B	Yes	Wetland on RPW that flows into TNW
9	Fill pad/fill pile. Course gravel over mixed fill. Red alder saplings and creeping buttercup dominant	upland	No	

[2] PJD - Preliminary Jurisdictional Determination
[3] TNW - Traditional Navigable Water
[4] RPW - Relatively Permanent Water

Conclusions

Using GIS tools and wetland information gathered in the field, the acreage of wetlands and waters of the US was determined.

There are 3.61 total acres of wetland in the project area.

- **PEM1A** - 0.08 acres
- **PFO4B** - 2.31 acres
- **PFO1B** – 1.22 acres
- **Upland** - 1.13 acres

There are 2,531 linear feet of ephemeral, seasonal and perennial streams in the parcel

- **R4SB3/6** - ephemeral & seasonal (with surface water at least 2 weeks out of the growing season) - 1,316 linear feet
- **R3UB1** - perennial -1,215 linear feet

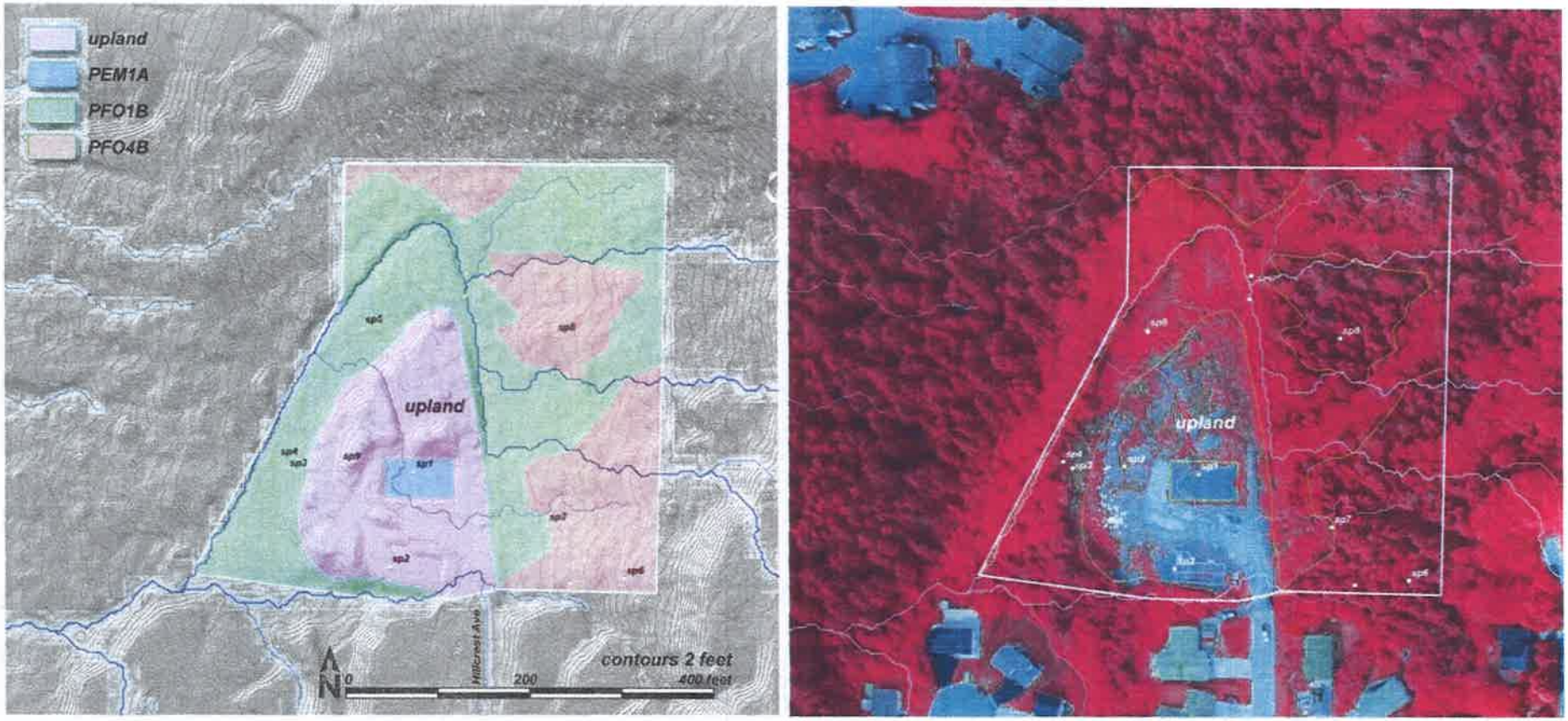

Figure 1 – Wetland Delineation map pair – 2013 CBJ LiDAR hillshade and CIR aerial photo. Sample points (yellow dots) for the project area. The blue lines are the field-checked modeled streams.

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Appendix A - Scanned Sample Site Data Sheets

SP 1

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 1
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): fill
Local relief (concave, convex, none): concave Slope (%): 0
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PEM1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓	No	
Wetland Hydrology Present?	Yes ✓	No	

Remarks: Foundation area on fill pad

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra (Alru)	30	✓	F
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Equisetum arvense (Eqar)	50	✓	F
2. Juncus articus (Juar)	5		FW
3. Scirpus microcarpus (Schmi)	2		OB
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 57			
50% of total cover: 28.5	20% of total cover: 11.4		

Plot size (radius, or length x width) 10x10 % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

US Army Corps of Engineers Alaska Version 2.0

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16+	—	100%					coarse	gravel WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ✓ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

New surface!

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 1-0

Water Table Present? Yes ✓ No ___ Depth (inches): 0-2

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP2

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 2
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): fill pad
Local relief (concave, convex, none): concave Slope (%): —
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: —
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes	No ✓	
Wetland Hydrology Present?	Yes	No ✓	

Remarks: Next to deep stream gully → well-drained.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis (Pisi) seedlings	10	✓	FU
2. Salix sitchensis (Sasi) "	5	✓	F
3. Alnus rubra (Alru) "	5	✓	F
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	20		
50% of total cover:	10	20% of total cover:	4

Plot size (radius, or length x width) 10x10 % Bare Ground ____
% Cover of Wetland Bryophytes ____ (Where applicable) Total Cover of Bryophytes ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16+							course gravel	unsat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): —
Water Table Present?	Yes ___	No ✓	Depth (inches): 7/2
Saturation Present? (includes capillary fringe)	Yes ___	No ✓	Depth (inches): 7/2

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP3

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 3
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): toe-of-fill/hillside
Local relief (concave, convex, none): none Slope (%): 4%
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Alru	50	✓	F
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Ranunculus repens (Rare)	30	✓	F
2. Scirpus microcarpus (Scmi)	10	✓	OB
3. Phalaris arundinacea (Phar)	5		OB
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	45		
50% of total cover: 22.5	20% of total cover: 9		

Plot size (radius, or length x width) 15 x 15 % Bare Ground ____
% Cover of Wetland Bryophytes ____ (Where applicable) Total Cover of Bryophytes ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16+	2.5Y 3/2	100%					mixed fill	silt & gravel - sat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ✓ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:
Mixed-fill

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

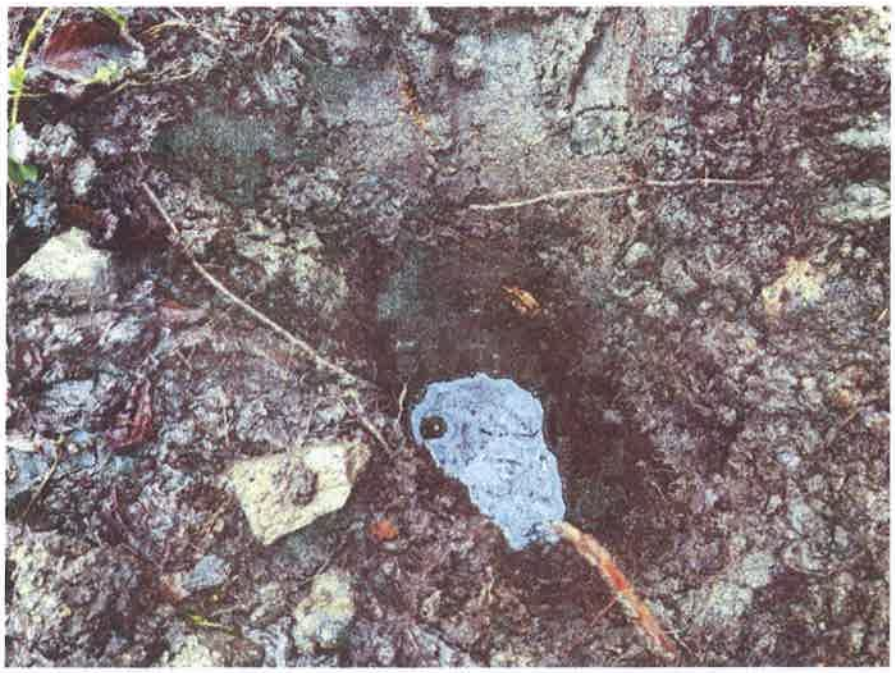
Surface Water Present? Yes ___ No ✓ Depth (inches): ___
Water Table Present? Yes ___ No ✓ Depth (inches): 7/12
Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP4



WP4

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 4
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside toe-of-slope
Local relief (concave, convex, none): concave Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓	No	
Wetland Hydrology Present?	Yes ✓	No	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Alru	40	✓	F
2. Pisi	5		FU
3.			
4.			
5.			
6.			
Total Cover: 45			
50% of total cover: 22.5	20% of total cover: 9		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Ranunculus repens (Rare)	10	✓	F
2. Atfe	20	✓	F
3. Scmi	10	✓	OB
4. Phar	5		OB
5. Lyam	10	✓	OB
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27.5	20% of total cover: 11		

Plot size (radius, or length x width) 15' x 15' % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

WP4

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5YR 3/2	100					silt + gravel fill	Sat
7-13+	5YR 2.5/2	100					peat	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- ✓ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ✓	No ____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
stream/ditch below

SP5

WP5

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 5
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): toe of fill
Local relief (concave, convex, none): Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present?	Yes ✓	No	
Wetland Hydrology Present?	Yes ✓	No	

Remarks: slash

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:	20% of total cover:		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera (Poba)	10		F
2. Picea sitchensis (Pisi)	35	✓	FU
3. Ribes glandulosum (Rigl)	5		F
4. Rubus spectabilis	5		FU
5.			
6.			
Total Cover: 55			
50% of total cover: 27.5	20% of total cover: 11		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Athyrium felix-femina (Atfe)	50	✓	F
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:	20% of total cover:		

Plot size (radius, or length x width) 15' x 15' % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) Total Cover of Bryophytes

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 65	x 3 = 195
FACU species 40	x 4 = 160
UPL species	x 5 =
Column Totals: 105 (A)	355 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks: Disturbance - adopted species (Pisi, Rusp FU)

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SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 2.5/1	100					Peat w/ gravel	sat.
8-12+	10YR 2/2	100					Peat w sand	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- __ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): —

Water Table Present? Yes ✓ No ____ Depth (inches): 6-7

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP6

WP10

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 6
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside - terrace
Local relief (concave, convex, none): complex Slope (%): 39%
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PF04B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: 2nd growth w/ lots of slash + stumps

VEGETATION -- Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla (Tshe)	60	✓	F
2. Pisi	15		FU
3. Poin	5		F
4.			
Total Cover: 80			
50% of total cover: 40	20% of total cover: 16		
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium (Vaov)	10	✓	F
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		
Herb Stratum			
1. Cornus canadensis (Coca)	10	✓	FU
2. Tiarella trifoliata (Titr)	3	✓	F
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 13			
50% of total cover: 6.5	20% of total cover: 2.6		

Plot size (radius, or length x width) 15'x15' % Bare Ground ____
% Cover of Wetland Bryophytes (Where applicable) ____ Total Cover of Bryophytes ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

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SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100%					peat + roots	sat.
2-4	2.5Y 3/1	100%					sand w/ peat	sat
4-12	2.5Y 3/1	100%					sand w/ silt + gravel + OM	sat. + W.T.
12-15	2.5Y 3/1	90%	5YR 3/4	10%			sand	W.T.
15+	10YR 2/2	100%					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks: Mixed peat & fill sediment wasted down.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): –
Water Table Present?	Yes ✓	No ___	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP7

WP11

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 7
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside swale
Local relief (concave, convex, none): concave Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ____, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____
Hydric Soil Present? Yes ✓ No ____		
Wetland Hydrology Present? Yes ✓ No ____		

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Alru	60	✓	F
2.			
3.			
4.			
Total Cover:			
50% of total cover: ____ 20% of total cover: ____			
Sapling/Shrub Stratum			
1. Menziesia ferruginea (Mefe)	20	✓	FU
2. Rubus spectabilis (Rusp)	10	✓	FU
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover: ____ 20% of total cover: ____			
Herb Stratum			
1. Lysichiton americanum (Lyam)	30	✓	OB
2. Tsuga heterophylla (Tshe)	15	✓	F
3. Cornus canadensis (Coca)	2		FU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 47			
50% of total cover: 23.5 20% of total cover: 9.4			

Plot size (radius, or length x width) ____ % Bare Ground ____
% Cover of Wetland Bryophytes ____ (Where applicable) Total Cover of Bryophytes ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a seperate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-13	7.5YR 2.5/1	100					Peat	sat
13+	10YR 2/3	100					Peat + sand	WT

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- __ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✓	Depth (inches): ___
Water Table Present?	Yes ✓	No ___	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✓	No ___	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP8

WP 12

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 8
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): hillside terrace
Local relief (concave, convex, none): Convex Slope (%): 2%
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: PF04B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	60	✓	F
2. Pisi	12		FU
3.			
4.			
Total Cover: 72			
50% of total cover: 36	20% of total cover: 14.4		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Mefe	20	✓	FU
2. Vovo	15	✓	F
3. Oplopanax horridus (Opho)	3		FU
4.			
5.			
6.			
Total Cover: 38			
50% of total cover: 19	20% of total cover: 7.6		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Rubus pedatus (Rupe)	3	✓	F
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: ____			
50% of total cover: ____	20% of total cover: ____		

Plot size (radius, or length x width) ____ % Bare Ground ____
% Cover of Wetland Bryophytes (Where applicable) ____ Total Cover of Bryophytes ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

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SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Peat	sat
10-15	10YR 2/1	100					Peat w/ sand	sat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ✓ Histosol or Histel (A1)
- __ Histic Epipedon (A2)
- __ Hydrogen Sulfide (A4)
- __ Thick Dark Surface (A12)
- __ Alaska Gleyed (A13)
- __ Alaska Redox (A14)
- __ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __ Alaska Color Change (TA4)[4]
- __ Alaska Alpine Swales (TA5)
- __ Alaska Redox With 2.5Y Hue
- __ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __ Surface Water (A1)
- __ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Marl Deposits (B15)
- __ Hydrogen Sulfide Odor (C1)
- __ Dry-Season Water Table (C2)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-stained Leaves (B9)
- __ Drainage Patterns (B10)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Salt Deposits (C5)
- __ Stunted or Stressed Plants (D1)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ Microtopographic Relief (D4)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): —

Water Table Present? Yes ____ No ✓ Depth (inches): >12

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SP9

— WP9

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Richland Manor - Section 1 Borough/City: CBJ Sampling Date: 11/14/18
Applicant/Owner: William Heumann Sampling Point: 9
Investigator(s): Koren Bosworth Landform (hillside, terrace, hummocks, etc.): file pile
Local relief (concave, convex, none): CONVEX Slope (%): 2
Subregion: SE Alaska Lat: Long: Datum:
Soil Map Unit Name: NWI classification: —
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ___	Is the Sampled Area within a Wetland? Yes ___ No ✓
Hydric Soil Present?	Yes ✓ No ___	
Wetland Hydrology Present?	Yes ✓ No ___	

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover: ___ 20% of total cover: ___			
Sapling/Shrub Stratum			
1. Alru	100	✓	F
2. Sooi	5		F
3.			
4.			
5.			
6.			
Total Cover: 105			
50% of total cover: 52.5 20% of total cover: 21			
Herb Stratum			
1. Kore	15	✓	F
2. Phar	5	✓	OB
3. Deschampsia beringensis (Dobe)	5	✓	F
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12.5 20% of total cover: 5			

Plot size (radius, or length x width) 15 x 15' % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ Total Cover of Bryophytes ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:

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SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16+	—						course gravel	unsat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-stained Leaves (B9)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Salt Deposits (C5)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): —
Water Table Present? Yes ___ No ✓ Depth (inches): >12
Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): >12

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Alaska Version 2.0

BEFORE THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU

MOUNTAINSIDE ESTATES NEIGHBORHOOD ASSOCIATION, ET AL., Appellant, vs. CBJ PLANNING COMMISSION, and MICHAEL AND WILLIAM HEUMANN, Appellees,	Appeal of: Notice of Decision CDD File No. SMP2018-0002

STIPULATED SETTLEMENT AGREEMENT

The parties to this Agreement are the Appellants, consisting of the Mountainside Estates Neighborhood Association and 17 individuals,[1] ("MENA"); the CBJ Planning Commission ("PC"), and Michael and William Heumann, ("Heumanns"). The parties are executing this Stipulated Settlement Agreement in order to resolve this appeal in its entirety, after the Assembly granted their joint motion for a 90 day stay of the appeal for such intended purpose.

Background Information:

The Heumanns applied for approval of a preliminary plat to subdivide and develop the first 12 lots of a phased major subdivision on a 30.67 acre parcel named Richland Manor, which is adjacent to the existing Mountainside Estates subdivision. During the planning process and at the February 26, 2019 hearing on the Heumanns' application, many of the appellants testified against the application, raising concerns that included and related to increased traffic, including construction traffic, pedestrian and child safety, decreased home values, crime and quality of life.

1 In the interests of space, the individual appellants are not listed here but will sign this document at the bottom. Collectively the appellants will be designated as MENA.

On February 28, 2019 the PC issued its decision approving the preliminary plat requested by the Heumanns, with conditions. This appeal followed. The parties then entered into settlement negotiations which have resulted in the following agreements, intended to fully resolve all issues raised in MENA's appeal.

Agreements of the Parties:

The parties agree to the following terms of settlement:

1. SMP 2018 0002 is the preliminary plat approved with conditions, by the PC's February 28, 2019 Notice of Decision ("NOD"), both of which are attached as Exhibit A.
2. Within 30 days of executing this Agreement, the Heumanns will submit an application for the alternative preliminary plat depicted in Attachment B ("alternative plat"). The application will be for approval of Phase 1 of the alternative plat and conditions set out in Exhibit B. For clearer illustration, the features of the alternative plat establishing greenbelt separation on the individual lots between Richland Manor and Mountainside Estates are set out in Exhibit C, ("greenbelt buffers").
3. The parties acknowledge that the alternative preliminary plat application will include the sketch plat in Exhibit D, showing future proposed phases of the Richland Manor subdivision, as required by CBJ 49.15.410, but the application and intended PC action is limited to approval of Phase 1.
4. The following subdivision features, conditions and actions are agreed to between or accepted by the parties as a condition of the dismissal of the appeal and complete settlement of this dispute. To the extent that any of the subdivision features, conditions, or required actions may be included on the alternative plat or the associated conditions, they shall be. The appellants and Heumanns acknowledge, however, that not all features, conditions, notes or

other information appearing on the alternative plat are legally required or enforceable by the Planning Commission and/or the CBJ.

The subdivision features and conditions listed below shall be included or referenced on the plat. To the extent any features, conditions, notes or actions, including, but not limited to, density conditions, are not subject to PC authority or CBJ enforcement jurisdiction, they are indicated with an asterisk* and considered contractual obligations between the Heumanns and Appellants enforceable by direct private legal action to enforce this agreement, or any other lawful process.

(a) Hooter Lane will be developed as a public two-way street, as set out in the alternative plat, subject to CBJ public improvement standards, in CBJ 49.35.

(b) Hooter Lane from Glacier Highway to Hillcrest Avenue, and Hillcrest Avenue and Mountainside Drive shall be developed with a a sidewalk on one side. The number of sidewalks in the remainder of Richland Manor will be determined at the time of future development applications.

(c) *Density: It is agreed that the loop road of Hillcrest Ave. and Mountainside Drive will be developed as single family homes, as depicted on the attached alternative plat.

(d) *Robbie Road development that is connected to Mountainside Estates shall be limited to not more than 7 single family homes, 3 of which may have accessory apartments.

(e) Robbie Road shall terminate and shall not be a point of access to Richland Manor, unless required, and gated, for fire/emergency service access only.

(f) Hillcrest Avenue shall terminate at Hooter Lane. Hillcrest Avenue may connect to Hooter Lane west of the existing Hillcrest alignment as shown in the alternative plat (Exhibit C). Alternatively road access to the northeast portion of Tract B-1 may connect

to the east/west portion of Mountainside Drive across from the entrance to the "pocket" between Hillcrest and Mountainside.

(g) *Greenbelt buffers will be implemented and privately maintained by lot owners as delineated on the alternative plat, Exhibit B (and as more clearly drawn for illustrative purposes in Exhibit C) to separate single family homes from multi-family development. Excavation for purposes of slope stabilization may take place in the greenbelt buffers provided they are allowed to revegetate following construction. In the event this becomes necessary Heumann will consult with adjacent homeowners about the impacts.

5. The following subdivision features, conditions and requirements will not be included or referenced on the plat and are also not matters for PC and/or CBJ enforcement through the platting process, but rather are created by and subject to this contractual agreement as between Heumanns and appellants, and are thus subject to private enforcement by direct private legal action or any other lawful process:

(a) Construction traffic that will utilize roads within Mountainside Estates will be limited to the development and build out of the Hillcrest Avenue extension to Hooter Lane and any development of the seven homes allowed on Robbie Road.

(b) Hooter Lane will be constructed "from the bottom up", meaning that construction will start at Glacier Highway and proceed uphill.

(c) On Tract A, the "pocket" in the loop between Hillcrest Avenue and Mountainside Avenue, there shall be no more than 16 dwelling units, which shall be contained in buildings of no more than 4 units per building, not to exceed two stories each.

(d) Construction traffic for Richland Manor which flows through Mountainside Estates will be limited to the hours between 7:00 a.m. and 7:00 p.m. On days when children are in school in the Juneau School District there will be no construction traffic through

Mountainside Estates between the hours of 7:00 a.m. to 8:15 a.m. and 2:30 p.m. to 3:45 p.m.

(e) Traffic calming measures will be incorporated as part of the CBJ's public right of way adoption process to address changes in traffic patterns or density that may arise from the construction of Richland Manor, subject to CBJ approval. The Heumanns will be responsible for stop signs at all appropriate locations; a 20 MPH posted speed limit; and "Children at Play" warning signs in all appropriate locations within Richland Manor Subdivision. CBJ shall be responsible for similar measures, as appropriate, on Hillcrest Avenue and Mountainside Drive to Craig Street, within Mountainside Estates.

(f) *Water System: As soon as feasible, but in any event prior to connecting up to 80 new residential units to the existing water system and prior to the completion of Mountainside Drive, the Heumanns will connect the water supply system in a loop that encompasses Mountainside Drive and Hillcrest Street or more directly between Hillcrest Avenue and Mountainside Drive. For all units beyond 80, there will be a separate additional water supply developed. Should a unit be disconnected from the water system it may be replace with another.

6. The alternative plat application will be processed in the normal course of business by Community Development Department ("CDD"), followed by the PC's review at a regular PC meeting.

7. CDD has reviewed Attachments B and C, the sketch plat in Exhibit D, and the conditions set out above, and has determined it can conceptually support and recommend approval of the application to the PC, with the associated conditions.

8. Appellants will support the proposed application and agree to timely submit a statement of such support to CDD for inclusion in the packet before the PC.

9. No individual Appellant(s), member of Appellant MENA, MENA representative or Appellee will speak against, obstruct or oppose the alternative plat application or related CBJ, State of Alaska and Federal permits in writing or in public testimony.
10. The Heumanns and Appellants agree that the application is a good faith compromise to settle this appeal, and that if the application is not approved as submitted, either party may request that the stay be lifted to proceed with the appeal of SMP2018 0002. The request must be made within 10 days of the Notice of Decision.
11. The PC has not reviewed, and is not authorized to commit its support and/or approval of the application prior to reviewing it through the normal hearing process, but acknowledges that the application will not automatically supersede or replace SMP2018 0002 unless the PC issues a NOD approving the application as submitted and no appeal is filed by a third party not subject to this agreement.
12. Nothing in this Agreement shall operate or be interpreted to supersede or waive any CBJ Code provision or requirement, including technical plat requirements.
13. If the PC issues a NOD approving the application as submitted and no appeal has been filed by a 3rd party Appellants will file an executed dismissal of the appeal with prejudice, within 3 business days of the expiration of the time limit within to appeal the NOD.
14. Appellants individually and jointly expressly waive their individual and associational rights to appeal to the Assembly under CBJ 01.50, or to otherwise challenge, an NOD that approves the application as submitted. This waiver does not apply to an NOD that alters the terms of this agreement in any significant respect.
15. Should the PC issue a NOD approving the application as submitted which is not appealed by any party, all parties understand that this Agreement shall operate as a full

and final mutual release and discharge of all parties against each other on behalf of themselves, their members, officers, agents, successors, assigns, attorneys, and anyone who can claim through or on behalf of the parties from the current appeal and from any and all past, present, and future appeals or claims relating to SMP 2018 0002 and the approved application. The parties understand and acknowledge that this release and discharge is made for the purpose of settlement and that it may not be construed as an admission of liability.

16. If a third party appeals a Notice Of Decision that approves the alternative plat,, the Heumanns and MENA shall immediately meet and confer (with or without the involvement of the third party appellants) to determine whether there is a solution that is consistent with this Agreement. If an agreement cannot be reached, the Heumanns will have the right to elect to defend against the appeal of the approved alternative plat, in which case MENA will support the Heumanns to the extent necessary to preserve this Agreement, or to abandon the approved alternative plat, lift the stay and defend the original preliminary plat in this appeal brought by MENA.
17. In executing this Agreement, each member of each party fully, completely, and unconditionally acknowledges and agrees that it has had the opportunity to consult with, and have the advice of, duly licensed and competent attorneys, and that it has executed this Agreement after independent investigation, voluntarily and without fraud, duress, or undue influence. Each party expressly consents that this Agreement be given full force and effect according to each and every of its express terms and provisions.
18. Each person executing this Agreement on behalf of another person or organization represents and warrants to each member of all other parties that he or she is fully authorized to execute and deliver this Agreement on behalf of such person or

organization. Each member of each party represents and warrants to all members of all other parties that no consent of any person not a party to this Agreement is necessary in order for this Agreement to be fully and completely binding upon each member of the parties hereto.

19. The parties agree to bear their own costs and attorney fees in this appeal.

Respectfully submitted this 23 day of ~~August~~ Sept 2019.

APPELLANTS, MENA, et al

By: _____
Paul H. Grant, Esq. /Libby Bakalar, Esq.
Alaska Bar No. 7710124

APPELLEE WILLIAM HEUMANN

By: _____
William Heumann

APPELLEE MICHAEL HEUMANN

By: _____
Michael Heumann

APPELLEE PC

By: Jane S. Mores 9/30/19
Jane S, Mores, Esq.
Alaska Bar No. 9011115

SIGNATURES OF INDIVIDUAL APPELLANTS

The following are the individual Appellants in the CBJ Planning Commission appeal designated as No. SMP2018-0002. By signing below each of them certifies that he or she has reviewed the Stipulated Settlement Agreement and the associated exhibits, and agrees that the appeal should be resolved as set out in the Agreement. It is understood that this is a compromise agreement, and that not every Appellant agrees with every term. However, each of the signing Appellants endorses the Settlement as his or her voluntary act, without coercion or undue influence. Each of the signing Appellants agrees that he or she will not oppose the application for approval of the modified plat before the planning commission, and each of them understands that MENA will provide a statement of support for the application.

9/5/19
Dawn Wolfe date

9/9/19
Dane Lenaker date

9/11/19
Eugene Huang date

9-12-19
Noelle Blanc date

9/5/2019
Steve Iha date

9-5-2019
Tom Rutecki date

9/11/19
Katherine Sullivan date

9/12/2019
Mary Noreross date

9-12-19
Euming Suewing date

9/6/2019
Bob Janes date

9-14-19
Luciana Alinson date

9/5/19
Kris Coffee date

9-12-19
Kerrie Suewing date

9/5/19
Rhonda Biles date

9/12/19
Dave Tallmon date

9/5/19
Mathew Peedes date

9/5/19
Kelli Manchester date

EXHIBIT A

Planning Commission

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

PLANNING COMMISSION
NOTICE OF DECISION

Date: February 28, 2019
File No.: SMP2018 0002

Michael & William Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	A Preliminary Plat for a phased major subdivision to include 12 single-family lots and 1 large tract (13 lots total).
Property Address:	4506, 4508, 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	February 26, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 14, 2019, and approved the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to final plat approval, the following changes shall be made to the preliminary plat:
    a. Complete all 22 requested plat changes listed in the MEMO dated January 31, 2019, from CBJ Engineering & Public Works.
    b. On sheet one (1), label Laurie Lane.
    c. On sheet two (2), label the western lot line with bearing and distances described.
    d. On sheet one (1), show all five (5) lots on the south side of Coogan Drive, created Plat 2009-18.
    e. Through the review process, Blocks A and B have gotten switched. Plat Notes 9 & 10 do not match the plat when referencing the bungalow lots and panhandle lots. Change the plat graphic to match the plat notes or vice versa.
    f. Prior to final plat recording, remove setbacks, wetlands, drainage, and contours from plat graphic and legend.

g. On all pages, use a dashed font to label the original TRACT B.
h. Add the following Plat Note: "Further Subdivision of Tract B-1, Richland Manor 2 Subdivision shall require City & Borough of Juneau Preliminary Platting Requirements indicating adequate access for all lots created in Phase 1, Richland Manor Subdivision 2, and all future Phases."

2. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

3. The developer shall use Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

4. The average daily trips (ADT) generated by Phase 1, Richland Manor 2 Subdivision, and all future phases will be included in the ADT's generated by any future development of Tract B1.

5. A Hillside Development Permit may be required if triggered by CBJ 49.70.210(a)(1-5).

6. Sidewalks on both sides of the street are required for Phase 1.

7. All future phases of development may require wetlands delineation.

8. For each pair of panhandle lots sharing a driveway, the applicant must provide a maintenance agreement that is recorded with the subdivision, on forms acceptable to the director, ensuring the required access and parking areas will be constructed and maintained by all future property owners. The applicant shall also create a plat note referencing the easements.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway shall be paved, whichever length is greater, for all panhandle lots created with this subdivision.

10. The applicant shall construct, or bond for, street lights at each intersection in this subdivision with spacing between lights not to exceed 250 feet.

11. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

12. A driveway and parking plan that shows the feasibility of off-street parking shall be submitted and approved by the Director prior to recording the plat.

13. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit within this subdivision.

14. The sketch plat shall be amended to show a future connection to Hooter Lane from Hillcrest Avenue.

15. The applicant must submit a drainage plan showing how drainage will flow from the subdivision to Glacier Highway; this drainage plan must be approved by the CBJ Engineering & Public Works Department. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

16. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to CDD for review by the Director of Engineering & Public Works for compliance with 49.35.140.

17. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to CDD and reviewed and approved by CDD and CBJ Engineering & Public Works.

18. Prior to final plat approval, the applicant must construct, and/or bond for, all required public utilities and improvements.

Attachment: February 14, 2019 memorandum from Laurel Bruggeman, Community Development, to the CBJ Planning Commission regarding SMP2018 0002.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 26, 2019.

Expiration Date: The permit will expire five (5) years after the effective date, or February 26, 2024, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner: _____ _____

Laurel Bruggeman, Planner
Community Development Department

Benjamin Haight, Chair
Planning Commission

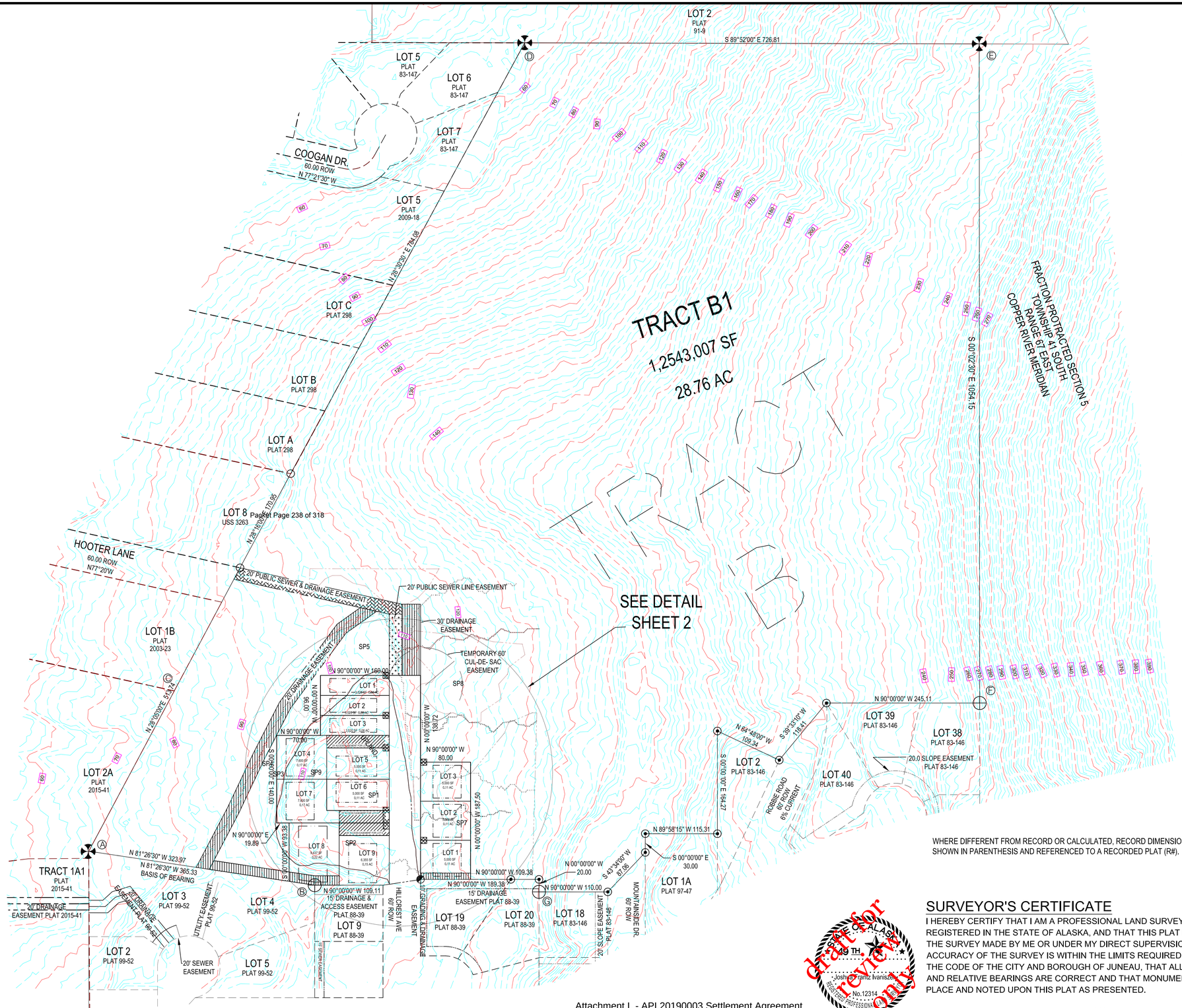
_____ 3/5/2019

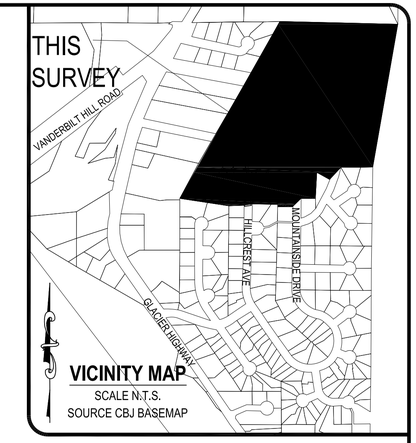
Filed With Municipal Clerk

Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and 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.





VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47

1"=80'

0 80 160 240 320

WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

STATE OF ALASKA
49 TH
Joshua Frantz Ivaniszek
No.12314
REGISTERED PROFESSIONAL LAND SURVEYOR

draft for review only

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 80'	26 DECEMBER 2018	1 OF 3

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
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- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
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(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
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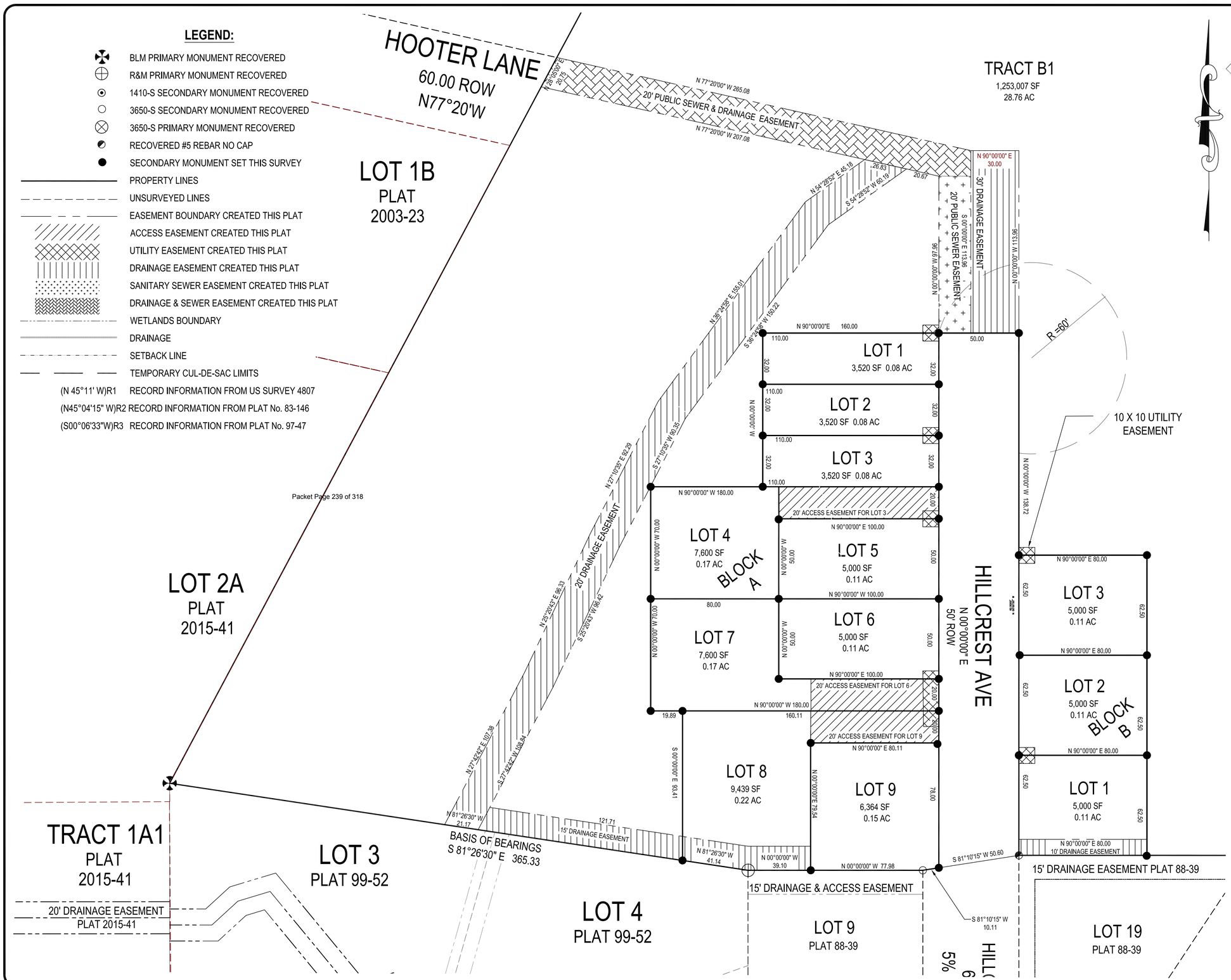
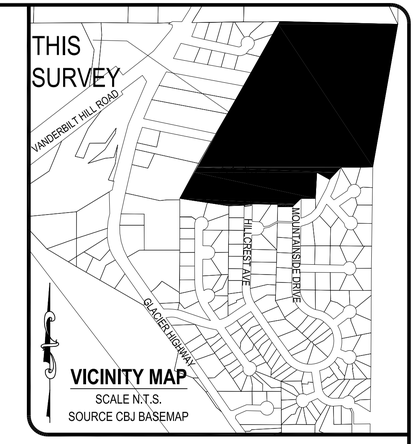


Packet Page 239 of 318



CHILKAT SURVEYING
BLK B
ROW L 2 / L 1
2019
PLS 12314

TYPICAL MONUMENT DETAIL
N.T.S.
5/8" x 36" REBAR WITH 2.5" ALUMINUM CAP

STATE OF ALASKA
49TH
Joshua Fritz Ivanisevich
No.12314
PROFESSIONAL LAND SURVEYOR

draft for review

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

1"=30'

0 30 60 90 120

PLAT OF
RICHLAND MANOR 2
A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

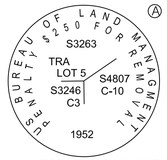
STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

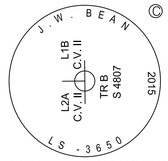
SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 30'	26 DECEMBER 2018	2 OF 3

FOUND MONUMENT DESCRIPTIONS:

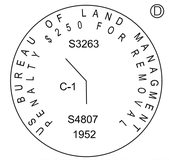


2.5" BRASS CAP MONUMENT

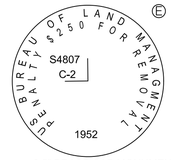
3.25" ALUMINUM CAP MONUMENT



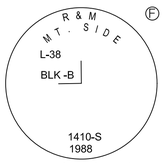
3.25" ALUMINUM CAP MONUMENT



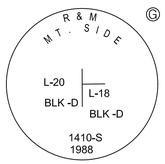
2.5" BRASS CAP MONUMENT



2.5" BRASS CAP MONUMENT



3.25" ALUMINUM CAP MONUMENT

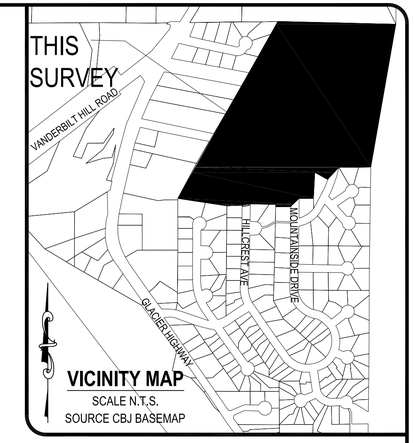


3.25" ALUMINUM CAP MONUMENT

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- 3650-S PRIMARY MONUMENT RECOVERED
- RECOVERED #5 REBAR NO CAP
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- ACCESS EASEMENT CREATED THIS PLAT
- UTILITY EASEMENT CREATED THIS PLAT
- DRAINAGE EASEMENT CREATED THIS PLAT
- SANITARY SEWER EASEMENT CREATED THIS PLAT
- DRAINAGE & SEWER EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DE-SAC LIMITS

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47



VICINITY MAP
SCALE N.T.S.
SOURCE CBJ BASEMAP

PLANNING COMMISSION PLAT APPROVAL

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE CITY AND BOROUGH OF JUNEAU, ALASKA AND THAT SAID PLAT HAS BEEN APPROVED BY THE PLANNING COMMISSION BY PLAT RESOLUTION NO. _____ , DATED _____ , 2019_____ , AND THAT THE PLAT SHOWN HEREON HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE DISTRICT RECORDING OFFICE, JUNEAU, ALASKA.

_____DATED _____ , 2019

CHAIRMAN OF THE PLANNING COMMISSION

CITY AND BOROUGH OF JUNEAU

ATTEST:

_____

MUNICIPAL CLERK

CITY AND BOROUGH OF JUNEAU

OWNERSHIP CERTIFICATE:

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT WE HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH OUR FREE CONSENT, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

DATE: _____,2019

_____ _____

WILLIAM C. HEUMANN MICHAEL P. HEUMANN

NOTARY ACKNOWLEDGEMENT:

UNITED STATES OF AMERICA)
)SS
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS____ DAY OF _____, 2019, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED WILLIAM C. HEUMANN AND MICHAEL P. HEUMANN TO ME KNOWN TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY SIGNED AND SEALED THE SAME FREELY AND VOLUNTARY FOR THE USES AND PURPOSES THEREIN MENTIONED AUTHORIZED TO DO SO.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES: _____

NOTES:

1) THE ERROR OF CLOSURE OF THIS SURVEY DOES NOT EXCEED 1:10,000.

2) ALL DISTANCES ARE MEASURED IN U.S. SURVEY FEET.

3) RECORD INFORMATION DERIVED FROM THE OFFICIAL PLAT OF US SURVEY 3263; US SURVEY 4807, PLAT OF SUBDIVISION OF LOTS 9 AND 10 US SURVEY 3263 TRACT A PLAT NO. 298 RECORDED 9 AUGUST 1961; MOUNTAINSIDE SUBDIVISION PLAT NO. 83-146 RECORDED 23 SEPTEMBER 1983; FAIRWEATHER SUBDIVISION PLAT NO. 83-147 RECORDED 23 SEPTEMBER 1983; DESERET SUBDIVISION PLAT NO. 91-9 RECORDED 28 FEBRUARY 1991; MOUNTAINSIDE SUBDIVISION II PLAT NO. 88-39 RECORDED 28 DECEMBER 1988; RICHLAND MANOR SUBDIVISION PLAT NO. 97-47 RECORDED 24 JULY 1997; VANDERBILT HILL SUBDIVISION PLAT NO. 99-52 RECORDED 29 OCTOBER 1999; A PLAT OF RESUBDIVISION OF LOT 1 CHILKAT VIEW SUBDIVISION PLAT NO. 2003-23; RECORDED 9 SEPTEMBER 2003; CHILKAT VIEW SUBDIVISION II PLAT NO. 2005-20 RECORDED 20 APRIL 2005; A PLAT OF FALLING TREE SUBDIVISION PLAT NO. 2009-18 RECORDED 7 JULY 2009; PLAT OF LOT 2A, CHILKAT VIEW SUBDIVISION II AND TRACT 1A1, US SURVEY 3246 PLAT NO. 2015-41 RECORDED 6 OCTOBER 2015 ON FILE WITH IN THE JUNEAU RECORDING DISTRICT.

4) WHERE DIFFERENT FROM RECORD OR CALCULATED, RECORD DIMENSIONS ARE SHOWN IN PARENTHESIS AND REFERENCED TO A RECORDED PLAT (R#).

5) DOMESTIC WATER & SANITARY SEWER PROVIDED BY THE CITY AND BOROUGH OF JUNEAU PUBLIC UTILITIES.

6) SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

7) THE STORMWATER RUNOFF IS ACCEPTABLE PER RICHLAND MANOR II SUBDIVISION DRAINAGE PLAN IN APPROVED CONSTRUCTION PLAN SET AS APPROVED BY CBJ ENGINEERING. . ALL REQUIRED RICHLAND MANOR II SUBDIVISION PUBLIC IMPROVEMENTS INCLUDING SURFACE DRAINAGE, DRIVEWAYS AND ROADSIDE DRAINAGE SHALL BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE FOR MAINTENANCE BY CBJ PUBLIC WORKS. MODIFICATIONS TO THE APPROVED PLANS WILL NOT BE ALLOWED UNLESS PERMITTED BY CBJ ENGINEERING PURSUANT TO CBJ 19.12 EXCAVATION AND GRADING CODE.

8) OTHER THAN AS SHOWN, THERE IS AN IMPLIED PRIVATE DRAINAGE EASEMENT ALONG ALL SIDE PROPERTY LINES WITHIN THE SUBDIVISION BEING 10FT IN WIDTH CENTERED ON EACH ADJOINING PROPERTY LINE.

9) LOTS 1 , 2, AND 3 BLOCK B ARE BUNGALOW LOTS. AT THE TIME OF PLAT RECORDING, STRUCTURES ON LOTS 1 & 2 & 3 BLOCK B ARE LIMITED TO ONE 1,000 SQUARE FOOT DETACHED SINGLE-FAMILY RESIDENCE PER LOT; OTHER DEVELOPMENT RESTRICTIONS APPLY. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

10) LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B ARE PANHANDLE LOTS. AT THE TIME OF PLAT RECORDING, FURTHER SUBDIVISION OF LOTS 4, 5, 6, 7, 8, AND 9 BLOCK B IS SUBJECT TO CBJ 49.15.423 'PANHANDLE LOTS'. SEE THE CITY AND BOROUGH OF JUNEAU LAND USE CODE FOR CURRENT REGULATIONS.

11) WETLANDS MAY EXIST ON PARTS OF THIS SUBDIVISION. SPECIAL REGULATIONS MAY APPLY. WETLANDS DELINEATED BY KOREN BOSWORTH NOVEMBER 2018

11) TOPOGRAPHY DERIVED FROM WATERSHED SCIENCES, INC CBJ LIDAR AND IMAGERY PROJECT DATA COLLECTED MAY 2013 2" CONTOURS.

BASIS OF BEARING:

THE BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF N 81°26'30" W AS DELINEATED ON THE OFFICIAL PLAT OF VANDERBILT HILL SUBDIVISION, DATED 29 OCTOBER 1999, BETWEEN FOUND PRIMARY MONUMENTS WHICH MARK THE NW CORNER OF LOT 3 AND THE NE CORNER OF LOT 4, VANDERBILT HILL SUBDIVISION AS SHOWN ON THIS PLAT.

0 80 160 240 320

1"=80'

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE ACCURACY OF THE SURVEY IS WITHIN THE LIMITS REQUIRED BY TITLE 49 OF THE CODE OF THE CITY AND BOROUGH OF JUNEAU, THAT ALL DIMENSIONS AND RELATIVE BEARINGS ARE CORRECT AND THAT MONUMENTS ARE SET IN PLACE AND NOTED UPON THIS PLAT AS PRESENTED.

DATED: _____,2019

PLAT OF

RICHLAND MANOR 2

A SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

STATE RECORDERS OFFICE AT JUNEAU

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SMP:	SCALE:	DATE:	SHEET NO.
20180002	1" = 30'	26 DECEMBER 2018	3 OF 3

EXHIBIT A

Date: 24 JANUARY 2019

To: CBJ COMMUNITY DEVELPOMENT DEPARTMENT
155 SOUTH SEWARD ST.
Juneau, Alaska 99801

Subject: Lot closure reports

Remarks: The lot closure reflects the proposed subdivision of Richland Manor II

BLOCK A
Lot 1

Northing	Easting	Bearing	Distance
2379490.480	2527711.091		
		N 90°00'00" W	110.000
2379490.480	2527601.091		
		N 00°00'00" W	32.000
2379522.480	2527601.091		
		N 90°00'00" E	110.000
2379522.480	2527711.091		
		S 00°00'00" E	32.000
2379490.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 2

Northing	Easting	Bearing	Distance
2379458.480	2527711.091		
		N 90°00'00" W	110.000
2379458.480	2527601.091		
		N 00°00'00" W	32.000
2379490.480	2527601.091		
		N 90°00'00" E	110.000
2379490.480	2527711.091		
		S 00°00'00" E	32.000
2379458.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot 3

Northing	Easting	Bearing	Distance
2379426.480	2527711.091		
		N 90°00'00" W	110.000
2379426.480	2527601.091		
		N 00°00'00" W	32.000
2379458.480	2527601.091		
		N 90°00'00" E	110.000
2379458.480	2527711.091		
		S 00°00'00" E	32.000
2379426.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 284.000
Polyline Area: 3520 sq ft, 0.08 acres

Lot4

Northing	Easting	Bearing	Distance
2379406.480	2527711.091		
		N 90°00'00" W	100.000
2379406.480	2527611.091		
		S 00°00'00" E	50.000
2379356.480	2527611.091		
		N 90°00'00" W	80.000
2379356.480	2527531.091		
		N 00°00'00" W	70.000
2379426.480	2527531.091		
		N 90°00'00" E	180.000
2379426.480	2527711.091		
		S 00°00'00" E	20.000
2379406.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 5

Northing	Easting	Bearing	Distance
2379356.480	2527611.091		
		N 00°00'00" W	50.000
2379406.480	2527611.091		
		N 90°00'00" E	100.000
2379406.480	2527711.091		
		S 00°00'00" E	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 6

Northing	Easting	Bearing	Distance
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		N 00°00'00" W	50.000
2379356.480	2527711.091		
		N 90°00'00" W	100.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		

Closure Error Distance> 0.00000
Total Distance> 300.000
Polyline Area: 5000 sq ft, 0.11 acres

Lot 7

Northing	Easting	Bearing	Distance
2379286.480	2527711.091		
		N 90°00'00" W	180.000
2379286.480	2527531.091		
		N 00°00'00" W	70.000
2379356.480	2527531.091		
		N 90°00'00" E	80.000
2379356.480	2527611.091		
		S 00°00'00" E	50.000
2379306.480	2527611.091		
		N 90°00'00" E	100.000
2379306.480	2527711.091		
		S 00°00'00" E	20.000
2379286.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 500.000
Polyline Area: 7600 sq ft, 0.17 acres

Lot 8

Northing	Easting	Bearing	Distance
2379266.480	2527711.091		
		N 00°00'00" W	20.000
2379286.480	2527711.091		
		N 90°00'00" W	160.109
2379286.480	2527550.982		
		S 00°00'00" E	93.380
2379193.100	2527550.982		
		S 81°26'30" E	41.359
2379186.946	2527591.880		
		N 90°00'00" E	39.100
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		

Closure Error Distance> 0.00000
Total Distance> 513.594
Polyline Area: 9439 sq ft, 0 acres

Lot 9

Northing	Easting	Bearing	Distance
2379186.946	2527701.100		
		N 90°00'00" W	70.120
2379186.946	2527630.980		
		N 00°00'00" W	79.535
2379266.480	2527630.980		
		N 90°00'00" E	80.111
2379266.480	2527711.091		
		S 00°00'00" E	77.983
2379188.497	2527711.091		
		S 81°10'15" W	10.110
2379186.946	2527701.100		

Closure Error Distance> 0.00000
Total Distance> 317.859
Polyline Area: 6364 sq ft, 0 acres

BLOCK B
Lot 1

Northing	Easting	Bearing	Distance
2379196.264	2527761.091		
		N 00°00'00" W	62.500
2379258.764	2527761.091		
		N 90°00'00" E	80.000
2379258.764	2527841.091		
		S 00°00'00" E	62.500
2379196.264	2527841.091		
		N 90°00'00" W	80.000
2379196.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 2

Northing	Easting	Bearing	Distance
2379258.764	2527761.091		
		N 00°00'00" W	62.500
2379321.264	2527761.091		
		N 90°00'00" E	80.000
2379321.264	2527841.091		
		S 00°00'00" E	62.500
2379258.764	2527841.091		
		N 90°00'00" W	80.000
2379258.764	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Lot 3

Northing	Easting	Bearing	Distance
2379321.264	2527761.091		
		N 00°00'00" W	62.500
2379383.764	2527761.091		
		N 90°00'00" E	80.000
2379383.764	2527841.091		
		S 00°00'00" E	62.500
2379321.264	2527841.091		
		N 90°00'00" W	80.000
2379321.264	2527761.091		

Closure Error Distance> 0.00000
Total Distance> 285.000
Polyline Area: 5000 sq ft, 0 acres

Tract B1

Northing	Easting	Bearing	Distance
2379193.100	2527550.982		
		N 81°26'30" W	323.971
2379241.313	2527230.618		
		N 28°05'00" E	513.740
2379694.567	2527472.464		
		N 28°16'00" E	170.950
2379845.132	2527553.422		
		N 28°30'30" E	784.080
2380534.140	2527927.653		
		S 89°52'00" E	726.810
2380532.449	2528654.461		
		S 00°02'30" E	1054.150
2379478.299	2528655.227		
		N 90°00'00" W	245.110
2379478.299	2528410.117		
		S 39°33'10" W	118.408
2379387.002	2528334.716		
		N 64°48'00" W	109.340
2379433.556	2528235.782		
		S 00°00'00" E	164.270
2379269.286	2528235.782		
		N 89°58'15" W	115.310
2379269.345	2528120.472		
		S 00°00'00" E	30.000
2379239.345	2528120.472		
		S 43°34'00" W	87.060
2379176.264	2528060.471		
		N 90°00'00" W	110.000
2379176.264	2527950.471		
		N 00°00'00" W	20.000
2379196.264	2527950.471		
		N 90°00'00" W	109.380
2379196.264	2527841.091		
		N 00°00'00" W	187.500
2379383.764	2527841.091		
		N 90°00'00" W	80.000
2379383.764	2527761.091		
		N 00°00'00" W	138.720
2379522.484	2527761.091		
		N 90°00'00" W	160.000
2379522.484	2527601.091		
		S 00°00'00" E	96.000
2379426.484	2527601.091		
		N 90°00'00" W	70.000
2379426.484	2527531.091		
		S 00°00'00" E	140.000
2379286.484	2527531.091		
		N 90°00'00" E	19.890
2379286.484	2527550.981		
		S 00°00'00" E	93.383
2379193.101	2527550.981		

Closure Error Distance> 0.00090 Error Bearing> S 81°26'30" E
Closure Precision> 1 in 6266245.1 Total Distance> 5668.072
Polyline Area: 1253007 sq ft, 29 acres

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- 3650-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- EASEMENT BOUNDARY CREATED THIS PLAT
- EASEMENT CREATED THIS PLAT
- WETLANDS BOUNDARY
- DRAINAGE
- SETBACK LINE
- TEMPORARY CUL-DA-SAC LIMITS
- (N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
- (N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
- (S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47

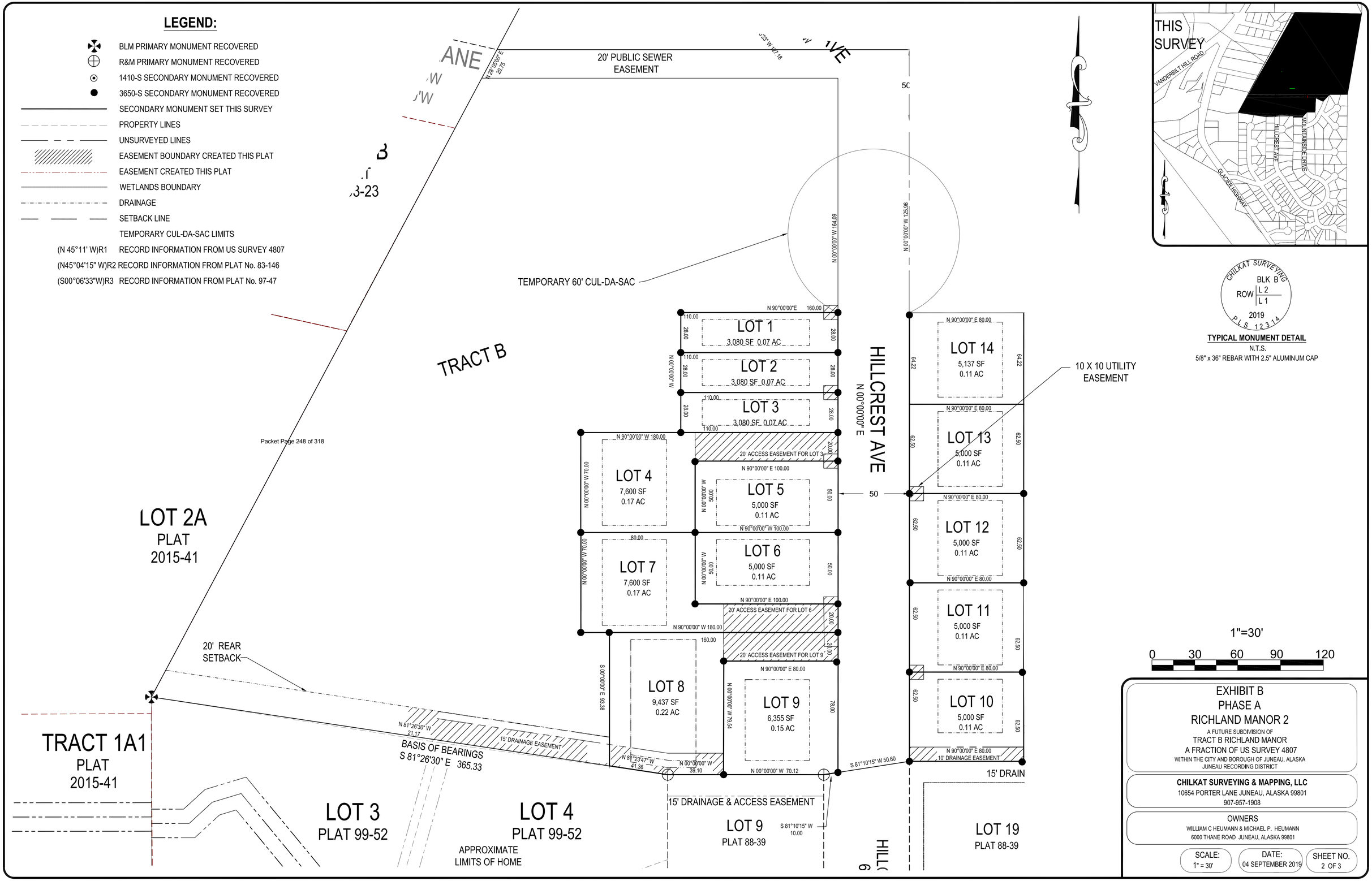
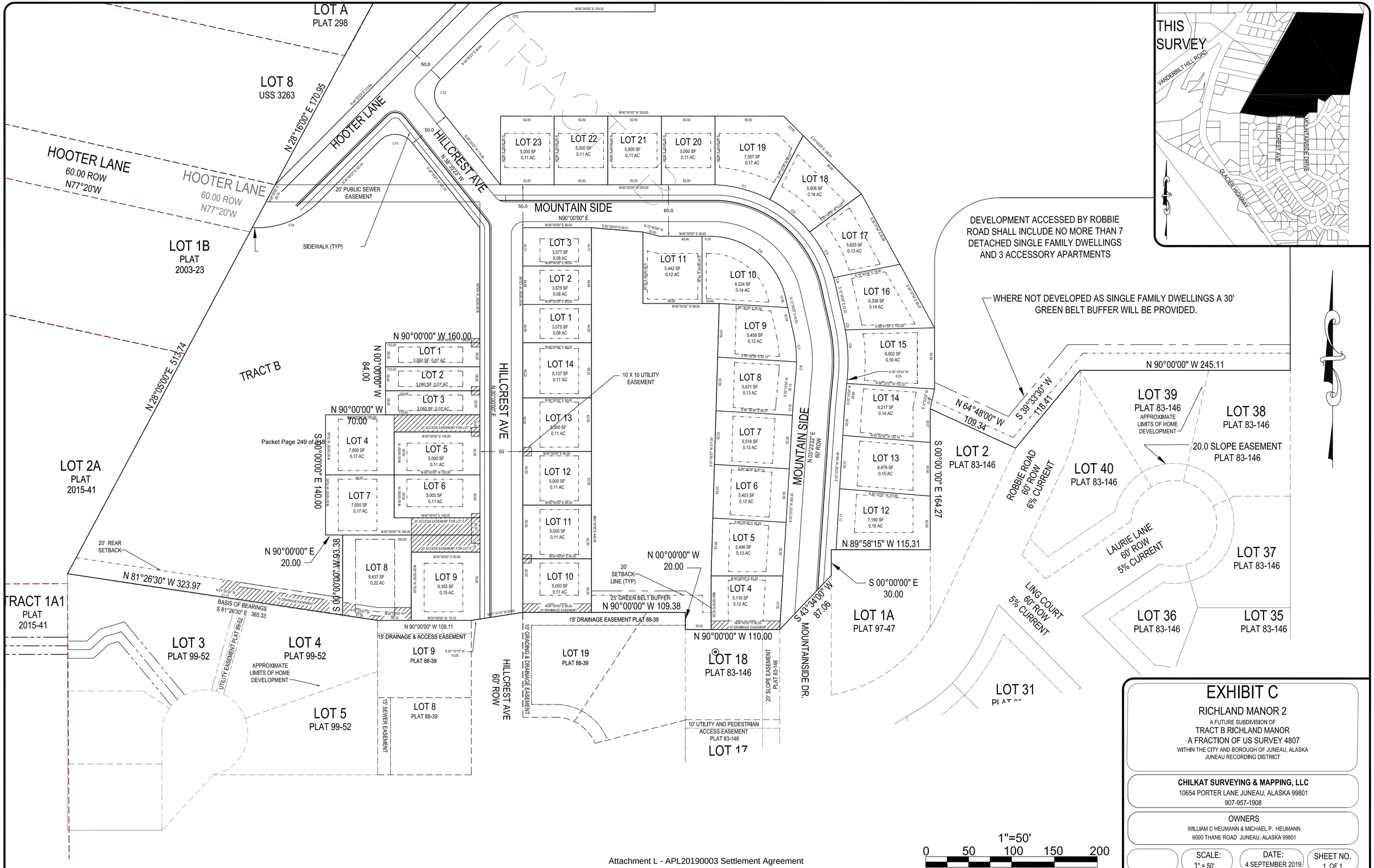


EXHIBIT B
PHASE A
RICHLAND MANOR 2
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SCALE:	DATE:	SHEET NO.
1" = 30'	04 SEPTEMBER 2019	2 OF 3

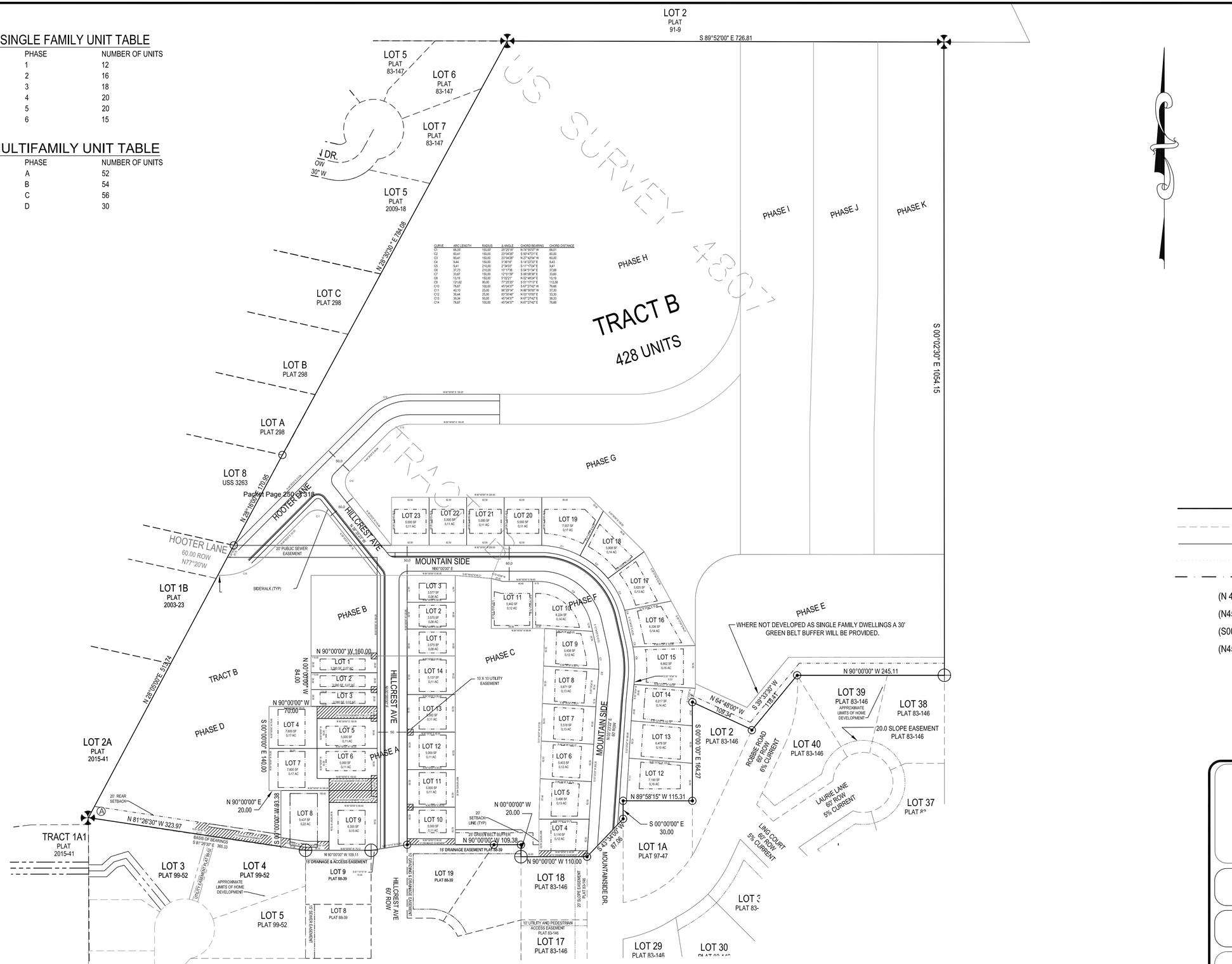

LOT A
PLAT 298
LOT 8
USS 3263
N 28°16'00" E 170.95
HOOTER LANE
60.00 ROW
N77°20'W
HOOTER LANE
60.00 ROW
N77°20'W
LOT 1B
PLAT
2003-23
N 28°05'00"E 513.74
TRACT B
LOT 2A
PLAT
2015-41
TRACT 1A1
PLAT
2015-41
20' PUBLIC SEWER
EASEMENT
SIDEWALK (TYP)
HILLCREST AVE
N 38°39'23" W
MOUNTAIN SIDE
N90°00'00" E
N 90°00'00" W 160.00
N 00°00'00" W
84.00
N 90°00'00" W
70.00
S 00°00'00" E 140.00
N 90°00'00" E
20.00
S 00°00'00" W 93.38
N 81°26'30" W 323.97
20' REAR
SETBACK
BASIS OF BEARINGS
S 81°26'30" E 365.33
N 90°00'00" W 109.11
15' DRAINAGE & ACCESS EASEMENT
HILLCREST AVE
N 00°00'00" E
10 X 10 UTILITY
EASEMENT
N 00°00'00" W
20.00
20'
SETBACK
LINE (TYP)
25' GREEN BELT BUFFER
N 90°00'00" W 109.38
15' DRAINAGE EASEMENT PLAT 88-39
N 90°00'00" W 110.00
10' UTILITY AND PEDESTRIAN
ACCESS EASEMENT
PLAT 83-146
LOT 17
MOUNTAIN SIDE
N 03°22'22" E
60' ROW
S 43°34'00" W
87.06
MOUNTAINSIDE DR.
N 64°48'00" W
109.34
S 39°33'30" W
118.41
N 90°00'00" W 245.11
S 00°00'00" E 164.27
N 89°58'15" W 115.31
S 00°00'00" E
30.00
ROBBIE ROAD
60' ROW
6% CURRENT
LAURIE LANE
60' ROW
5% CURRENT
LING COURT
60' ROW
5% CURRENT
20.0 SLOPE EASEMENT
PLAT 83-146
APPROXIMATE
LIMITS OF HOME
DEVELOPMENT
UTILITY EASEMENT PLAT 99-52
HILLCREST AVE
60' ROW
10' GRADING & DRAINAGE EASEMENT
20' SLOPE EASEMENT
PLAT 83-146
15' SEWER EASEMENT
LOT 1
3,080 SF 0.07 AC
LOT 2
3,080 SF 0.07 AC
LOT 3
3,080 SF 0.07 AC
LOT 4
7,600 SF
0.17 AC
LOT 5
5,000 SF
0.11 AC
LOT 6
5,000 SF
0.11 AC
LOT 7
7,600 SF
0.17 AC
LOT 8
9,437 SF
0.22 AC
LOT 9
6,355 SF
0.15 AC
LOT 23
5,000 SF
0.11 AC
LOT 22
5,000 SF
0.11 AC
LOT 21
5,000 SF
0.11 AC
LOT 20
5,000 SF
0.11 AC
LOT 19
7,557 SF
0.17 AC
LOT 18
5,908 SF
0.14 AC
LOT 17
5,625 SF
0.13 AC
LOT 16
6,336 SF
0.14 AC
LOT 15
6,802 SF
0.16 AC
LOT 14
6,217 SF
0.14 AC
LOT 13
6,478 SF
0.15 AC
LOT 12
7,190 SF
0.16 AC
LOT 3
3,577 SF
0.08 AC
LOT 2
3,575 SF
0.08 AC
LOT 1
3,575 SF
0.08 AC
LOT 14
5,137 SF
0.11 AC
LOT 13
5,000 SF
0.11 AC
LOT 12
5,000 SF
0.11 AC
LOT 11
5,000 SF
0.11 AC
LOT 10
5,000 SF
0.11 AC
LOT 11
5,442 SF
0.12 AC
LOT 10
6,224 SF
0.14 AC
LOT 9
5,458 SF
0.12 AC
LOT 8
5,671 SF
0.13 AC
LOT 7
5,518 SF
0.13 AC
LOT 6
5,403 SF
0.12 AC
LOT 5
5,496 SF
0.13 AC
LOT 4
5,116 SF
0.12 AC
LOT 1A
PLAT 97-47
LOT 2
PLAT 83-146
LOT 39
PLAT 83-146
LOT 38
PLAT 83-146
LOT 40
PLAT 83-146
LOT 37
PLAT 83-146
LOT 36
PLAT 83-146
LOT 35
PLAT 83-146
LOT 31
LOT 3
PLAT 99-52
LOT 4
PLAT 99-52
LOT 5
PLAT 99-52
LOT 9
PLAT 88-39
LOT 8
PLAT 88-39
LOT 19
PLAT 88-39
LOT 18
PLAT 83-146
THIS
SURVEY
VANDERBILT HILL ROAD
MOUNTAINSIDE DRIVE
HILLCREST AVE
GLACIER HIGHWAY
DEVELOPMENT ACCESSED BY ROBBIE
ROAD SHALL INCLUDE NO MORE THAN 7
DETACHED SINGLE FAMILY DWELLINGS
AND 3 ACCESSORY APARTMENTS
WHERE NOT DEVELOPED AS SINGLE FAMILY DWELLINGS A 30'
GREEN BELT BUFFER WILL BE PROVIDED.
1"=50'
0 50 100 150 200
EXHIBIT C
RICHLAND MANOR 2
A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT
CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801
SCALE:
1" = 50'
DATE:
4 SEPTEMBER 2019
SHEET NO.
1 OF 1

SINGLE FAMILY UNIT TABLE

PHASE	NUMBER OF UNITS
1	12
2	16
3	18
4	20
5	20
6	15

MULTIFAMILY UNT TABLE

PHASE	NUMBER OF UNITS
A	52
B	54
C	56
D	30



CURVE	ARC LENGTH	RADIUS	Δ ANGLE	CHORD BEARING	CHORD DISTANCE
C1	66,58'	150,00'	25°25'18"	N 74°35'57" W	66,01
C2	60,41	150,00	23°04'29"	S 00°47'57" E	60,00
C3	60,41	150,00	23°04'29"	N 27°42'54" W	60,00
C4	9,41	210,00	2°34'02"	S 11°17'54" E	9,41
C5	9,41	210,00	2°34'02"	S 11°17'54" E	9,41
C6	37,73	210,00	10°17'36	S 04°51'34" E	37,68
C7	33,67	150,00	12°51'39"	S 06°08'38" E	33,60
C8	13,19	150,00	5°02'21"	N 02°48'24" E	13,19
C9	121,62	90,00	77°23'35"	S 51°11'13" E	112,58
C10	78,67	100,00	45°04'33"	S 67°37'42" W	78,66
C11	42,10	25,00	96°28'14"	N 86°50'05" W	37,30
C12	36,44	25,00	83°36'46"	N 03°10'08" E	33,30
C13	39,34	50,00	45°04'37"	N 67°37'42" E	38,33
C14	78,67	100,00	45°04'37"	N 67°37'42" E	78,66

LEGEND:

- BLM PRIMARY MONUMENT RECOVERED
- R&M PRIMARY MONUMENT RECOVERED
- 1410-S SECONDARY MONUMENT RECOVERED
- SECONDARY MONUMENT SET THIS SURVEY
- PROPERTY LINES
- UNSURVEYED LINES
- WETLANDS BOUNDARY
- DRAINAGE
- PHASE BOUNDARY

(N 45°11' W)R1 RECORD INFORMATION FROM US SURVEY 4807
(N45°04'15" W)R2 RECORD INFORMATION FROM PLAT No. 83-146
(S00°06'33"W)R3 RECORD INFORMATION FROM PLAT No. 97-47
(N45°11'W)R4 RECORD INFORMATION FROM PLAT No.99-52

1"=80'

0 80 160 240 320

EXHIBIT D

SKETCH PLAT OF

RICHLAND MANOR 2

A FUTURE SUBDIVISION OF
TRACT B RICHLAND MANOR
A FRACTION OF US SURVEY 4807
WITHIN THE CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

CHILKAT SURVEYING & MAPPING, LLC
10654 PORTER LANE JUNEAU, ALASKA 99801
907-957-1908

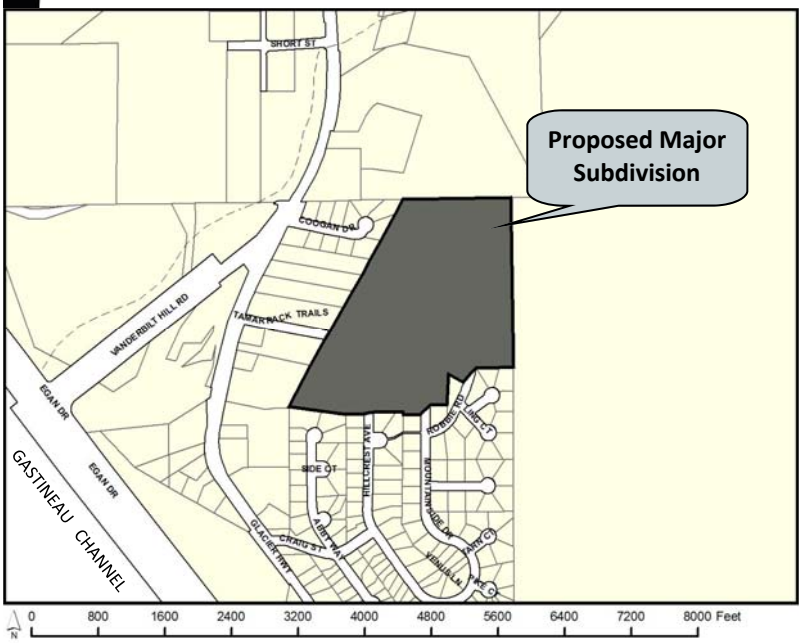
OWNERS
WILLIAM C HEUMANN & MICHAEL P. HEUMANN
6000 THANE ROAD JUNEAU, ALASKA 99801

SCALE:	DATE:	SHEET NO.
1" = 80'	4 SEPTEMBER 2019	1 OF 1

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission

Your Community, Your Voice



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission for a **Phased Major Subdivision** creating **14 lots and 1 large tract for future development (15 total parcels)** located at **4506 Hillcrest Avenue** in a **D15 Zoning District**.

TIMELINE

Staff Report expected to be posted **Monday, November 4,** at **https://beta.juneau.org/assembly/assembly-minutes-and-agendas**
Find hearing results, meeting minutes and more here as well.

Now through October 21, 2019

Comments received during this period will be sent to the Planner, **Laurel Christian**, to be included in the staff report.

October 22 through 12 noon, November 8

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, November 12, 2019

You may testify and bring up to 2 pages of written material (15 copies) in City Hall's Assembly Chambers, 155 S. Seward St., Juneau.

November 13

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 October 9, 2019

Case No.: SMP2019 0004
Parcel No.: 7B1001160010
CBJ Parcel Viewer: http://epv.juneau.org

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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

MEMORANDUM

DATE: November 12, 2019

TO: Planning Commission

FROM: Laurel Christian, Planner
Community Development Department

FILE NO.: SMP2019 0004

SUBJECT: Clarification to Staff Report Regarding Right-of-Way Width

The intent of this memorandum is to clarify two sections of the staff report from Laurel Christian to the Planning Commission, dated November 4, 2019. Packet page 111 contains a memorandum from CBJ Engineering and Public works approving a right-of-way width reduction for phase 1, and indicating that remaining phases should also be constructed to the 50-foot width; packet page 76 references this memorandum.

The applicant has clarified that the extended right-of-way of Hillcrest Avenue will be 50 feet in width while the planned extended right-of-way of Mountainside Drive will be 60 feet in width tapering to 50 feet in as it nears the connection to Hillcrest Avenue ("connected loop"). This is depicted on the Sketch Plat, provided as Attachment C in the above referenced staff report.

SMP20190004

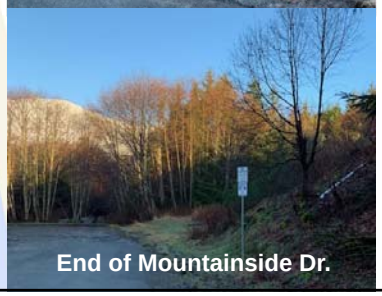
Preliminary Plat approval for a phased major subdivision creating 14 lots and 1large tract for future development (15 total parcels)

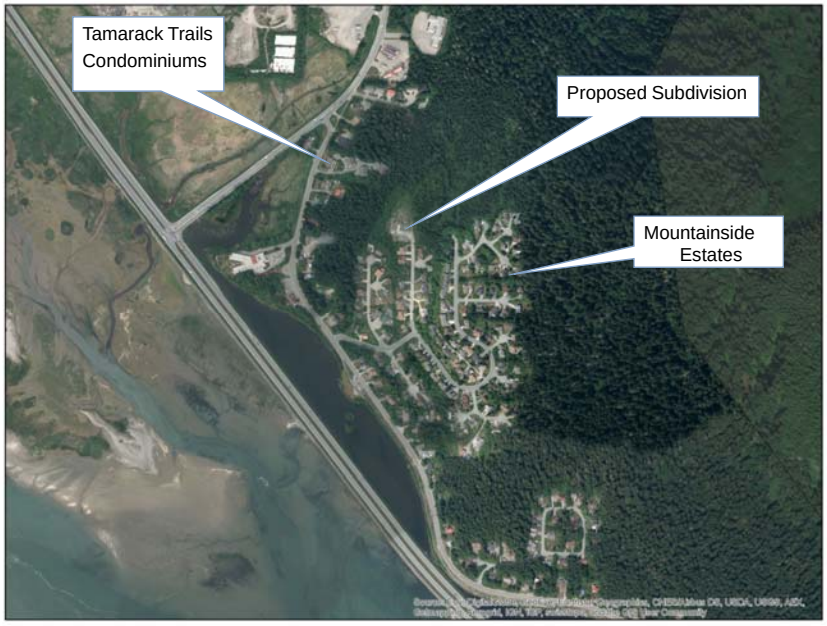
Planning Commission Presentation November 12, 2019

Background Information

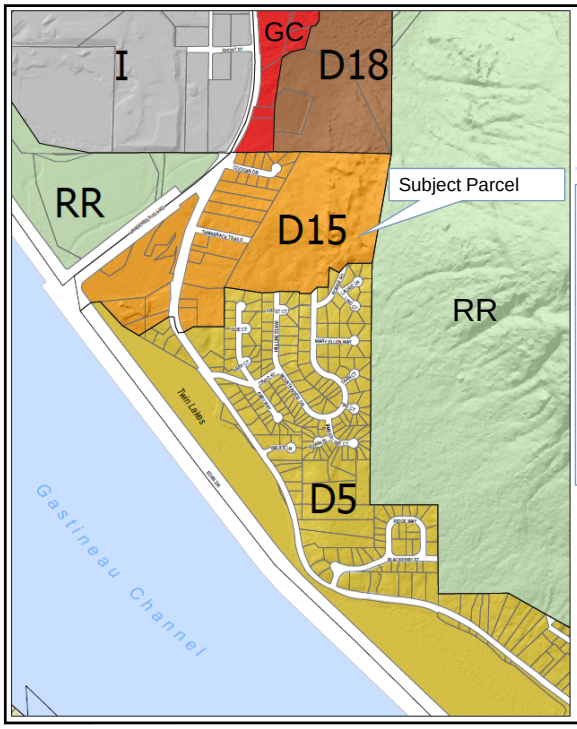
Applicant:	Michael & William Heumann
Legal Description:	Richland Manor Tract B
Parcel Code:	7B1001160010
Site Size:	30.67 Acres (1,335,985 sq. ft.)
Comprehensive Plan Future Land Use Designation:	Medium Density Residential (MDR) (5-20 Units Per Acre)
Current Zoning:	D15 (15 Units Per Acre)
Utilities:	Public Water & Sewer Proposed
Existing Land Use:	Vacant

Vicinity Map





Zoning Map



*"The **D-5, residential district**, is intended to accommodate primarily **single-family and duplex** residential development at a density of **five dwelling units per acre**."*

*"The D-10 and **D-15, residential districts**, are intended to accommodate primarily **multifamily residential** development at ten and **15 units per acre** respectively. These are relatively low-density multifamily districts"*

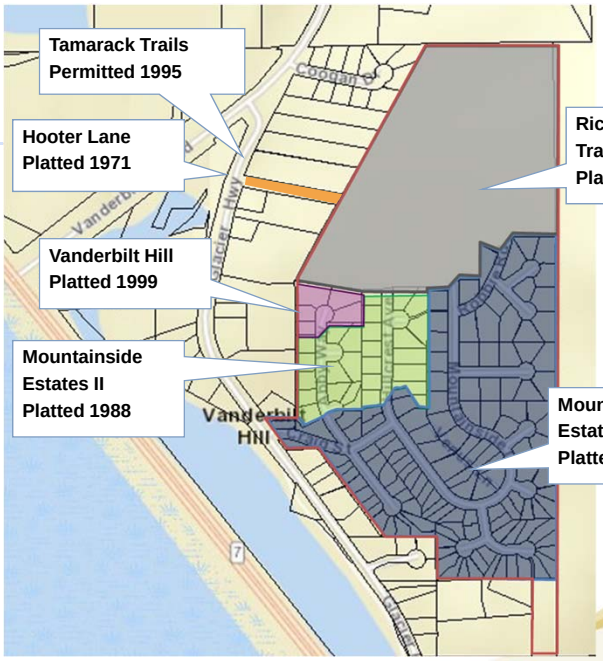
History

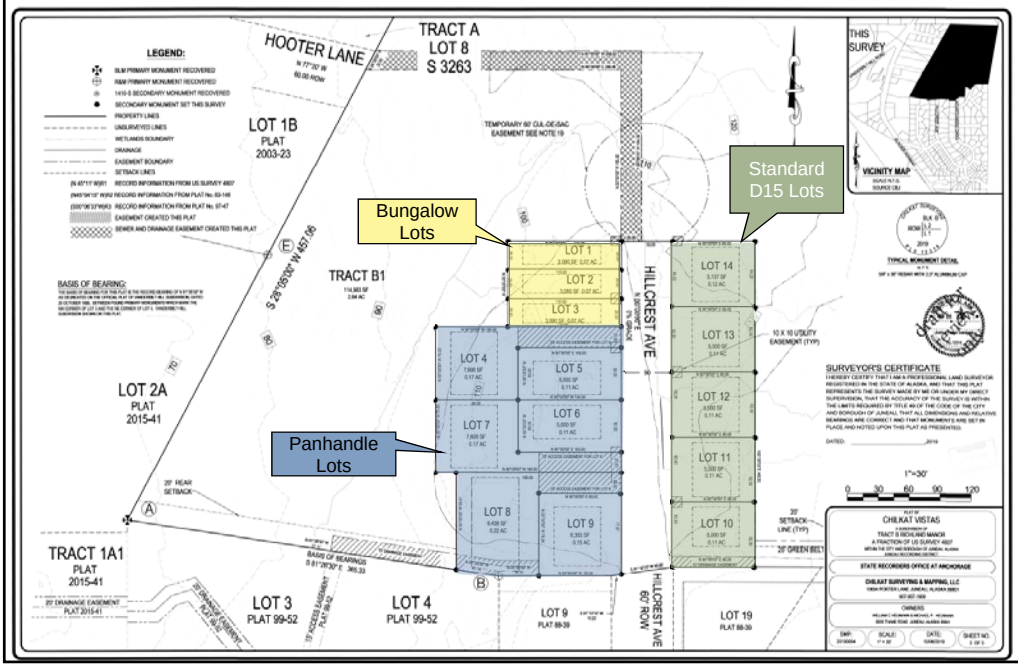
February 2019 – Applicants received preliminary plat approval for SMP20180002

March 2019 - Preliminary Plat was appealed to the CBJ Assembly (APL20190003).

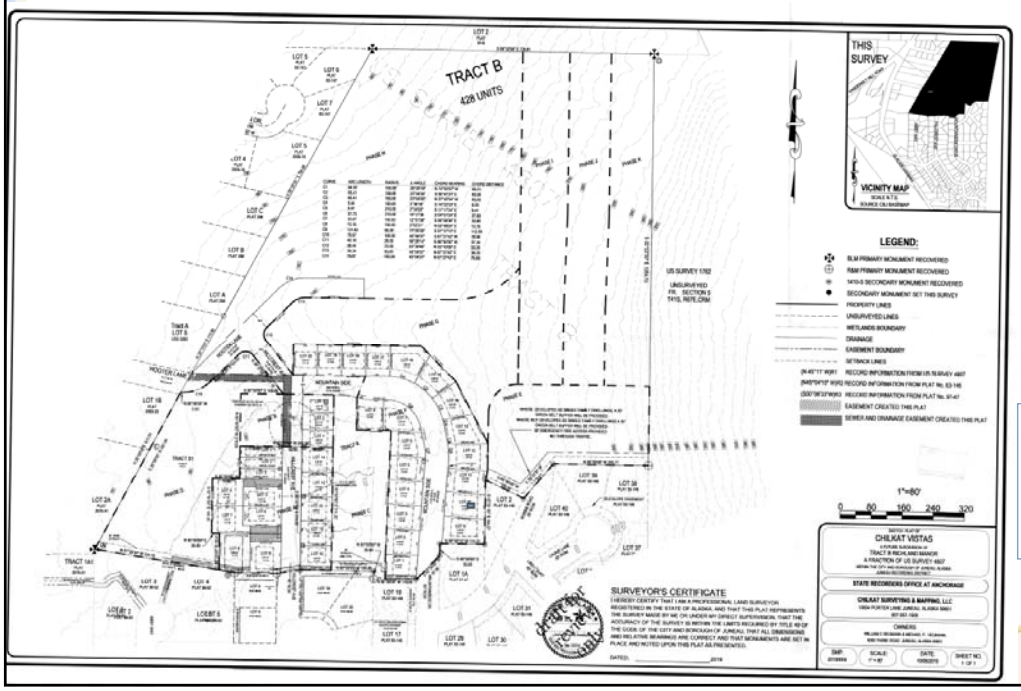
September 2019 – Applicants, Appellants, and CBJ reached a settlement of APL20190003.

September 2019 – SMP20190004 Preliminary Plat Application was filed with CDD.





Proposal – Phase 1

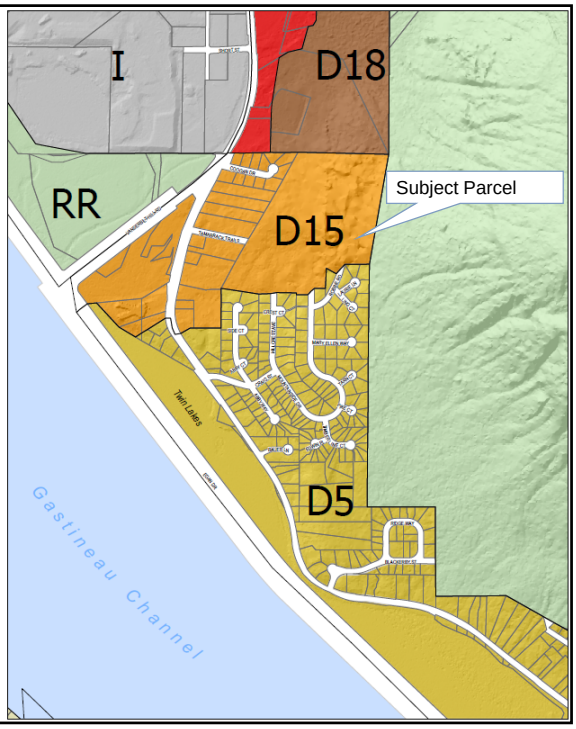


Proposal – Phased Subdivision

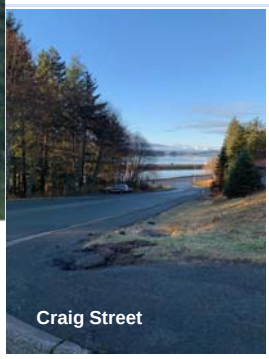
Maximum Density: 460 Dwelling Units

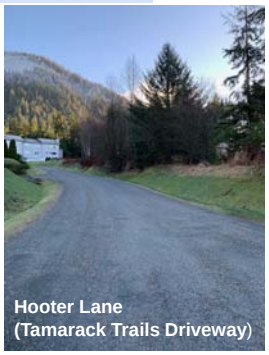
Table of Dimensional Standards

Dimensional Standard	D5	D15	D18
Min. Lot Size			
Single-Family	7,000	**5,000**	5,000
Bungalow	3,500	**3,000**	2,500
Duplex	10,500	**5808***	4840*
Common wall	7,000	**3,500**	2,500
Min. Lot Width			
Single-family	70’	**50’**	50’
Bungalow	35’	**25’**	25’
Common wall	60’	**30’**	30’
Min. Lot Depth			
All Uses	85’	**80’**	80’
Setbacks**			
Front	20’	**20’**	20’
Rear	20’	**15’**	10’
Side	5’	**5’**	5’
Street Side	13’	**13’**	13’



Access





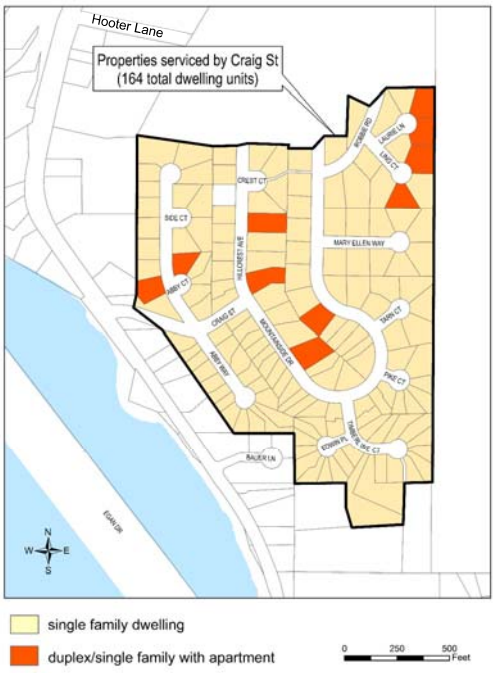
Secondary Access

Per Capital City Fire & Rescue (CCFR) when more than 200 dwelling units are serviced by a single access, a secondary access is required for emergency services.

This includes existing dwellings in the Mountainside Estates Subdivision AND the dwellings constructed through the Chilkat Vistas Subdivision as the only access to Glacier Highway is through Craig Street.

Because there is one access point currently, CCFR requires that the homes being constructed in phase 1 have residential sprinkler systems.

These requirements come from the 2012 International Fire Code, Sections D106 and D107.



Traffic

Phase 1 Lot Number	Total # of Dwellings per lot	ADTs
1, 2, 3 (Bungalow Lots)	1 Single-family	9.52 x 3 = 28.56
4, 5, 6, 7, 8, 9 10, 11, 12, 13, 14	1 Single-family and 1 accessory apartment	16.17 x 11 = 177.87
		TOTAL: 206.43 ADTs

49.40.300 - Applicability.

(a) A traffic impact analysis (TIA) shall be required as follows:

(1) A development projected to generate **500 or more average daily trips (ADT) shall be required to have a traffic impact analysis.**

(2) A development projected to **generate fewer than 250 ADT shall not be required to have a traffic impact analysis**.

(3) A development projected to generate more than 250 ADT but fewer than 500 ADT shall be required to have a traffic impact analysis if the Community Development Department Director determines that an analysis is necessary based on the type of development, its location, the likelihood of future expansion, and other factors found relevant by the director.

Right-of-Way Width Reduction Per CBJ 49.35.240(b)

Applicant requests to reduce required ROW width from 60' to 50'.

CBJ 49.35.240(b)(5) States:

(5) The director shall make written findings supporting right-of-way minimum width reductions granted under this section. The director's findings shall state that:

(A) The applicant has provided room for electric utility features and demonstrates that if the road is upgraded in the future to include additional sidewalks that there is sufficient right-of-way for construction of the sidewalks without need for retaining walls over two feet in height.

(B) There is sufficient right-of-way or easements to allow for drainage improvements required construction of the sidewalks.

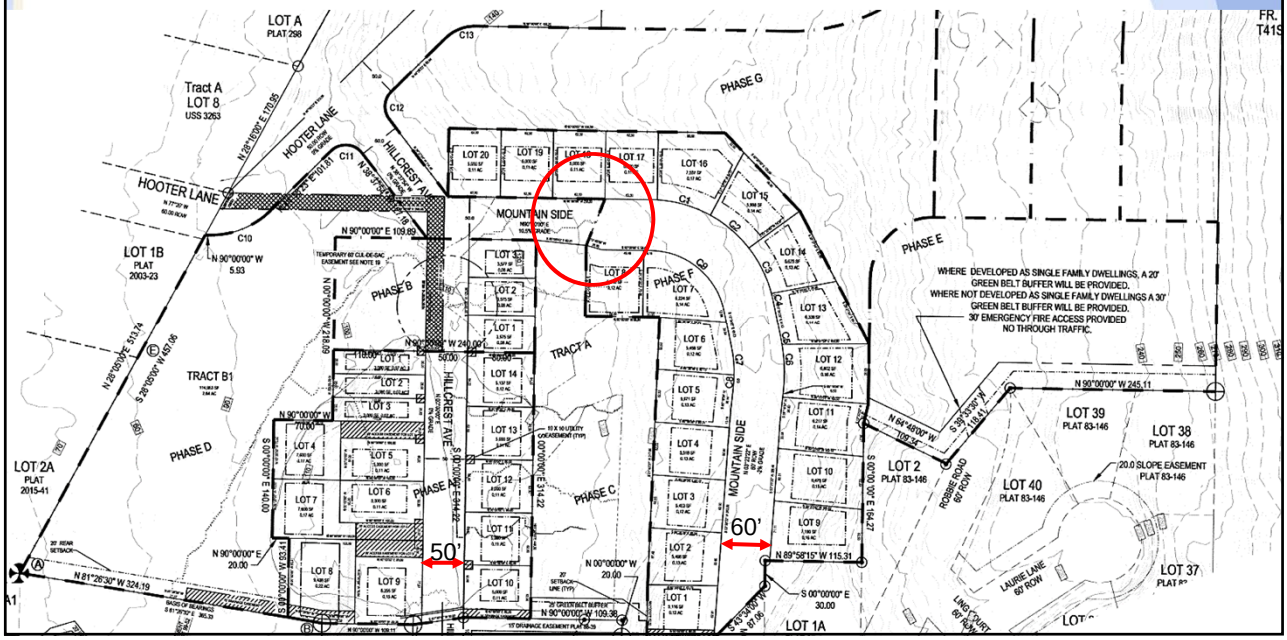
(C) That any driveways shall be constructed to accommodate the elevations of future sidewalks.

(D) No additional right-of-way width will be required in order to provide for sufficient access to abutting lands.

(E) There is sufficient room for snow storage

The Community Development Department and the Department of Engineering & Public Works recommend approval of the request for a reduced ROW width.

Right-of-Way Width Reduction Per CBJ 49.35.240(b)

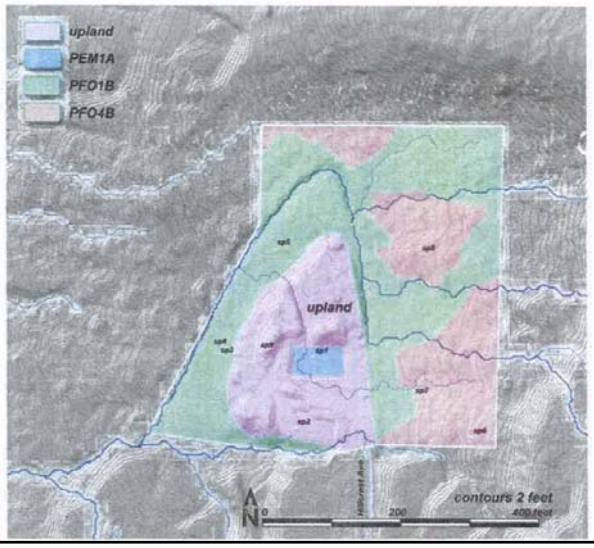


Request for alternative roadway construction standards per CBJ 49.35.120(b)

Per CBJ 49.35.130(b) the Director of E&PW may prescribe different construction standards than those required in the Table of Roadway Construction Standards. E&PW has reviewed the request for sidewalk on one side of the street and approves this request due to the following:

"This request is consistent with the other recent local subdivision determinations of similar size developments and is also consistent with the infrastructure within the Mountainside Subdivision, with sidewalk only constructed on one side of the two main access roads, Mountainside Drive and Craig Street (and no sidewalks on the side streets). The previously platted Hooter Lane right-of-way (ROW), which will provide pedestrian connection from the development to Glacier Highway, is only required to have one sidewalk, making the requirement of two sidewalks within the new development an unnecessary redundancy."

Wetlands



Wetlands Review Board Recommendation February 21, 2019:

"The applicant use control measures or storm water best management practices (BMPs) that cause the runoff from the development to infiltrate the ground on-site. Conventional storm water systems transport water into impervious surfaces like streets and driveways which concentrates flow of water and pollutants. On-site infiltration treats water naturally."

Conditions of approval have been added which address BMPs.

Drainage and Grading

CBJ Engineering and Public Works Department (E&PW) has reviewed the preliminary drainage plan and found that the plan is not complete though the plan appears to be feasible. E&PW would like to review a final drainage plan prior to the approval of construction plans.

The applicants submitted a revised drainage report on November 3, 2019. This is under review by E&PW.

A recommended condition of approval:

The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

Agency Comments

CBJ Assessors Office – Does not anticipate a negative effect on neighboring property values.

Capital City Fire & Rescue (CCFR) – Due to the number of dwellings accessed by a single point (Craig Street) CCFR requires that all homes constructed through Phase 1 be sprinkled. Once there are 200 dwelling units accessed by Craig Street, a second access is required. The requirement for sprinkling has been added as a condition of approval.

Alaska Department of Fish and Game (ADF&G) – Found no issues with the proposed development, but recommends employing best management practices for managing waste. Additionally, ADF&G recommends the applicants maintain existing hydrology and drainage channels. No anadromous waterbodies were found on the subject parcel during site visits performed by ADF&G.

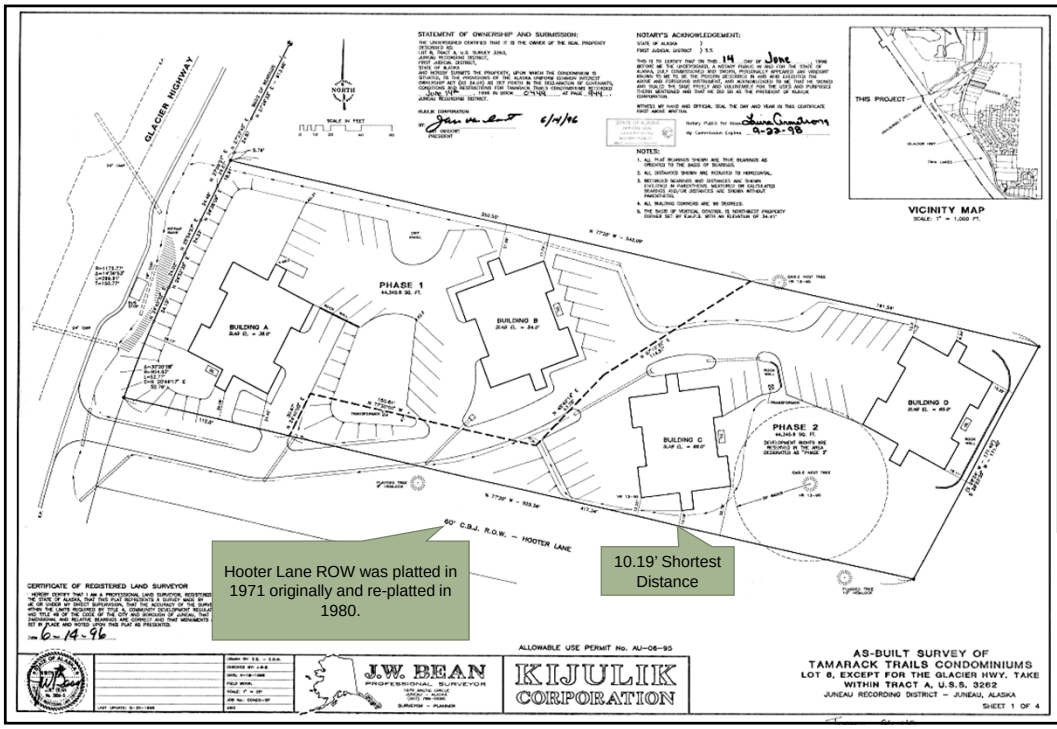
Alaska Department of Transportation and Public Facilities (DOT) – No issues at this time. A Traffic Impact Analysis may be required in the future.

Public Comments

Concerns raised by residents include:

- Use of the Hooter Lane right-of-way and potential impacts to the Tamarack Trails condominiums (discussed next slide)
- Construction traffic
- Drainage and water run-off
- Traffic and pedestrian safety

The Mountainside Estates Neighborhood Association (MENA) submitted a letter of support for the proposed subdivision, which was submitted through Attorney Grant representing MENA, in response to the settlement agreement reached between the Applicant and MENA.



Hooter Lane ROW was platted in 1971 originally and re-platted in 1980.

10.19' Shortest Distance

Tamarack Trails Condominiums were permitted in 1995 and received a variance to the required setback from Hooter Lane in 1996.

Findings

(A) Does the preliminary plat comply with CBJ 49.15.411?

Yes. With the conditions listed below, and the plat revisions required, staff finds that the preliminary can comply with CBJ 49.15.411. Required plat corrections can be found in Attachment H, these corrections are required as a condition of approval.

(B) The applicable subdivision development standards of this title are met, or can reasonably be met with conditions?

Yes. Staff finds that applicable subdivision development standards can be reasonably met with conditions.

(C) Will the proposed subdivision will provide building sites suitable for the zoning district?

Yes. Staff finds the proposed subdivision can, with conditions, provide building sites suitable to the D15 zoning district.

(D) Are the proposed street names unique in the City and Borough or are continuations of existing streets and are otherwise acceptable?

Yes. Hillcrest Avenue, platted through Phase 1 of the proposed subdivision is an extension of an existing street.

Findings

(E) Has the director of Engineering and Public Works (E&PW) reviewed the application and determined that:

(i) The subdivision can be constructed to conform to applicable drainage and water quality requirements;
Yes. E&PW found drainage and water quality requirements can reasonably be met with conditions

(ii) The streets, pioneer paths, and pedestrian ways as proposed accommodate anticipated traffic, align, and, where appropriate, connect with streets and pedestrian ways serving adjacent properties;
Yes. E&PW finds the proposed improvements conform to the requirements of this title and can be feasibly constructed in accordance with Title 49

(iii) Any proposed improvements conform to the requirements of this title and can feasibly be constructed in accordance with this title; and
Yes. E&PW finds improvements can reasonably be constructed in accordance with this title

(iv) Where public sewer is not required, the applicant has shown that soils are suitable for individual on-lot wastewater treatment and disposal or has shown the feasibility of alternative methods for wastewater treatment and disposal.
Not Applicable.

Recommendation

Staff recommends that the Planning Commission adopt the Director's analysis and findings and **APPROVE** the Preliminary Plat for Phase 1 of the Chilkat Vistas Subdivision. This approval would allow the applicant to submit for the Final Plat Application. The approval is subject to the following conditions:

Recommendation - Conditions

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from CDD to Michael Heumann (Applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the Community Development Department (CDD) and reviewed and approved by CDD and Engineering and Public Works.

5.Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

Recommendation - Conditions

6.The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7.The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8.The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

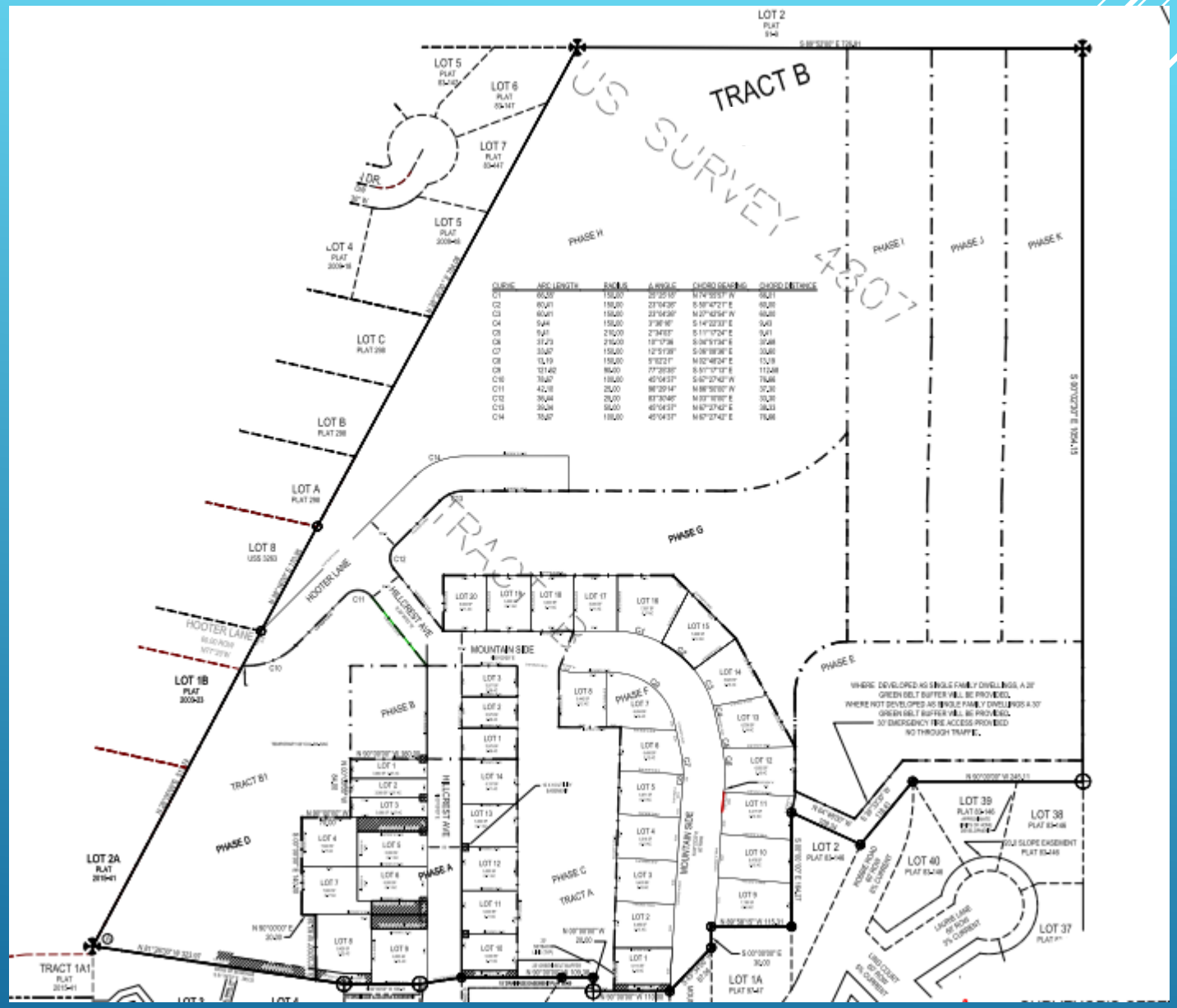
9.The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10.Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11.The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.

CHILKAT VISTAS

- **2nd Preliminary Plat Application**
- **14 Single Family Lots in Phase A**
- **400+ Units at Full Build-Out**
- **Provides for Wide Range of Housing and Greatly Mitigates Juneau's Housing Shortage**
- **Named for the Tract's Stunning Views**



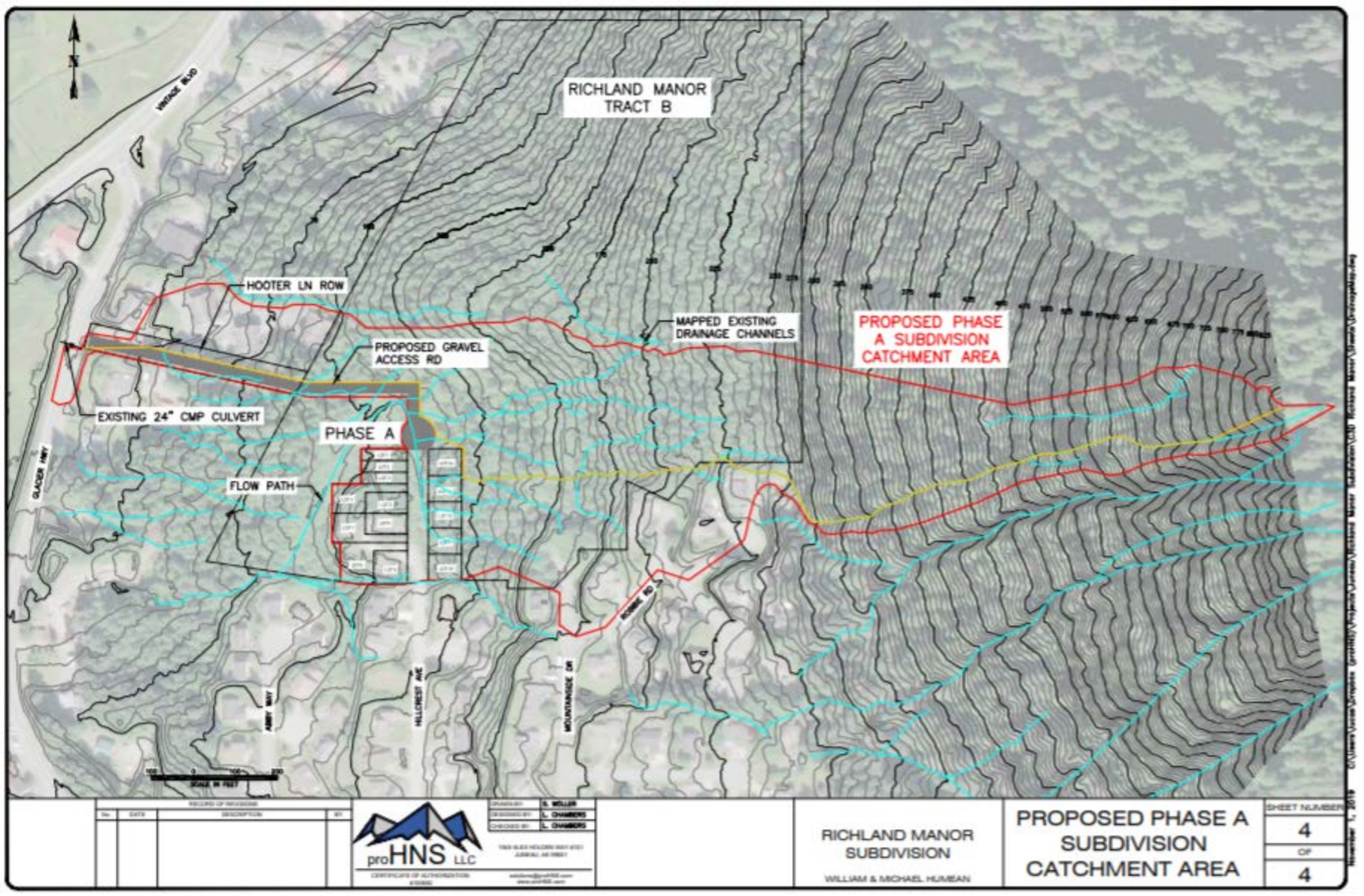
SETTLEMENT ACHIEVED WITH MOUNTAINSIDE NEIGHBORS & CBJ

- **Result of 100's of Hours spent by Developers, Neighbors, Planners, Lawyers, Surveyors, Engineers and Consultants**
- **Provides Clear Expectations for Future Development**
- **Balances Traffic Impacts while Preserving Resident/Fire Safety and Access**
- **Settlement is Contingent on Approval of Phase A and Sketch Plat**

ADDRESSING PAST CONCERNS

- Drainage Analysis Completed by PROHNS
- Road Grades Evaluated by PROHNS
- Traffic Impact Analysis Underway by TENW
  - Traffic Counts and Intersection Analysis Completed
- Hooter Lane Access Provided for in Settlement/Sketch Plat
- Compatibility with Neighborhood Achieved Through Settlement

DRAINAGE



Catchment Area	Q (cfs)
Existing 24" CMP Culvert	2.30
Phase A Predeveloped	6.31
Proposed Phase A Subdivision	8.24

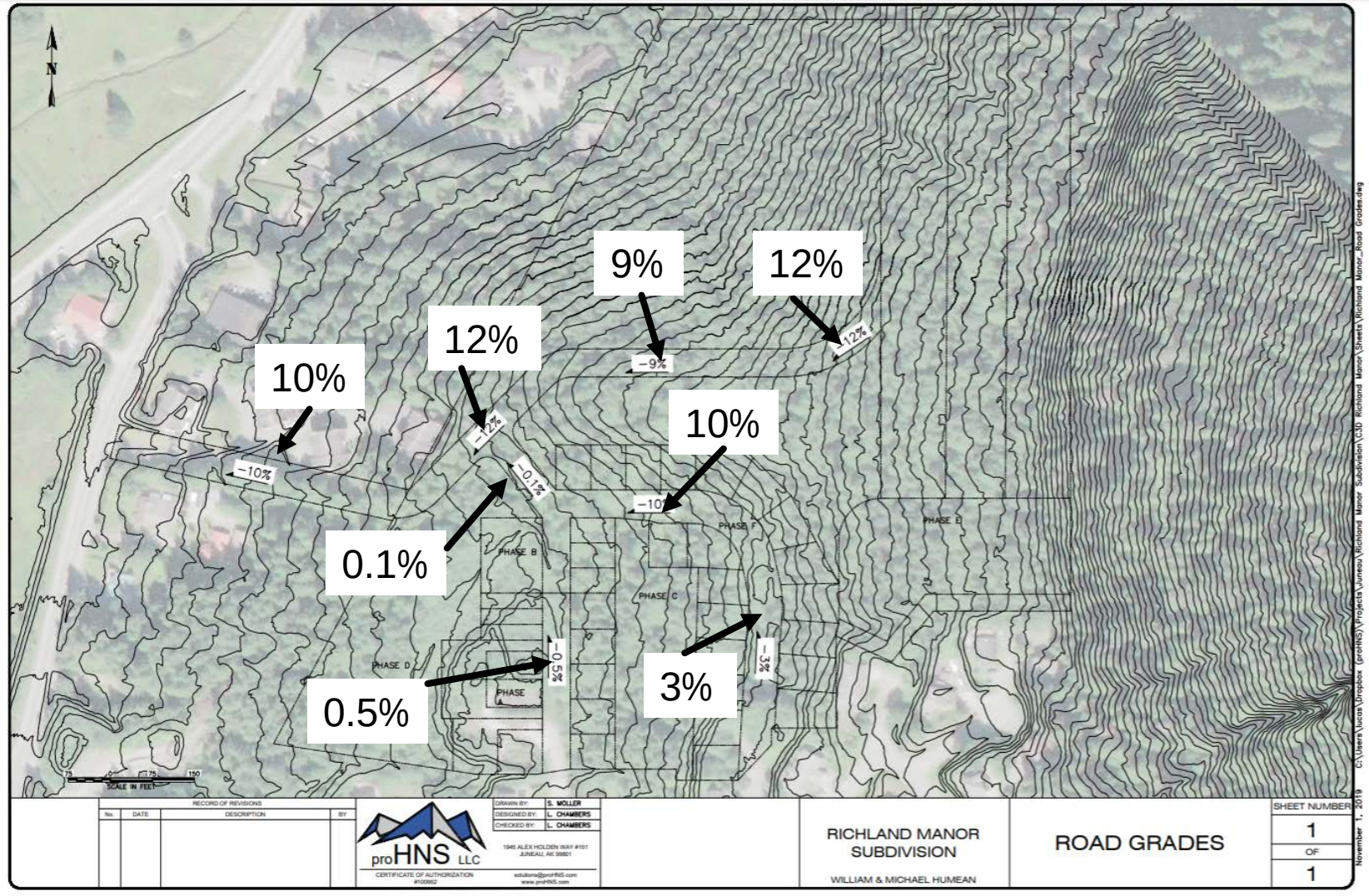
Drainage Basin	Post Development Runoff Q (cfs)	Capacity Check	24" CMP Flow Capacity Q (cfs)
Proposed Subdivision	8.24	<	8.87

ROAD GRADES - 12% OR LESS

Based on LIDAR Data

Corroborated by Surveyed Elevations at Key intersections

Further Grade Reductions in Northern Portion of Tract May Occur Depending on Final Layout



TRAFFIC IMPACTS - MINIMAL

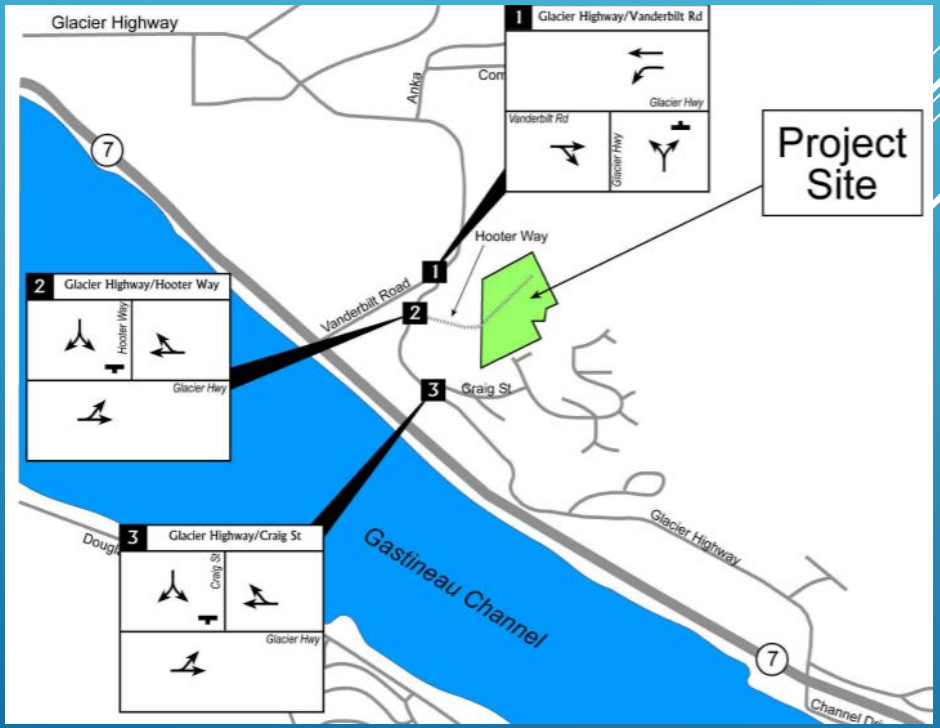
Intersection	Level of Service*
Hooter Lane	B
Craig Street	B
Vanderbilt Hill	C
Vanderbilt Hill with DOT Project (without anticipated mitigation)	D

***Year 2029, Build-out of 47 Single-Family Units and 356 Multi-Family Units**

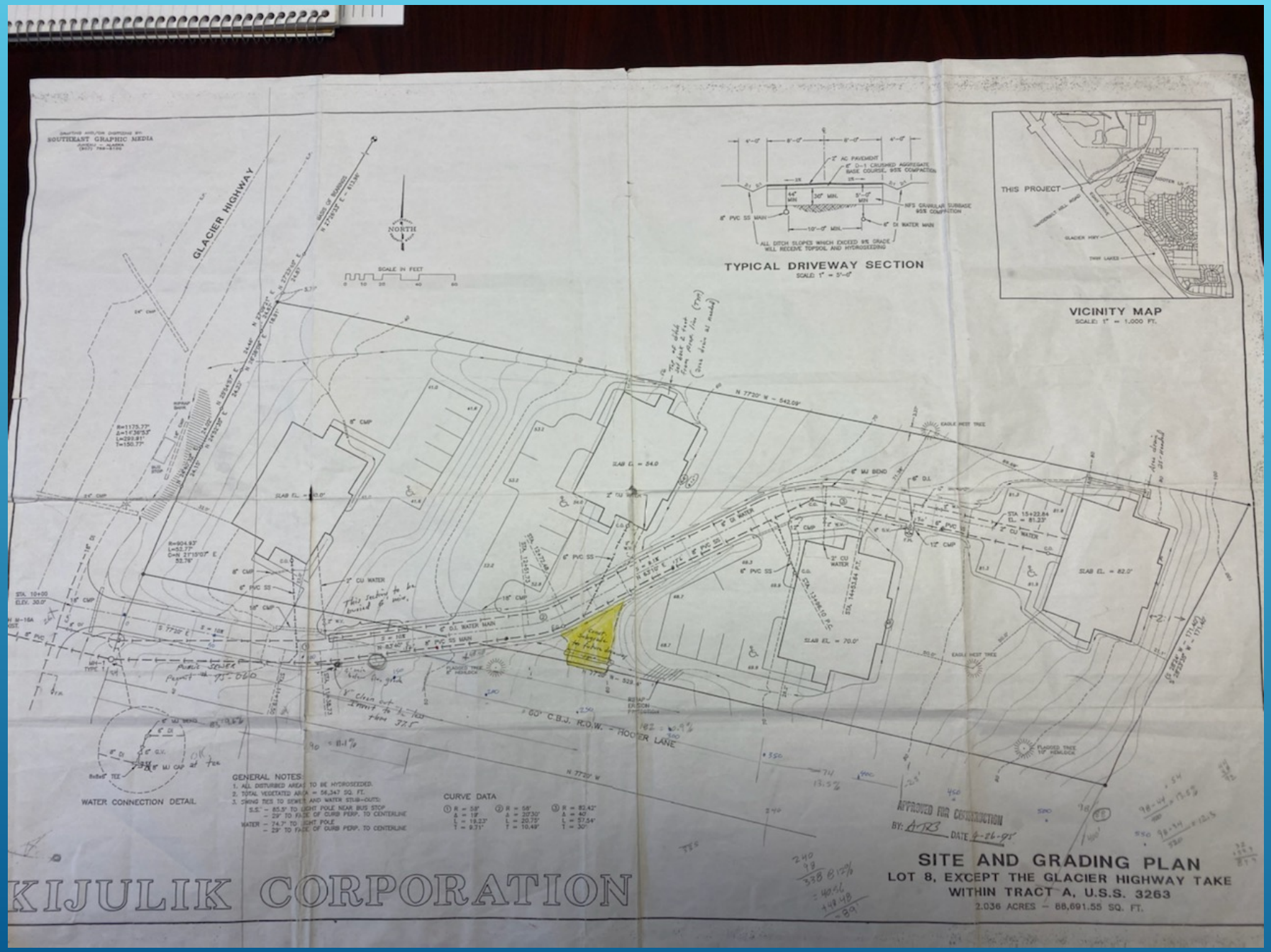
Table 2: 2006 Existing A.M. and P.M. Peak Intersection Levels of Service

Intersections	Approach	A.M. Peak		P.M. Peak	
		LOS	Delay	LOS	Delay
#1 – Glacier Highway at Vanderbilt Road	WB Left	A	8	A	8
	NB	B	13	B	14
#2 – Glacier Highway at Hooter Way	EB Left	A	8	A	8
	SB	A	9	A	10
#3 – Glacier Highway at Craig Street	EB Left	A	8	A	8
	SB	A	10	A	10

Note: Analysis based on HCS 2000 results using HCM 2000 control delays (seconds) and LOS.



BACK-UP


SOUTHEAST GRAPHIC MEDIA
GLACIER HIGHWAY
NORTH
SCALE IN FEET
TYPICAL DRIVEWAY SECTION
SCALE: 1" = 5'-0"
2" AC PAVEMENT
6" D-1 CRUSHED AGGREGATE BASE COURSE, 95% COMPACTION
NF'S GRANULAR SUBBASE 95% COMPACTION
6" PVC SS MAIN
6" DI WATER MAIN
ALL DITCH SLOPES WHICH EXCEED 8% GRADE WILL RECEIVE TOPSOIL AND HYDROSEEDING
THIS PROJECT
GLACIER HWY
VICINITY MAP
SCALE: 1" = 1,000 FT.
SLAB EL. = 54.0
SLAB EL. = 70.0'
SLAB EL. = 82.0'
6" PVC SS
6" DI WATER MAIN
2" CU WATER
60' C.B.J. R.O.W. - HOOSIER LANE
WATER CONNECTION DETAIL
GENERAL NOTES:
1. ALL DISTURBED AREAS TO BE HYDROSEEDED.
2. TOTAL VEGETATED AREA = 56,347 SQ. FT.
3. SWING TIES TO SEWER AND WATER STUB-OUTS:
S.S. - 85.5' TO LIGHT POLE NEAR BUS STOP
- 29' TO FACE OF CURB PERP. TO CENTERLINE
WATER - 74.7' TO LIGHT POLE
- 29' TO FACE OF CURB PERP. TO CENTERLINE
CURVE DATA
① R = 58' Δ = 19° L = 19.23' T = 9.71'
② R = 58' Δ = 20°30' L = 20.75' T = 10.49'
③ R = 82.42' Δ = 40° L = 57.54' T = 30'
APPROVED FOR CONSTRUCTION
BY: ATB DATE 4-26-95
SITE AND GRADING PLAN
LOT 8, EXCEPT THE GLACIER HIGHWAY TAKE
WITHIN TRACT A, U.S.S. 3263
2.036 ACRES - 88,691.55 SQ. FT.
KIJULIK CORPORATION

Planning Commission

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

PLANNING COMMISSION
NOTICE OF DECISION
Date: November 13, 2019
File No.: SMP2019 0004

William & Michael Heumann
6000 Thane Road
Juneau, AK 99801

Proposal:	Preliminary Plat approval for a phased major subdivision creating 14 lots and 1 large tract for future development (15 total parcels)
Property Address:	4506, 4508, & 4510 Hillcrest Avenue
Legal Description:	Richland Manor Tract B
Parcel Code No.:	7B1001160010
Hearing Date:	November 12, 2019

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated November 4, 2019, and **APPROVED** the preliminary plat to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to approval of the final plat, all required plat corrections listed in the MEMO from the Community Development Department (CDD) to Michael Heumann (applicant), dated November 1, 2019 shall be completed (Attachment H).

2. Prior to approval of the final plat, Certification from the CBJ Treasurer is required showing that all real property taxes and special assessments levied against the property for the year of recording have been paid.

3. Prior to approval of a final plat, the applicant shall submit a complete set of construction plans for all required improvements to the Community Development Department for review by the Director of Engineering and Public Works for compliance with CBJ 49.35.140.

4. Prior to final plat approval, an engineer's estimate for the installation of public utilities and improvements must be submitted to the CDD and reviewed and approved by CDD and Engineering and Public Works.

5. Prior to approval of the final plat, the applicant has constructed all required improvements or provided a financial guarantee in accordance with CBJ 49.55.010.

6. The developer shall utilize Best Management Practices to treat or reduce any harmful particulates that may arise from the development.

7. The developer shall utilize Best Management Practices for storm water runoff to prevent sediment run-off from construction activities into neighboring waterbodies.

8. The developer shall submit a final drainage plan to be approved by Engineering and Public Works prior to final plat approval. This drainage plan must be signed and stamped by an Alaskan licensed engineer in accordance with CBJ 49.35.510.

9. The applicant shall pave, or bond for, the portion of the driveway in the right-of-way or the first 20 feet from the edge of the public roadway, whichever length is greater, for all panhandle lots created with this subdivision.

10. Prior to construction plan approval, the applicant shall submit a lighting plan meeting applicable CBJ standards.

11. The applicant shall install a residential sprinkler system that meets Capital City Fire & Rescue requirements in each dwelling unit constructed through Phase 1 of this subdivision.

Attachment: November 4, 2019 memorandum from Laurel Christian, Community Development, to the CBJ Planning Commission regarding SMP2019 0004.

This Notice of Decision does not authorize any construction. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance to CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, November 12, 2019.

Expiration Date: The permit will expire five (5) years after the effective date, or November 12, 2024, if no Building Permit has been issued and substantial construction progress has not been

made in accordance with the plans for which the subdivision permit was authorized or no final plat has been approved. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner: Laurel Christian, Planner
Community Development Department

Benjamin Haight, Chair
Planning Commission

Filed With Municipal Clerk

11/26/2019
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this subdivision. ADA regulations have access requirements above and beyond CBJ - adopted regulations. Owners and 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.

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
COMMUNITY DEVELOPMENT

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

DATE: November 5, 2019

TO: Planning Commission

FROM: Allison Eddins, Planner II
Community Development Department

FILE NO.: AME2019 0012

PROPOSAL: A Text Amendment to adopt Juneau's Historic and Cultural Preservation Plan as part of the CBJ Comprehensive Plan

The City and Borough of Juneau Code states in CBJ 49.10.170(d) that the Commission shall make recommendations to the Assembly on all proposed amendments to this title, zonings and re-zonings, indicating compliance with the provisions of this title and the Comprehensive Plan.

ATTACHMENTS

Attachment A – Public Participation Report

INTRODUCTION

The City and Borough of Juneau Title 49 Land Use Code states in CBJ 49.10.170(a) that one of the duties of the Planning Commission is Comprehensive Plan review. Furthermore, CBJ 49.10.170(d) requires the Commission to "make recommendations to the Assembly on all proposed amendments to this title, zonings and re-zonings, indicating compliance with the provisions of this title and the Comprehensive Plan." The Comprehensive Plan and its additions are incorporated into Title 49 at CBJ 49.05.200.

BACKGROUND

In 1966 the U.S. Congress passed the National Historic Preservation Act in order to preserve historical and archaeological sites within the United States. This act created the National Register of Historic Places, the list of National Historic Landmarks and State Historic Preservation Offices (SHPO). A later amendment to the act created the Certified Local Government (CLG) program. The CLG program is way for states and the federal government to empower and support preservation efforts at the local level. Juneau became an Alaska CLG member in 1988. With this distinction comes numerous benefits including technical expertise from the Alaska SHPO,

eligibility to apply for federal CLG earmarked funding and priority consideration for non-CLG grant funding. In order to maintain CLG status, CBJ must meet the following minimum requirements: 1) enforce appropriate state and local legislation for designation and protection of historic properties; 2) establish an adequate and qualified historic preservation review commission by local legislation; 3) develop a local historic preservation plan providing for identification, protection and interpretation of the area's significant cultural resources; 4) maintain a system for the survey and inventory of historic properties; 5) provide for adequate public participation in the local historic preservation program; and 6) satisfactorily perform the responsibilities delegated to it under the National Historic Preservation Act.

The *Historic and Cultural Preservation Plan* is meant to guide efforts to preserve and protect the valuable historic and cultural resources in the community. The Plan established goals and action items that the community has determined to be important. The Plan is intended to guide CBJ's preservation activities for the next 20 years, with progress reviews taking place every two years and an update of the Plan taking place after 10 years.

The development of the plan was made possible through a Federal Historic Preservation Fund matching grant administered by the Alaska Office of History and Archaeology. The process of developing the plan began in late 2016 with a series of public meeting and focus groups. Participants were asked to share their vision for preservation in Juneau, identify issues and concerns regarding the preservation of historic and cultural resources in the community, and to identify goals for the future of preservation. For more details on the public process, see Attachment A of this report.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The 2013 Comprehensive Plan (Chapter 16) identifies the need to protect Juneau's historic resources and one of the best ways to do that is by adopting and implementing a preservation plan. The 2013 Comprehensive Plan states (page 221): *The existing policy regarding historic preservation, although a basic good start toward recognizing and protecting valuable historic resources, no longer provides the complete protections necessary given the dramatic rise of cruise ship tourism and the resulting pressure on historic resources from the heritage tourism trades. The CBJ government should update and adopt its draft version of the Historic and Cultural Preservation Plan, as well as continually evaluate its existing historic design standards and update its design review process, in order to better integrate preservation activities into broader community and land use planning efforts.*

> Policy 16.1. To identify, preserve and protect Juneau's diverse historic and cultural resources, and to promote historic preservation and accurately represent Juneau's unique heritage through publications, outreach and heritage tourism.

> Policy 16.2. To identify historic resources within the CBJ and to take appropriate measures to document and preserve these resources.
>
> Policy 16.3. To increase public awareness of the value and importance of Juneau's archaeological and historic resources, and to educate, encourage, and assist the general public in preserving heritage and recognizing the value of historic preservation.
>
> Policy 16.4. To preserve and protect the unique culture of Juneau's native peoples including buildings, sites, artifacts, totems, traditions, lifestyles, languages and histories.
>
> Policy 16.5. To promote responsible heritage tourism that accurately represents Juneau's unique history while protecting the resources from overuse or harm.

Historic preservation is also mentioned in the Housing Element chapter of the Comprehensive Plan (Chapter 4) and the Economic Development chapter (Chapter 5).

> Policy 4.7. To encourage preservation of residential structures that are architecturally and/or historically significant to the CBJ and which contribute to the historic and visual character and identity of the neighborhood.
>
> Policy 5.5. To maintain and strengthen downtown Juneau as a safe, dynamic and pleasant center for government and legislative activities, public gatherings, cultural and entertainment events, and residential and commercial activities in a manner that complements its rich historic character and building forms.

If adopted, the *Historic and Cultural Preservation Plan* would be an addendum to the Comprehensive Plan. Where the preservation plan and the Comprehensive Plan conflict, or where the *Historic and Cultural Preservation Plan* is more specific, the preservation plan supersedes the Comp Plan.

Findings
Based upon the information presented, the draft *Historic and Cultural Preservation Plan* complies with the Comprehensive Plan.

COMPLIANCE WITH OTHER PLANS

CBJ currently has area plans adopted for the Auke Bay neighborhood and the Lemon Creek neighborhood. Both of these area plan include specific goals and actions that relate to preservation. See pages 18 and 19 of the draft *Historic and Cultural Preservation Plan* for the specific policies from each of the area plans.

Auke Bay Area Plan Chapter 3: Cultural and Historic Significance and Resources
Goal 1: Identify Auke Bay's historical sites and structures
Goal 2: Preserve and protect Auke Bay's history
Goal 3: Promote Auke Bay's rich culture and history

Lemon Creek Area Plan Chapter 2: Historic and Community Character
Goal 3: Recognize the Lemon Creek area's cultural diversity

Blueprint Downtown
CBJ is currently working on an area plan for Downtown Juneau. The study area includes eight of Juneau's nine historic neighborhoods, and many of Juneau's historic resources are located in this area. Blueprint Downtown will include a Historic Context chapter with goals and action items, many of which will likely be similar to the action items in this plan.

Findings
Based upon the information presented, the draft *Historic and Cultural Preservation Plan* complies with relevant adopted plans.

STAFF RECOMMENDATION
Staff recommends that the Planning Commission review and consider the draft *Historic and Cultural Preservation Plan* and recommend to the Assembly its adoption as an addendum to the Comprehensive Plan.

City and Borough of Juneau
Historic Preservation Plan Update

Phase I Report: Initial Public Outreach for the Update of Juneau's Historic Preservation Plan

Report Prepared for the City and Borough of Juneau
by
Corvus Culture
Anchorage, Alaska
September 2016

JNU HPP | Juneau Historic Preservation Plan

Introduction

In April 2016, the City and Borough of Juneau (CBJ) and the CBJ Historic Resources Advisory Committee (HRAC) initiated Phase I of the update to the CBJ Historic Preservation Plan (the Plan). The Plan was originally drafted in 1997 but was not adopted. CBJ contracted with Corvus Design and their subconsultants Corvus Culture and Winter and Associates to facilitate completion of Phase I of the update effort.

The 1997 plan consisted of four goals: 1) Identify, evaluate, and protect the historic and archaeological resources within the City and Borough of Juneau; 2) Increase public awareness of the value and importance of Juneau's history and historic resources; 3) Preserve and protect the unique culture of Juneau's Native people including buildings, sites, traditions, lifestyle, language, and history; and 4) Promote heritage tourism which enhances and accurately represents Juneau's unique history and Native culture. Additionally, the 1997 plan detailed 12 objectives and 47 implementing actions, to achieve the plan vision and these goals.

To gauge public interest in and understanding of historic preservation, and the updating and adoption of a revised Plan, CBJ and the consultant team (the planning team) held two public meetings, one focus group meeting, and conducted an online survey. Together these public outreach efforts constitute Phase I. Focused outreach and stakeholder engagement, plan preparation, and public review will constitute Phase II. Phase II will culminate in the presentation of the revised Juneau Historic Preservation to the CBJ Assembly for adoption.

Attendees at the May 31 Public Meeting

The following report documents the Phase I meeting and survey efforts, and presents recommendations for completing Phase II and the Plan update, including recommendations regarding Plan goals, objectives and actionable strategies, and additional public outreach and stakeholder involvement.

Outreach Methods

Public Meetings

The planning team held two public meetings. The meetings were publicized through email blast and phone calls to key stakeholder groups at least one week prior to meeting date, radio interviews on *Juneau Afternoon* the week of the meeting dates, flyers posted throughout downtown, Douglas and the Valley, posting on the CBJ website, and word-of-mouth. Key stakeholders contacted directly via email and phone included Douglas Indian Association, Sealaska Heritage Institute, the Downtown Business Association, the Downtown Improvement Group, University of Alaska Southeast, the Treadwell Historic Preservation and

Juneau's Historic Preservation Plan will...

- help create more opportunites for education
- create or encourage more signage about existing historic buildings
- put up signage in Tlingit language
- spruce up and clean up downtown
- be integrated with ongoing devleopment, help clean up and improve downtown
- help Juneauites identify what spaces and structures are important for them
- identify historic resources and assess their state and condition
- give vibrancy to past and present
- protect and preserve natural and cultural resources that have cultural and historical significance to the poeples of the Juneau area
- be useful and not sit on a shelf
- provide checks and balances, before a place or building or artifact is removed or destroyed
- respectfully and correctly address Native history
- provide clear guidance in land use management decisions
- help the Village, bring out the history of the Village (Juneau Indian Village)
- guide authentic heritage tourism
- identify and protect historic buildings, sites, and structures that remain
- provide a framework of places, activities, and values that represent our community
- preserve our history
- be a living document that allows for change
- meet with Elders of local Clans to find out what they would like to preserve and how
- save the stories about the history of Juneau's neighborhoods and

Plan visioning ideas presented by May 31 meeting attendees

Attendees at the August 25 Public Meeting

Restoration Society, and numerous others.

The first meeting occurred on the evening of May 31, at the Boardroom in the Senate Building in downtown Juneau. A total of 41 area residents attended the first meeting, as well as two CBJ planning staff and the project consultants. The second meeting was held the evening of August 25, at Floyd Dryden Middle School in the Mendenhall Valley. Eleven people attended, as well as the CBJ planning staff and consultants present at the first meeting.

The first meeting consisted of four activities, designed to assess public understanding of and interest in historic preservation, and investigate visioning and goal development so as to compare current community vision and goals with those identified in the 1997 draft plan. First, attendees were

asked to introduce themselves and finish the following sentence: "To me, historic preservation is ___." The goal of this exercise was to get an idea of the understanding of the interests of people attending. The second exercise focused on visioning and goal development; attendees were asked to complete the sentence: "Juneau's historic preservation plan will ___." Attendees were then asked to identify three actions CBJ and residents could take to meet this vision, and then lastly to name five places within the CBJ of cultural or historical importance to them. A sample of the responses to the first question is presented in the call-out box on the previous page, tables detailing responses to all exercises in full are presented at the end of this report.

The meeting was well-attended by a cross section of Juneau residents, including representatives from Douglas Indian Association, Sealaska Heritage, the tourism industry, historic building owners, HRAC members, a UAS student, small business owners, and the Treadwell Historic Preservation and Restoration Society. In general, attendees expressed widespread interest in and support for development of a Historic Preservation Plan for Juneau, particularly if it provided economic, educational and interpretation opportunities and incentives.

The second public meeting consisted of three exercises, designed to approach visioning and goal development from a different angle. First attendees were asked to introduce themselves and name their three favorite places in the CBJ. Second, attendees were asked to identify two challenges or roadblocks to historic preservation in the CBJ, and third, attendees were asked to identify up to five tools that could be used to address or overcome the challenges just identified. A sample of responses to the exercise question regarding challenges is presented in the call-out box to the right, tables detailing full responses to all exercises are included at the end of this report.

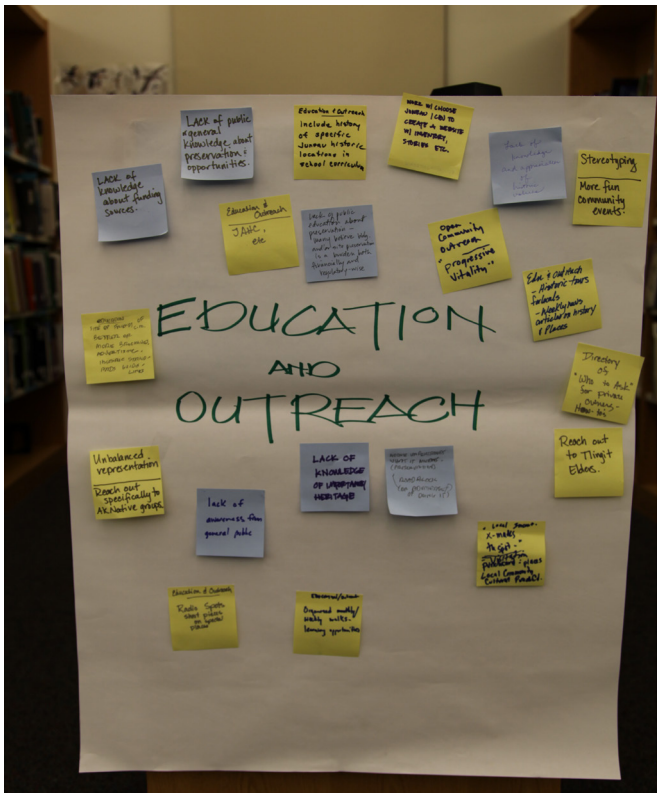
The meeting was held in the Valley to reach out to Valley residents specifically, but was not as well attended as the first. Again representatives from Douglas Indian Association and HRAC attended, as well as historic residential home owners, tourism industry workers, a representative from the Downtown Business Association (DBA) and others. As with the first meeting, attendees were generally supportive of and interested in development of a Historic Preservation Plan for Juneau. The smaller attendance resulted in great dialogue and brainstorming among attendees, including discussion regarding the Main Street Approach to community revitalization, the need to provide heritage-related opportunities to both local residents and visitors, the need to develop heritage-

Challenges to Historic Preservation

- funding
- cost
- lack of financial incentives
- no obvious economic incentives
- not necessarily "highest and best use"
- lack of awareness from general public
- lack of knowledge regarding the importance of our heritage
- lack of knowledge about preservation opportunities
- lack of public education about preservation
- not a high priority
- balancing preservation with development goals
- how to right-size regulations?
- climate change
- which history to preserve?
- no public buy-in
- how to prioritize what is most important?

A sample of historic preservation challenges identified by August 25 and DIG meeting attendees

related education opportunities for students, and the regulatory, financial and technical challenges to historic preservation faced by historic building owners.



Ideas for Education and Outreach Tools, August 25 Meeting

Downtown Improvement Group (DIG) Focus Meeting

The planning team was invited to present at DIG's August 26th meeting. DIG is a volunteer group of downtown Juneau business owners and others interested in improving the downtown community who meet twice monthly. Twenty DIG members attended the August 26th meeting. For the meeting, the planning team ran through an expedited version of the visioning and goal development exercises completed at the public meeting on August 25. A sample of responses to the exercise question regarding challenges is included in the call-out box to the right, tables detailing full responses to all exercises are included at the end of this report. DIG members were particularly interested and concerned about coordinating the historic preservation planning effort with other CBJ planning processes, collaborating with the private business sector on plan development, and establishing a transparent and reasoned process for determining Plan priorities.

Online Survey

The planning team also conducted an online survey using the Survey Monkey format. The survey was accessed and publicized through a link on the CBJ historic preservation web page. The survey was also publicized through email blast to key stakeholders, the CBJ main web page, the August 25 and DIG meetings, and word-of-mouth. The survey was open in August for three weeks prior to and after the August 25 and 26 meetings, and included 11 questions, two of which were open ended. Similar to the public meetings, the survey was designed to gauge public interest and understanding of historic preservation, and get at visioning, goal and action development. A total of 49 people responded; quantitative survey results are presented at the end of this report, immediately following recommendations.

Discussion

The comments heard during the public process generally aligned with the existing goals and objectives of the 1997 plan. The planning team did however hear a lot about the need to fully involve and celebrate Alaska Native culture and heritage in the Plan update, and in particular work on the inventory, education, interpretation and preservation of important Alaska Native sites/places such as the Juneau Indian Village, Douglas Indian Village, and Indian Point/Auke Cape areas. One meeting attendee summarized the intent behind a number of meeting comments by stating that the Plan should serve to *bring about community cohesion, by celebrating all of Juneau's cultures and history.*

Kamal Lindoff and Bernadine DeAsis, both from the Douglas Indian Association, at the site of the Douglas Indian Village. The Village Site is now a ballfield and skating rink.

Renee Hughes and Galena at the Sentinel Island Light Station

Douglas Indian Association members in the Taku Inlet, with Taku Glacier in the background

Visitors to the Last Chance Mining Museum

Important and Favorite Juneau Places

- Indian Point / Auke Cape
- Douglas Indian Village
- Skater's Cabin
- Sheep Creek
- Juneau Indian Village
- Perseverence Trail and Valley
- Treadwell Mining Area
- House of Wickersham
- AJ Mining Area
- My house
- Starr Hill
- Evergreen and Douglas Cemeteries
- Capitol Building
- Downtown Historic District
- Sandy Beach
- Amalga Area
- Merchants Wharf
- Arcticoy Building
- Senate Building
- Old Theater Building
- Last Chance Mining Museum
- Underground Mining Tunnels
- Mendenhall Glacier Visitor Center
- Auke Rec
- Valentine Building
- Deharts
- Governor's House
- Cope Park
- St. Nicholas Russian Orthodox Church
- Sentinel Island Lighthouse
- St. Therese Shrine
- Jensen Olsen Arboretum
- Montana Creek
- Gold Creek
- Berners Bay Village

The planning team also heard (overwhelmingly in the online survey) that through historic preservation, Juneau's sense of community and place are strengthened and enhanced, and that historic preservation enhances economic opportunity. The inclusion of economic opportunity as an outcome or reason for historic preservation is an entirely new vision and goal for Juneau, which was not discussed in the 1997 Plan.

In the August meetings where attendees were asked about existing roadblocks to preservation, much of the public discussion and comment focused on a lack of financial incentives, or lack of awareness of financial incentives; a lack of interpretation and education regarding historic resources and preservation in general; that there is no engagement with or interest on the part of younger people; and that it is difficult to figure out what/how to prioritize.

All of these challenges present opportunities for updated Plan goals, objectives and actions. In fact, meeting attendees suggested a number of creative ideas for specific actions or tools that could be part of the Plan, including:

- development of education curriculum for historic places similar to the art boxes used in the schools
- a how-to guide published on the CBJ website and made available in print that connects historic property owners with information on how to preserve/restore/rehabilitate their property, who to talk to (contractors) and what financial incentives are available to owners
- place name and interpretation signage in Tlingit Language
- CBJ Brochure with all historic building related building code information
- revamped and improved historic site walking tour brochure
- uniform plaque program to recognize and describe historic buildings
- live weekly/monthly story-telling program broadcast on radio (or posted to web)
- Juneau-area heritage site visitation punch card (similar to National Park Service Passport program)
- monthly events that celebrate Juneau's diversity and poke fun at stereotypes. A "Fry Bread vs Funnel Cake" competition for example
- fund preservation projects through existing CBJ permit fees. $1.00 from each permit fee to establish local incentive funding.

Public meeting attendees and survey respondents also commented that the Historic Preservation Plan and planning effort should be integrated and coordinated with other CBJ planning efforts and and external groups, including notably the efforts of the DBA, which is currently researching implementation of the Main Street Approach in the downtown business district.

It is important to note that while meeting attendees and survey respondents were generally supportive of the Plan, some expressed concern regarding additional regulation and restrictions that may come from the Plan, particularly restrictions to property development or building modifications, and increased regulation of property uses. This concern demonstrates a need for additional outreach to and involvement of key stakeholders during Phase II of the planning process.

Recommendations

In comparing responses from the public outreach conducted for Phase I with the 1997 draft plan, it is clear that the 1997 plan will serve well as a basis for the updated Plan. The 1997 plan contained four primary goals and eight objectives. A series of implementing actions (generally two to six) was identified for each objective. These goals, objectives and implementing actions are largely consistent with public response for potential goals and objectives identified during Phase I outreach. To complete the next Phase of planning, and overall development and implementation of the Plan, the following is recommended:

Plan Content and Mechanics

1. Rewrite visioning, based on results of public outreach for Phase I (this report) and Phase II. Visioning concepts from 1997 should be amended to incorporate the greater emphasis placed on inclusivity and the concept of historic preservation as a catalyst for community cohesion and cooperation, and economic development.

2. Consider reframing 1997 goals into simpler, more holistic concepts describing what Juneau will be. Tie goals to discrete objectives and implementing actions. Many of the objectives and actions identified in the 1997 plan are still applicable and can be assigned to newly revised goals. An example of goal, objective and action revision:

> 1997 Plan Goal: *to preserve and protect the unique culture of Juneau's Native People including buildings, sites, traditions, lifestyles, language and history*
>
> 2017 Plan Goal: *Juneau is a diverse community with a strong sense of culture and history*
>
> > Objective: *Integrate Alaska Native culture into CBJ interpretation efforts*
> >
> > > Action: *Display Tlingit place names and language on all new interpretive and recognition signage*
> >
> > Objective: *Tourism Industry portrays Juneau's diverse culture and history accurately*
> >
> > > Action: *Establish "heritage ambassador" program with cruise industry to fund onboard liaisons to educate passengers on Juneau's culture and history*

3. Consider organizing Plan goals, objectives and actions into categories that relate to CBJ functions and Plan implementation. These categories include Administration, Management Tools, Identification and Inventory, Education, and Incentives and Benefits. An example of the application of this kind of goal and action categorization is available in the City of Tacoma Historic Preservation Plan (http://cms.cityoftacoma.org/Planning/Comprehensive%20Plan/11%20-%20Historic%20Preservation%206-14-11.pdf)

4. Work with a Tlingit language expert to include Tlingit place names and other Tlingit words and names (as appropriate) throughout the Plan.

5. Consider carefully the way history is referenced in the plan, to ensure inclusivity of the varied histories of Juneau's residents. Meeting attendees suggested avoiding use of the term "prehistory" in favor of more inclusive and barrier-free terms such as "deep history."

6. Create an implementation plan for actions that includes both a schedule and identification of entities responsible for implementing Plan actions.

Public Outreach and Stakeholder Involvement

1. Attend a meeting of the Alaska Native Sisterhood (ANS) and Alaska Native Brotherhood (ANB). At the August 25 meeting, a representative of the ANS invited the planning team to attend one of their meetings to talk with members about historic preservation. CBJ and HRAC should follow up on this invitation and also try to talk with the ANB.

2. Prepare a Public Involvment Plan and conduct more focused outreach and engagement for Phase II. The plan and proposed outreach should:

- allow for public engagement in both Plan development and Plan review

  Conduct a public meeting at the beginning of Phase II to lay out the process for the rest of the Plan and collect any additional input, then conduct a public meeting at the end of Phase II to present the public review draft of the Plan.

- include strategies for a strong digital and social media presence

  Greater engagement with the younger residents of Juneau—those 40 and under, including high school and University students—is needed. As one meeting attendee noted, the younger and future generations are the ones who will be most affected by the Plan.

  Also, one central point of information, such as a project website, is needed to assist the public in understanding and tracking the progress of the Plan development.

- include focused stakeholder workshops to identify plan goals, objectives, actions and implementation strategies, for the following topic areas: education and interpretation, economics, regulations and land use, survey and designation, and heritage tourism

  The focused workshops should be two-fold: first part educational, second part brainstorming. Stakeholders should be identified and invited specifically. For example, for the education and interpretation workshop, identified and invited stakeholders should include students, teachers, and museum/interpretation staff from throughout the community. Ensure that identified and invited stakeholders cross generations and include people from under-represented communities, such as the Alaskan Native and Filipino communities.

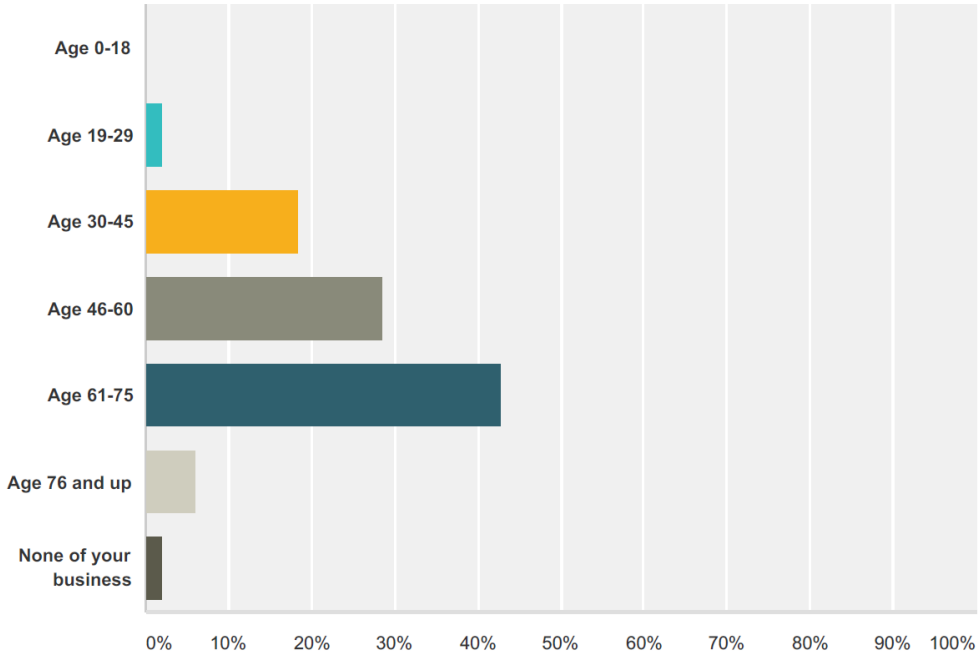
3. Identify a steering committee of up to 11 individuals (to be consistent with CBJ Plan guidelines), potentially including: a representative from the Alaska Native community, a student, an educator, an HRAC member, a historic house homeowner, a local business owner, a local developer, a preservation organization representative, a real estate representative, and other representatives from key stakeholder groups, to guide completion of the plan, assist with outreach efforts to respective stakeholder groups, and champion Plan adoption by the Assembly. The steering committee should work directly with the HRAC and CBJ in the review of plan drafts and participation at public meetings and focused stakeholder workshops.

4. Establish a liaison with the Downtown Business Association (DBA). The DBA's interest in implementing the Main Street Approach for the downtown area aligns closely with CBJ and public interest in historic preservation. DBA actions to implement the Main Street Approach will likely align with Plan actions.

Online Survey Results

Q1 How young are you?

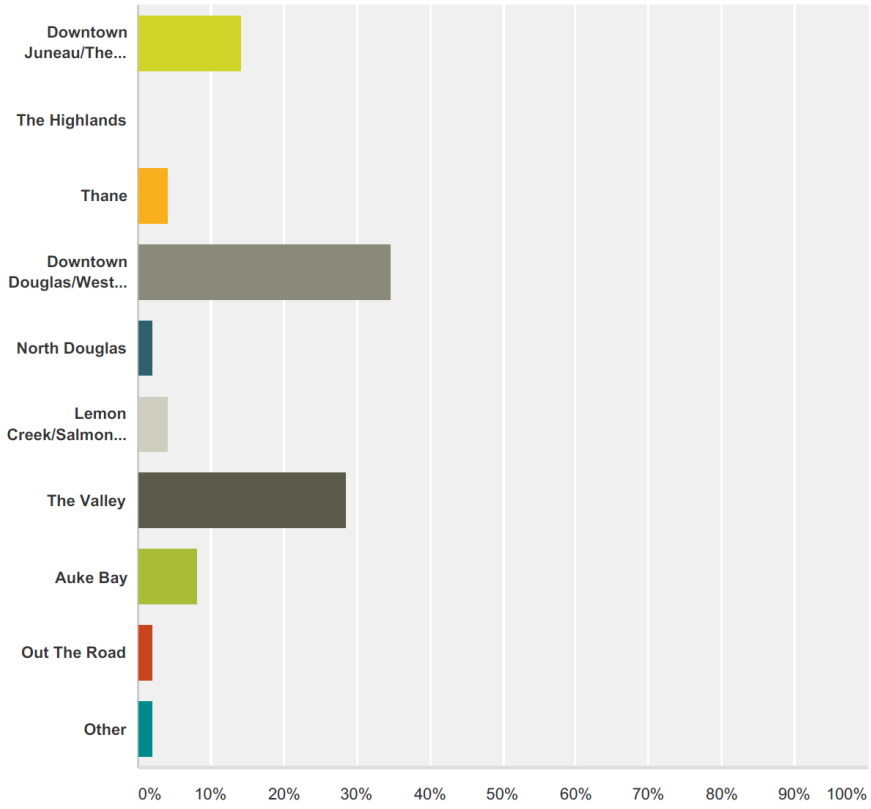
Answered: 49 Skipped: 0



Answer Choices	Responses	
Age 0-18	0.00%	0
Age 19-29	2.04%	1
Age 30-45	18.37%	9
Age 46-60	28.57%	14
Age 61-75	42.86%	21
Age 76 and up	6.12%	3
None of your business	2.04%	1
Total		**49**

Q2 Where do you live?

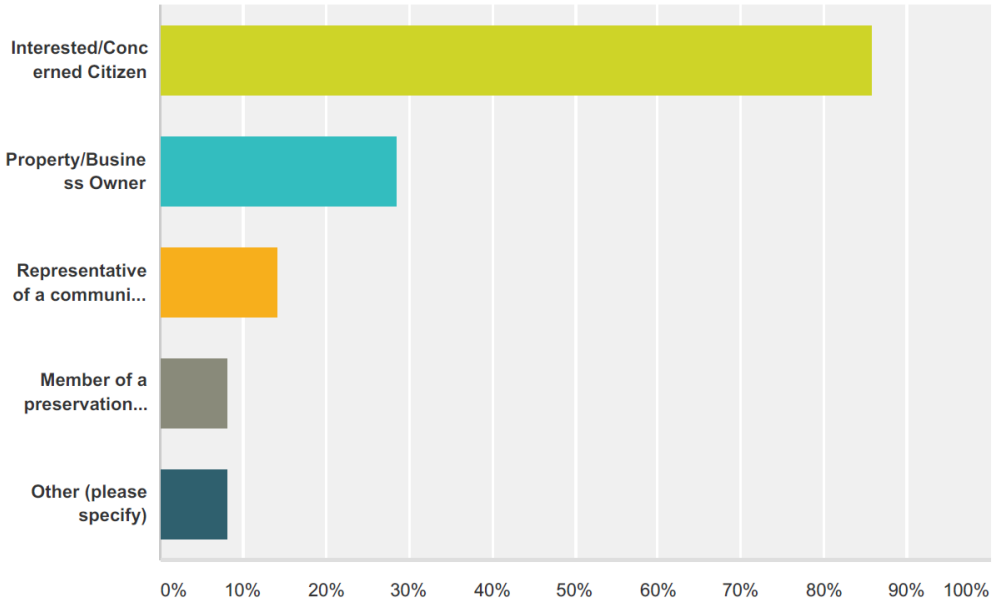
Answered: 49 Skipped: 0



Answer Choices	Responses	
Downtown Juneau/The Flats	14.29%	7
The Highlands	0.00%	0
Thane	4.08%	2
Downtown Douglas/West Juneau	34.69%	17
North Douglas	2.04%	1
Lemon Creek/Salmon Creek	4.08%	2
The Valley	28.57%	14
Auke Bay	8.16%	4
Out The Road	2.04%	1
Other	2.04%	1
Total		**49**

Q3 What is your connection to Historic Preservation? (Please check all that apply)

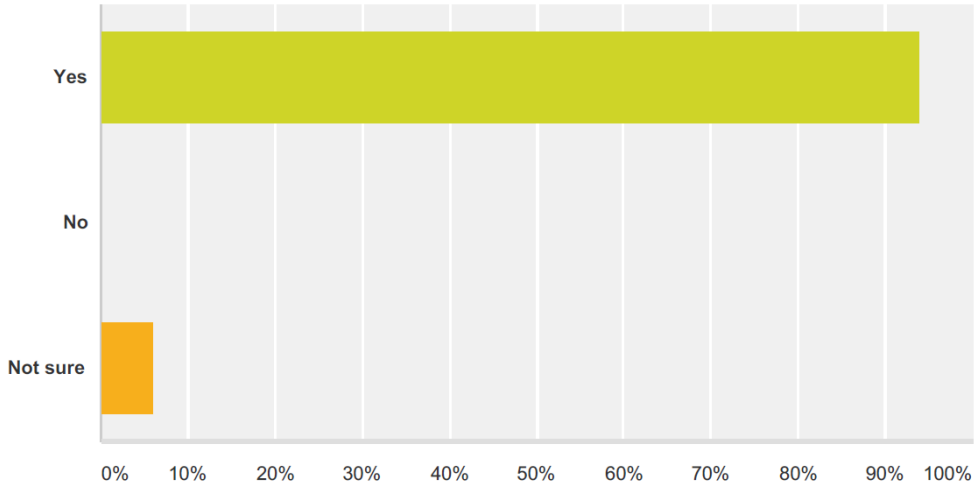
Answered: 49 Skipped: 0



Answer Choices	Responses	
Interested/Concerned Citizen	85.71%	42
Property/Business Owner	28.57%	14
Representative of a community group	14.29%	7
Member of a preservation organization	8.16%	4
Other (please specify)	8.16%	4
Total Respondents: 49		

Q4 Do you believe historic preservation is a worth while goal?

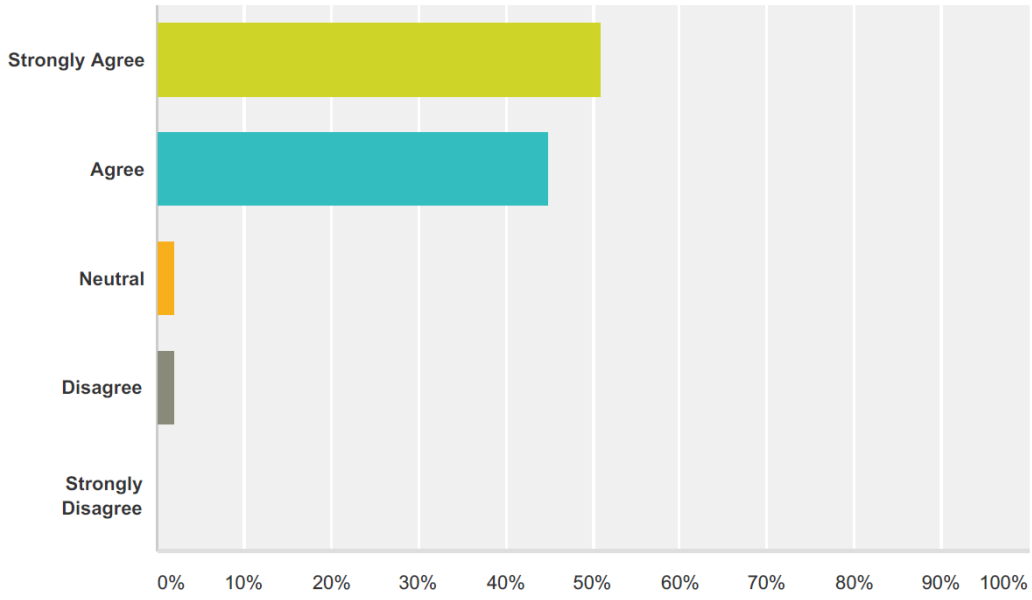
Answered: 49 Skipped: 0



Answer Choices	Responses
Yes	93.88%
No	0.00%
Not sure	6.12%

Q5 Please state whether you agree or disagree with the following statement: It is important to identify and preserve the historic, archaeological and cultural resources within Juneau.

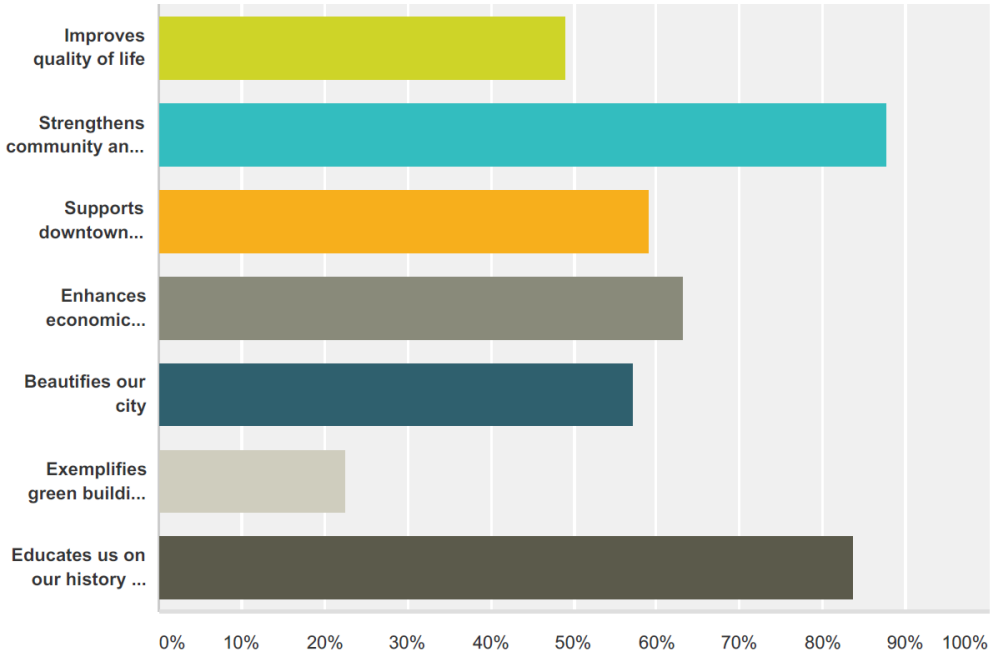
Answered: 49 Skipped: 0



Answer Choices	Responses	
Strongly Agree	**51.02%**	25
Agree	**44.90%**	22
Neutral	**2.04%**	1
Disagree	**2.04%**	1
Strongly Disagree	**0.00%**	0
Total		**49**

Q6 If you agreed with question 5, why do you think it is important to preserve Juneau's historic resources? (Click all that apply)

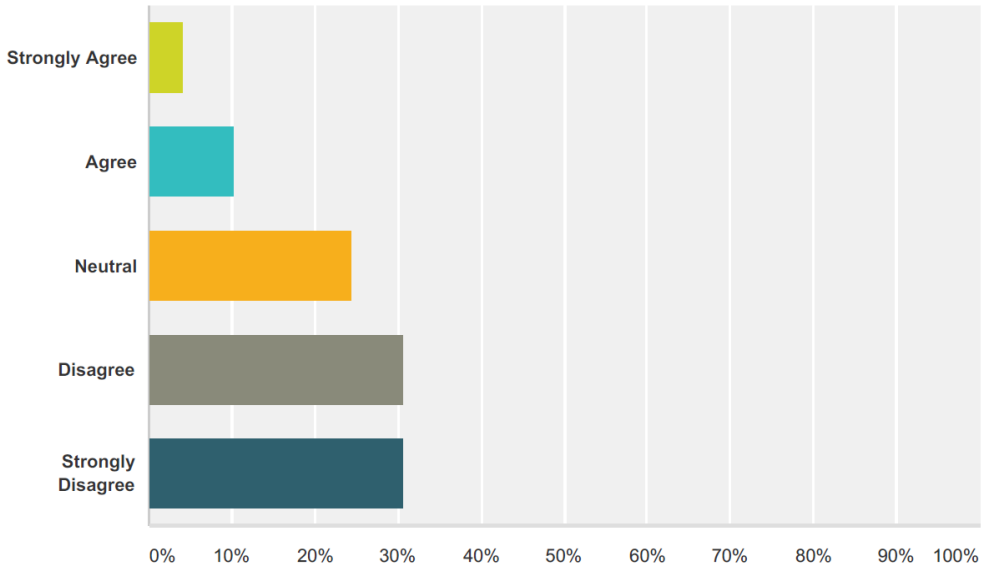
Answered: 49 Skipped: 0



Answer Choices	Responses	
Improves quality of life	48.98%	24
Strengthens community and provides a sense of place	87.76%	43
Supports downtown revitalization	59.18%	29
Enhances economic opportunity	63.27%	31
Beautifies our city	57.14%	28
Exemplifies green building and sustainability	22.45%	11
Educates us on our history and culture	83.67%	41
Total Respondents: 49		

Q7 Please state whether you agree of disagree with the following statement: Preserving Juneau's historic, archaeological and cultural resources hinders development.

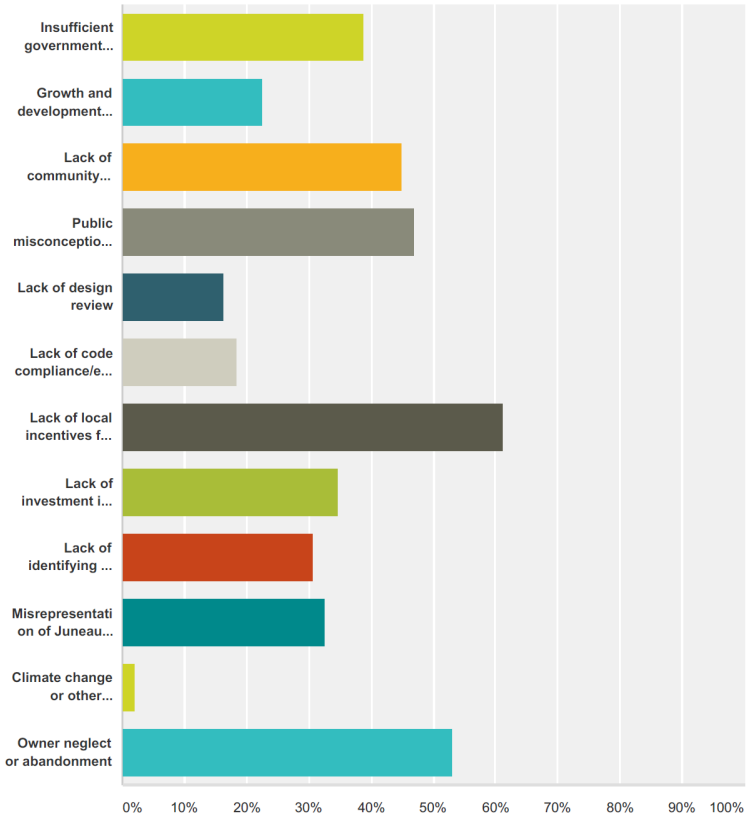
Answered: 49 Skipped: 0



Answer Choices	Responses	
Strongly Agree	4.08%	2
Agree	10.20%	5
Neutral	24.49%	12
Disagree	30.61%	15
Strongly Disagree	30.61%	15
Total		49

Q8 What do you think are the biggest challenges facing Juneau's historic resources? (Click all that apply)

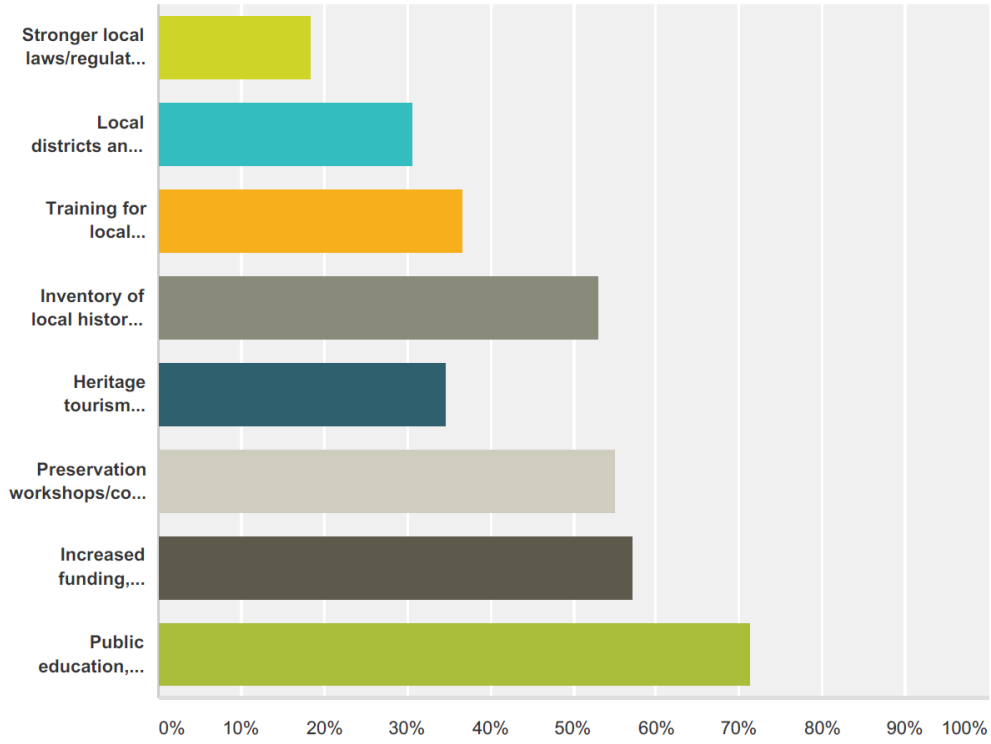
Answered: 49 Skipped: 0



Answer Choices	Responses	
Insufficient government funding/incentives	38.78%	19
Growth and development pressure	22.45%	11
Lack of community interest in historic preservation	44.90%	22
Public misconception of historic preservation	46.94%	23
Lack of design review	16.33%	8
Lack of code compliance/enforcement	18.37%	9
Lack of local incentives for preservation (for example: property tax credits or abatement, facade improvement grants, historic building identification plaques, etc.)	61.22%	30
Lack of investment in the historic district	34.69%	17
Lack of identifying and interpretative markers, including identification of the historic district, Alaskan Native cultural sites, interpretive signs, historic building plaques, etc.	30.61%	15
Misrepresentation of Juneau's history and/or Alaskan Native culture and history by the tourism industry	32.65%	16
Climate change or other environmental concerns	2.04%	1
Owner neglect or abandonment	53.06%	26
Total Respondents: 49		

Q9 Which of the following preservation tools do you feel are the most effective and realistic approaches for preserving Juneau's historic places? (Click all that apply)

Answered: 49 Skipped: 0



Answer Choices	Responses	
Stronger local laws/regulations	18.37%	9
Local districts and design review	30.61%	15
Training for local government decision-makers	36.73%	18
Inventory of local historic places	53.06%	26
Heritage tourism programs	34.69%	17
Preservation workshops/conferences for property owners, developers, realtors, etc.	55.10%	27
Increased funding, grants, and tax incentives	57.14%	28
Public education, recognition and interpretation program	71.43%	35
Total Respondents: 49		

Public Meeting Comments and Open-Ended Survey Question Responses

May 31 Public Meeting Comments, Page 1 of 5

To Me, Historic Preservation Is..	Juneau's Historic Preservation Plan Will...	3 Actions to Meet This Vision	5 Places Important to You
embracing Juneau's unique grounds and communities	help create more opportunities for education	participate in a survey of existing historical sites	historic hotels
restoring historic buildings	create or encourage more signage about the existing historic buildings	map historical and cultural resources in space and time throughout CBJ	Merchants Wharf
curious	rebuild all longhouses or assist in doing so	address increased regulations, perceived/realized regulations	Eagle Valley Trail
preserving built environment for education and enjoyment	put up signage in Tlingit Language	organize, strategize, publicize	Amalga Area
respecting the built form	a guide for authentic historic tourism destination	information about what identifying as historic building/blocks/neighborhood means (paint?) change features?	West side of Mendenhall Lake
preserving historic sites (not just in HD)	develop plaques and pictures of buildings and land for observation by tourists and other public when they visit	expand/enlarge the downtown historic district--controversial	Skaters cabin
nice town--preserving that	identify our surroundings by their traditional Tlingit place names with signs	specific information about advantages for Juneau as historical tourist destination	Sheep Creek Valley
presenting history through photography and in person	save the remote areas of Juneau and reconnect them to the public by rebuilding/repaving historic roads/trails	get preservation in the public dialogue (multigroups, multiages)	Perseverance Valley
the past, the present and how we use it in the future	look at reclaiming the lost property AJ and property that was sold to Avista	streamline focus goals for most practical effective document	The Village (Auke)
the culture that explains who we are, what we are, THE ViLLAGE	spruce up and clean up downtown	identify funding and project resources to support goals	Berners Bay Village
restoring the built environment	help transmit and protect, evolve a sense of place, give vibrancy to past and present activities of Juneau's people	respectfully document and create signage which accurately tells the history of segregation in Juneau and also uplifts the people who fought for desegregation---William Paul, frank Johnson, the ANB, ANS, Elizabeth and Roy Peratrovich, etc.	Sealaska Heritage
maintaining a city that people want to live in and is attractive to visitors	preserve buildings and maintain	get the city to think history instead of modern every building city builds is modern design	Sandy Beach to Lucky ME
understanding the past	be integrated with ongoing development, help clean up and improve downtown	organize, look for financing, get more community support, talk it up in the newspaper and radio	Treadwell
restoration of built environment	make all of downtown look historic, make theme	listen to the elders	Douglas Indian Village
in my blood	make a nicer town and place to live with the old buildings maintained and spruced up	respect each others opinion	Old bookstore on N. Franklin (between front and second)-Capital theater building?
recognizes first people	help juneauites identify what spaces and structures are important for them	be aware of what/how a specific place was used, its purpose	houses on Starr Hill
communicating history	propose develop a process for documenting culturally and historically important places and resources	create tax incentives	CCC cabin on Turner Lake
make history tangible	identify historic resources and assess state/condition	provide funding, enforce litter laws	Juneau Ice Field
roots of the community	protect and preserve natural and cultural resources that have cultural and historical significance to the peoples of Juneau area	generate community interest	Sheep Creek area/power plant

May 31 Public Meeting Comments, Page 2 of 5

To Me, Historic Preservation Is..	Juneau's Historic Preservation Plan Will...	3 Actions to Meet This Vision	5 Places Important to You
preserve sites, structures, landscapes important to community, cultures, groups	organize, standardize and highlight significant historical places as identified by the community to develop, maintain a vibrant place to live.	get it into school curriculum	Last Chance mining museum area
past, present and future	enforce the legacy of hydroelectricity, by preserving extant buildings and places as well as developing new generation of historic sites i.e. sheep creek, nugget creek. Underground utilities can be part of this preservation	listen to all voices in the community, uncover history from all sources	Montana creek trail/area
cool stuff to show my kids	to find answers how to preserve original Juneau village that made Juneau who we are today	obtain funding	Amalga and Peterson area
language preservation/revitalization	make a plan for saving preserving the history of the Juneau area to show and inform citizens as well as visitors	complete proposed plan	Village council house needs rebuilding and replaced
tool for understanding how we are and how we got there	provide a framework of places, activities and values the represent our community	approve from public support	Auke Rec
the Village	our history as a place for gathering food was important to us	get needed funds to complete proposed plan on table	Rebuild Treadwell recreation hall
	identify places that have largely been ignored but if preserved and interpreted will provide a fascinating learning experience for residents and visitor alike	put together a PR plan for the public education process, include the schools	state hist archive
	identify and protect historic buildings, sites, structures that remain in the town/borough for future generations. Ex loss of important buildings like the Gastineau Hotel, Cropley House	inventory historic buildings, using the current city records, define historic bldg.	movie theater downtown on front street
	help the village, bring out history of the village and people	enlarge historic district to 4th or 5th street	underground mining tunnels (AJ and related)
	preserve our history	revisit concepts such as historic core or downtown historic district	Arcticoy building
	maintain what we have	take risks	Auke rec
	will save the stories about the history of the buildings and neighborhoods, and let people know how important it is to the future of Juneau	manage congestion and noise	NW Douglas - Peterson Creek drainage
	uncover lost history	engage property owners	the historic Juneau beach front
	enlighten and educate residents and visitors about Juneau's culture and history, through preserving, restoring and uncovering historic/cultural buildings and places and their stories	quantify economic opportunity	natural area parks
	be useful and not sit on a shelf	identify, inventory and assess condition of historic resources	the bowling alley
	will be a living document that allows for change	illustrate economic benefit--existing and potential	totem poles- all of them
	be a guide for development	present to the assembly with community support (and present again if needed)	mendenhall campground at Auke Rec
	provide checks and balances before a place or building or artifact is removed or destroyed	fund the goals of the plan	sacred places and origin

May 31 Public Meeting Comments, Page 3 of 5

To Me, Historic Preservation Is..	Juneau's Historic Preservation Plan Will...	3 Actions to Meet This Vision	5 Places Important to You
	provide clear guidance in land use management decisions	gather people to help	the village (downtown)
	meet with elders of local clans to find out what they would like to preserve and how	partnerships between community entities on common goals- tourism with preservation groups	Indian Point
	provide a basis for measuring success or failure	maintain and preserve your historic property, volunteer to help those in need to protect their historic property	Gardens for Auke Rec for food!
	not use the term "pre-history" what does that mean? Madonna moss uses the term "deep history" instead	identify new historic district to expand/new	the village (original in Douglas)
	respectfully address Native history in the area	fun is good, funding is better--create list of priorities of projects to be pursued/funded	Berners Bay Village
	define the terms "history", "resources" etc.	need money/or donated time	Douglas Indian Village
	tell the history correctly- start at the beginning and correctly tell Native history. History is the foundation	communicate with property owners and people with specific interests	Dzintik'I Heeni (Gold Creek-mouth)
		consistently communicate those goals to all stakeholders	Indian Point
		develop clear, actionable goals and define the stakeholder responsible for achieving each goal	Auke Village in Juneau
		learn about the different types forms of history in our community	gold creek watershed including granite creek
		conduct and promote survey of all Juneau residents as to three buildings/site each considers most important	silverbow
		meet with elders	last chance
		create a website (specific to this plan) that is easy to find, navigate, and keep it updated	evergreen
		speak out publicly in support of historic preservation- assembly, newspaper, social media, community organizations	Douglas village longhouses
		develop historic preservation incentives- tax credits, low interest loans, design assistance	cope park
		educate one another	St. Nicholas Church
		get advice, information from groups that already know about the history	governor's house
		educate population as to importance, relevance, and economic opportunities	Treadwell mine office building
		take it slow, don't try to do more than is financially feasible to accomplish	capitol building
		define public goals, prioritize and fund through the CIP process	historic downtown waterfront
		implement a community energy plan which leads to living within our hydroelectric capacity	last chance mining museum area

May 31 Public Meeting Comments, Page 4 of 5

To Me, Historic Preservation Is..	Juneau's Historic Preservation Plan Will...	3 Actions to Meet This Vision	5 Places Important to You
		provide all information on site signs in English and Tlingit	state capitol
		make it fun	Douglas island cemeteries
		educate, educate, educate	skaters cabin
		spread the word through many different types of media (newspaper, Instagram etc.)	deharts
		educate about the history	senate building
		revisit property tax system so that dilapidated properties are improved- through very high taxes on buildings that are not maintained	wetlands
		learn the history of the first people!	gold creek
			Treadwell ditch trail
			Auke Rec/village
			shrine of St. Therese
			fish creek fort
			trail from knutsen farm (airport) to Amalga
			Amalga town and eagle
			valentine bldg.
			original place where first electrical generator was placed
			gold creek
			AJ mine buildings in last chance basin
			Harrisburg bldg.
			franklin bldg.
			deharts
			red dog salon
			empty lot next to parking garage
			Treadwell mine historic park
			sentinel island lighthouse
			capitol building
			terry miller bldg.
			downtown surrounding the historic district
			lighthouses
			downtown residential neighborhoods
			sentinel island lighthouse
			downtown historic district
			the shrine
			governor's house
			the old Indian school in Douglas (now the Juneau Montessori)
			AJ remaining up above town
			some of the boarded up downtown buildings that were part of AELP/Juneau mining properties
			engine repair building up at last chance mining museum

May 31 Public Meeting Comments, Page 5 of 5

To Me, Historic Preservation Is..	Juneau's Historic Preservation Plan Will...	3 Actions to Meet This Vision	5 Places Important to You
			capitol theater building
			Treadwell office building
			eagle beach
			the new SLAM bldg.
			city museum
			X'unaxi (Indian Point)
			Gatheeni- stream which pours out from Aak'w (Auke Lake)
			the old Douglas Indian Village (Savikko park)
			Kaxdigoown Heen (Montana Creek)
			Aanshgaltsoow (Auke Rec)
			old Juneau Opera House or houses
			Taku River Tlingit Villages
			Jensen Olsen Arboretum
			The Dock
			merchants wharf
			Mendenhall Glacier and Visitor Center
			Jensen Olsen Arboretum
			the destroyed Douglas Indian Village
			Juneau Indian Village
			Auke Village
			Auke Cape
			Mendenhall Glacier and environs
			AJ bldg. down at the end of Franklin
			downtown Juneau Historic District
			Downtown Douglas and Sandy Beach
			all maritime places- docks, waterfront etc.

August 25 Public Meeting Comments, Page 1 of 3

3 Favorite Places	Challenges to HP	Tools to Overcome Challenges
Douglas Indian Village	funding costs	collaborate with private govt
Juneau Indian Village	costs funding	public fund drive
Treadwell Mining Area	funding	historic tax credit education, seminars, handouts
Historic Downtown	costs to keep an old building in downtown	tax exemption for privately owned historic sites
Theater, Bank, Senate Building	funding	federal grants
Skaters Cabin/other CCC work	$$	recognition of first peoples, embrace their cultures
Capitol Building	prioritize projects	stories on website categorized people economics, architecture, etc.
City Museum	building code	new or expanded historic districts
All of Front St and Franklin	limited space for development	use cbj website for historic stories
Basin Rd and Flume Trail	limited space/opportunity	start weekly/monthly story program on tidbits of history, use Jim (Geraghty?)
House of Wickersham	cost	interpretive signs
Don's House (Don Harris)	lack of financial incentives	historic self walking tour maps
Mining Museum	no obvious economic incentive	signs
Evergreen and Douglas Cemeter	high financial cost to rehab and maintain historic properties and traditional villages	Tlingit Language Signage (SOA? DOT?CBJ?)
Perseverance Trail	cost for commercial buildings and residential buildings	education
Indian Point	cost	continue to survey and update properties as needed
AJ Mining Area	not necessarily highest and best use	nominate sites
Auke Village	financial incentives to preserve historic buildings	inventory Douglas, including village site and downtown Douglas
Carl and Heather's Home		educate property owners on pros/cons of preservation
Old trails near Auke Meadows	how benefit is measured by community? Need cultural alliances	signs to match maps
Berners Bay	lack of knowledge about funding sources	brainstorm win/wins- vacant historical buildings, affordable housing, financial burdens/cost

August 25 Public Meeting Comments, Page 2 of 3

3 Favorite Places	Challenges to HP	Tools to Overcome Challenges
	lack of public education about preservation- many believe bldg. and/or site preservation is a burden both financially and regulatory wise	let people know what is allowed (code wise)
	lack of awareness from general public	give more power to HRAC
	lack of knowledge of importance/heritage	creative guidelines to ease bldg. code, encourage maintaining historic fabric while allowing modern use/bldg. methods
	no one understands what preservation means	guidelines and programs for homeowners who want to have their homes on the historic register
	lack of knowledge and appreciation of historic values	give CBJ historic preservation commission authority, not just advisory
	lack of public or general knowledge about preservation and opportunities	guest speakers , elders, food prep, art, concepts
	publicity and accessibility of historic treasures to day visitors in summer (how to get the tourists to the historic places they can't walk to)	tax incentives
		reduced permit fees
		tax incentives for restoration
		create incentives and/or educate about benefits
		create TIF for downtown district-funds go back into district
		tax credits for historic properties
		create umbrella preservation non-profit that can spearhead preservation efforts
		better or more brochures, advertising.
		historic standards and guidelines
		site of friends of c.m.
		unbalanced representation- reach out specifically to native groups
		use JAHC for education/outreach
		radio spots--short pieces on special places
		open community outreach, "progressive vitality"
		use stereotypes to do outreach---create fun community events like fry bread vs funnel cake
		organized monthly weekly walks and learning opportunities

August 25 Public Meeting Comments, Page 3 of 3

3 Favorite Places	Challenges to HP	Tools to Overcome Challenges
		work with choose Juneau/CBJ to create a website with inventory, stories etc.
		create a visitation punch card--places of local community/cultural importance get visited, get a punch on the card (i.e. NPS passport), or consider a scavenger hunt event/Pokémon Go type thing
		include history of specific Juneau historic locations in school curriculum (similar to Art box concept)
		reach out to Tlingit elders
		directory of "who to ask" for private owners--how-tos
		historic tours for locals
		weekly news article on history and places
		volunteers/docents to speak about local historic quick trip options (i.e. Mobile Maidens)
		PR charts to cruise ships to include a local historic sites side trip for day visitors who want a piece of local color
		encourage year round use of stories and support facilities- i.e. housing
		work with tourist industry to create historic tours
		work with Sealaska Heritage on center NW art
		One page brochure with complete map of Juneau on one side and numbered with points of interest and description of each number on other side
		tourism shuttles to/from historic sites for 1 1/2 hour round trips with a couple of short stops for historical tour
		training for tourist information staff
		maps for a historic walking tour of downtown
		recognition of phonetics and language on cultural signage
		interpretive signs and historic tours
		signs at the wharf and Treadwell
		more interpretive signage and clear signage everywhere

DIG Meeting Comments, Page 1 of 3

3 Favorite Places	Challenges to HP	Tools to Overcome Challenges
Territorial Govt Bldgs.	funding costs	collaborate with private govt
St Nicholas Russian Orthodox Ch	costs funding	public fund drive
Sandy Beach	funding	historic tax credit education, seminars, handouts
Zach Gordon House? Youth Cent	costs to keep an old building in downtown	tax exemption for privately owned historic sites
Hangar on Wharf	funding	federal grants
Willoughby Village Area and Lan	$$	go to different groups (Filipino etc.) and ask for input
Last Chance	fear of cultural prejudice	use archives for information
Perseverance Trail	historical ignorance	engage youth in discussion, they must live with the results
Treadwell	making choices on what's most important	promote and use the historical library
Cope Park	agmt on what to with or about certain bldgs.	work cooperatively with other groups/plans
Capitol Bldg.	education to building owners on how to do a historical reno	continuing ed courses for building industry, including contractors
	public education re Juneau/Douglas history	classes and workshops for building owners
	public funding when priorities differ	when a bldg. has been upgraded, show as an example
	priorities (everyone has their own idea of what's important	public media and native corp outreach
	HP not a high priority	significant time given for community dialogue to learn the various histories and define historic preservation
	hard to gain consensus on prioritizing	educating legislators on the historical significance of Juneau
	need a mission, need a philosophy on why we do it	work with the schools to educate students on what is history and what they think Juneau should focus on
	historic district interpretation	map delineating historic places (similar to art walk)

DIG Meeting Comments, Page 2 of 3

3 Favorite Places	Challenges to HP	Tools to Overcome Challenges
	dominant culture versus native culture and how to define history	make formal structure to neighborhood associations to use these for education and support
	varying histories	increase communication regarding ongoing education events (e.g. museum)
	recent history of interpretation of historic district, getting public buy in	connections to jsd curriculum and objectives, lesson plans
	what makes something historic	downtown library and exhibit space available
	how to right size regulations	clearly define parameters of inventory and designation
	balancing preservation with development goals	redefine historic district and cultural district, expand period of significance and inclusive of other cultures
	climate change	have elementary students draw pictures of historic sites (like art box)
	how to preserve sacred places who's location must remain confidential	make a list of what we have and distribute that info
		need cbj approval of destruction, reconstruction and renovation of buildings over 100 yrs.
		presentation on history of Juneau at fireside chat
		public art archive
		history as living --using art to tell our story
		maybe allow and help with cost of signs on buildings of the original date and use of buildings
		include several pages in annual travel Juneau publication
		marketing, collaborate w/SLAM
		historic tours with options of varying histories, celebrate the diversity
		signage on old historic buildings
		finish and adopt the plan
		eliminate parking requirements for newly designated historic sites

DIG Meeting Comments, Page 3 of 3

3 Favorite Places	Challenges to HP	Tools to Overcome Challenges
		regulations should keep it simply stupid
		downtown business district to tax themselves and to gain agreement on actions
		grants or fundraising to have Rockwell wall painted
		establish and native and non-native committee for regulations and land use
		clarify regulations and land use related to HP
		make tourists move up the hill
		guides to teach, help to get tourists to places that are not walkable from cruise ship
		have Juneau historian speak on cruise ships
		historic walking tour map for tourists
		work more closely with the cruise industry
		market tourism industry
		liaison to DBA and main streets

Response to Online Survey Questions 10 and 12, Page 1 of 2

What place(s) in Juneau mean the most to you?	Do you have any comments or other thoughts on historic preservation in Juneau to share with us?
Cope Park. Treadwell, Sandy Beach	
Cope Park. Treadwell, Sandy Beach	
Alaska Juneau Mill on Mt. Roberts Treadwell Mine area	
I love downtown Juneau, Basin Road and the flume trail. It feels like walking through history. I also think Auk Rec and summer camps of the Tlingit peoples are very important to remember and protect.	Thank you for doing this!
Auke Rec Basin Road Sandy Beach historic area Mendenhall Wetlands Glacier Historic Downtown buildings Eaglecrest North Douglas	Don't over develop downtown Juneau just for tourist industry. Preserve historic buildings.
unsure, recently moved to city	
Treadwell ruins Perservance ruins Downtown Juneau	Glad that some people are doing planning.
Auke Rec. Auke Lake	
Evergreen Bowl. Sandy Beach. Treadwell Ditch Trail and mine ruins.	
Annex Creek Power Plant (not the transmission line)	
No answer	All of the groups/actors should work together and keep the community informed.
Downtown Historic District	
Downtown Historic District	
Franklin Street structures Treadwell area AJ mine area Houses in downtown area	It's the flavor of the time. So many cities are doing this.
Douglas Island	
Native sacred sites Early religious sites Early US Government sites	
Downtown Core	Love it, if we can afford it.
Sandy Beach Russian Orthodox Church Perseverance	
Last Chance Perseverance Flume Trail Cope Park Area	
Jensen Douglas Arboretum Shrine of St. Theresa Skaters Cabin Senate Building	
No answer	
Downtown - Franklin & Front St. area Waterfront - MHTF wasteland (should be used and beautified instead of wasted	
House of Wickersham Flume Trail Treadwell Mine	
Governor's House, Capitol, etc.	I am working on the history of Juneau Garden Club. The Club has been actively working on beautification o Juneau and the Valley for 70 years.
Gov Mansion, Capitol	
Douglas Indian Village, Juneau Indian Village, Auke Village,Taku River Area, Treadwell area, downtown Juneau and	I think visitors and locals alike would enjoy learning about and seeing the preservation of our past.
Capitol Building City Library Front an Franklin Streets	Always use a carrot before a stick.
downtown, glacier	
Natural wild places. The historic places that were obliterated on South Franklin. The Flats district. Perseverance Trail.	
Sandy Beach Douglas	Would like to see more native culture in the gold mine historic districts, including Douglas and Sandy Beach area.
Physical beauty of the place, not buildings	Need flexibility in approach not rigid adherence to rules. Approach to Sealaska building one example when committee did not approve the bldg. Filipino Hall another example with approach to mural. In looking at art work development downtown it does not have to all be gold miners, etc. you can have the new exist quite well with historic if done right
old mining areas	

Response to Online Survey Questions 10 and 12, Page 2 of 2

What place(s) in Juneau mean the most to you?	Do you have any comments or other thoughts on historic preservation in Juneau to share with us?
Old mine sites throughout CBJ, cemeteries, all historic buildings downtown and on Starr Hill, Auke Village, Capitol, Glacier and visitor center, historic buildings Douglas, Coast Guard building on waterfront, Merchants Wharf, old Native village, Governor's house, Evergreen Bowl	
Treadwell mine area, Brotherhood Bridge area, Glacier and surrounding trails, Cope Park, etc.	
Downtown historic district	Just reading the questions and limited answers provided speak volumes to the lack of respect and understanding the survey creator has for the role the private for-profit business sector has in the downtown core.
Natural places	
I think downtown is unique, but I think there are many building and property owners that make choices not to reinvest in their property. I also know there is a push to bring "higher class" groups of people into downtown. But I do fear that this will squeeze out what little moderate and low-income housing is available. Lastly, I think we can definitely do a better job remembering, honoring, including the the history and contributions of our Tlingit brothers and sisters.	
downtown corridor; neighborhoods such as starr hill and chicken ridge;	in answering the above question i was struck by my inability to include any place that represents the heritage of native Alaskans. They have a unique and beautiful way of looking at structures within the natural environment. This approach is evident in subtle ways and it would be nice for us as well as tourists to be able to celebrate that.
Mendenhall Glacier Downtown District Auke Bay area	I'm not terribly familiar with this issue, but I would like to be more informed.
I love our historic downtown.	
Capitol, Governor's House, Treadwell, Mining sites and trails, Mendenhall Glacier Area, Auke Rec, Downtown	A historic resources walking map of downtown that included the historic district, mining statue, USS Juneau, Main Street (Bronze Bear, Seward Statue, Capitol, City Museum), Governors. House, Empty Chair sculpture, Russian church, Native Guard statue, APK Museum (SLAM), Whale sculpture and others that relate to our history.
Downtown Douglas and Juneau "Indian Villages".	
Treadwell area, perseverance basin, auke rec/village.	
Lemon Creek. It has no preservation advocates but plenty of business advocates.	Need to think beyond Juneau and its mining history. Wilderness preservation and Native presence in the Juneau area has its own stories to tell.
Every place in Juneau means the most to me. I have been here and watched what has happened to this town. When you see South Franklin Street look like there is a hurricane coming...you know tourist season is over. Downtown just died....but it will come alive again in the Spring...Where are the FACADES that make Juneau Juneau? International Diamonds Tanzanite Jewelers ....no matter where you go and what tour ship you disembark they All look the same...	Current CBJ mentality seems to be to get rid of anything that is over 30 years old....tooo bad ...they don't understand that they are standing on the shoulders of those who went before them A Whale that shoots water out of its fins? Yeah right...I am soooo excited. NOT! This is what we are saying Juneau was built on and represents?
Capital buildings, Treadwell and AJ mines.	
Don't have a favorite. I just love everything about the history of this lovely place, and want it to stay accessible to all.	
More hiking	More activity for young people
Glacier, wetlands, museums	

CBJ's Historic & Cultural Preservation Plan

Regular Planning Commission Meeting
November 12, 2019

Historic Resources Advisory Committee (HRAC)

Zane Jones, Chair
Don Harris, Vice Chair
Shauna McMahon, Secretary
Shannon Crossley
Gary Gillette
Myra Gilliam
Charlie Kidd
Dorene Lorenz
Chuck Smythe

Thank you!

What is Preservation Planning?

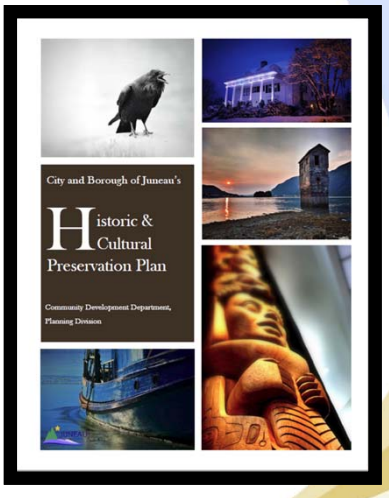
A proactive way to provide for the preservation of the historic resources and character of our community.

Focus on public input to identify significant historic and cultural resources and the challenges that come along with preserving them.

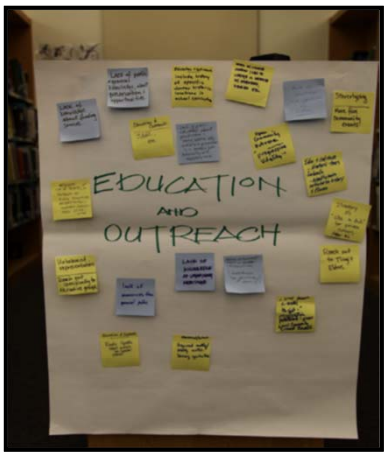
Articulate preservation goals and prioritize strategies to address challenges.

Why Does CBJ Need a Preservation Plan?

- Including a preservation component as part of our long-range planning initiatives is a way to recognize the importance of local heritage and the built environment.
- Clearly articulated goals in an adopted plan will make CBJ more attractive to granting agencies.
- Required to maintain CLG status.



The Planning Process



How the Preservation Plan is Organized?

Five Distinct Components of a Preservation Program:

1. Administration and Management Tools
2. Resource Inventory and Identification
3. Incentives and Benefits
4. Education and Interpretation
5. Advocacy and Partnerships

Each component has a vision, goals and prioritized action items.

- Near-term action items:1-5 years
- Long-term action items:5-15 years

The plan will have a 20 year life span, be reviewed every two years with an update in 10 years.

CBJ's Preservation Program - Today

·Staffing and preparing the materials for the monthly HRAC meetings and sub- committee meetings

·CLG Grant writing and management

·Assisting the public and other government agencies with local preservation issues

·Reviewing projects that impact Juneau's historic or cultural resources for compliance with adopted plans, regulations and standards

CBJ's Preservation Program - Tomorrow

· Survey and inventory management

· Maintain survey and data systems

· Grant writing and management for national grants

· Demolition review

· Neighborhood meetings and outreach events

· Manage CDD's preservation webpage

· Information, publications and research

Compliance with the Comprehensive Plan

The 2013 Comprehensive Plan states (page 221): *The existing policy regarding historic preservation, although a basic good start toward recognizing and protecting valuable historic resources, no longer provides the complete protections necessary given the dramatic rise of cruise ship tourism and the resulting pressure on historic resources from the heritage tourism trades. The CBJ government should update and adopt its draft version of the Historic and Cultural Preservation Plan, as well as continually evaluate its existing historic design standards and update its design review process, in order to better integrate preservation activities into broader community and land use planning efforts.*

Compliance with the Comprehensive Plan

Policy 16.1. To identify, preserve and protect Juneau's diverse historic and cultural resources, and to promote historic preservation and accurately represent Juneau's unique heritage through publications, outreach and heritage tourism.

Policy 16.2. To identify historic resources within the CBJ and to take appropriate measures to document and preserve these resources.

Policy 16.3. To increase public awareness of the value and importance of Juneau's archaeological and historic resources, and to educate, encourage, and assist the general public in preserving heritage and recognizing the value of historic preservation.

Policy 16.4. To preserve and protect the unique culture of Juneau's native peoples including buildings, sites, artifacts, totems, traditions, lifestyles, languages and histories.

Policy 16.5. To promote responsible heritage tourism that accurately represents Juneau's unique history while protecting the resources from overuse or harm.

Findings

Based on the information presented, the draft *Historic and Cultural Preservation Plan* complies with the 2013 Comprehensive Plan.

Staff Recommendation

Staff recommends that the Planning Commission consider the draft *Historic and Cultural Preservation Plan* and recommend to the Assembly its adoption as an addendum to the Comprehensive Plan.