

Agenda

Planning Commission - Regular Meeting City and Borough of Juneau Ben Haight, Chair

August 23, 2016
Assembly Chambers
7:00 PM

- I. **ROLL CALL**
- II. **APPROVAL OF MINUTES**
 - A. July 12, 2016 Minutes - Regular Planning Commission
 - B. July 26, 2016 Minutes - Regular Planning Commission
 - C. July 12, 2016 Minutes - Planning Commission Committee of the Whole
- III. **PUBLIC PARTICIPATION ON NON-AGENDA ITEMS**
- IV. **PLANNING COMMISSION LIAISON REPORT**
- V. **RECONSIDERATION OF THE FOLLOWING ITEMS**
- VI. **CONSENT AGENDA**
- VII. **CONSIDERATION OF ORDINANCES AND RESOLUTIONS**
- VIII. **UNFINISHED BUSINESS**
- IX. **REGULAR AGENDA**
 - A. SGE2016 0001 A Conditional Use Permit for an extension to year 2026 and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.
 - B. USE2016 0021 A Conditional Use Permit for the Sweetheart Lake Hydroelectric Project.
- X. **BOARD OF ADJUSTMENT**
 - A. **CONTINUED FROM 6/14/16** VAR2016 0004 A Variance request for a reduction of the frontyard setback for an addition to an existing dwelling.
 - B. VAR2016 0009 A Variance Request to the front yard setback, for a garage with an accessory apartment.
- XI. **OTHER BUSINESS**
- XII. **DIRECTOR'S REPORT**
- XIII. **REPORT OF REGULAR AND SPECIAL COMMITTEES**
- XIV. **PLANNING COMMISSION COMMENTS AND QUESTIONS**
- XV. **ADJOURNMENT**

Agenda
Planning Commission
Regular Meeting
CITY AND BOROUGH OF JUNEAU
Ben Haight, Chairman
July 12, 2016

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 7:07 p.m.

Commissioners present: Ben Haight, Chairman; Paul Voelckers, Vice Chairman; Percy Frisby, Nathaniel Dye, Matthew Bell, Kirsten Shelton-Walker, Carl Greene

Commissioners absent: Bill Peters, Michael LeVine

Staff present: Rob Steedle, CDD Director; Beth McKibben, Planning Manager; Jill Maclean, Senior Planner; Jonathan Lange, Planner II; Tim Felstead, Planner II; Robert Palmer, Assistant Municipal Attorney; Greg Chaney, Lands Manager; Dan Bleidorn, Deputy Lands Manager

Assembly members: Debbie White

II. APPROVAL OF MINUTES

- June 14, 2016 Regular Planning Commission Meeting
- May 24, 2016 Committee of the Whole Planning Commission Meeting

MOTION: *by Mr. Bell, to approve the Committee of the Whole Planning Commission meeting minutes from May 24, 2016, and the June 14, 2016, Regular Planning Commission meeting minutes with any minor modifications by staff or Commission members.*

Mr. Steedle announced that Items CSP2016 0009 and CSP2016 0007 which are consistency reviews for disposal of CBJ-owned property were pulled from the agenda as they are items that do not need to go before the Commission.

Mr. Palmer explained that the items pulled from the Consent Agenda deal with Renninger Subdivision. These two items have been reviewed by the CDD and by the Lands Department. It became apparent, said Mr. Palmer, that these Renninger properties were the result of an Assembly-initiated action which do not need to be reviewed by the Planning Commission, since this was not initiated by a third party.

III. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

IV. PLANNING COMMISSION LIAISON REPORT

Sales Tax

Assembly Liaison to the Planning Commission Debbie White said that at the Assembly meeting held on July 11, 2016, that the Assembly approved placement on the ballot the 3% temporary tax for another five years. It also approved the second option be placed on the ballot to make that 3% sales tax permanent, said Ms. White. The Assembly also approved that an 8% tax on marijuana be placed on the ballot instead of a 5% tax, said Ms. White.

Rezones

The Assembly approved the rezone for the property located between Sherwood Avenue and Engineers Cutoff, said Ms. White.

Dunn Street

The Assembly came to a resolution with the property owners on Dunn Street, said Ms. White.

Appeals

The Olmo appeal will be heard on November 21, 2016. The hearing officer will be Assembly member Maria Gladziszewski, said Ms. White.

The Assembly has also accepted an appeal regarding the small asphalt plant which was requesting that it be located on Sherwood Avenue. Assembly member Loren Jones will be the hearing officer for that appeal, said Ms. White.

AEL&P Construction

The Assembly has been receiving requests to communicate with RCA (Regulatory Commission of Alaska), regarding AEL&P constructing a large plant in the industrial area after it had stated that Sweetheart Creek was not necessary. In light of this the construction of a large diesel powered plant or a hydro plant seemed contradictory, said Ms. White.

Executive Session

The Assembly held an executive session to discuss the City Attorney's evaluation, said Ms. White.

Ms. White said she was happy to see the Planning Commission dealing with unintended consequences as a result of the passage of Title 49 as one big package. Ms. White suggested that when the Planning Commission submits large portions of legislation before the Assembly

that it does so in a piecemeal fashion so that the Assembly can better deal with the information that it receives.

Ms. White said that she had received very favorable comments about CDD Planner Jonathan Lange from a local lender in town. She said the lender appreciated being approached for their input and how it would affect their agency on business before the Planning Department.

V. RECONSIDERATION OF THE FOLLOWING ITEMS - None

VI. CONSENT AGENDA

CSP2016 0009 removed from agenda

~~**A. CSP2016 0009:** Consistency review for disposal of CBJ owned property; Lot 6 & Lot 7, Renninger Subdivision, Lemon Creek~~

~~**Applicant:** City and Borough of Juneau~~

~~**Location:** 1598 Renninger Street & 1600 Renninger Street~~

B. AAP2016 0011: Conditional Use permit for 600 square foot accessory apartment on an undersized lot.

Applicant: Teri Stone

Location: 503 F Street

Staff Recommendation

Staff recommends that the Planning Commission adopt the Director's analysis and findings and approve the requested accessory apartment permit. The permit would allow the development of a 600 square foot accessory apartment on an under-sized lot in a D5 zoning district.

The approval is subject to the following conditions:

1. The applicant must receive a final inspection for the second story deck that built in 2002 and must close out the existing building permit BLD2002-00415 prior to receiving a building permit for the accessory apartment.
2. Any outdoor construction activity shall be limited to 7:00 am to 10:00 pm Monday through Friday, and 9:00 am to 10:00 pm Saturday and Sunday.

AAP2016 0011 was approved unanimously accepting the staff's findings, analysis and recommendations.

~~**C. CSP2016 0007:** Consistency review for disposal of CBJ owned property; Lot 3, Renninger Subdivision, Lemon Creek~~

~~**Applicant:** City and Borough of Juneau~~

~~**Location:** 1589 Renninger Street~~

CSP2016 0008 was moved to the regular agenda.

VII. CONSIDERATION OF ORDINANCES AND RESOLUTIONS - None

VIII. UNFINISHED BUSINESS - None

IX. REGULAR AGENDA

CSP2016 0008: A City Project Review of a proposed lot line adjustment resulting in disposal of CBJ land to a private owner.

Applicant: City and Borough of Juneau

Location: 17255 & 17275 Pt. Lena Loop Road

Staff Recommendation

Staff recommends that the Planning Commission recommend approval to the Assembly of CSP2016 0008, a City Project Review of a proposed lot line adjustment resulting in disposal of CBJ land to a private owner.

This proposal is for a lot line adjustment, said Mr. Lange, which would result in the disposal of 2,345.68 square feet of CBJ land from the Lena Point Natural Area Park to Alaska Power and Telephone for the purpose of laying a fiber optic cable. The Planning Commission is to either recommend approval or denial to the Assembly for the disposal of this portion of the park land, said Mr. Lange. The natural area park is managed by Parks and Recreation and it is classified as a natural area park in the Comprehensive Plan, said Mr. Lange.

Alaska Power and Telephone purchased the home and land for the purpose of installing a fiber optic cable, and upon purchase, discovered that the former owner of the home had encroached into CBJ land, said Mr. Lange. It is this land that Alaska Power and Telephone would like to purchase from CBJ, said Mr. Lange.

The sale of this land would be in line with the Comprehensive Plan in that it is contributing to entrepreneurship and innovation as well as supplying services for the community, said Mr. Lange. It is up to the Commission to decide if this portion of land has more value as park land or would it result in more value to the community facilitating the installation of fiber optic cable for the community, said Mr. Lange. The lot line adjustment would be done within the department and would be a minor subdivision approval, said Mr. Lange.

Commission Comments and Questions

Mr. Voelckers asked if the optic fiber line would run right along the proposed new lot line, and if it would miss improvements already in place.

Mr. Lange responded in the affirmative.

Mr. Palmer explained that for a project such as this which is requested by a third-party, that the Planning Commission actually stands in the shoes of the Assembly and makes the initial determination regarding the disposal of this property. The secondary question is if this action would be in compliance with Title 49 and the Comprehensive Plan, said Mr. Palmer. The decision on this request is balancing the addition to the community of the fiber optic cable with the past owner's encroachment, and balancing the potential harm which could occur as a result of the disposal of natural parkland, said Mr. Palmer.

Mr. Chaney said they are not dealing with the original owners who created the encroachment and that it would be a benefit to the community to obtain a high quality fiber optic connection. It is a small strip of land which is under consideration, said Mr. Chaney. This parcel has been developed as a driveway and yard with the adjacent home for many years, he said. If this disposal was not granted it would mean significant damage would need to be done to the existing home for the installation of the fiber optic cable, said Mr. Chaney. The applicant would have to pay fair market value for the property, said Mr. Chaney, adding that the department head for Parks and Recreation is in favor of the proposal. If the Commission decides not to approve the sale, said Mr. Chaney, the Lands Department would require all of the existing improvements on that land parcel be removed and returned to its natural state. Should the sale be approved, the applicant could be asked to also make some improvements to the park as part of the deal, said Mr. Chaney.

Commission Comments and Questions

Mr. Dye asked what the square footage was for the entire park.

The staff replied that the park is composed of over 50 acres.

Mr. Chaney said he would not be opposed to a recommendation coming from the Commission that the applicant makes a good will gesture towards improving the park as part of the transaction.

In response to a question posed by Ms. Shelton-Walker, Mr. Chaney said the plan is to run the fiber optic cable down that property line and then wrap it around the existing private property on which the home is situated. There would be no impact on the adjacent City park land other than on this small portion of land which they wish to purchase from the City, said Mr. Chaney.

MOTION: *by Mr. Frisby, that CSP2016 0008 be approved with any findings, analysis and recommendations of the staff.*

Speaking in favor of the motion, Mr. Voelckers said he saw this action as the best way out of a complicated circumstance. This would have little impact on the park and the City would be compensated, said Mr. Voelckers.

The motion passed with no objection.

AME2016 0010: A Text Amendment to adopt the Housing Action Plan as part of the CBJ Comprehensive Plan

Applicant: City and Borough of Juneau

Staff Recommendation

Staff recommends that the Commission review the draft Housing Action Plan and recommend to the Assembly its adoption as an addition to the Comprehensive Plan.

According to Title 49, the Planning Commission has to review and recommend to the Assembly any amendments to Title 49 and any adoptions or amendments to the Comprehensive Plan, said Ms. McKibben. The Housing Needs Assessments completed in 2010 and 2012 by the Juneau Economic Development Council found vacancy rates which indicated a critical housing shortage in Juneau, said Ms. McKibben. Documentation goes back at least to the 1970's indicating that Juneau has had a long standing housing shortage, said Ms. McKibben.

The Juneau Economic Development Plan made a clear connection between housing and economic development, said Ms. McKibben. The Affordable Housing Commission received funding approval from the Assembly to undertake the Housing Action Plan. The Affordable Housing Commission then worked with the staff from the CDD and lands departments to develop a scope of work. A planning firm from Alexandria, Virginia, was then given a contract to complete the Housing Action Plan, said Ms. McKibben.

This plan was developed by the consultants, the Affordable Housing Commission, and the community of Juneau, said Ms. McKibben. The draft plan was presented to the Assembly in October, said Ms. McKibben. After some edits the draft plan was available for public review for 30 days, said Ms. McKibben. The plan was presented at two public open houses in March during which public input was solicited, said Ms. McKibben.

The Affordable Housing Commission has approved this plan and forwarded it to the Commission for the review which is before them, said Ms. McKibben.

The plan has shown that if the City wants to encourage housing growth then it will have to put forward its resources, said Ms. McKibben. Policies must be upheld to promote and to encourage housing development. The community needs to create more housing, and encourage more housing in all housing spectrums from young families to the growing senior population, said Ms. McKibben. The use of incentives to encourage housing development is suggested, as is streamlining the permitting process, she said.

The plan is divided into two sections with the first section defining the problem and the second section creating the toolkit to rectify the problem, said Ms. McKibben. One reason discovered

for why Juneau has a housing problem is because at this point the market is stuck said Ms. McKibben.

Consumers can't find a home that they want, companies can't hire additional employees or expand because they cannot obtain housing for their employees, or they cannot hire employees because the employees cannot find housing, said Ms. McKibben. Juneau has a very large proportion of homes which are owned outright, said Ms. McKibben. In a community with a more fluid housing market some of those individuals may sell those homes for smaller homes or condominiums as their families got smaller. Here in Juneau these home owners are staying in their original home because there is nowhere else for them to move within the community, said Ms. McKibben.

Ms. McKibben provided several examples where individuals have been offered work in Juneau and had to turn down those jobs because they could not find housing within the community.

The key recommendations in the plan are:

- 🏠 Formally adopt the plan into Juneau's Comprehensive Plan
- 🏠 Grow the affordable housing fund and its potential uses
- 🏠 Create and fund a full-time housing director (done)
- 🏠 Grow the supply and diversity of housing, aiming at specific numerical targets, through new construction and preservation
- 🏠 Preserve existing affordable housing
- 🏠 Develop new policies for the use of CBJ owned lands and assets to achieve key housing goals
- 🏠 Update CBJ zoning tools/regulations with a focus on housing
- 🏠 Develop small area/focus neighborhood plans with detailed incentives and direction on housing (such as the plan already developed for Auke Bay and underway for Lemon Creek)
- 🏠 Develop a downtown strategy that has explicit housing elements

The plan recommends that 1,980 more housing units be added to the community within 30 years, said Ms. McKibben.

Commission Comments and Questions

Mr. Frisby stated that there is federal money available for housing and asked if this avenue was being pursued.

Ms. McKibben said one of the jobs of the new Chief Housing Officer is to identify ways to grow the housing fund.

Mr. Voelckers asked where the \$3 million figure quoted for the housing fund was derived.

Ms. McKibben said she could not recall the specifics of when this figure was mentioned but she did remember the comment that \$3 million was not enough, but somewhat realistic and attainable.

Ms. Shelton-Walker asked if there were any other staffing positions of which she is not aware.

Ms. McKibben said the only recommendation for CBJ staff is for a housing director. She said Juneau now has a Chief Housing Officer. The plan recommends that the funds be managed but that would not necessarily have to come from existing staff, it could be contracted out, noted Ms. McKibben.

Ms. Shelton-Walker commented that she felt accomplishing the goals would be very difficult without a dedicated position to see that they were accomplished. She said she hoped this would be taken into account when funding for this item came before the Assembly.

Chairman Haight asked if there had been discussion about the provision of tax incentives.

Ms. McKibben said she could not recall at the moment if tax incentives were part of the plan.

Chairman Haight said he has noted over the years that the older houses have continued to increase in cost and value. He asked how this affected affordability of housing for the community.

Ms. McKibben said the plan states that if there is fluidity in the housing market that does not automatically necessitate a parallel drop in housing prices.

Mr. Voelckers said in a stuck housing market it is difficult to ascertain the exact nature of the demand for housing.

Chairman Haight asked what steps were required to make the Housing Action Plan Part of the Comprehensive Plan.

This would go forward to the Assembly with the Manager's report and an ordinance which has to be adopted by the Assembly said Ms. McKibben.

MOTION: *by Mr. Frisby, to adopt AME2016 0010 with the staff's findings, analysis and recommendations.*

Roll Call Vote:

Yeas: Greene, Dye, Frisby, Bell, Voelckers, Shelton-Walker, Haight

Nays:

The motion passed.

X. BOARD OF ADJUSTMENT - None

XI. OTHER BUSINESS

A. Housing Presentation by Scott Ciambor, Chief Housing Officer

Chief Housing Officer Scott Ciambor thanked Ms. McKibben and the other CDD staff as well as the volunteer hours put in by the Affordable Housing Commission members. Mr. Ciambor informed the Commission of the positions he has held to qualify him for the position of Chief Housing Officer. There are three housing markets to consider simultaneously, said Mr. Ciambor: fair market housing with single family homes and condominiums, affordable housing, and subsidized housing. It is important to realize that help for the housing market in Juneau has to come from within, said Mr. Ciambor.

As of 2010 the largest gaps for the homeless was supported housing for the chronically homeless and assisted living, he said. Housing First is addressing the chronically homeless and an assisted living facility has just been approved for the community, said Mr. Ciambor.

Most municipal resources across the country go to 80% area median income and below, said Mr. Ciambor. Those are the families and the income ranges which typically have the most difficult time locating housing, he said. That is where most of the federal aid falls, he said.

Workforce housing is in a slightly different range, said Mr. Ciambor. Workforce housing falls between 50% and 120% of the area median income, he said. One hundred twenty percent is about \$100,000, he said.

The availability of data has proven very successful in enabling developers to obtain federal funding for housing projects, said Mr. Ciambor. The Community Development Block Grant is a primary source of funding for affordable housing development, said Mr. Ciambor.

Juneau has by far the most capacity in the state for housing those in need of shelter, said Mr. Ciambor.

The City and Borough of Juneau is currently working on a mobile home down payment program and property tax exemptions, said Mr. Ciambor. The Juneau Housing Trust which is a community land trust buys a home which they then resell. The land on which the dwelling

stands remains with the trust, said Mr. Ciambor.

A new program for market housing provides grants for homeowners to build accessory apartments, said Mr. Ciambor. There was funding for 12 homes and they are in the process of construction or have completed construction, he said. On the state level there is the subdivision property tax abatement ordinance which could provide the Assembly with another tool to incentivize home construction, said Mr. Ciambor.

To incentivize growth in the private housing market the community is free to do as much or as little as it wishes to do, said Mr. Ciambor. Unlike communities down South, he said, Juneau cannot afford to ignore any of its housing areas because it is an independent community without access to nearby towns or bedroom communities. One of the options mentioned in the Affordable Housing Plan is for the City to purchase homes which are being foreclosed upon and repurpose them for affordable housing, said Mr. Ciambor.

The Neighborhood Improvement Development Corporation has targeted investment neighborhoods, said Mr. Ciambor. They provide a lot of resources for those particular areas of town, he said. They provide assistance through home loans and the Home Buyers Assistance Program and tax incentives among other inducements, said Mr. Ciambor.

Commission Comments and Questions

Mr. Voelckers said it seemed to him that perhaps Juneau was slightly healthier in the areas of subsidized housing and assisted living and a little more stuck economically in some of the mid and upper range privately owned properties. Mr. Voelckers asked Mr. Ciambor if it was part of his job to come up with initiatives to present to the Assembly on how to address that area of the housing market.

Mr. Ciambor said it was part of his job, and that this presentation was the first step in identifying those areas of the housing market which needed assistance for the Assembly. He said he would be working with municipal parties to define the next step in the process.

XII. DIRECTOR'S REPORT

Mr. Steedle said there are currently no items scheduled for the August 9, (2016) meeting, and that at this time there is no meeting scheduled for August 9.

The next meeting for the Title 49 Committee is July 20, (2016) said Mr. Steedle.

Ms. McKibben said there is a meeting of the Commission on Sustainability which has been working on an energy plan, and the consultants will be presenting to the Assembly Committee of the Whole on Monday, July 25. The Commission on Sustainability will also be hosting a brown bag lunch to present the plan on a date yet to be decided. The energy plan is also

available on the CBJ website, she noted.

XIII. REPORT OF REGULAR AND SPECIAL COMMITTEES

Mr. Voelckers reported that the Title 49 Committee met and worked with staff on some language improvements for variances.

XIV. PLANNING COMMISSION COMMENTS AND QUESTIONS - None

XV. ADJOURNMENT

The meeting was adjourned at 8:31 p.m.

DRAFT

Agenda
Planning Commission
Regular Meeting
 CITY AND BOROUGH OF JUNEAU
Ben Haight, Chairman
 July 26, 2016

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 7:07 p.m.

Commissioners present: Ben Haight, Chairman; Paul Voelckers, Vice Chairman; Bill Peters, Michael LeVine, Percy Frisby, Nathaniel Dye, Matthew Bell, Kirsten Shelton-Walker

Commissioners absent: Carl Greene

Assembly Members: Debbie White, Loren Jones

Staff present: Rob Steedle, CDD Director; Beth McKibben, Planning Manager; Robert Palmer, Municipal Attorney, Chrissy Steadman, Planner II

II. APPROVAL OF MINUTES

- June 28, 2016 Regular Planning Commission Meeting

MOTION: *by Mr. Peters, to approve the Regular Meeting Minutes from the June 28, 2016 Planning Commission meeting with any minor changes by staff or Commission members.*

III. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS - None

IV. PLANNING COMMISSION LIAISON REPORT

Assembly Liaison Debbie White reported that the next full Assembly meeting is on August 1, 2016. The draft Energy Plan is on the agenda for that meeting.

Mr. Voelckers asked if the Haven House appeal has been resolved.

Mr. Palmer said the case has not yet been resolved, and that the judgment is due in three or four weeks.

V. RECONSIDERATION OF THE FOLLOWING ITEMS - None

VI. CONSENT AGENDA

USE2016 0022 was removed from the Consent Agenda and placed on the Regular Agenda for a regular hearing at the request of Mr. LeVine. He said since this is the first application of its kind to come before the Commission that he would like it available for review.

VII. CONSIDERATION OF ORDINANCES AND RESOLUTIONS - None

VIII. UNFINISHED BUSINESS - None

IX. REGULAR AGENDA

USE2016 0022: Conditional Use Permit application for a marijuana testing facility in the General Commercial zoning district.

Applicant: Southeast Alaska Laboratories LLC

Location: 5450B Jenkins Drive

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 marijuana testing facility in the General Commercial zoning district.

The approval is subject to the following conditions:

1. Marijuana and marijuana product samples transported to the testing facility shall be in non-transparent locked containers.
2. Parking spaces shall meet CBJ 49.40.210(b)(1); 8 spaces including 1 ADA assigned space shall be marked and maintained. A parking and circulation plan shall be submitted with the building permit application.
3. No offsite glare shall be produced by exterior lights.
4. A minimum of 2,534 square feet of the site will be maintained with live vegetative cover.

The property is located in the General Commercial area of Lemon Creek on Jenkins Drive, said Ms. Steadman. The property is provided with water and sewer, said Ms. Steadman. The existing use is for two general warehouse buildings, she said. The proposed testing site will be located at the rear of the building, and the front of the building will still be used for warehouse storage, she noted. About 1,000 square feet of the 3,000 square foot building will be occupied by the testing facility, said Ms. Steadman.

Ms. Steadman said that seven parking spaces are required for this site; two are required for the testing facility, two for the additional warehouse space and three for the rear warehouse building. There will be a security camera focused on the entry to the building with a motion

sensor light, said Ms. Steadman. The equipment for the facility will be located on the south side of the facility and will have the required containment facilities as well, said Ms. Steadman.

The test samples are rendered unusable as a result of the testing process, said Ms. Steadman, and according to State requirements will be disposed of in the landfill. The facility will be testing the marijuana for potency, for pesticides which may have been used in cultivation, and for residual solvents which are used in the product manufacturing process, said Ms. Steadman. The current proposal calls for lab employees to pick the product up and deliver it to the lab, said Ms. Steadman, which would reduce the traffic.

Noise should not be a problem, and the applicant has been instructed to eliminate any possible offsite glare from outside lights, said Ms. Steadman. The proposed business is in conformance with the Comprehensive Plan, she said. The business has a security plan as is required, with four security cameras, LED motion sensor lighting, and an alarm system, she said. No windows are proposed for the facility or any outside signage, said Ms. Steadman. There will be no carbon dioxide used, she said. While odor is not anticipated to be a problem with this testing facility, said Ms. Steadman, there is a required odor mitigation plan, she said.

The staff recommends approval of this Conditional Use Permit subject to the following conditions:

- ✓ Marijuana and marijuana product samples transported to the testing facility shall be in nontransparent locked containers
- ✓ Parking spaces shall meet CBJ 49.40.210 B1; eight spaces including one ADA assigned space shall be marked and maintained. A parking and circulation plan shall be submitted with the building permit application.
- ✓ No offsite glare shall be produced by exterior lights.
- ✓ A minimum of 2,534 square feet of the site will be maintained with live vegetative cover.

Commission Comments and Questions

Applicant Jessica Dreibelbis told the Commission that Ms. Steadman has done an excellent job with her analysis.

Mr. Voelckers asked if the various marijuana producers would drive separately to the lab with their samples or if lab staff would retrieve the samples from the producers.

They plan on picking up the samples themselves for the lab, said Ms. Dreibelbis.

Mr. LeVine asked if there would be hazardous materials used in the lab, and if there would be any odor concerns other than from the lab samples themselves.

Ms. Dreibelbis said hazardous materials would not be a concern. They will be using nitrogen which is contained, which perhaps could be considered hazardous if it was not contained, she said. They would have no hazardous materials to dispose of, she added.

MOTION: *by Mr. Peters, to approve USE2016 0022 adopting the staff's findings, analysis and recommendations.*

The motion passed with no objection.

A. USE2016 0020: A Conditional Use permit for pet grooming and boarding.

Applicant: Benjamin L. Nestler

Location: 8757 Dudley 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 a pet grooming and daytime boarding business to continue to operate out of a single family home in a D-5 zoning district.

The approval is subject to the following conditions:

1. The days and hours of operation for both pet grooming and day boarding, as stated in this application, shall not increase or expand without Planning Commission approval.
2. There shall be no more than five dogs boarded overnight, including those owned by the applicant.
3. There shall be no more than five dogs boarded during the day, not including those owned by the applicant.
4. The applicant must keep the yard free of animal waste. The waste will be stored in a plastic or metal container with a lid and will be properly disposed of regularly.
5. Within 30 days of an approved Conditional Use Permit, the applicant must obtain a CBJ Utility Permit and have the required water meter installed.
6. The applicant must meet the parking requirements when he applies for the Utility Permit for the water meter installation. The parking requirements include the following:
 - Five parking spaces, one of which is ADA accessible.
 - Each parking space must be 8.5 ft. by 17ft.
 - The parking aisle must be 24 feet wide.
 - A "No Back Out Parking" sign must be posted near the driveway.

Advisory Condition:

1. The applicant should exercise great consideration for adjacent property owners and be mindful of barking dogs and odors.
2. The applicant should allow no more than five dogs in the yard at one time.

Day services are allowed in the D-5 zoning district with an approved Conditional Use Permit, said Ms. McKibben. The home is located on Dudley Street on a 15,000 square foot lot, said Ms. McKibben. There is access to City water and sewer. The single-family home also supports a dog grooming business for day animal use, she said. The surrounding uses in the neighborhood are single-family residential homes, she said.

The Table of Permissible Uses does include uses within the D-5 zoning district for dog grooming and day animal care, said Ms. McKibben, with an approved Conditional Use Permit. The applicant has been keeping dogs overnight and there is a condition limiting the number of dogs the applicant may have overnight as six or more dogs would constitute a kennel which is not allowed in this zoning district, she said.

Grooming takes place in the garage which is just over 500 square feet, dogs are dropped off by appointment only, and the hours of operation are 9:00 a.m. – 3:30 p.m., said Ms. McKibben. The applicant grooms a maximum of five animals each day, she said. The doggie daycare portion of the business takes place from 7:00 a.m. 6:00 p.m. Monday through Saturday, said Ms. McKibben. Animals can be dropped off between 7:00 a.m. and 9:00 a.m. in the morning, she said. They can be picked up at any time during the day until 6:00 p.m., she said.

Since there are no parking requirements for this particular business, they are to look in the code for the most comparable type of business, said Ms. McKibben. The staff found that this business was the most comparable to banks in that items were being dropped off, she said. The day boarding aspect of the business the staff found to be most similar to day care, she said. The parking requirement for the building has been determined as two spaces for the single-family dwelling, two spaces for pet grooming, and one additional space for day boarding, said Ms. McKibben, for a total of five parking spaces. Title 49 prohibits back-out parking in this zoning district, said Ms. McKibben, except for single-family residential uses. A water meter is required with the addition of the business to the residence, said Ms. McKibben.

The staff has received a number of comments about this Conditional Use Permit request, said Ms. McKibben. They received two comments against granting the Conditional Use Permit and three neighbors provided comments in favor of the permit with eight clients expressing their support for the permit, said Ms. McKibben, in addition to the one letter in favor of the permit and one letter against the permit provided to the Commission this evening.

The concerns expressed by the neighbors were focused primarily on the noise from barking dogs and odor from dog waste detected outside, said Ms. McKibben. One of the neighbors has also expressed concern that there have been problems in the past with the fence not adequately retaining the dogs, she said.

The staff has found that the application is complete, that the proposed use is appropriate according to the Table of Permissible Uses, and that the development as proposed will comply

with the other requirements of Title 49, said Ms. McKibben. In addition, it was found the business would not materially endanger the public health or safety, that it would not substantially decrease the value of, or be out of harmony with property in the neighboring area, and the staff found the proposal to be in general conformity with the Comprehensive Plan, the Thoroughfare Plan or other officially adopted plans, said Ms. McKibben.

The staff recommends approval of the permit with the following conditions:

1. The days and hours of operation for both pet grooming and day boarding, as stated in this application, shall not increase or expand without Planning Commission approval.
2. There should be no more than five dogs boarded overnight, including those owned by the applicant.
3. There should be no more than five dogs boarded during the day, not including those owned by the applicant.
4. The applicant must keep the yard free of animal waste. The waste will be stored in a plastic or metal container with a lid and will be properly disposed of regularly.
5. Within 30 days of an approved Conditional Use Permit, the applicant must obtain a CBJ Utility Permit and have the required water meter installed.
6. The applicant must meet the parking requirements when he applies for the utility permit for the water meter installation. The parking requirements include the following:
 - ✓ Five parking spaces, one of which is ADA accessible
 - ✓ Each parking space must be 8.5 feet x 17 feet
 - ✓ The parking aisle must be 24 feet wide
 - ✓ A "No Back Out" parking sign must be posted near the driveway.

In addition there are two advisory conditions:

1. The applicant should exercise great consideration for adjacent property owners and be mindful of barking dogs and odors.
2. The applicant should allow no more than five dogs in the yard at one time.

The staff currently has no suggested conditions for fencing, said Ms. McKibben, but the Commission may want to keep that issue in mind when considering the permit application.

Commission Comments and Questions

Mr. Voelckers asked what the functional difference is between a regular condition and an advisory condition.

Ms. McKibben answered that regular conditions can be enforced by the municipality, while advisory conditions are not necessarily enforceable but are a means of informing the applicant of concerns the municipality may want to applicant to keep in mind.

Mr. Voelckers asked why the limit of dogs in the yard at one time is an advisory rather than a regular condition.

Ms. McKibben said she was out of the office when this report was written and she is not sure of the logic behind that condition.

Mr. Voelckers said he was curious since it seemed to be a very specific condition.

Mr. LeVine said he had discussed with the staff his question about dogs staying overnight versus official kennel status. He said his understanding after his discussion with the staff was that the Conditional Use Permit is for the day grooming business, and that overnight care is not covered in the Table of Permissible Uses, unless it is for a kennel, which is for six dogs and above.

Mr. LeVine said his first question is whether the Commission can place conditions upon evening use of the business, if it is something which is not within the Conditional Use Permit.

Ms. McKibben said this may be better as an advisory condition, to make sure the applicant understands that six or more dogs overnight crosses the line and puts them into kennel status for which they are not eligible.

Mr. LeVine asked if it would be permissible for the applicant to have more than five dogs excluding his own within the business during the day. There would be different dogs throughout the day, he said. He asked if this would put the applicant into kennel status.

Ms. McKibben said upon discussing this question with the Law Department, that it was determined that the day animal services are separate from animals kenneled overnight.

Ms. Shelton-Walker asked what "regular disposal of waste" meant in terms of adhering to the Conditional Use Permit.

It could mean a lot of things, said Ms. McKibben. They have left the means up to the applicant, but they are aware of what they need to accomplish, she added.

Mr. Voelckers said it felt slightly oppressing to him that the two separate functions of the business were demanding parking for essentially the same area. He asked how this number of parking spaces was derived. He added there are two spaces allocated for pet grooming and another space for pet boarding. He said it felt slightly awkward since two different uses are being assigned to the same area.

Ms. McKibben explained that in a mixed use building where there may be a bank and a restaurant, for example, they have parking spaces assigned for each individual use. She said

that is what the staff did with this application. The applicant will need to provide five parking spaces on site, with no back out parking. The garage space is not available to count as two parking spaces, she added. The single family home is required to have two parking spaces, the dog grooming aspect of the business is required to have two parking spaces and the dog day care is required to have one space, said Ms. McKibben.

Mr. Voelckers said that dog boarding is required to have one spot. He said there is no area analysis to match that requirement. He said he felt the applicant was being penalized for an excessive number of parking spaces.

In their analysis they used the childcare parking requirement as the closest example for use for the business, said Ms. McKibben.

Mr. LeVine explained that the doggie daycare is in the house and the dog grooming takes place in the garage.

Mr. Voelckers said that is essentially his question; because one area has a numeric analysis and the other one does not.

Ms. McKibben explained this is because the child care used for comparison does not have a square footage requirement in the parking table. The analogy they used for the grooming portion of the business does have a numeric analysis which accompanies it, she added.

Mr. Frisby asked if there were five dogs which were watched during the day if those same dogs could stay overnight.

Ms. McKibben said they are permitting up to five animals to be moving through the business for grooming during the day. There are also up to five dogs which may remain during the day for the doggie daycare portion of the business, said Ms. McKibben. They have also notified the applicant that if he were to keep more than five dogs overnight then his business would become a kennel, which is not an allowed use for the zoning district, she added.

Mr. Frisby commented that boarding five dogs overnight is pretty close to being a kennel.

Applicant Benjamin Nestler

The land use code for kennels when he began his business in 2007 defined the business as six or more dogs are kept, and it was allowed at that time as long as it did not reasonably interfere with the public health or safety of the area. Under his circumstances back out parking was allowed at that time, he said, within his current zoning district at the Director's discretion. He said in the drawing showing the proposed five parking spots they were all directed away from the driveway. Mr. Nestler said his 30' x 60' driveway provided more than enough parking for his home and business.

Mr. Nestler said they would like a Conditional Use Permit for up to eight animals. They are very conscientious about cleaning up animal waste and disposing of it, he said. Flexibility is something that their customers' value and very limited hours would harm what is now a current benefit of their business, said Mr. Nestler. They have set times for their customers and they are spaced out so that customers are not arriving at the same time, said Mr. Mr. Nestler. Therefore, they would like an exemption not only for the days and hours of operation but for the parking requirements, he said.

Commission Comments and Questions

Mr. LeVine asked how they managed the dogs going in and outside of the house to the backyard during the day and during the night.

Mr. Nestler said if they have five dogs as day boarders for the day then he would not book himself fully for grooming that day, thereby controlling the number of dogs the business handled at one time. Dogs are never left in the yard unsupervised, said Mr. Nestler. He said it is in their long-term plans to construct a site obstructing fence, but that project is not currently within their budget. He said within nine years maybe two or three times has a dog escaped from the existing fence.

Mr. Voelckers asked Mr. Nestler to be specific about the numbers that he was requesting for the Conditional Use Permit. He asked how many dogs a day they expected for grooming appointments.

Mr. Nestler said he is not requesting a certain number of dogs for grooming each day. He said time limits them to about a maximum of four grooming appointments a day.

Mr. Voelckers asked the staff if there were any issues regarding the number of dogs served by the grooming aspect of the business.

Ms. McKibben said the number of five dogs listed in the staff report as the total number of dogs who could be groomed per day were derived from numbers provided by the applicant. She added that the hours of operation were also based upon times provided by the applicant. Mr. Voelckers clarified that at this point it was the hours of operation which would dictate how many dogs could be grouped per day, not a specified number of dogs which would be allowed.

Mr. Nestler said he emphasized with the planner he was working with that they have no set hours of operation. They do everything by appointment, he said. They do not have set hours, he said. He added that their Facebook profile states that they are always open. He said if he is bound by regular business hours that he would not be able to accept a special timeslot in the evening to accommodate a customer for grooming their dog. He added he would also have to turn down those customers arriving on an evening flight who wanted to stop by his business to pick up their pet.

Mr. Nestler said it was his understanding that there were no limits on the number of dogs he took for day boarding. He said it was his understanding that it was the night boarding which triggered the kennel limitation to which he must abide.

Day boarding is a new aspect of their business and they rarely have more than three dogs a day, said Mr. Nestler, for day boarding.

Mr. Nestler said he felt that eight dogs would be a reasonable limit to set on night boarding the dogs. He said they were told when they applied for their license in 2007 that a Conditional Use Permit was not necessary for their business.

Mr. Dye asked if the dogs that were being groomed also spent time in the yard along with the day boarded animals.

Mr. Nestler said this happened upon occasion. Dogs who have just been groomed get dirty when released into the yard, he said.

Public Comment

Doggie Do customer Elizabeth Ziegler spoke in favor the Conditional Use Permit. She said her concern upon reading the staff report was the requirement of five parking spaces, which she felt were excessive. She said she has never met anyone else when taking her dog and picking it up from the business.

George Utermohle told the Commission he was providing support for the granting of the Conditional Use Permit for Doggie Dos. He said he was particularly in support of their proposal for night boarding, day boarding, and grooming. Mr. Utermohle said that day boarding should not have an effect on the numbers for night boarding, and that this is a much-needed service for Juneau.

Rick Dansic, an adjacent neighbor of the business, said that he was also in favor of the Conditional Use Permit for Doggy Dos. He said that he has found as a customer and as a neighbor that Mr. Nestler is very responsive to feedback from the neighbors.

Clint Gundelfinger said that he is also an adjacent neighbor of Doggie Dos. He said he has never observed more than two vehicles in the driveway at the same time. Barking or any other noise from the business has not disturbed his family, he said. They have not experienced any odor from the business either, said Mr. Gundelfinger. He added that he felt the business provided a superior and much needed service for the community.

Mr. Voelckers asked if Mr. Gundelfinger's residence was adjacent to the fenced portion of the yard.

Mr. Gundelfinger replied that it was adjacent to the fenced portion of the yard.

Juneau resident Deborah Behr spoke in favor of a Conditional Use Permit being issued to Doggie Dos. She said this is a home run business which provides a very valuable service to our community. She said she and her husband are often contacted by individuals seeking quality doggie day care in the community.

Applicant

Mr. Nestler said over the past nine months he has had to turn away a lot of business in order to abide by the ordinance, and that this is not good for his business or for the community.

Commission Comments and Questions

Mr. Peters said he believed he understood that if seven dogs were mentioned for boarding, that it that included both day and evening boarding.

Mr. Nestler said they do not board more than four dogs in the evening because that would not be honoring the kennel requirement. He said the zero to seven number of dogs he mentioned was an arbitrary number that he selected when he was asked by the City to put together an application for a Conditional Use Permit. Ten to 12 dogs is a reasonable number of dogs for them to board, he said.

Mr. LeVine asked how it would affect their business if the hours of operation were not limited but the hours that dogs were allowed in the backyard were limited.

Mr. Nestler replied that would negatively affect their business. He said they have clients that go to work at 5:00 a.m. He said if the dog was indicating that it needed to go outside that he had to honor that need of the dog.

Mr. Frisby said that he felt the problem would be overnighting more than five dogs, because that would then be putting the applicant into kennel status.

Mr. Nestler said they honor that ordinance and do not kennel more than four dogs at night, since they have one dog of their own. He said they have to turn away dogs all the time and that it is difficult and hurtful for the business and the community.

Ms. Shelton-Walker said that when they are boarding a number of dogs the problem may not be problem barkers but the cumulative effect of a large number of dogs producing noise.

She asked Mr. Nestler how he proposed to handle the noise from a larger number of dogs on the premises.

Mr. Nestler said they have three rules and a house visit which must be followed before they allow a dog to board with them. The dogs must come when called, they must be well socialized with other people and pets and they must not be barkers, he said.

Mr. Voelckers asked if the applicant used his garage to park their vehicle or if it was strictly for grooming purposes.

Mr. Nestler said there is room in the garage to park his truck.

Mr. Voelckers clarified that there is available space in the garage for parking their vehicle.

Mr. LeVine asked if there would be additional parking requirements if Doggie Dos decided to hire an additional employee.

Ms. McKibben responded that if they continue to use the analogy of childcare than another parking space would be required for the additional employee.

Mr. LeVine asked if the kennel restriction is applied to doggie day care as well.

Ms. McKibben said that in discussions with the Law Department it was determined that it was the overnight number of dogs which determined if the business was a kennel or not, not the number of dogs present during the daytime. The Table of Permissible uses was amended in 2010, said Ms. McKibben. If Mr. Nestler had received a Conditional Use Permit for a kennel prior to 2010, he would be able to operate that kennel today in compliance with his approved Conditional Use Permit, said Ms. McKibben. The code has since changed and they can no longer authorize a kennel of six or more dogs in that zoning district with a Conditional Use Permit. Doggie Dos does not qualify as a home occupation based upon the amount of square footage which is allocated for the business, said Ms. McKibben.

Mr. LeVine asked Ms. McKibben if she had any idea why the Table of Permissible Uses was changed.

Ms. McKibben responded that when the Table of Permissible Uses within Title 49 was amended, that staff or public comment could not change the conditions.

Mr. Peters asked if they were also limiting the number of dogs allowed during the day for day boarding and grooming purposes.

Ms. McKibben stated that it was the staff's understanding that pets which are brought in and kept in the garage for grooming did not have free roam of the house with the day boarded animals. They did not propose to limit the number of animals which could be groomed in a day, she said.

Mr. Voelckers asked if the garage had been counted as a space for parking.

Ms. McKibben said the information provided to the planning Department was that the garage was used for grooming. She said she did not know if they had incorrectly analyzed information or had not received it at the time, she was not sure. It was the staff's understanding that the garage was used for grooming and that it was not available for parking, said Ms. McKibben.

Mr. Voelckers said it may be a useful clarification to note that there was a parking space available for parking within the garage.

Mr. Frisby said he felt the conditions were too specific regarding the number of dogs which could be groomed or day-boarded during the day.

Chairman Haight said in the traffic analysis he felt the number of dogs served during the day would serve as the basis for the traffic determination.

Ms. McKibben responded that they used the information provided by the applicant to make their best estimate on the typical traffic anticipated to be generated by the business.

Chairman Haight said looking at the conditions that he did not see the hours of operation listed.

Ms. McKibben said the staff used information supplied by the applicant regarding the days and hours of operation.

Chairman Haight said he would like the conditions to be more specific regarding the days and hours of operation.

Mr. Peters asked if condition number two and condition number three, which addresses the number of dogs boarded during the day and the number of dogs boarded during the night were overlapping conditions. He asked if the applicant could board five dogs overnight with an additional five dogs during the day or if this addressed the same dogs.

Ms. McKibben said they are not the same dogs.

Mr. LeVine said that noise being a potential problem for neighbors was the primary issue that he was concerned with. He suggested that one condition be that no more than one boarded dog be allowed in the yard before 9:00 a.m. or after 8:00 p.m. The other condition he offered for consideration was that the boarded dogs should always be supervised when in the yard.

Mr. Dye suggested that conditions two, three and four be removed and replaced with conditions that the applicant allow no more than five supervised dogs in the yard at one time,

not including dogs owned by the applicant, between 8:30 a.m. and 6:00 p.m. Mr. Dye suggested that the number of dogs allowed in the yard at one time be the focal point and not the number of dogs allowed within the structure.

Mr. LeVine said that he concurred with this language but that he was sensitive to the point raised by the applicant that there are times during the late night or early morning hours when a dog may need to go outside. He added that he did not see what the reason was for limiting the applicant to having only five dogs on the premises during the day. He said he did not see a problem with allowing eight dogs per day on the premises.

Mr. Dye stated that his thought is to remove the stipulation that only five dogs can be boarded at the business during the day, instead switching that stipulation to no more than five dogs allowed to be in the yard supervised at one time. He proposed that there be no limit on the number of dogs allowed within the house during the day.

Mr. Voelckers said he liked the idea of eight dogs being allowed within the business during the day.

Mr. LeVine said he suggested the number of eight dogs within the business at one time during the day because if it was an unlimited number at some point there could be difficulties in terms of numbers with parking and drop off and pick up of the animals.

Combining the conditions suggested by himself and Mr. Dye, Mr. LeVine stated that there be no more than one dog in the yard at any time before 8:00 a.m. or after 8:00 p.m. Between the hours of 8:00 p.m. and 8:00 p.m. no more than five supervised boarded dogs should be allowed in the yard at any one time, with a separate condition stipulating that all dogs shall be supervised at all times. In addition to the five boarded dogs the owners could have their own dog in the yard at any time during those hours. This includes the dogs who may be at the facility for grooming purposes. The business shall contain no more than eight dogs not owned by the applicant at any one time.

Mr. Dye said he felt the process would be simplified if they did not stipulate hours of operation. The basis of any complaints received were based upon dogs and not traffic, said Mr. Dye.

Ms. Shelton-Walker said that she agreed with Commissioner Dye. She said it appeared to her that the main concerns stemmed from dogs when they were outside.

Mr. Voelckers said that he agreed, and that he had no desire to place the applicant into a situation where he the hours of operation would hinder him taking a dog as an emergency for grooming in the evening, for example.

Chairman Haight summarized that the Commission has eliminated conditions two, three and four, inserting its own conditions that:

- ✓ That only one boarded dog and one personal dog be allowed in the yard prior to 8:00 a.m. or after 8:00 p.m.
- ✓ the daytime hours for the business would be set from 8:00 a.m. to 8:00 p.m. with up to five dogs in the yard
- ✓ the dogs in the yard will be supervised

The Commission agreed to the above conditions.

Mr. Voelckers said he felt the parking requirements for the business were a little heavy-handed. He said at this point the staff has recommended five parking spots based upon its analysis that the business was most analogous to banking. He said he would like to suggest that the parking be capped at four spaces, one of which must be ADA accessible, and one which can be counted as the garage.

Mr. LeVine said he would like to add the caveat that if an additional employee is hired for the business that an additional parking spot would then be necessary.

Ms. McKibben said she wanted to clarify that with a Conditional Use Permit this is not a home occupation. In response to a question she said that back out parking is not an option since this is not for a residence or a duplex. Typically they require from the applicant a parking plan which does not include back out parking, said Ms. McKibben.

MOTION: *by Mr. Peters, that USE2016 0020 be approved with conditions addressed as follows: striking conditions one, two, three and four with condition five becoming an advisory condition, and that conditions six, seven and eight remain with the stipulation that the change to number eight be four parking spaces, one of which is located within the garage, one of which is ADA compliant. The spaces would be allocated as two parking spaces for the residence and two parking spaces for the business. Advisory condition nine remains, with advisory condition 10 becoming a condition based upon the additional conditions added by the Commission, which are limited to one boarded dog in the yard before 8:00 a.m. and after 8:00 p.m., and no more than five supervised boarded/groomed dogs in the yard at any one time between 8:00 a.m. and 8:00 p.m.*

Mr. Dye offered the friendly amendment that the number of supervised dogs in the yard be limited to five with no discrepancy between groomed dogs and boarded dogs.

Mr. Peters accepted the friendly amendment.

Ms. McKibben asked if the Commission felt the need to address fencing at this time.

Mr. LeVine wanted to offer a friendly amendment to the motion of Mr. Peters stating that he worried that with an unlimited number of dogs within the home that the risk was being run of overextension of the available parking. Mr. LeVine offered the friendly amendment that no more than 12 dogs be in the home at one time.

Mr. Voelckers said he would support the friendly amendment. He added that it establishes an upper credible limit while at the same time offering much more flexibility than what had been proposed in the Conditional Use Permit.

Mr. Peters did not accept the friendly amendment of Mr. LeVine stating he felt setting forth the number of dogs allowed within the business was too limiting. He said he felt given the hours which have been set by the conditions as well as the number of dogs allowed in the yard at one time provides an adequate limitation for the business.

Mr. Bell said that he agreed with Mr. Peters. He said he did not want to see the Commission handcuffing growth when it was not necessary.

Roll Call Vote: (on the amendment)

Yeas: Voelckers, LeVine

Nays: Shelton-Walker, Frisby, Bell, Peters, Dye, Haight

The friendly amendment to the main motion to limit the number of dogs within the business to 12 dogs did not pass.

Mr. Dye offered a friendly amendment to the main motion that the fenced area of the dog yard would require a 6 foot obscuring fence.

Ms. Shelton-Walker said she had heard comments from the applicant that dealing with the costs of a new fence at this time would be prohibitive for the business.

Mr. Voelckers also spoke against the friendly amendment stating that he felt it was prohibitive. He said he felt that condition would go further than he was comfortable with.

Speaking against the fence amendment, Mr. Frisby said there was already a fence in place. He said he understood from the comments offered by the applicant that it was in their business plan to add a new fence in the future when they could afford it.

Mr. LeVine offered language that the fence be made acceptable to abutting neighbors within a years' time.

Mr. Voelckers said he was concerned about this amendment because it is setting up language that would support any neighbor who had any type of objection to any type of fence.

Mr. LeVine said he would probably support Mr. Dye's motion if it was a longer period such as six months or a year to construct or bolster the fence.

Mr. Voelckers said he would prefer this phrased as an advisory condition to work towards a sight obscuring fence rather than a regular condition.

Mr. Dye withdrew his friendly amendment regarding the fence.

Mr. LeVine proposed the friendly amendment that a regular condition would state that the applicant shall maintain a functional fence surrounding the backyard. The advisory condition would be that the applicant should prioritize improvement of the fence to an obscuring fence of six feet.

Roll Call Vote: *(on the amendment that the regular condition be added that the applicant shall maintain a functional fence, and the advisory condition that the applicant should prioritize improvement of the fence to an obscuring fence of six feet).*

Yeas: Dye, Frisby, Peters, Voelckers, Shelton-Walker, LeVine, Haight,

Nays: Bell

The amendment passed.

Roll Call Vote on the main motion: *(by Mr. Peters, including amendments, that USE2016 0020 be approved with conditions addressed as follows: striking conditions one, two, three and four with condition five becoming an advisory condition, and that conditions six, seven and eight remain with the stipulation that the change to number eight be four parking spaces, one of which is located within the garage, one of which is ADA compliant. The spaces would be allocated as two parking spaces for the residence and two parking spaces for the business. Advisory condition nine remains, with advisory condition 10 becoming a condition based upon the additional conditions added by the Commission, which limit one supervised boarded dog in the yard before 8:00 a.m. and after 8:00 p.m., and no more than five supervised dogs in the yard at any one time between 8:00 a.m. and 8:00 p.m. In addition, the regular condition be added that the applicant shall maintain a functional fence, and the advisory condition be added that the applicant should prioritize improvement of the fence to an obscuring fence of six feet.*

Yeas: Shelton-Walker, Dye, LeVine, Peters, Frisby, Voelckers, Bell, Haight

Nays:

The motion passed.

B. USE2016 0023: A Conditional Use Permit for senior housing.

Applicant: GMD Development

Location: Clinton Drive

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 49-unit senior housing complex. The approval is subject to the following conditions:

1. Submit a lighting plan, prior to issuance of a Building Permit, illustrating the location and type of exterior lighting proposed for the development. Exterior lighting shall be designed, located and installed to minimize offsite glare. Approval of the plan shall be at the discretion of the Director of Community Development, according to the requirements at CBJ 49.40.230(d).
2. Installation of parking lot light poles must be limited to the property and not located within the right-of-way.
3. Installation of landscaping must be limited to their property and not located within the right-of-way.
4. Restore and vegetate the river bank, if needed.
5. Apply the CBJ Manual of Stormwater Best Management Practices to reduce or eliminate the need for direct discharge of runoff into the river and to attenuate storm water on site.

Ms. McKibben told the Commission that this is an application for a Conditional Use Permit for senior housing. The proposed housing is to be located on Clinton Drive in the area of Vintage Park. The project is located on one acre and the Comprehensive Land Use Plan is for a traditional town center, said Ms. McKibben. The zoning is Mixed-Use and City water and sewer are available, she added.

The Conditional Use Permit is for 49 units of senior housing, said Ms. McKibben. Trillium Senior Housing consists of almost 46,00 square feet and is a four story structure, said Ms. McKibben. Of the 49 units, eight units will remain as market rate apartments, and 41 units will be income and rent restricted affordable housing, said Ms. McKibben. The land was rezoned Light Commercial before it was recently rezoned to Mixed-Use, said Ms. McKibben. Mixed-Use zoning has no maximum density, no setbacks and no vegetative cover requirement, said Ms. McKibben.

The Planning Commission recently approved the assisted living facility which will be located adjacent to Trillium Senior housing, said Ms. McKibben. The two sites have been designed by the same architect and will work together architecturally, but they will not be identical, said Ms. McKibben. This site also provides pedestrian access to the adjacent site and to the pedestrian pathway along Mendenhall River, she said. The first floor will have eight apartments, office space and storage, a laundry facility, a lobby, a gym and a community room, said Ms. McKibben. The remaining three floors will have apartments, she said.

The parking requirement for this development is 37 spaces, with two spaces ADA accessible, said Ms. McKibben. A traffic impact analysis is not required because it will not generate more than 250 vehicle trips in a day, she said. A lighting plan has not yet been submitted, and the staff recommends that a condition of approval be granted once the lighting plan is submitted, she said. Even though it is not required, this site does include five percent vegetative cover including trees on its own property along the street, said Ms. McKibben.

Mendenhall River is an anadromous fish stream, and there is a 50 foot streamside setback which is required, said Ms. McKibben. Flood requirements for the property will be addressed through the building permit process, said Ms. McKibben. They have found there will be no negative impact to neighborhood property values and the project is consistent with neighborhood harmony, said Ms. McKibben. The project is consistent with the Comprehensive Plan, she added.

Fish and Wildlife had expressed a concern about storm water runoff which will be addressed through the building permit process following the City's best management practices, said Ms. McKibben.

Mr. Voelckers asked about the parking plan since there are only two ADA accessible parking spaces provided.

He was told there are requirements for van parking and there will be a load and unload area in front of the building so there will be a safe zone for this activity.

Evelyn Rouso, architect, said they have made the parking spaces larger than standard parking spaces, to provide extra room for individuals getting in and out of their vehicles.

MOTION: *by Mr. Frisby, to accept staff's findings, analysis and recommendations and approve USE2016 0023.*

The motion passed with no objection.

X. **BOARD OF ADJUSTMENT** - None

XI. OTHER BUSINESS - None

XII. DIRECTOR'S REPORT

Mr. Steedle reported that there will be no Planning Commission meeting on August 9. There will be a Committee of the Whole meeting slated for September 13, at 5:30 p.m. on shared access and the Energy Plan.

XIII. REPORT OF REGULAR AND SPECIAL COMMITTEES

Committee on Sustainability

Mr. Frisby reported that they moved the Energy Plan to the Assembly and they discussed matters relating to chickens within the municipality.

Public Works Committee

Mr. Bell reported that Public Works will have some issues coming up to Planning Commission in the near future.

XIV. PLANNING COMMISSION COMMENTS AND QUESTIONS - None

XV. ADJOURNMENT

The meeting was adjourned at 9:39 p.m.

Agenda
Planning Commission
Committee of the Whole
 CITY AND BOROUGH OF JUNEAU
Ben Haight, Chairman
 July 12, 2016

I. ROLL CALL

Ben Haight, Chairman, called the Committee of the Whole Meeting of the City and Borough of Juneau (CBJ) Planning Commission (PC), held in the Assembly Chambers of the Municipal Building, to order at 5:07 p.m.

Commissioners present: Ben Haight, Chairman; Paul Voelckers, Vice Chairman; Percy Frisby, Nathaniel Dye, Matthew Bell, Kirsten Shelton-Walker, Carl Greene

Commissioners absent: Bill Peters, Michael LeVine

Staff present: Rob Steedle, CDD Director; Beth McKibben, Planning Manager; Jill Maclean, Senior Planner; Allison Eddins, Planner I; Robert Palmer, Assistant Municipal Attorney; Trinidad Contreras, Assistant Municipal Attorney; Dan Jager, Fire Marshall

I. REGULAR AGENDA

A. AME2015 0012: Text amendment of Title 49 concerning private road standards.

Ms. McKibben told the Commission that during the development and the adoption of the Subdivision Ordinance the Community Development Department (CDD) was asked to provide information on allowing access to a lot not necessarily from the frontage on the publicly maintained right of way. The Assembly directed that this practice needed to be codified, said Ms. McKibben. In essence they are creating rules which will allow past practices to continue, said Ms. McKibben.

The new Subdivision Ordinance provides the opportunity for a privately maintained road inside of a public right-of-way, said Ms. McKibben. The proposed ordinance before the Commission is for certain lots which could be exempt from the requirement to have frontage on a publicly maintained right-of-way, said Ms. McKibben. This could take place when a new access point to the publicly maintained right-of-way is prohibited, said Ms. McKibben. For example, said Ms.

McKibben, North Douglas Highway is a state maintained highway. In order to have a driveway directly onto Douglas Highway an approved driveway permit, from the Alaska Department of Transportation (DOT) is necessary. There are instances when a driveway permit from the Alaska Department of Transportation will not be issued, she said. That is when one of these alternate methods of accessing the lot could be used, said Ms. McKibben. Also a permit may not be issued if the CDD Director determines that a safety hazard could result from a direct access road onto a public right-of-way, she said. This could result in a privately maintained access, said Ms. McKibben, via a private easement.

With this code, if access to the publicly maintained right-of-way was not available for all of the three lots, an individual could subdivide their property into three lots which all have frontage on the privately maintained road. Access would be provided via an easement, said Ms. McKibben. The draft ordinance proposes that no more than three lots share an easement, said Ms. McKibben. The easement may be constructed to less than full public street standards. Traffic safety must restrict access to the public right-of-way. These would be limited to zoning districts RR, D-1, D-3, D-5, D-10 and D-10 SF, said Ms. McKibben. The primary use would be limited to one single family home and one accessory apartment, said Ms. McKibben. A child care home, for example, said Ms. McKibben, would not be allowed on one of these types of lots. This could only be allowed if street connectivity would not be impaired, noted Ms. McKibben.

The easement would have to be 50 feet wide. It could be reduced with Director approval, added Ms. McKibben, to no less than 40 feet. It may be unpaved if located outside of the Mendenhall Valley, she said. Roads within the Mendenhall Valley would need to be paved to maintain the air quality standards, she added. It would have to meet minimum fire code standards, she said. The yard setbacks would be measured from the easement, not the property line, said Ms. McKibben.

Minimum lot size requirements would need to be met, exclusive of the easement, said Ms. McKibben. This is to ensure that if at some point in the future the easement was to become a publicly maintained right-of-way, the lots would already be set up to meet the minimum lot area for the zoning district, and that the development of the lots would meet the setback requirements, explained Ms. McKibben.

These subdivisions would require a plat note that no further subdivisions would be allowed, said Ms. McKibben, unless the access was upgraded to a public street. The owners would be responsible for snow removal and access maintenance, said Ms. McKibben. The owners would automatically abandon all rights to the easement if it should become a publicly maintained right-of-way in the future, said Ms. McKibben.

The Subdivision Review Committee recommended that shared driveways with private easements be located only in residential subdivisions, with no more than 70 average daily trips

in a day, and the subdivision could not create a land-locked parcel, added Ms. McKibben. If there is foreseeable future development beyond the proposed development, then private easements would not be allowed, and the lots would be required to have frontage along a publicly maintained right-of-way, she said. The Subdivision Review Committee had recommended that the private easement could serve no more than four lots, said Ms. McKibben. The staff is recommending three lots, said Ms. McKibben, as a way to limit the number of trips using the private access without having to go through the exercise of calculating the average daily trips for the potential development on the property. A subdivision would not be allowed if there was land behind it, said Ms. McKibben. That would be creating a land-locked parcel, she explained.

Key policy issues they would like the Planning Commission to consider, said Ms. McKibben, are:

- ✓ Is frontage on a publicly maintained right-of-way essential
- ✓ Should uses on those lots sharing a private access easement be limited
- ✓ Should private access roads be constrained to no more than three lots
- ✓ Is a gravel surface for a private access road located outside of the Mendenhall Valley to be allowed

Commission Comments and Questions

Mr. Frisby asked if access roads could only be provided to a maximum of three lots, how a potential body of property behind those lots would be accessed in the future.

Ms. McKibben explained this is why access roads to lots with undeveloped land behind them would not be allowed.

Mr. Greene asked what some of the advantages were for having frontage access to a publicly maintained right-of-way. He asked why this has been an essential element in the past.

Mr. Steedle said one reason would be if neighbors who had been using an easement could no longer get along, for example if there was a deficiency in the easement language itself, they would have a means to connect with a publicly maintained right-of-way.

Mr. Voelckers added that part of this issue is addressed by robust language about developing the easement to the satisfaction of the CBJ.

Ms. McKibben concurred that this is what the ordinance is attempting to address.

Mr. Palmer said that one of the hurdles which is present any time the City reviews a private agreement is the balancing act to on the one hand address components such as access, proper drainage and utilities, but on the other hand the City does not want to be in the business of reviewing a private agreement among the parties to make sure it is sufficient and then be

exposed to liability. He said that is why the proposed ordinance is just for access, utilities and drainage. It is not for legal sufficiency, he added, it is just for the purposes of addressing those elements connected with the CBJ code. The staff is proposing an option to provide the means for limited residential development while at the same time trying to make sure that the development does not come back in the future and create a situation where private property owners are not getting along, subsequently requesting that the City take over what was previously a private easement, said Mr. Palmer.

Ms. Shelton-Walker said this could also be a problem in the winter for example, if an improperly maintained private easement precluded access for police and fire protection.

Ms. McKibben responded that this ordinance would require acknowledgment that the owners are responsible for access and maintenance.

Mr. Voelckers said he felt there was a dimensional mistake on the Table of Roadway Construction Standards within the proposed ordinance. He said it states that the Director has the discretion to reduce an easement by 10 feet but that it appeared that the Director has the discretion to reduce the easement by up to 25 feet.

The staff concurred with Mr. Voelcker's assessment.

Mr. Greene asked if utilities such as sewer and water would need to be assessed based upon the number of units within the subdivision.

Mr. Steedle responded that this ordinance is only for single-family dwellings or single-family dwellings with an accessory apartment. It is important to the staff that the right-of-way be no less than 40 feet so that future needs could be accommodated.

Since some of the lots were rather large, Mr. Greene asked if they should not be considering other types of residences such as duplexes.

Ms. McKibben said these types of decisions are open for the Commission's consideration.

Mr. Murray Walsh said he has been a planning consultant for over 20 years, and that he has been involved in a number of varied projects. He said he currently is involved with a project which is stalled because of a lack of an ordinance such as is being considered by the Planning Commission. He said in his view this ordinance does not enable a double-tiered subdivision. The idea, said Mr. Walsh, is to obtain more use from City land with City streets. Mr. Walsh said he would like to introduce a new option for sub dividers with small lots which would enable them to construct small homes.

If the City wants to encourage affordable housing, said Mr. Walsh, the answer is not to construct substandard roads but to continue building good roads while at the same time expanding their use. Mr. Walsh showed one option of four lots which all had public road frontage and shared a central drive which led to the public road. If you were able to construct 40 houses, under this proposal 60 houses could be constructed, said Mr. Walsh.

The first question which the Commission would need to determine, said Mr. Walsh, is how many lots were to be served by a shared driveway. Mr. Walsh said that he was of the opinion that every lot should have some frontage on a public road. He said he felt the Commission was stepping off into “unchartered waters” if there was not some connection to a public road. Mr. Walsh said he felt that 20 feet of road was adequate for a double panhandle scenario such as he illustrated. He said he felt allowing the creation of completely detached parcels as a direction leading into complications. Mr. Walsh said he felt the number of lots sharing an easement should be four lots instead of three.

Mr. Walsh said he felt the ordinance should include all residential zones, not just those specified in the proposed ordinance. He stated that on line 24 on page seven of the ordinance that a problem has to exist before a developer could even use the standards in the proposed ordinance. He advised against this.

Mr. Walsh added that the minimum rectangle feature which used to be in the code is now missing.

Mr. Dye said he liked the idea of the panhandle lot which could also be used in other situations.

Chairman Haight said he did not see any limit on the length of a shared driveway of this type, and he wondered if this could be cause for concern.

Ms. McKibben said she believed this would be addressed through the fire code. The length of the driveway would be limited by its distance from a fire hydrant or mitigated with sprinklers.

Fire Marshall Dan Jager said a property with more than three structures on it, and the road to those structures was more than 150 feet in length, that a turnaround for fire equipment would need to be installed, he said, with a minimum of a 20 foot width. If residential sprinkler systems were installed within the dwellings, then the length of the drive could exceed 150 feet and the turnaround would not need to be constructed.

Ordinance Review by Section

Mr. Voelckers suggested that line 16 under Section 9 (Amendment of Sections) be changed by deleting the word “provide” and instead insert the words “allow the potential”. He said the purpose was so that developers would not need to spend money until the future of their project was certain.

Mr. Steedle said he felt the intent of the wording was that drainage, for example, currently under construction, would be adequate for later development.

Mr. Voelckers said perhaps the language could be adjusted. He stated he did not want to make the process awkward committing a developer to a future expense when that is not really the intent.

Addressing Mr. Voelckers' earlier concerns about amendment of the table, Mr. Palmer said he felt this could best be addressed by dropping the Roman numeral after the word "width" at the top of the table and instead insert the Roman numeral after the next four road classifications which all currently stipulate "60 feet public right-of-way". The Roman numeral stipulates that "ROW (right-of-way) width may be reduced as prescribed at CBJ.49.35.240."

Mr. Palmer said the language under the access portion of the ordinance is currently in code under Section 49 and is being moved to Chapter 35 which is the public improvement section. He said this is because this will keep all of the access provisions together, and it would then be removed from the chapter which is subject to variances and place it in Chapter 35 which is not currently subject to variances.

Mr. Voelckers said the portion of the ordinance called *Private Shared Access* on page six of the ordinance currently stipulates that private shared access can only occur if it is a development "when a new access point is prohibited or when a new access point would likely result in a traffic safety hazard..." Mr. Voelckers said he was surprised that topography was not mentioned in this portion of the ordinance, when it is often an issue before the Commission. Mr. Voelckers recommended that site topography be listed as an item to be considered within this portion of the ordinance where private shared access would provide a solution.

Within the same portion of the ordinance Mr. Voelckers said he felt that the issue was not really disposing of a minimum frontage requirement but an access requirement from the frontage. The issue is access, said Mr. Voelckers, not lack of right-of-way frontage.

Mr. Palmer said the concept of frontage within the current code assumes that access is obtained through that frontage. The Planning Commission needs to decide the purpose of frontage, said Mr. Palmer. If frontage does not have a purpose, said Mr. Palmer, there is the danger of a "taking" claim being made against the City, by requiring something which has no purpose. This is why this ordinance has been so difficult to assess, said Mr. Palmer.

Mr. Voelckers said some residences in town such as some located on Starr Hill do not have road access but access provided by a stairway.

Those are old subdivisions, responded Mr. Palmer, that did not have the frontage requirement currently in existence. Therefore they are exempt from current regulations, he said. He said he does not know of a subdivision formed since the Borough had the subdivision requirement that does not have frontage. Panhandles exist because of the frontage requirement, said Mr. Palmer, and there is good reason for that, he added.

Mr. Greene asked if a road had to be of a certain grade in order to qualify as driveway access to the frontage.

The draft ordinance does specify that the access has to be a minimum of 20 feet wide and that it has to be a certain grade, said Mr. Palmer.

Mr. Voelckers said he would like to add site topography as a possible reason for lots not having frontage on a right-of-way and sharing an access road under item (b), "Purpose", page seven. He wanted to add the same item under "Standards" on page seven, when site topography would render access on the public road impractical.

Mr. Voelckers said he would like the ordinance to apply to all residential zoning districts rather than stipulate only the districts currently listed on the draft ordinance.

Ms. Shelton-Walker asked how the CBJ could ensure that private road maintenance was maintained to acceptable standards.

Mr. Palmer replied that there is no guarantee that the owners would maintain the access road up to the standards that are sufficient for access. One of the purposes of the overarching code was to provide access for residential single-family homes, said Mr. Palmer. It was not to provide access to multi-family dwelling units. That is why only single-family zoning districts are included in this ordinance, he said. It was the feeling of the staff that this ordinance should not encourage the construction of single-family homes in multi-dwelling zones, said Mr. Palmer.

Mr. Voelckers asked for clarification under "Approval Process" on page eight of the draft ordinance.

Ms. McKibben said she felt the intent was similar to that of a major subdivision where preliminary plat approval is first obtained and then final approval is given once the access is constructed.

Mr. Voelckers asked why line 16 on page nine of the proposed ordinance referenced a common walls subdivision since this ordinance pertained to single residential dwellings.

Ms. McKibben stated that a common wall residence is a single-family home as defined in the code.

For example, said Mr. Palmer, if there were three lots there could be three single detached family residences, or there could be one single-family detached home and two common wall units.

In answer to a question by Mr. Voelckers, Ms. McKibben stated that a common wall could have an accessory apartment.

Ms. McKibben clarified that if there were three lots and one of those lots contained a common wall, if there is already a residence on the first lot, the third lot could not be developed because the common wall would be subdivided into two lots.

Ms. Shelton-Walker asked if on line 24 on page nine if the definition of shared access could be applied to a staircase as well as the road.

Mr. Palmer responded that phrase could be clarified to specify vehicular access.

Chairman Haight asked why line two on page nine referenced up to 50 average daily trips when they had been told that 70 daily trips would be the top number.

Mr. Palmer said if one single-family residence is approximately 16 average daily trips and three lots are allowed, that would be around 48 average daily trips. Fifty average daily trips would account for any small changes to the above referenced numbers, he said. Should the Commission want to expand the number of lots to four instead of three, then the average daily trips would be closer to 70 average daily trips, he said.

The table would also need to be modified, said Chairman Haight.

Mr. Voelckers recommended that on page 10, line 16, that accessory apartments be added to single-family residence.

Mr. Palmer said the provision on page 10 is unusual in that there are currently a number of properties that are served by shared access. This provision would prohibit those parcels that are currently being served by a shared access from deviating from this ordinance, he said. Shared access also exists within commercial and industrial zones, and on lots which do not have residential uses, said Mr. Palmer. This provision could potentially limit what can happen on those commercial and industrial lots until those shared accesses are improved and comply with a public street, he said.

Mr. Voelckers said he would like to speak in favor of the draft ordinance covering four lots instead of three lots. That would also allow for the potential of possibly using the four lot model provided by Mr. Walsh.

Mr. Greene asked if since the size of lots can vary due to zoning, if they should also consider the specific zoning of the area under consideration.

Ms. Shelton Walker noticed that in some of their reference material that some communities require roads to be paved if they exceed a certain number of lots and/or the length of the road.

Mr. Dye said if the Commission was concerned about possible bad relations between neighbors over an access road that a paved access road would provide less ground for argument among neighbors.

Mr. Voelckers said he leaned towards requiring access roads to be paved. This is already required in the Valley because of dust issues, he said.

Mr. Voelckers said that he recommended that on page 10 that the access road that can be reduced up to 10 feet at the Director's discretion be 20 feet instead. That would mean a road could be reduced to 30 feet or even less, he added.

Mr. Steedle said the width in the proposed ordinance of an access road had evolved after discussions with the superintendent for streets who felt strongly that 40 feet was the minimum size he felt should be allowed. He said it was important to keep this in mind because even though they are discussing private access roads there may be a point when those residents may wish to make that a public road.

The Commission agreed they would like the insertion of topography into those portions of the ordinance previously outlined by Mr. Voelckers.

Mr. Voelckers said there is a related issue which involves how to make panhandles perform slightly better. The minimum rectangle language was taken away when the subdivision ordinance was passed in the fall, said Mr. Voelckers. In several recent instances people have a big lot and simply want to divide it in half and are prevented from doing so because the current language on minimum lot size states that each lot served by a public sewer system shall be 20,000 square feet. Mr. Voelckers said he would like to cross out the 20,000 square feet provision stating that it shall meet the dimensional requirements of the underlying zoning district, including minimum lot depth and width, excluding the panhandle portion.

Mr. Voelckers asked Mr. Palmer if he saw any problem with removing the 20,000 square foot designation which currently exists within the code from item (2) under Panhandle Lots.

Mr. Palmer said that panhandles were specifically not included in the shared access portion of the ordinance. If the Commission wants to address panhandle lots it can do so, he said.

Panhandles and shared access lots are similar, said Mr. Palmer, but said he did not know what the CDD currently had planned.

Mr. Steedle said they do want to investigate panhandles as well as many other items, but that what has slowed the progress of this ordinance to appear before the Commission was his desire to revise street standards. He said considering street standards simultaneously with the shared access slowed down the process to the extent that they needed to remove consideration of street standards at this time. Mr. Steedle said he felt this could move forward much more expeditiously if shared access was considered separately from panhandles.

II. **OTHER BUSINESS** - None

III. **REPORT OF REGULAR AND SPECIAL COMMITTEES** - None

IV. **ADJOURNMENT**

The meeting was adjourned at 6:55 p.m.



Community Development

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

DATE: August 11, 2016

TO: Planning Commission

FROM: Jonathan Lange, Planner
Community Development Department

FILE NO.: SGE2016 0001

PROPOSAL: A Conditional Use Permit for an extension to year 2026 and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.

GENERAL INFORMATION

Applicant: City & Borough of Juneau, Lands Division

Property Owner: City & Borough of Juneau, Lands Division

Property Address: 13010 Glacier Highway

Legal Description: USS 3810 Lot 1 FR

Parcel Code Number: 4-B30-0-102-002-0

Site Size: (Parcel size: 13,503,600 Square Feet or 310 Acres) Quarry size: 16 Acres

Zoning: RR – Rural Reserve

Utilities: Public Sewer and Water

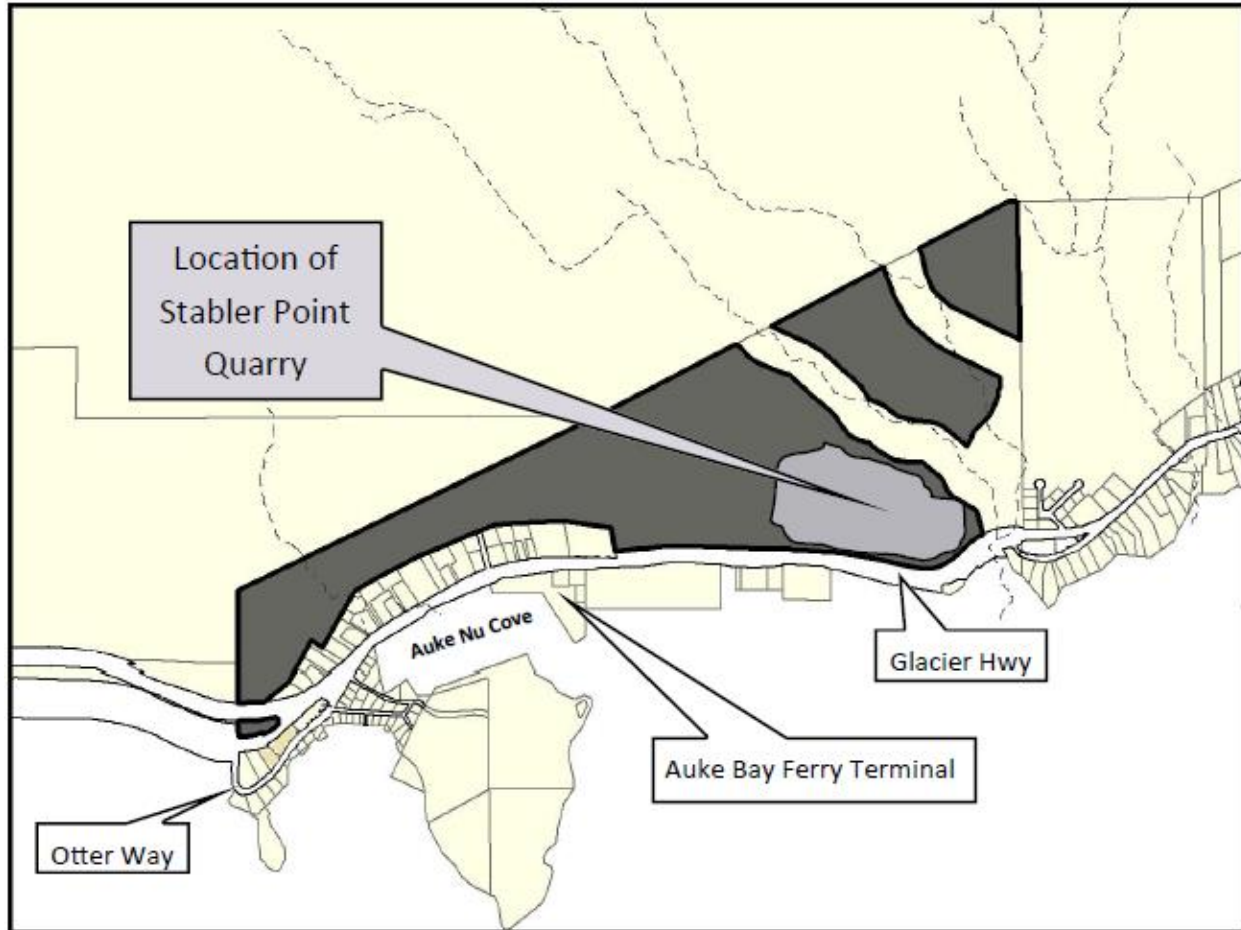
Access: Glacier Highway

Existing Land Use: Rock Quarry

Surrounding Land Use: North – RR, Vacant and Auke Nu Creek
South – D-3, Single-Family Residence; WI, Auke Bay Ferry Terminal
East – D-1 (T) D-3, Single-Family Residences
West – RR, Vacant; D-3, Single-Family Residences

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VICINITY MAP



ATTACHMENTS

- Attachment A – Application and Narrative
 - Attachment A 1 – Site Map
 - Attachment A 2 – Photo of Site
 - Attachment A 3 – 3D View of Intermediate Contours
 - Attachment A 4 – Proposed Expanded Quarry Limits Plan
 - Attachment A 5 – Possible Initial Development for Expanded Stabler Quarry
 - Attachment A 6 – USE2011 0017 Notice of Decision
 - Attachment A 7 – Vibration Monitoring Summary Report
 - Attachment A 8 – Stabler Quarry Noise Study 2011
- Attachment B – Public Notices and Neighborhood Meeting Handouts and Sign-in Sheet
- Attachment C – Agency Comments
- Attachment D – Public Comments

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PROJECT DESCRIPTION

The applicant, City and Borough of Juneau (CBJ), Lands Division (Lands), requests a Conditional Use Permit for Stabler Point Quarry to expand the area of rock quarry operations, to extend the operational life to the year 2026, and to increase the maximum blast size to 25,000 cubic yards. Please see the attached applicant's narrative (Attachment A) and below, in Analysis, for further description of the Conditional Use Permit request.

Stabler Point Rock Quarry's current Conditional Use Permit allows for operations until the year 2021; but, because the applicant is requesting to expand the area of operations and increase the blast size, they are requesting to extend the operational life, to 2026, at the same time.

BACKGROUND

Stabler Point Quarry is located on Glacier Highway, west of Auke Bay, and just east of the Auke Bay ferry terminal. The quarry has been in operation since 2001. In 2011 the rock quarry operations Conditional Use Permit was renewed to allow for ten more years of operation. Currently the hours of operation are 8am – 4:30pm, Monday through Friday. Blasting is allowed from 10am - 12pm and 1pm – 3pm, Monday through Friday. These hours are proposed to stay the same.

The CBJ owns and manages the rock quarry, while private contractors conduct mining activities within the quarry. Recently, extraction has increased due to large projects within the Borough. The current quarry pit has expanded to its permitted perimeter and further extraction would require either lateral expansion, as requested in this application, or for the pit to be excavated deeper. A deeper pit would reduce the available space for extraction, processing and hauling activities. Thus, the applicant is asking to expand the area of rock quarry operations laterally away from Glacier Highway (see Attachment A 1).

The Alaska Department of Transportation and Public Facilities (DOT&PF) considers the existing curve of Glacier Highway at Stabler Point as dangerous because of the sharpness of the curve. At the end of the life of the quarry the DOT&PF want to straighten out the alignment of Glacier Highway at Stabler Point and establish a new road that would run from the existing entrance of the quarry on a straight line through the hill side to the west and then to continue on Glacier Highway.

NEIGHBORHOOD MEETING

CBJ Community Development (CDD), Engineering, and Lands Division staff held a neighborhood meeting at the University of Alaska Southeast on July 21, 2016 to discuss the proposed changes to the Stabler Point Quarry Conditional Use Permit. Three members of the public were in attendance. CDD staff gave an overview of the Conditional Use Permit process, and Engineering and Lands

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Division gave background and information about the proposed expansion to the quarry operations. One member of the public requested more exact times of when blasting will occur.

AGENCY COMMENT

The CBJ Building, General Engineering, Fire, and Police Departments did not have any issues or comments with the proposal.

DOT&PF Southcoast Region offered the following comments on this proposal:

“Traffic and Safety has no comment or objection provided current traffic control provisions are kept in place.

“Right of Way and Utilities - Would like to see all the trees on the remaining slope above the highway high stumped. Leaving high stumps would slow escaping rock from rolling down slope too fast. Removing the tall trees will keep trees from damaging the utilities on the pole line across from the pit. When alders are high stumped they still grow and get more like a hedge shrub. That too would slow escaping rock.”

The applicants responded to DOT&PF’s comments (see Attachment C) and stated that their concern is possibly for the area that was previously mined near Glacier Highway. Engineering stated that “At this time the area is relatively clean and stable”, and that this concern would be more of an issue when they “start lowering the top of the cliff prior to mine closure.”

PUBLIC COMMENT

Staff received the following comments and questions from the public at the time of preparation of the staff report. Public Comments are Attachment D to the staff report.

Rich Brenner of 13650 Glacier Highway submitted, via email, questions to staff. His main concerns were of noise, especially in relation to hours of operation, and the location of the proposed expansion for the quarry operations. Quarry operation times are not proposed to change. The extent of the proposed lateral expansion of quarry operations will be approximately a half mile from Mr. Brenner’s property (see Attachment D for comments and staff’s response).

Staff received an email and phone call from Vivian Hegg of 2950 Fritz Cove Road. Ms. Hegg’s concerns are the visual and noise impacts of quarry operations. She also was wondering if the operation hours were proposed to change. Ms. Hegg asked staff to explain the size of expansion and the long term plan for realignment of Glacier Highway.

Karol Kriens of 12175 Glacier Highway, Unit A403 of Spaulding Beach Condos, provided written comments about the proposal. Ms. Kriens is concerned about: rocks that may fall from trucks onto

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Glacier Highway; the speed of the trucks traveling along Glacier Highway; the effects of blasts to wildlife; and ensuring conditions of approval are followed.

Staff communicated with Suzanne Dvorak by telephone and via email. Ms. Dvorak and Mr. Robert L. Eastaugh own a home at 12555 Auke Nu Drive. They currently live in Anchorage, Alaska, and rent their home on Auke Nu Drive. In their written comments, Ms. Dvorak and Mr. Eastaugh provided five suggested requirements that they state would be “critical” to their willingness to accept the proposal. The requirements are as follows:

- “(1) The permit requires that vibration and blast effects observed and reported to date not be exceeded;
- (2) The permit requires adoption and implementation of recommendations contained in the ASE Blast Monitoring Report of December 31, 2015 (pages 8-11);
- (3) The permit includes a requirement identical to paragraph 7 of the Commission's 2011 Decision, which required that the quarry operator "submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast.";
- (4) The permit allows shot frequency not exceeding that experienced in 2015; and
- (5) The permit requires a "stepped" increase to the maximum proposed; i.e., require a 15,000 cubic yard blast to determine effects (conducted under similar conditions for any 25,000 cubic yard shots) before allowing shots at the requested 25,000 cubic yard level.”

Staff finds that Ms. Dvorak’s and Mr. Eastaugh’s suggested requirements 1-4 are met by the proposed conditions of approval. The applicant has shown in their Vibration Monitoring Summary Report (Attachment A 7) that controlled blasts up to 15,000 and 23,000 cubic yards of material are recorded to be far below the required limits of peak particle velocity allowed, as explained further in the below analysis, section 7(L).

Staff received a letter from Alison Browne. Ms. Browne owns an undeveloped lot at 12545 Auke Nu Drive. Her concerns are with the expansion of the blast size and how it might negatively impact her lot and any future structures she would like to place on her lot.

ANALYSIS

This permit has been reviewed and processed according to CBJ Land Use Code Title 49.65.210(a) Extraction permit.

49.65.200 Extraction permit required.

- (a) The use of property for the excavation, removal or other extraction of stone, sand, gravel, clay or other natural deposits and formations, including the processing of the materials, may be authorized in any district only under a conditional use permit issued by

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the Commission under the procedures set forth in chapter 49.15, article III, as modified by this article. (Emphasis Added)

49.65.210 Contents of application.

Each person who requires a permit under this article [Article II Sand & Gravel] shall file an application with the department. The application shall contain a plan for the excavation operation, storage, on-site processing if permitted in the district, and site restoration. The plan shall include (see items 1-7 below):

The applicant has provided a detailed application and narrative responding to the following criteria listed in "Contents of application 1-7" below; see Attachment A.

(1) A graphic and legal description of the property;

Attachment A 1 shows an aerial photo of the subject parcels location. The Stabler Point rock quarry is located in U.S. Survey 3810, Lot 1 in the Auke Bay area at approximately 13 mile, Glacier Highway. The lot is zoned Rural Reserve and is 310 acres in size. The quarry is currently 16 acres in size; 24 additional acres are proposed for rock quarry operations.

(2) A topographic map showing the existing topography, vegetation, drainage features, ground water level, structures, significant natural and artificial conditions of the land, on-site and off- site geophysical hazards which may affect or be affected by the proposed operation, proposed structures, roads, stockpiling and operation;

Site topography is shown in Attachment A 1. Attachment A 2 is a photo of the quarry. Attachment A 3 shows a 3D rendering of the site contours. Existing topography is described in the applicant's narrative. The main floor of the quarry is at approximately 140 feet elevation; around 90 feet above Glacier Highway. Drainage will continue to settle in the existing areas and will drain toward Glacier Highway. A description of the drainage plan will be discussed further in this analysis under 7 (A).

(3) A topographic map and a typical cross section showing the proposed finished contour on the land, vegetation, drainage features, limits of overburden clearing, structures, and significant natural and artificial conditions of the property which will exist upon completion of the site restoration plan;

Proposed finished contours of the expansion of quarry operation area is included in the applicant's narrative and Attachment A 3.

(4) Topographic mapping required in subsections (2) and (3) of this section for areas having a slope of less than five percent shall show spot elevations at all breaks in grade, drainage

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channels or swales and at selected points not more than 100 feet apart in all directions. For areas having a slope of greater than five percent, contours shall be shown at an interval of not more than five feet where the ground slope is regular; however, contour intervals of not more than two feet may be required where necessary to adequately show irregular land features or drainage details;

As mentioned in the applicant's narrative the walls of the quarry will be benched down toward the floor of the quarry at a series of benches 20 feet wide horizontally with 30 foot tall vertical walls between benches.

(5) The plan shall include a map showing ingress and egress points for trucks and other equipment;

The two existing access roads will continue to be used for ingress and egress to the quarry. The eastern most access road will continue to be used as the main entrance for quarry operations.

(6) The plan shall include a map showing all buildings and structures to be located on the site; and

The truck scale and associated buildings are shown in the aerial photo of Attachment 1 and were installed in the quarry in 2007. A small plastic garden storage shed and a portable restroom are the only other buildings on-site. All buildings are not permanent and will be relocated to lower levels of the quarry floor as the mining progresses downward.

(7) A narrative statement describing the operation, on-site processing, stockpiling, and site restoration shall be included showing:

The applicant describes the operations of the quarry as follows:

- "CBJ owns and manages the quarry, provides infrastructure (roads, truck scale, water), permitting, environmental monitoring and compliance oversight.
- Contractors are required to submit a mining plan for approval prior to mining. The contractor must operate under conditions imposed by the quarry usage plan. The mining plan and usage plan address the contractor's responsibilities while operating in the quarry.
- When space is available, mining areas may be allocated to contractors needing rock for other projects (e.g. State, Federal, and private).
- All actual mining work is done by contractors, not by CBJ.
- CBJ charges the contractor a management fee for each ton of rock mined. The fees are used to pay for CBJ's material sources operational expenses and to fund past and future material source development and reclamation expenses."

(A) A site drainage plan;

Site drainage and stormwater on-site management is regulated by the Alaska Department of Environmental Conservation (ADEC) through their Multi Sector General Permit. This requires the quarry to comply with and follow a Storm Water Pollution Prevention Plan or SWPPP. Most quarry runoff water is collected and settles in a pond located at the east end of the quarry. Here the pond discharges the water into a vegetated buffer zone and finally flows to an existing drainage ditch along Glacier Highway. The quarry also has a culvert that is used as the SWPPP designated stormwater outfall that flows under the access road towards Auke Nu Creek. This culvert is used at times of frozen ground or excessive rainfall.

The applicant's narrative describes that as the quarry expands the surface storm water runoff is expected to increase as well.

(B) A method of securing the area, including installation of gates at access points, posting, and fencing;

Both access roads are equipped with permanent locking gates within 100 feet of Glacier Highway. These gates are locked at the end of daily operations.

(C) Methods to be used to minimize noise pollution and visual blight;

A Noise Study was prepared in 2011 and is included as Attachment A 8 to the application. The study was prepared by Michael Minor and Associates, Inc. and models the existing and future noise impacts of the quarry operations. The study concludes that the current methods of noise mitigation are sufficient to meet code requirements. The mitigation measures are as follows:

- Restrict the use of exhaust brakes on trucks entering or leaving the quarry, unless required for safety reasons.
- A constructed earthen berm at the "open" east end of quarry serves as a noise barrier.
- Maintain a rock wall around south and western perimeter. Height of the wall is generally one bench height (30 ft) or taller above the lower quarry floor levels.
- Minimize the clearing of trees and other vegetation from around the perimeter of the quarry and encourage the regeneration of vegetation in order to diffuse noise and soften sound reflective surfaces.
- Limit crushing activities to the lower quarry levels, locating crushers behind stockpiled material if at all possible.

The applicant states that visual blight is minimized by allowing trees to grow and stay in place as long as possible around the quarry perimeter. These can act as a visual shield between Glacier Highway and the current quarry operations.

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(D) The proposed hours and days of operation during the year;

Hours of operation are proposed to stay the same. The current hours of operation are Monday through Friday 8am to 4:30pm, all year except State holidays. Blasting is allowed Monday through Friday 10am - 12pm and 1pm - 3pm.

(E) The estimated amount and general type of material present and to be removed from the site;

Under the current quarry footprint approximately 1.8 million cubic yards of rock is potentially available. With the proposed expansion, the applicant is estimating that 2.3 million cubic yards of rock could potentially be extracted.

Generally the material that is extracted from the quarry is solid rock that requires blasting, crushing, and screening prior to loading and hauling of materials from the site. The applicant's narrative contains figures showing the mining operations foot print of current mining, continued to the elevation of Glacier Highway; and the proposed mining expansion away from Glacier Highway (see Attachment A under 7(E)).

(F) The results of test holes which show the water table level, if any, and the general type and location of materials to be removed;

The applicant states that there is no visible water table in the highway cut face and none has been found in the quarry. The quarry will eventually be mined down to the elevation of Glacier Highway.

(G) The date by which it is anticipated the extraction and processing operation will be completed;

The rate of extraction and the demand for rock from Stabler Point Quarry greatly affects the anticipated completion date of extraction and processing operations at the quarry. The applicant's narrative states that with the expansion of the quarry, rock supply could potentially continue into the foreseeable future.

(H) A schedule for completion of necessary site restoration work;

Site restoration work will follow the restoration plan and will leave clean rock faces interspersed with stable benches at the perimeter of the quarry. The restoration schedule will depend on actual extraction rate but will include grading and sloping of floor areas for proper drainage.

(I) Operating procedures for control of airborne particulates and other pollutant emissions from the site and equipment used at the site that may affect areas beyond the site boundaries;

When dust occurs within the quarry operations from drilling, blasting, and crushing/screening, water will be used by contractors to settle the dust. Drills used in the quarry are required to be

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fitted with collection and separation devices. Spray bars are required during crushing and screening of rock. Water trucks are also used to spray down the quarry floor and roads.

- (J) The identification of any geophysical hazards which may affect or be affected by the proposed operation. A statement of the possible impact of the hazard on the operation and of the operation on the hazard including methods of reducing the impact shall be included;**

Prior to starting quarry operations near the southwest portion of the quarry a geotechnical evaluation of the large cliff face will need to be completed. This area contains several large overhanging sections of cliff, above Glacier Highway, that contain some large boulders.

- (K) The date of establishment of the operation and history of adjacent land development; and**

The applicant has outlined the date of establishment of the operation and history of adjacent land development in the application narrative under 7 (K), Attachment A.

- (L) Such additional relevant information as the Commission or Department may request.**

Eagles nests – Adjacent to the quarry are several historically designated eagle nest trees that have consistently had occupied nesting eagles. These eagles have become habituated to the quarry activities and have continued to use the nests in the area year after year.

Variances were received for allowing development within 330 feet of actively nesting eagles.

- VAR20008-00006 – A Variance request for the proposed expansion of the existing Stablers quarry pit within an eagle's nest habitat setback.
- VAR2001-00017 – A Variance to allow excavation of rock within the required 330 foot setback for an eagle nest located on public lands. The proposed Stabler Point rock quarry will be within 330' of eagles nest tress at various stages of operation.
- VAR2000-00037 – A Variance to allow excavation of rock within the required 330 foot setback for an eagle nest located on public lands, and
- VAR-VR96-52) – A Variance to reduce required setback from eagle nest tree.

Maximum Blast Limits – Conditional Use Permit USE2011 0017 Condition 25 limited the maximum blast limit to 6,000 cubic yards (see Attachment A 6). This limit was set by the Planning Commission and was taken from the CBJ Standard Specification for Civil Engineering Projects and Subdivision Improvement Section 02090 – Blasting Controls. The standards set a maximum limit of peak particle velocity at the nearest structure or facility. The blasting at Stabler Point Quarry conforms to the limits in the above mentioned standard. The CBJ Engineering Department has collected blast vibration data in Stabler Point Quarry. All shots ranging from 4,000 cubic yards to 24,000 cubic yards have been well under the peak particle velocity limit (see Attachment A, applicant's narrative).

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The applicant has asked for the blast limit to be increased to 25,000 cubic yards. This will allow for fewer shots to be taken, while also staying below the peak particle velocity that is allowed. The applicant has shown vibration data that concludes that the bigger shots are below the allowed limit.

49.65.230 Commission action on Application.

The Commission may grant the permit but shall first consider each of the following areas (as listed below) and may impose restrictions as may be necessary to protect the public health, safety and welfare. Staff indicates that the following areas listed below were addressed in the 2001 and 2011 Conditional Use permits and listed as permit conditions under Attachment A 6. Some of these conditions are still relevant and, where still warranted, staff continues to recommend them as permit conditions for the current permit.

(1) The hours, days, and times of year of operation;

Staff recommends that the hours of operation continue as currently operated: Monday through Friday 8am - 4:30pm, year-round, except for State holidays; and that blasting is allowed Monday through Friday 10am - 12pm and 1pm - 3pm.

(2) Screening, whether natural or artificial, to reduce or eliminate adverse visual, audible or other impacts of the operation;

The applicant has provided a Noise Study (see Attachment A 8) that documents that the measured noise levels of the quarry operations were below the regulation of 65 dBA.

Staff recommends the following Conditions of Approval to mitigate adverse visual, audible or other impacts of the operation:

- The applicant shall (or cause to) retain a natural buffer at the western end of the quarry similar to that at the eastern end for a visual and noise barrier. This buffer may be pierced to create the new western entrance roadway for the realignment of Glacier Highway. Additionally, and when feasible, the buffer shall be retained during all quarry operations throughout the site for noise and visual buffering.
- Rock crushers shall be operated on the lower quarry levels. Stockpiles shall be located to provide additional noise screening barriers whenever possible.
- The applicant shall have all operators of the quarry conduct their activities in accordance with all requirements of the noise management plan, blasting and noise controls, and temporary environmental controls.
- The site clearing shall be consistent with needs to retain sound and visual barriers

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for the quarry operation.

- (3) Measures to protect the public from the dangers of the operation or site, to prevent casual or easy access to the area, or to prevent the operation or area from being an unprotected attractive nuisance;**

The site will continue to use the security gates at each access road to the quarry. During blasting Glacier Highway is temporarily closed and public notice is given for each blast occurrence.

- (4) Final and working slope ratios of the face of any extraction area to the extent necessary to protect abutting public and private property, and to protect the future beneficial uses of the property as described in the applicant's plan for development and restoration;**

Staff recommends that the applicant reclaim the quarry site with finished faces and established benches, and removes loose rock during periods between projects, see Conditions of Approval.

- (5) Measures to protect private and public property adjoining the operation and to guarantee orderly and safe traffic circulation both on the public streets and within the permit application area;**

The applicant has addressed these measures in their application. Safe traffic circulation shall be guaranteed through blasting notice signs and closure of Glacier Highway during blasting.

- (6) Measures which will ensure adequate drainage or collection and storage of surface waters to protect surrounding property, eliminate dangers to the public, or to protect the future beneficial use of the property as described in the applicant's plan for development and restoration;**

Staff recommends Conditions of Approval for this application to ensure adequate drainage and stormwater management. Staff finds that the application adequately explains drainage, protection and restoration plans of the project.

- (7) Measures to protect the water level and water quality;**

This criterion has been discussed under subsection 7(A) above. No water level has been observed in the quarry or at the Glacier Highway road elevation.

- (8) Measures to minimize or eliminate airborne particulates, visual blight, noise and other adverse environmental effects;**

Measures have been implemented and will continue as Conditions of Approval for the Conditional Use Permit that minimize and eliminate airborne particles, visual blight, noise and other adverse environmental effects. Dust control devices shall continue to be used.

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(9) Restoration measures and schedule;

Trees and buffers shall be retained, as feasible, and the exposed rock will be reclaimed with finished faces and established benches as discussed above.

(10) Other measures designed to protect the public health, safety and welfare, including preservation of neighboring property; and

The applicant's narrative addresses the measures that are taken to protect the public health, safety and welfare, including preserving neighborhood property.

(11) Present development and past history of the neighboring property.

The applicant has outlined the date of establishment of the operation and history of adjacent land development in the application narrative under 7 (K), Attachment A.

49.65.235 - Mandatory conditions of permit.

Unless specifically waived by the Commission, the requirements of this article shall be a condition of all permits issued. The Commission may not waive or modify any of the following requirements except upon a finding that the requirement would serve no useful purpose. Such finding must be supported by substantial evidence in the record of the hearing before the Commission:

- (1) A strip of land at the existing topographic level, and not less than 15 feet in width, shall be retained at the periphery of the site wherever the site abuts a public way. This periphery strip shall not be altered except as authorized for access points. This section does not alter the applicant's duty to maintain subjacent support.**

The project plan and applicant's narrative plan for a strip of land to remain between the quarry and Glacier Highway, the public way, until the time that DOT&PF realign Glacier Highway through Stabler Point.

- (2) If the bank of any extraction area within the permit area is above the high water line or water table, it shall be left upon termination of associated extraction operations with a slope no greater than the angle of repose for unconsolidated material of the kind composing it, or such other angle as the Commission may prescribe. If extraction operations cause ponding or retained water in the excavated area, the slope of the submerged working face shall not exceed a slope of 3:1 from the edge of the usual water line to a water depth of seven feet. This slope ratio may not be exceeded during extraction operations unless casual or easy access to the site is prevented by a fence, natural barriers, or both.**

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As explained above the water table and high water line are both below the quarry's lowest level. The quarry walls will be stepped down in benches toward the quarry floor. The drainage plan addresses water run-off.

Conformity with Adopted Plans

The following sections of adopted plans relate to the proposal:

CBJ Comprehensive Plan (2013)

POLICY 5.9 IT IS THE POLICY OF THE CBJ TO SUPPORT THE EXTRACTION AND PROCESSING OF MINERAL RESOURCES IN AN ENVIRONMENTALLY-SOUND MANNER, GIVING PROPER RECOGNITION TO THE UNIQUE VALUES OF THIS COMMUNITY.

Conditions of Approval for the proposed expansion of Stabler Point Rock Quarry will minimize negative affects to the environment and adjacent properties while providing extraction and processing of rock for projects throughout the community.

The Comprehensive Plan designates this land as Resource Development, which is defined as:

"Land to be managed primarily to identify and conserve natural resources until specific land uses are identified and developed. The area outside the study area of this Comprehensive Plan is considered to be designated Resource Development. As resources are identified or extracted from these lands, they should be re-designated and re-zoned appropriately."

CBJ Land Use Code Title 49

In general, the purpose of the Land Use Code is to ensure that development is:

- In accord with the values of the community;
- Achieving goals and policies with adopted plans;
- An appropriate use of economically valuable land;
- Appropriate in type, design, location, and
- Served by adequate utilities.

Stabler Point Rock Quarry provides rock for the community's needs. The Conditions of Approval recommended below will help the proposed expansion meet the intent of the Land Use Code.

Habitat

As discussed above, there are mapped eagles nests near the quarry. The quarry has received Variances to the no development buffer to eagles' nests and they have not expired. The eagles

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return to their nests year after year and have become habituated to the quarry activities.

The subject parcel contains two stream corridors. The applicant has maintained a 50 foot setback for development from Auke Nu Creek (see Attachment A 1).

FINDINGS

CBJ §49.15.330 (e)(1), Review of Director's Determinations, states that the Planning Commission shall review the Director's report to consider:

1. Whether the application is complete;
2. Whether the proposed use is appropriate according to the Table of Permissible Uses; and,
3. Whether the development as proposed will comply with the other requirements of this chapter.

The Commission shall adopt the Director's determination on the three items above unless it finds, by a preponderance of the evidence, that the Director's determination was in error, and states its reasoning for each finding with particularity.

CBJ §49.15.330 (f), Commission Determinations, states that even if the Commission adopts the Director's determination, it may nonetheless deny or condition the permit if it concludes, based upon its own independent review of the information submitted at the public hearing, that the development will more probably than not:

1. Materially endanger the public health or safety;
2. Substantially decrease the value of or be out of harmony with property in the neighboring area; or,
3. Not be in general conformity with the comprehensive plan, thoroughfare plan, or other officially adopted plans.

Per CBJ §49.15.330 (e) & (f), Review of Director's & Commission's Determinations, the Director makes the following findings on the proposed development:

1. Is the application for the requested conditional use permit complete?

Yes. We find the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. Is the proposed use appropriate according to the Table of Permissible Uses?

Yes. The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ §49.25.300, Section 14.500 for the RR – Rural Reserve zoning district.

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3. *Will the proposed development comply with the other requirements of this chapter?*

Yes. The proposed development complies with the other requirements of this chapter. Public notice of this project was provided in the August 9, 2016 and August 19, 2016 issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to all property owners within 1,000 feet of the subject parcel. Staff extended public notice to include parcels around Auke Bay Harbor and along Fritz Cove Road. Moreover, a Public Notice Sign was posted on the subject parcel, and on Fritz Cove Road, visible from the public Right of Way.

4. *Will the proposed development materially endanger the public health or safety?*

No. As the quarry operation continues to follow the Conditions of Approval, safety plan, noise mitigating measures, and environmental control plan, it will continue to operate in a way as to not endanger the public health and safety.

5. *Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?*

No. Though noise, vibrations, and dust have been a concern of property owners in the neighboring area, the operations and Conditions of Approval to the proposed expansion of the quarry operations have mitigated and will continue to mitigate these concerns. The proposed expansion to the quarry operations is found to not decrease the value of or be out of harmony with property in the neighboring area.

6. *Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?*

Yes. The proposed development is in general conformity with the Land Use Code Title 49 and the CBJ Comprehensive Plan.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

7. *Will the proposed development comply with the Juneau Coastal Management Program?*

N/A

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 extension to year 2026

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and expansion of blast size and area of rock quarry operations for Stabler Point Quarry. The approval is subject to the following conditions:

1. All vehicle loads shall be contained. Vehicles hauling from the site shall be operated with tailgates, covers or other similarly effective methods. The use of exhaust brakes on trucks entering or leaving the quarry shall not be used, unless required for safety reasons.
2. Public notification warning signs shall be erected a minimum of 24 hours prior to blasting. Written notification shall be given to Juneau Flight Services, Juneau Police Department and Capital City Fire / Rescue a minimum of 24 hours prior to blasting.
3. The hours, days, and dates of operation shall be 8am - 4:30pm, Monday through Friday, all year except State holidays.
4. Blasting operation shall be scheduled to occur between 10am - 12pm and 1pm - 3pm, Monday through Friday.
5. This quarry permit shall expire 10-years after the date of approval.
6. Each quarry operator shall submit an individual mining plan that is in conformance with this Conditional Use permit and is approved by the quarry manager prior to performing any work in the quarry. Each mining plan shall be prepared by a civil engineer or other authorized professional.
7. The operator is required to comply with the requirements of CBJ Standard Specifications 02090 Blasting Controls. A quarry operator shall submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast.
8. Quarry operators shall comply with the existing DOT/ PF approved Stabler Traffic Control Plan(s) for blasting operations, quarry access, and work within the DOT/ PF ROW.
9. Explosives shall not be stored on site, except for that which is immediately necessary for the next blast.
10. The applicant shall comply with DEC regulations governing stormwater discharges from the quarry site, with particular attention paid to protecting Auke Nu Creek
11. The applicant shall (or shall cause to) reclaim the quarry site with finished faces and established benches, and remove loose rock during the period between projects, even if the entire quantity of rock has not been removed.

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12. The applicant shall (or cause to) control dust caused by excavation, truck hauling, rock crushing, or other aspects of the operation.
13. The applicant shall (or cause to) repair any damage to Glacier Highway as a result of the quarry operation. If there is visible damage to the roadway due to hauling or mining operations, the roadway shall be repaired in cooperation with DOT/ PF.
14. The applicant shall require the posting of a bond (or equivalent if project based) from all quarry operators to ensure spilled or tracked material are removed from public roads. The applicant shall (or cause to) remove all spilled materials immediately from public roadway and ensure that mud and debris tracked onto roads be cleaned daily, with the City having the ability to allow less frequency on a case by case basis as warranted. DOT/ PF reserves the right to request sweeping at any time it sees a problem or complaint.
15. The applicant shall ensure that lighting (if any) does not glare onto adjacent roadways.
16. The applicant shall (or cause to) operate the quarry according to the application proposal, including attachments and drawings, except that all conditions contained herein shall take precedence.
17. The applicant shall ensure that the rock extraction is consistent with the recommendations of the US Fish & Wildlife Service for the protection of nesting eagles according to the past approved variances (VAR96-52, VAR2000-37, VAR2001-17, & VAR2008-6).
18. The applicant shall maintain a lockable security gate at the quarry entrance.
19. The applicant shall (or cause to) retain a natural buffer at the western end of the quarry similar to that at the eastern end for a visual and noise barrier. This buffer may be pierced to create the new western entrance roadway (Attachment C). Additionally, and when feasible, the buffer shall be retained during all quarry operations throughout the site for noise and visual buffering.
20. Prior to extracting the southwestern cliff face of the quarry, a qualified expert in geophysical hazard shall evaluate the site and recommend guidelines for its development. Further, these guidelines shall be made part of any approved mining plans for these areas and written notification given to all operators.
21. The recommended noise levels (excluding blasting) as measured at the nearest property lines shall not exceed 65 dBA.
22. Rock crushers shall be operated on the lower quarry levels. Stockpiles shall be located in a

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way to provide additional noise screening barriers whenever possible.

23. The applicant shall have all operators of the quarry conduct their activities in accordance with all requirements of the noise management plan, blasting and noise controls, and temporary environmental controls.
24. The site clearing shall be consistent with needs to retain sound and visual barriers for the quarry operation. Prior to removal of substantial vegetation, the clearing limits shall be flagged and reviewed for approval by the Community Development Department.
25. Individual blasts shall be limited to a maximum of 25,000 cubic yards.

Advisory Condition

26. The pull out area adjacent to the quarry entrance drive near Glacier Highway is to be used for equipment transfer only. There shall not be temporary or long term parking on the pull out area. Transfer operations shall occur outside of the roadway clear zone. Access into the pull out area shall be limited to right in and right out turns.
27. A strip of land at the existing topographic level not less than 15 feet in width shall be retained at the periphery of the site wherever the site abuts a public way. This periphery strip shall not be altered except as authorized for access points. This section does not alter the applicant's duty to maintain subjacent support.
28. If the bank of any extraction area within the permit area is above the high water line or water table, it shall be left upon termination of associated extraction operations, with a slope no greater than the angle of repose for unconsolidated material of the kind composing it, or such other angle as the Commission may prescribe. If extraction operations cause ponding or retained water in the excavated area, the slope of the submerged working face shall not exceed a slope of 3:1 from the edge of the usual water line to a water depth of seven feet. This slope ratio may not be exceeded during extraction operations unless casual or easy access to the site is prevented by a fence, natural barriers, or both.

DEVELOPMENT PERMIT APPLICATION

Project Number	CITY and BOROUGH of JUNEAU	Date Received: <u>6/23/16</u>
Project Name (City Staff to Assign Name)		

INFORMATION	Project Description Stabler Quarry Expansion		
	PROPERTY LOCATION		
	Street Address 13010 Glacier Highway	City/Zip Juneau 99801	
	Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) USS 3810 Lot 1 Fraction		
	Assessor's Parcel Number(s) 4 B30 0 102 002 0		
	LANDOWNER/ LESSEE		
	Property Owner's Name CBJ Lands Division	Contact Person: Greg Chaney	Work Phone: 5860205
	Mailing Address 155 S. Seward Street	Home Phone:	Fax Number:
	E-mail Address greg.chaney@juneau.org	Other Contact Phone Number(s): 586-0224	
	PROJECT / APPLICANT	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		<u>Greg P. Chaney</u> Landowner/Lessee Signature	<u>June 23 2016</u> Date
X		 Landowner/Lessee Signature	 Date
NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.			
APPLICANT If the same as OWNER, write "SAME" and sign and date at X below			
Applicant's Name Same		Contact Person:	Work Phone:
Mailing Address		Home Phone:	Fax Number:
E-mail Address	Other Contact Phone Number(s):		
X	<u>Greg P. Chaney</u> Applicant's Signature	<u>June 23 2016</u> Date of Application	

STAFF APPROVALS	☒	Permit Type	***SIGN	Date Received	Application Number(s)	
		Building/Grading Permit				
	✓	City/State Project Review and City Land Action				
		Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)				
		Mining Case (Small, Large, Rural, Extraction, Exploration)				
		Sign Approval (If more than one, fill in all applicable permit #'s)				
		Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)				
	✓	Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)			<u>58620160001</u>	
		Variance Case (De Minimis and all other Variance case types)				
		Wetlands Permits				
		Zone Change Application				
		Other (Describe)				
	***Public Notice Sign Form filled out and in the file.					
	Comments:					Permit Intake Initials <u>JMC</u>

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

I:\FORMS\2010 Applications

Revised November 2009

Attachment A - Application & Narrative

EXTRACTION PERMIT APPLICATION

(Sand, Gravel, and Quarry)

Project Number	Project Name (15 characters)	Case Number SGE 20160001	Date Received June 23 16																																								
LOCATION OF PROPOSED EXTRACTION: Stabler Point Quarry 4 B30 0 102 002 0 TPU 14.500																																											
DESCRIPTION OF ACTIVITY WHICH REQUIRES AN EXTRACTION PERMIT: Extending the operational life of the quarry to 2026. Expand the horizontal area permitted within the quarry. Increasing the maximum blast size to 25,000 cubic yards.																																											
HAVE EXTRACTION ACTIVITIES BEEN PERMITTED ON THIS SITE IN THE PAST? ☒ Yes ☐ No Previous Case Number(s), if known: USE2011 0017																																											
UNIQUE CHARACTERISTICS OF LAND OR BUILDING(S): Site has been used as an active quarry for decades.																																											
WHAT IS THE TOTAL AREA TO BE DISTURBED? 16 existing + 24 new acres acres HAS A FINANCIAL WARRANTY BEEN ESTABLISHED? ☐ Yes ☐ No AMOUNT \$ _____ WARRANTY HOLDER _____ CONTACT INFORMATION OF WARRANTY HOLDER: _____ CBJ Self Financed																																											
For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side. If you need any assistance filling out this form, please contact the Permit Center at 586-0770.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">EXTRACTION PERMIT FEE</th> </tr> <tr> <th></th> <th style="text-align: center;">Fees</th> <th style="text-align: center;">Check No.</th> <th style="text-align: center;">Receipt</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td>Application Fees</td> <td style="text-align: right;">\$ 1600.⁰⁰</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Admin. of Guarantee</td> <td style="text-align: right;">\$</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adjustment</td> <td style="text-align: right;">\$</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pub. Not. Sign Fee</td> <td style="text-align: right;">\$ 50</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pub. Not. Sign Deposit</td> <td style="text-align: right;">\$ 100</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total Fee</td> <td style="text-align: right;">\$ 1750.⁰⁰</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			EXTRACTION PERMIT FEE						Fees	Check No.	Receipt	Date	Application Fees	\$ 1600. ⁰⁰				Admin. of Guarantee	\$				Adjustment	\$				Pub. Not. Sign Fee	\$ 50				Pub. Not. Sign Deposit	\$ 100				Total Fee	\$ 1750.⁰⁰			
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NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM



Public Notice Sign Lease Agreement

Community Development Department

Case # 56f20160001 Sign # _____ Hearing Date: _____
 Assessor's Parcel # 4 B30 01020020 Check # _____ Receipt # _____
 Applicant: CBJ Lands Division Phone #: 586-0205
(please print)
 Application Received by: _____ Date: _____
(CDD staff initials/name)

I, _____, in cooperation with the Community Development Department (CDD), have leased a Public Notice Sign and agree to the terms listed below:

CHARGE: \$50 Preparation Fee
 \$100 Refundable Deposit

RETURN TIME: The sign **MUST** be returned to the Community Development Department **by 4:30 p.m. on the Monday** following the scheduled hearing date. If the sign is returned later than the Monday after the Planning Commission meeting, but within two weeks of the meeting, \$50.00 may be refunded.

PENALTIES: The sign **MUST** be returned to the Permit Center Staff in the same condition it was taken: clean, undamaged, and with no attachments. **If a sign is not returned on time, or has been damaged, the \$100 deposit fee will be forfeited.**

POSTING REQUIREMENTS:

- The sign must be posted by the applicant/developer on the site at least 14 days prior to the hearing date.
- The sign must be clearly visible and readable from a public Right-of-Way.

 (Applicant Signature)

 (Date)

Sign Received by: _____ Date: _____ Staff Initials: _____

Sign Returned by: _____ Date: _____ Staff Initials: _____

REFUND INFORMATION:		Receipt Number: _____	
Amount Refunded: _____	Method: _____	Date: _____	Staff Initials: _____
Refund Received by: _____		/mailed to: _____	

**A Conditional Use Permit Application
for
Expanded Area of Rock Quarry Operations
at
CBJ's Stabler Point Quarry**

I. Introduction

The City and Borough of Juneau's current Conditional Use Permit for operating a rock quarry at Stabler Point expires in August 2021. The CBJ plans to continue to operate Stabler Point Quarry into the foreseeable future. While there are still another 5 years to operate the quarry under Notice of Decision USE2011 0017, the recent pace of extraction has been unprecedented and the quarry has expanded out to the outer edges of the permitted perimeter. At this time, if the lateral quarry area is not expanded, the quarry will need to be excavated deeper. As the pit becomes deeper, the amount of rock available is reduced because the quarry walls are benched in toward the center. Reduced quarry floor area results in less space available for extraction, processing and maneuvering. Eventually operations will become less efficient to the point where the quarry will have to be shut down. Although the ultimate development plan is for the adjacent Veterans Memorial Hwy to be rerouted through the large rock cut eventually to be left after mining, the Borough's ongoing need for Stabler rock remains. If mining is allowed to proceed northwards concurrent with mining within the existing permitted area, both objectives (road realignment and continued supply of quarry rock) can be achieved.

In order to provide for future community rock material needs, the Lands Division requests that a new Conditional Use Permit be granted for another 10 year period with an expanded operational area. The new Conditional Use Permit would include the continuation of most existing permit conditions established in the Notice of Decision for USE2011 0017.

A short summary of major events at Stabler Point Quarry during the current permit period follows:

- Stabler originally operated under USE2001-00022. The original permitted quarry limits were based on the road cut required for the realignment of Veterans Memorial Highway to remove sharp curves at Stabler Point. Quarry limits were subsequently expanded in 2005 (USE2005-00020) and again in 2008 (USE2008-00007) in response to the needs of specific large construction projects and a general increase in Borough wide demand for rock.
- Quarry hours and days of operation have been modified several times over the length of the current permit. USE2004-00028 approved hauling operations on Saturdays, and USE2005-00020 extended operating hours to 5:30pm for the new high school project. USE2008-00007 required that the quarry hours of operation return to those which were permitted under USE2001-00022 (8am to 4:30pm Monday to Friday).

- Many large Borough construction projects have utilized Stabler rock. Recent projects include: Thunder Mountain High School site work, AMHS Fast Ferry Terminal uplands, Auke Bay Commercial Loading Facility Phase I and II, AK National Guard/UAS Gym, Auke Bay Launch Ramp and Parking expansion, realignment of Glacier Hwy through UAS/DeHart's roundabout, Juneau International Airport Terminal expansion and Runway Safety Area projects. Stabler rock is also used in many CBJ street reconstruction projects, and in numerous private developments throughout the borough.
- Approximately 2 million tons of rock has been mined over the last 10 years. The quarry's busiest year was 2015 with 473,000 tons of rock mined. 2016 has also been an active year with the potential to sell as much, or more rock, than last year. The quietest year was 2012 with <50,000 tons mined.
- The average rate of extraction in next 10 year permit period is expected to be reduced due to fewer large public projects planned and a forecasted general downturn in the private construction sector. Projected average annual tonnage is expected to be around 150,000 tons / year.

II. Project Need

Continued operation of Stabler Point Quarry is important to the community of Juneau. The quarry provides:

- A reliable source of clean and durable rock for community projects.
- Economical haul costs; Trucking costs associated with transporting rock long distances adds significantly to the overall cost of rock used in construction projects. The location of Stabler Point quarry at the north end of town and adjacent to a main highway, is an important factor in reducing haul distances, trucking time, and therefore cost of rock for projects in this area of the borough. The other major source of rock in the Borough is located 10 road miles distant in Lemon Creek.
- The removal of rock for the future realignment of Veterans Memorial Highway will be achieved concurrently with quarry rock extraction operations.

III. Extraction Permit Requirements

Much of the information of the original 2001 permit application is still valid. Pertinent updates are presented below.

1. Property Location and Legal Description

Stabler Point Quarry is located at approximately mile post 13 on Veterans Memorial Hwy in Juneau, Alaska. The legal description of the lot containing the quarry is USS 3810, Lot 1.

The property is zoned Rural Reserve. The property is bounded to the east and west by lots zoned residential (D-3) and to the south across Veterans Memorial Highway by a Waterfront Industrial (WI) district. There is only one residence in the immediate vicinity directly south of the quarry.

2. Existing Topography

The quarry is located north and inland of Veterans Memorial Highway atop a rock bluff overlooking Auke Bay. Quarry topography as of 2015 is shown on the accompanying site map. Multiple benches are currently being mined and a main quarry floor has been established at about elevation 140 ft. This is approximately 90 feet higher than the highway elevation. Two short steep access roads, both located at the east end of the site, run between the highway and the main quarry floor where a truck scale is located. The main haul road is paved. A parallel unpaved road provides access for tracked equipment. Both roads are gated. Other temporary roads are located at various places within the quarry to provide access to the various mining areas as needed. A large rock-surfaced pullout is located adjacent to the highway between the two access roads. This area allows equipment to be transferred from low boy trailers well beyond the highway shoulder. Stripped overburden is stockpiled in a dedicated on-site storage area within the quarry limits.

3. Topographic Mapping and Typical Section of Proposed Finished Contours

The proposed finished contours are presented in both plan and 3-D perspective views in the attachments. The final topography will have a through cut suitable for the realignment of the highway. The quarry walls are shown as a series of 20 foot wide horizontal benches with 30 foot vertical between benches.

Also presented is a depiction of how the quarry may look at an intermediate stage of development, estimated to occur within the next ten years. By then it is expected that mining will have occurred out to the upper northern most limits with the final, highest elevation benches established. Mining should also have been completed down to the current quarry floor at 140 foot elevation. A wall of un-mined rock, a minimum of one bench high will be maintained along the western and southern perimeter of the quarry to act as a visual and sound barrier. If demand remains strong during this timeframe, the quarry floor may be lowered to 110 feet elevation as part of long term quarry development.

5. Ingress and Egress

Access to the quarry is via the two existing access roads located at the east end of the quarry site. It is anticipated that the paved eastern most access road will continue to be the quarry's main entrance for the duration of the next ten year permitting period. An alternate access route on the west end of the quarry will be investigated during the

next 10 years. This access alignment could provide superior sight distance and lower grades for heavy trucks to negotiate.

There is also an unpaved rock surfaced road that is parallel to the existing access road which is used primarily for the movement of heavy tracked equipment such as mobile crushers/screens between the highway and the quarry.

6. Map of Buildings and Structures

A truck scale was installed in the quarry in 2007. It is located on the 140 ft elevation floor level at the east end of the quarry. A re-locatable scale shack adjacent to the truck scale and a small plastic garden storage shed are the only buildings kept on-site. During construction season a rented portable restroom is also on-site.

The location of the truck scale and buildings are not permanent. The scale and associated structures will be re-located to lower floor levels as mining progresses downwards. This will occur within the next 10 year period.

Electricity is supplied to the quarry by a combination of overhead and underground power lines. City water is supplied seasonally to the scale shack via a meter box adjacent to the highway and a 2" diameter HDPE pipe that runs overland through the forest.

Both access roads are secured with a lockable gate at their highway entrance.

7. Narrative Statement Describing Quarry Operations

The operation of the quarry will continue as it is currently permitted.

- CBJ owns and manages the quarry, provides infrastructure (roads, truck scale, water), permitting, environmental monitoring and compliance oversight.
- Contractors are required to submit a mining plan for approval prior to mining. The contractor must operate under conditions imposed by the quarry usage plan. The mining plan and usage plan addresses the contractor's responsibilities while operating in the quarry.
- When space is available, mining areas may be allocated to contractors needing rock for other projects (e.g. State, Federal, and private).
- All actual mining work is done by contractors, not by CBJ.
- CBJ charges the contractor a management fee for each ton of rock mined. The fees are used to pay for CBJ's material sources operational expenses and to fund past and future material source development and reclamation expenses.

A. Site drainage Plan

Stormwater discharge from quarrying operations is regulated by the Alaska Department of Environmental Conservation's Multi Sector General Permit (MSGP) for Industrial Activities. The MSGP requires the quarry to maintain and comply with a Storm Water Pollution Prevention Plan (SWPPP). The majority of quarry runoff flows subsurface through the fractured rock of the quarry floor to a settling/collection pond located at the east end of the quarry. The pond discharges into a vegetated buffer zone. Drainage from the vegetated buffer zone is collected in the tracked vehicle access road ditch and conveyed to a sump/infiltration zone beside the main quarry access road entrance. Stormwater infiltrates into the ground at this point. When frozen ground prevents infiltration or when rainfall exceeds infiltration rates an overflow culvert adjacent to the sump allows stormwater to flow under the access road and on towards Auke Nu Creek. This culvert is the SWPPP's designated storm water outfall. As mining progresses, drainage will continue to be directed eastwards to this outfall.

Quarry expansion will increase the surface area exposed to rainfall; resulting storm water runoff is expected to increase accordingly. As expansion proceeds, additional on-site storm water treatment measures will be implemented to deal with the increase in storm water runoff.

The ultimate drainage plan for the site at the conclusion of mining operations will be determined by the requirements of the roadway engineering design performed for the realignment of the highway.

B. Area Security

Permanent gates are installed across both access roads within 100 ft of the intersection with the highway. The gates are locked each evening to keep unauthorized vehicles from entering the quarry. Quarry information signs are posted at the quarry entrances.

C. Methods to Minimize Noise Pollution and Visual Blight

- i) Noise Pollution: The 2001 quarry Conditional Use application contained a noise management plan prepared by Toner Nordling & Associates, Inc. However, in the years of operation since 2001 the quarry development plan has evolved. Therefore, a new technical Noise Study was prepared by Michael Minor and Associates, Inc. for inclusion in the 2011 permit application (attached). The report models both existing and future noise impacts of quarry operations and concludes that current methods of noise mitigation are sufficient to meet code requirements. These methods currently include the following:

- Restrict the use of exhaust brakes on trucks entering or leaving the quarry, unless required for safety reasons.

- A constructed earthen berm at “open” east end of quarry serves as a noise barrier.
- Maintain a rock wall around south and western perimeter. Height of the wall is generally one bench height (30 ft) or taller above the lower quarry floor levels.
- Minimize the clearing of trees and other vegetation from around the perimeter of the quarry and encourage the regeneration of vegetation in order to diffuse noise and soften sound reflective surfaces.
- Limit crushing activities to the lower quarry levels, locating crushers behind stockpiled material if at all possible.

Visual Blight: Visual blight will be minimized by leaving as many trees standing for as long as possible around the quarry perimeter to act as a visual shield, especially those between the highway and the current quarry mining area.

Clearing of vegetation and stripping of overburden will be phased to stay ahead of mining operations.

Benches will be left in the rock faces around the quarry’s perimeter. Eventually the exposed rock of the benches/faces will weather to a dull grey to match the color of the existing cliffs typical in the area.

Planted cuttings and alder wildlings are well established beside the quarry access road and will continue to grow in the coming years, enhancing the aesthetics of the entrance to the quarry.

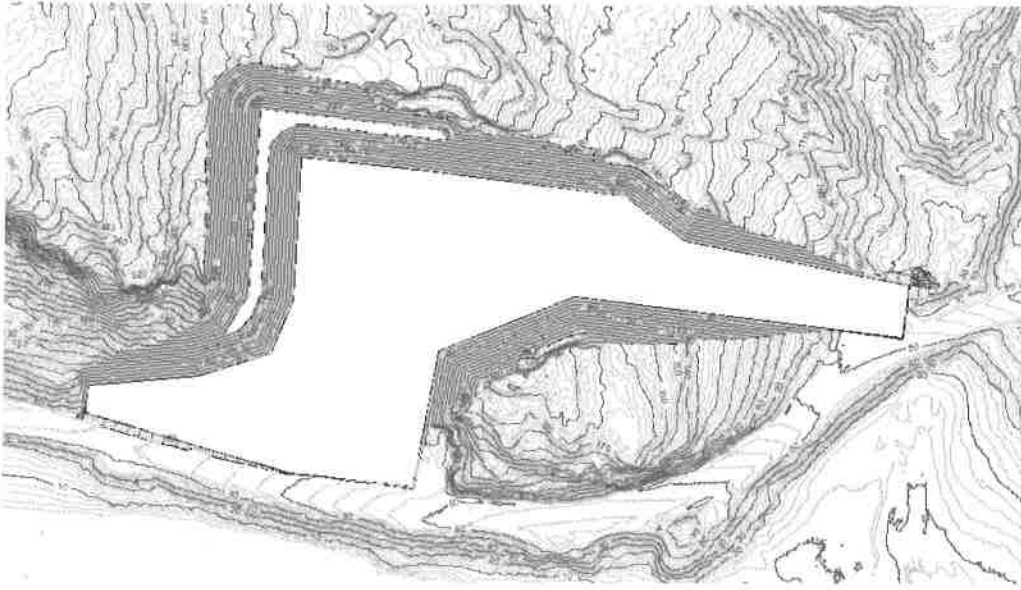
D. Quarry Hours and Days of Operation

Existing permitted quarry hours of operation are Monday – Friday 8:00AM to 4:30PM.

E. Amount and Type of Material for Extraction

The material in the quarry is solid rock, requiring blasting, crushing, and screening to produce shot rock products.

Approximately 1.8 million cubic yards of rock is potentially available for extraction under the current quarry development plan, if mined down to the elevation of the highway. See figure below.



If the quarry mining limits are expanded as requested, approximately 2.3 million cubic yards of rock could potentially be mined from above the quarry's current upper floor level (at 180 foot elevation).



F. Water Table

The quarry is planned to be mined down to the elevation of the adjacent highway. Bed rock is contiguous through to the highway elevation as evidenced by the rock face exposed during the construction. No water table is visible in the highway cut face and none has been found to date in the quarry itself as mining has progressed. Surface runoff water is present in the quarry, and is either diverted around the quarry perimeter, or managed internally, as explained in the quarry's SWPPP.

G. Completion Date for Extraction and Processing

Completion date depends on rate of extraction. The rate of extraction varies according to Borough construction project needs, and availability of alternate rock sources. Due to the increasing cost of truck transportation it is anticipated that Stabler will continue to supply rock to projects mostly in the Valley area and out the road. Quarries in the Lemon Creek area will be better located to supply Lemon Creek, Downtown and Douglas projects with rock. The economic conditions and specific project needs will dictate how much overlap there will be in quarry service areas. The current construction boom is winding down with fewer major projects planned for the coming decade. Demand for rock will likely decline accordingly. It is anticipated that with an expansion of the mining area Stabler has the potential to continue to supply rock to the Borough for the foreseeable future.

H. Schedule for Site Restoration Work

The restoration plan calls for clean rock faces interspersed with stable benches left at the perimeter of the quarry as shown in attached drawings and renderings. The quarry floor areas will be graded and sloped to drain. The restoration schedule is very dependant on actual extraction rate. The development plan is to mine from the top down, northwards, until the mining limits are reached. The final walls and upper benches will then be established. These benches will be allowed to be colonized by alders and other native vegetation.

I. Control of Airborne Particulates

Dealing with dust is a fact of life when working in a quarry. Anytime rock is handled, processed or transported dust generation is a possibility. The control of airborne particulates is important for the health and safety of quarry workers and for the well being of the surrounding neighborhood. Juneau's wet and rainy climate is generally conducive for keeping dust levels down. However dry spells do occur and dust must be dealt with. The quarry operations most likely to produce dust are drilling, blasting, and crushing/screening. Drills used in the quarry are required to be fitted with devices to collect and separate the fine airborne particulates from the air used to blow the drill cuttings out of the bore holes. City water is piped to the lower quarry level for use by contractors during crushing and screening operations. Spray bars are

required to be used on crushers and screens to keep the dust levels down. Water trucks spray down quarry roads on exceptionally dry days in order to keep dust down.

J. Geophysical Hazards

The southwest portion of the quarry development area lies below a large cliff with several overhanging sections. The slopes below the cliff (and above the highway) contain some large boulders indicating past possible cliff instability issues. A geotechnical evaluation of the stability of the cliffs will be commissioned prior to commencing quarry operations in this area.

K. Date of Establishment of Operations / History of Adjacent Land Development

Date of Establishment - Brief permit history of Stabler Point Quarry...

- 1997-2001: Rock mined from the area of the roadside cliff for various projects.
- 2001: CBJ obtains Conditional Use permit, USE2001-00022, allowing the operation of the quarry for a 10 year period, M-F 8:00 AM to 4:30 PM
- 2004: USE2004-00028 modifies USE2001-00022. The main change is to permanently allow hauling operations to occur on Saturdays.
- 2005: USE2005-00020 modifies USE2004-00028 by extending the hours of operation to 8:00 AM to 5:30 PM to facilitate construction of new high school.
- 2007: Electricity and truck scale installed at quarry.
- 2008: The quarry's busiest year up to that point. Stabler rock was used on two adjacent Auke Bay harbor projects.
- 2008: USE2008-00007 allowed the expansion of the quarry's limits and the operation of secondary crushers, but also imposed new restrictions on the quarry's hours of operation, essentially rescinding previously issued USE2004-00028 and USE2005-00020.
- 2011: CBJ obtains Conditional Use Permit USE2011-0017, allowing the operation of the quarry for a further 10-year period.
- 2013: USE2013-0021 approved a temporary modification of truck hauling hours for the duration of a specific construction project.
- 2015: The quarry's busiest year to-date, exceeding the previous highest year's tonnage by almost 60%.
- 2016: Another very active year for the quarry. Application for expansion of mining area and 10-year renewal of permit to operate.

History of Adjacent Land Development

Adjacent lands to the east and north of the highway to the west have been developed as residential. The nearest residential property to the east is approximately 600 feet from the quarry limits. Along the western side of the quarry, it is approximately 1/2-mile to the nearest residential neighborhood. A single residence is located across Veterans Memorial Highway south of the quarry. Waterfront commercial properties

and public facilities have been developed southwest of the quarry along the shores of Auke Bay. No development has occurred north of the quarry. The northern boundary is Tongass National Forest.

L. Eagles

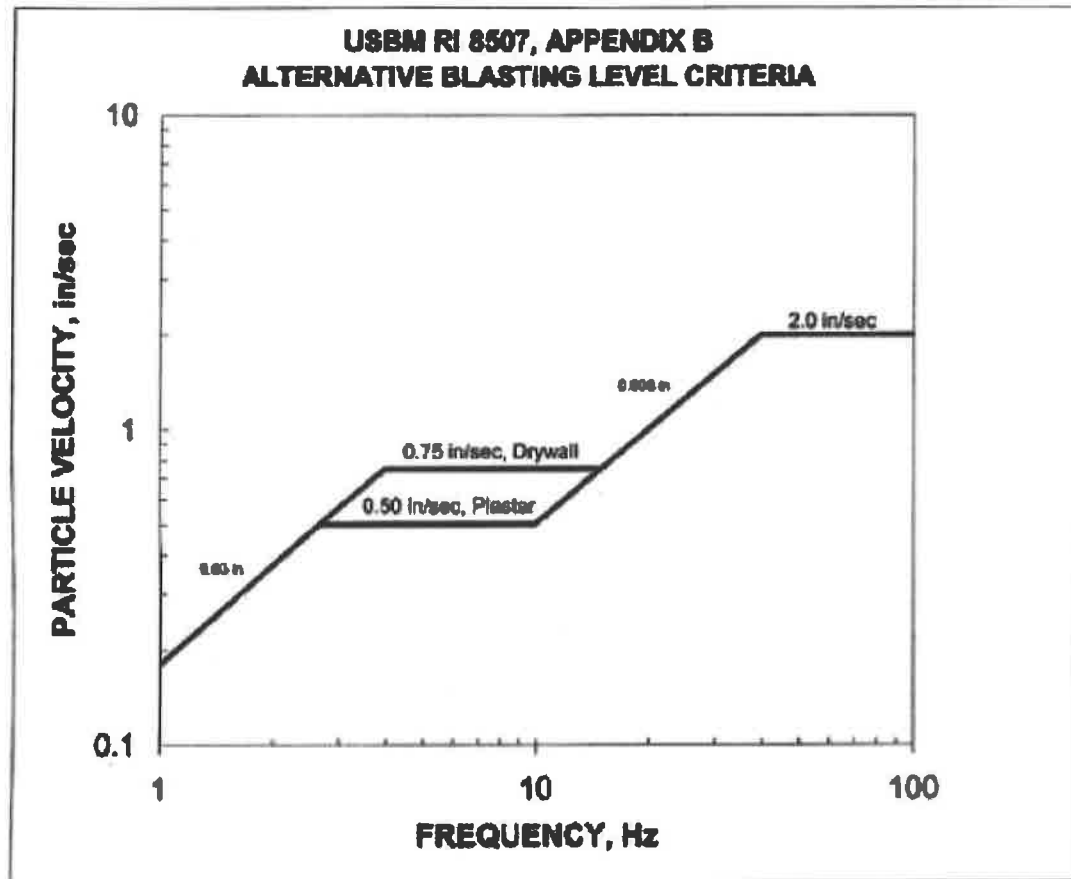
The quarry is adjacent to several historically designated eagle nest trees. Since at least 2005 and through 2014, a pair of eagles consistently occupied and successfully raised chicks from a nest located close to the quarry. Over the winter of 2014/15 this nest was observed to have deteriorated. In the spring of 2015 the eagles relocated and constructed a nest in new tree adjacent to the SW edge of the quarry. The eagles have shown remarkable ambivalence to on-going quarry activities (including blasting), as evidenced by continued presence year after year. Given their exposure and demonstrated history of tolerance to past quarry operations, it is not expected that further quarrying operations will have any impact on the future nesting activities of the resident eagle pair.

M. Maximum Blast Limits

USE2011 0017 Condition 25

“Individual blasts shall be limited to a maximum of 6,000 cubic yards.”

In reference to ground vibrations caused by blasting, the *CBJ Standard Specifications for Civil Engineering Projects & Subdivision Improvements* Section 02090 - *Blasting Controls*, sets the maximum limit for peak particle velocity at the nearest structure or facility at not-to-exceed 2 inches per second when frequency is 40-Hz or greater, and 0.75 inches per second when frequency is less than 40-Hz. These limits are based on recommendations established by the US Bureau of Mines. The Bureau of Mines guidelines have been widely incorporated into many States' codes, regulations, ordinances, and project specifications. Blasting at Stabler conforms to these limits.



CBJ Engineering has collected blast vibration data for each shot in the Stabler quarry. The data shows no exceedance of the vibration limits at the structures nearest the quarry. In 2015 CBJ Engineering contracted with *Alaska Seismic & Environmental, LLC*. (ASE) to conduct extensive blast vibration monitoring at various points within the quarry and at the closest structures. The size of the shots were allowed to vary significantly in order to provide sufficient data points for the analysis. ASE analyzed 2015 vibration data along with previously collected data from past year's shots. The results and findings were presented in an attached report. Table 1 of the seismic report summarizes the results from 12 shots. Shot size varied from 4,000 to a maximum of almost 24,000 cubic yards. The maximum peak particle velocity recorded at the residential structure nearest to Stabler during this study was 0.14 inch per second, *well below* maximum 2.00 inches per second allowed for the 56.8(Hz) frequency range. Interestingly this was the greatest peak particle vibration recorded at the structure and was associated with one of the smallest shots (5,482 yds³), while the largest shot (23,688 yds³) produced one of the smallest peak velocity measurements (0.04 inches per second).

It is apparent that shot location (distance from nearest structures, position within the quarry, shot direction, etc.), and blast design and implementation are more significant factors than pure shot size when considering blast induced vibration. The study demonstrates that large shots have not caused adverse vibration issues.

Factors other than vibration limits have a greater limiting effect on maximum shot size at Stabler. The established blasting “windows” of 10am to noon, and 1pm to 3pm create a practical limit to blast size. In order to comply with the allowable shot time window a contractor has to juggle many elements relating to blast design (how many bore holes to fill with explosive), what explosive (pumped, stick or powder), detonator choice, as well as site specific issues such as wet holes or dry, pump truck accessible or not, crew size, etc. Each shot is unique and it is appropriate to allow the CBJ Quarry Manager and the blaster in charge to determine how best to reach the desired outcome.

Recommended new conditions:

- Increase the maximum shot size to 25,000 cubic yards, with CBJ Quarry Manager approval.
- Continue using the existing blast windows of 10am to noon, and 1pm to 3pm.
- Monitor vibrations at nearest structures to ensure vibrations do not exceed established USBM recommendations.

IV. Conditional Use Permit Requirements

Exhibits, Drawings & Attachments

Attachment 1: Existing contours

Attachment 2: Finished contours

Attachment 3: 3D View final contours

Attachment 4: Proposed expanded quarry limits

Attachment 5: Possible Initial Development for Expanded Stabler Quarry

Attachment 6: USE2011 0017 Conditions

Attachment 7: Vibration Monitoring Summary Report

Attachment 8: Stabler Quarry Noise Study 2011

Attachment 1

Quarry Location



Attachment A 1 - Site Map

Attachment 2

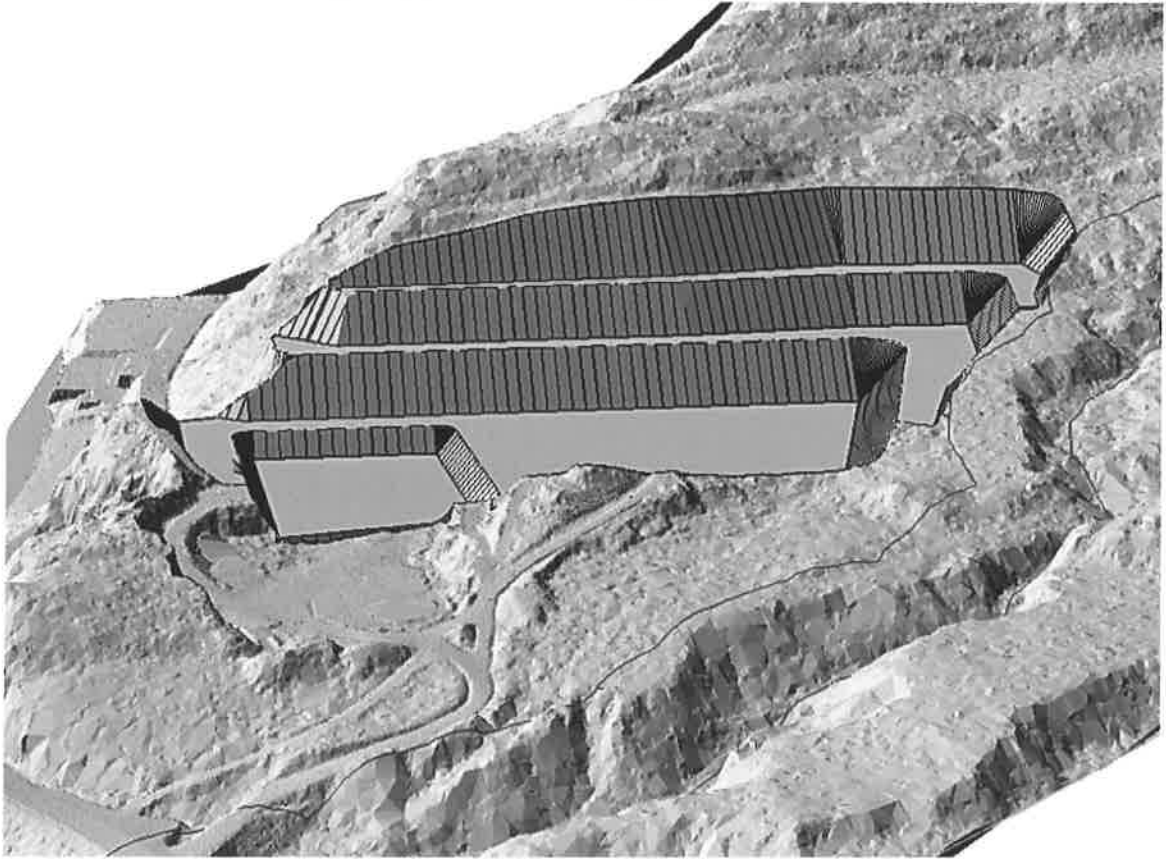
Spring 2016



Attachment A 2 - Photo of Site

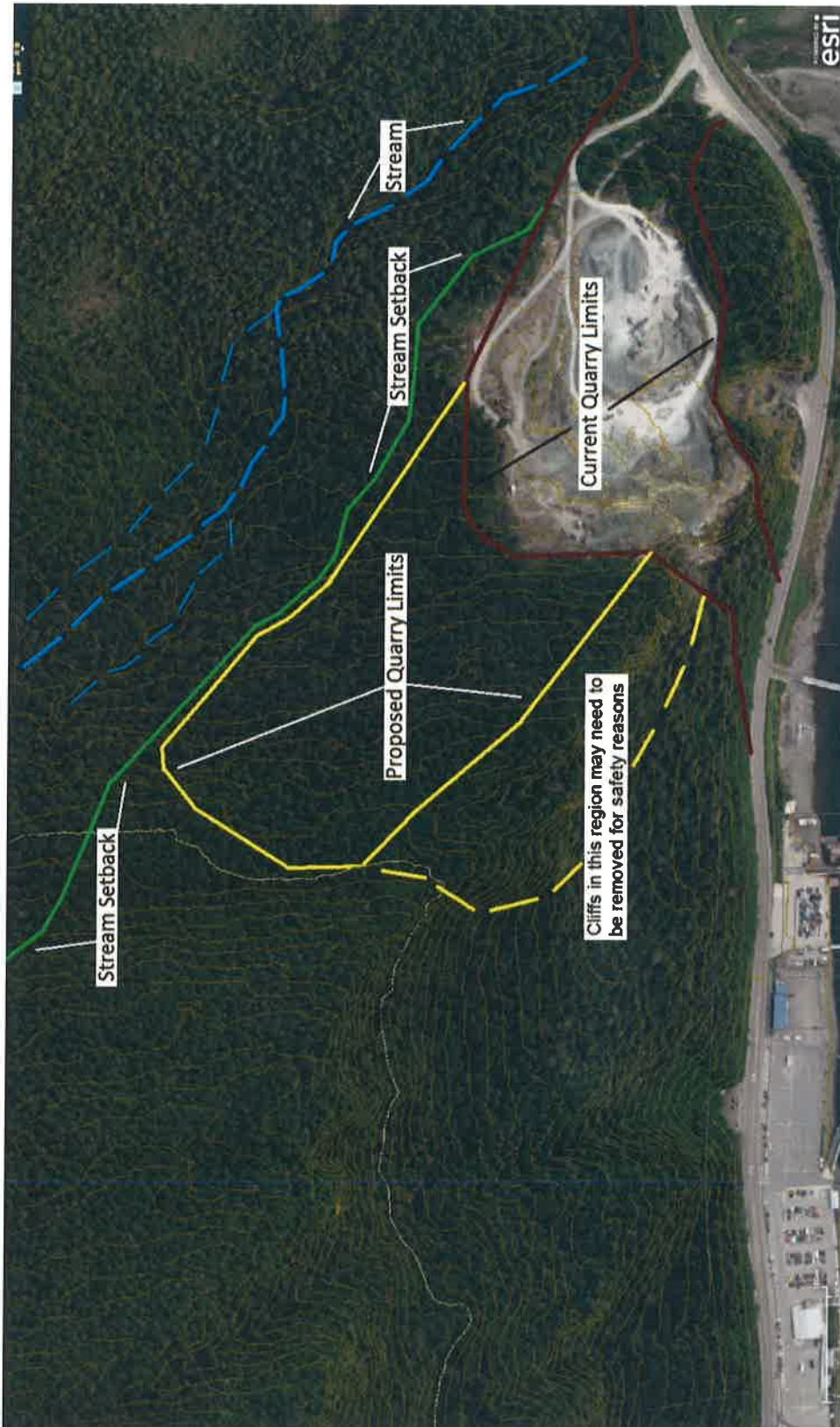
Attachment 3

3D View Intermediate Contours



Attachment 4

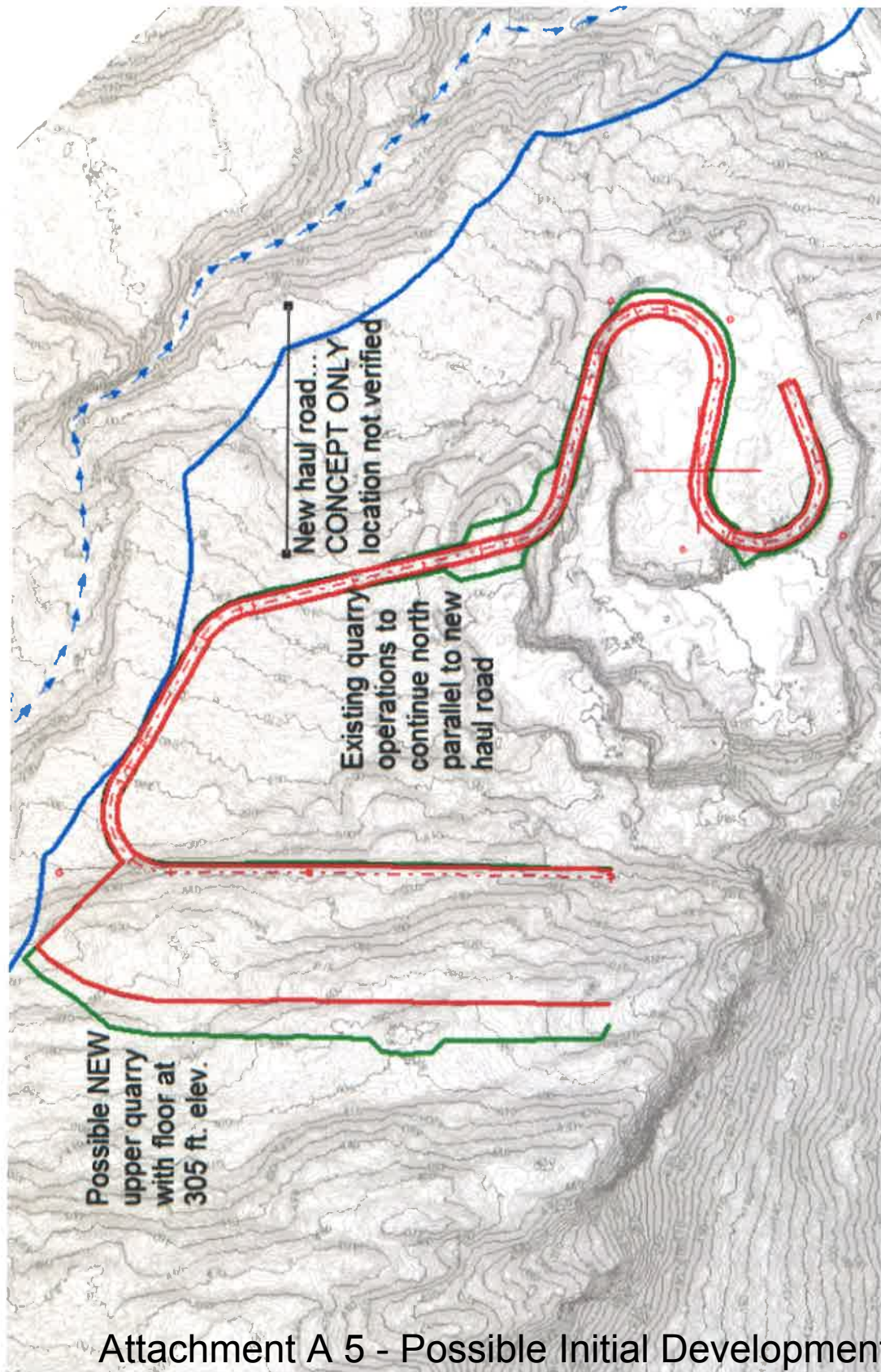
Proposed Expanded Stabler Quarry Limits



Attachment A 4 - Proposed Expanded Quarry Limits Plan

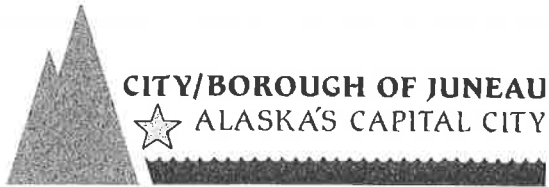
Attachment 5

Possible Initial Development for Expanded Stabler Quarry



Attachment A 5 - Possible Initial Development for Expanded Stabler Quarry

Attachment 6
USE2011 0017 Conditions



**PLANNING COMMISSION
NOTICE OF DECISION**

Date: August 10, 2011

File No.: USE2011 0017

City and Borough of Juneau
Alan Steffert
155 S. Seward Street
Juneau, AK 99801

Application For: Renew the 10-year Stablers Point Rock Quarry extraction permit.
Legal Description: Fraction of Lot 1 USS 3810
Property Address: 13010 Veterans Memorial Hwy
Parcel Code No.: 4-B30-0-102-002-0
Hearing Date: August 9th, 2011

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated August 3rd, 2011, and approved the renewal of the 10-year quarry permit to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. All vehicle loads shall be contained. Vehicles hauling from the site shall be operated with tailgates, covers or other similarly effective methods.
2. Public notification warning signs shall be erected a minimum of 24 hrs prior to blasting. Written notification shall be given to Juneau Flight Services, Juneau Police Department and Capital City Fire / Rescue a minimum of 24 hrs prior to blasting.
3. The hours, days and dates of operation shall be 8am – 4:30pm, Monday through Friday, all year except State holidays.
4. Blasting operation shall be scheduled to occur between 10am-12pm and 1pm-3pm, Monday through Friday.
5. This quarry permit shall expire 10-years after the date of approval.
6. Each quarry operator shall submit an individual mining plan that is in conformance with this Conditional Use permit and is approved by the quarry manager prior performing any work in the quarry. Each mining plan shall be prepared by a civil engineer or other authorized professional.
7. The operator is required to comply with the requirements of CBJ Standard Specifications 02090 Blasting Controls. A quarry operator shall submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast.

Alan Steffert
 File No.: USE2011 0017
 August 10, 2011
 Page 2 of 4

8. Quarry operators shall comply with the existing DOT/ PF approved Stablers Traffic Control Plan(s) for blasting operations, quarry access, and work within the DOT/ PF ROW.
9. Explosives shall not be stored on site, except for that which is immediately necessary for the next blast.
10. The applicant shall comply with DEC regulations governing stormwater discharges from the quarry site, with particular attention paid to protecting Auke Nu Creek
11. The applicant shall (or shall cause to) reclaim the quarry site with finished faces and established benches, and remove loose rock during the period between projects, even if the entire quantity of rock has not been removed.
12. The applicant shall (or cause to) control dust caused by excavation, truck hauling, rock crushing, or other aspects of the operation.
13. The applicant shall (or cause to) repair any damage to Glacier Highway as a result of the quarry operation. If there is visible damage to the roadway due to hauling or mining operations, the roadway shall be repaired in cooperation with DOT/ PF.
14. The applicant shall require the posting of a bond (or equivalent if project based) from all quarry operators to ensure spilled or tracked material are removed from public roads. The applicant shall (or cause to) remove all spilled materials immediately from public roadway and, that mud and debris tracked onto roads be cleaned daily within 200 yards west & east of the quarry entrance while loading and operations are on-going. DOT/ PF reserves the right to request sweeping at any time it sees a problem or complaint. (Edits by Planning Commission)
15. The applicant shall ensure that lighting (if any) does not glare onto adjacent roadways.
16. The applicant shall (or cause to) operate the quarry according to the application proposal, including attachments and drawings, except that all conditions contained herein shall take precedence.
17. The applicant shall ensure that the rock extraction is consistent with the recommendations of the US Fish & Wildlife Service for the protection of nesting eagles according to the past approved variances (VAR96-52, VAR2000-37, VAR2001-17, & VAR2008-6).
18. The applicant shall maintain a lockable security gate at the quarry entrance.
19. The applicant shall (or cause to) retain a natural buffer at the western end of the quarry similar to that at the eastern end for a visual and noise barrier. This buffer may be pierced to create the new western entrance roadway (Attachment C). Additionally, and when feasible, the buffer shall be retained during all quarry operations throughout the site for noise and visual buffering.

Alan Steffert
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 August 10, 2011
 Page 3 of 4

20. Prior to extracting the southwestern cliff face of the quarry, a qualified expert in geophysical hazard shall evaluate the site and recommend guidelines for its development. Further, these guidelines shall be made part of any approved mining plans for these areas and written notification given to all operators.
21. The recommended noise levels (excluding blasting) as measured at the nearest property lines shall not exceed 65 dBA.
22. Rock crushers shall be operated on the lower quarry levels. Stockpiles shall be located to provide additional noise screening barriers whenever possible.
23. The applicant shall have all operators of the quarry conduct their activities in accordance with all requirements of the noise management plan, blasting and noise controls, and temporary environmental controls.
24. The site clearing shall be consistent with needs to retain sound and visual barriers for the quarry operation. Prior to removal of substantial vegetation, the clearing limits shall be flagged and reviewed for approval by the Community Development Department.
25. Individual blasts shall be limited to a maximum of 6,000 cubic yards.

Advisory Condition

26. The pull out area adjacent to the quarry entrance drive near Glacier Highway is to be used for equipment transfer only. There shall not be temporary or long term parking on the pull out area. Transfer operations shall occur outside of the roadway clear zone. Access into the pull out area shall be limited to right in and right out turns.
27. A strip of land at the existing topographic level, and not less than 15 feet in width, shall be retained at the periphery of the site wherever the site abuts a public way. This periphery strip shall not be altered except as authorized for access points. This section does not alter the applicant's duty to maintain subjacent support.
28. If the bank of any extraction area within the permit area is above the high water line or water table, it shall be left upon termination of associated extraction operations with a slope no greater than the angle of repose for unconsolidated material of the kind composing it, or such other angle as the Commission may prescribe. If extraction operations cause ponding or retained water in the excavated area, the slope of the submerged working face shall not exceed a slope of 3:1 from the edge of the usual water line to a water depth of seven feet. This slope ratio may not be exceeded during extraction operations unless casual or easy access to the site is prevented by a fence, natural barriers, or both.
29. The applicant should contact DOT concerning the provision of a signal at the entrance to the quarry or other safety options. (Added by Planning Commission)

Alan Steffert
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Attachments: August 3rd, 2011, memorandum from Eric Feldt, Community Development, to the CBJ Planning Commission regarding USE2011-0017.

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

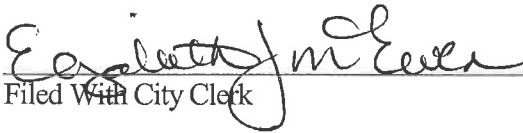
This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ §01.50.030 (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, August 9th, 2011.
Expiration Date: The permit will expire 10 years after the effective date, or August 9th, 2021. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner:


Eric Feldt, Planner
Community Development Department


Maria Gladyszewski, Chair
Planning Commission


Filed With City Clerk

8/10/2011
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. 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.

Attachment 7
Vibration Monitoring Summary Report



ALASKA SEISMIC & ENVIRONMENTAL, LLC
PO Box 20872 · Juneau, AK 99802 · 907.223.8285

CBJ Engineering Department
Stabler's Point Blast Monitoring
DH15-002

VIBRATION MONITORING SUMMARY REPORT

Project: Stabler's Point Blast Monitoring
Submitted to: Alan Steffert, Engineering Department
Description of work: Blast Monitoring
Reporting Period: May 15th – September 16th, 2015

BACKGROUND

Blasting at Stabler's Point Quarry is occurring near the pit boundaries and approaching final walls in some areas. Multiple contractors are permitted to blast in the pit including Alaska Juneau Construction (AJC), Miller Construction Company (MCC), and Channel Construction. During the summer and fall of 2015, seven blasts occurring near or adjacent to final wall locations were monitored and evaluated for performance and final wall damage potential. Monitoring efforts included blast design record keeping, vibration monitoring, and high speed video recording. An overview of the pit is shown in Figure 1 below.



Figure 1. Aerial view of Stablers Point Quarry. Quarry. Red rectangle in west half of pit indicates area where blast monitoring was performed in 2015.

METHODS

Monitoring efforts included collecting blast design information, in-ground vibration monitoring, and high speed video recording. Blast design information included location, bench height, pattern (burden and spacing), hole diameter and depth, borehole loading, timing, initiation sequence, and basic geologic conditions and abnormalities. Design information was determined as accurately as possible on site and from submitted blast plans.

Ground motion in terms of peak particle velocity (PPV) and frequency was recorded by seismographs and geophones. Typical seismograph and geophone installations are shown in Figures 2 and 3. All vibration monitoring was performed with seismographs operated in accordance with the International Society of Explosives Engineers (ISEE) Performance Specifications for Blasting Seismographs (2011 Edition) and Field Practice Guidelines for Blasting Seismographs (2009 Edition). Site specific conditions were used to determine monitoring locations and trigger levels. Ground vibrations were measured at various locations in close proximity to the blast site and farther away at the nearest residence located at 12701 Glacier Highway. Distances from each shot-to-seismograph were calculated as scaled distance (SD). Scaled distance factors for ground motions and airblast are given, respectively, by the following equations

$$\text{Square-root scaled distance (commonly referred to as SD)} \quad SRSD = \frac{D}{W^{1/2}} \quad (1)$$

$$\text{Cube-root scaled distance} \quad CRSD = \frac{D}{W^{1/3}} \quad (2)$$

Where D is the shot-to-seismograph distance and W is the maximum charge weight detonated within any 8 ms time period (per delay). Scaled distances were correlated with the largest PPVs of the three components of each tri-axial geophone to determine best fit equations describing ground motion attenuation. The attenuation equation is described as

$$PPV = a * SD^{-b} \quad (3)$$

where ' a ' is the y-intercept value at $SD = 1$ and ' b ' is the attenuation exponent that describes the rate of decay in PPV. The parameter ' a ' is the site specific energy term that represents the relative magnitude of explosive energy coupled into the ground at the blast site and is dependent on explosives type and rock quality. The attenuation slope term ' b ' is a function of geology transmitting the energy between the blast site and the seismograph. This relationship is useful in controlling ground vibrations for public relations and structural concerns as well as optimizing and troubleshooting blast design.

In addition to blast design recording and vibration monitoring, each blast was filmed from multiple view angles with high speed video cameras. All videos were edited and submitted post blast. An effort to use motion targets to assess ground heave and movement behind the shot was attempted but proved to be difficult to carry out due to site layout and large shot sizes. Various rock structures are shown in Figures 4, 5, and 6.



Figure 2. Left. Installing triaxial geophone in ground.

Figure 3. Right. Seismograph and sensors. Microphone on stand measures air blast and sandbag is covering buried triaxial geophone.



Figure 4. Left. Rock structure in southeast area of quarry.

Figure 5. Right. Rock structure along south side of quarry.



Figure 6. Rock mass and varying structure on west side of quarry.

RESULTS

A summary of vibration monitoring results for all monitored blasts is provided in Table 1. The summary information includes peak particle velocities (PPVs), associated frequencies, and airblast (dB) for each blast. Monitoring data were compared to scaled distance (SRSD, or SD). The largest shot monitored was performed by AJC on 9/16/15 and was approximately 23,688 cu yds. The largest amount of product shot within an 8 ms delay period (max lbs/delay) was recorded at 960 lbs / delay on 3/25/15. It should be noted that exact blast design details were difficult to obtain and actual amounts may have varied.

The ground motion attenuation relationship in terms of PPV and scaled distance (SD) for all monitoring results is shown in Figure 7. The equation for the best fit linear regression model is given by the formula

$$PPV = 9.02 SD^{-1.24} \quad (4)$$

with a 92% correlation coefficient.

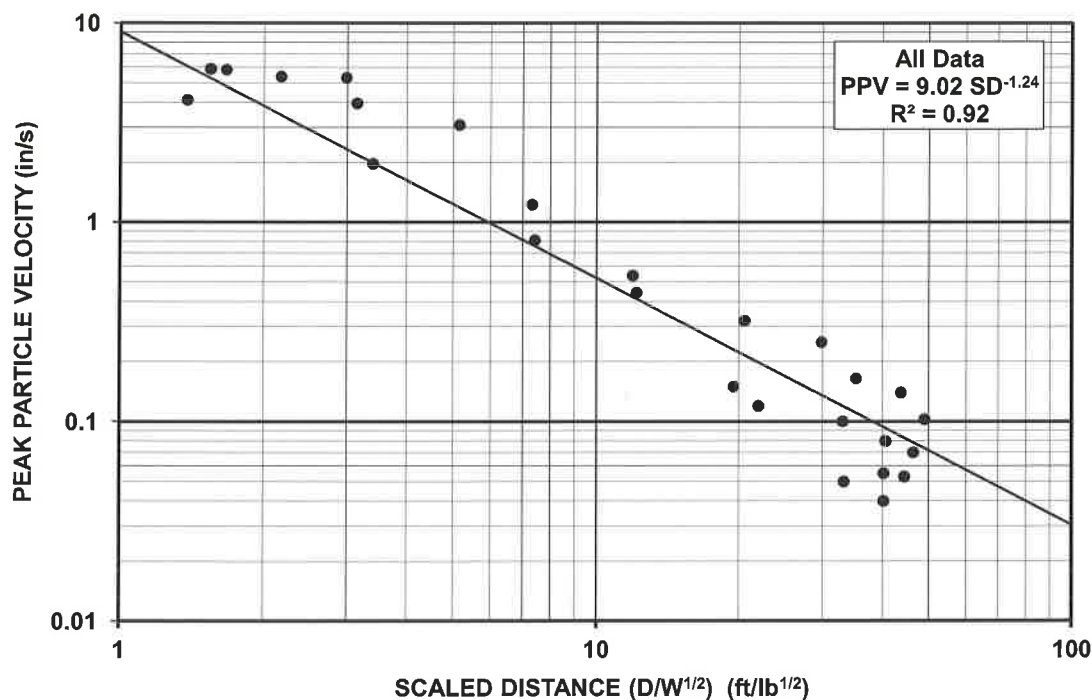


Figure 7. Site-specific attenuation plot developed from vibration data recorded during all blasts. Data include measurements taken within the quarry and at the nearest residence on Glacier Hwy.

Table 1. Summary of vibration and airblast monitoring results for blasts monitored in 2015. Previously monitored shots and shot sizes are provided for comparison. The monitoring location indicates if the seismograph was installed in the quarry or at the nearest residence (house). *Note: Not all quarry blasts from 2015 are included in table.*

Date	Time	Company	Location	Serial Number	Distance	Charge Weight per Delay	Scaled Distance	Cube Root Scaled Distance	Peak Particle Velocity	Peak Frequency	FFT	Airblast	Shot Size
					(ft)	(lb)	(ft/lb ^{1/2})	(ft/lb ^{1/3})	(in/sec)	(Hz)	(Hz)	(db)	(yds ³)
8/30/2013	2:20 PM	AJC	quarry	5582	173	560	7.3	21.0	1.23	26.2	20.0	139	9,000
			quarry	2276	461	560	19.5	56.0	0.15	60.2	20.5	125	
			quarry	5041	832	560	35.2	101.2	0.17	36.5	40.4	126	
			house	5581	1160	560	49.0	141.0	0.10	29.2	19.4	117	
8/12/2014	3:33 PM	AJC	quarry	11537	343	827	11.9	36.6	0.54	53.8	43.7	135	12,000
			quarry	5581	591	827	20.6	63.1	0.32	37.9	37.1	135	
			house	5582	950	827	33.0	101.4	0.10	26.9	47.8	119	
9/16/2014	1:04 PM	AJC	quarry	11537	303	623	12.1	35.6	0.44	30.1	39.6	148	9,600
			quarry	5581	744	623	29.8	87.3	0.25	26.9	26.6	140	
			house	5582	1005	623	40.3	117.9	0.06	20.0	19.8	125	
3/25/2015	1:56 PM	AJC	quarry	11280	230	960	7.4	23.4	0.81	48.7	42.0	135	16,497
			quarry	5581	680	960	21.9	69.1	0.12	36.5	30.4	127	
			house	5582	1030	960	33.2	104.7	0.05	30.1	40.5	118	
5/15/2015	1:05 PM	MCC	quarry	11537	35	517	1.5	4.4	5.89	25.6	25.9	NA	5,482
			house	5582	993	517	43.7	124.0	0.14	56.8	48.0	112	
5/26/2015	1:06 PM	MCC	quarry	12043	41	146	3.4	7.8	1.97	40.9	34.9	134	4,032
			quarry	11537	38	146	3.1	7.2	3.96	44.5	44.4	NA	

Stabler's Point Quarry

Blast Monitoring Report

Table 1 Cont'd. Summary of vibration and airblast monitoring results for blasts monitored in 2015. Previously monitored shots and shot sizes are provided for comparison. The monitoring location indicates if the seismograph was installed in the quarry or at the nearest residence (house). *Note: Not all quarry blasts from 2015 are included in table.*

Date	Time	Company	Location	Serial Number	Distance	Charge Weight per Delay	Scaled Distance	Cube Root Scaled Distance	Peak Particle Velocity	Peak Frequency	FFT	Airblast	Shot Size
					(ft)	(lb)	(ft/lb ^{1/2})	(ft/lb ^{1/3})	(in/sec)	(Hz)	(Hz)	(db)	(yds ³)
6/4/2015	1:08 PM	AJC	house	5582	900	375	46.5	125.1	0.07	73.1	91.0	116	9,529
			quarry	12043	27	375	1.4	3.8	10.19	146.2	2.1	NA	
			quarry	11537	42	375	2.2	5.8	5.39	30.1	17.8	139	
6/16/2015	1:02 PM	MCC	quarry	12043	39	550	1.7	4.8	5.83	28.0	25.9	146	7,960
			quarry	11537	70	550	3.0	8.6	5.32	33.5	42.7	145	
7/2/2015	1:04 PM	MCC	quarry	12043	103	400	5.2	14.0	3.09	18.4	21.9	133	3,999
			house	5182	890	400	44.5	121.0	0.05	10.0	NA	NA	
7/23/2015	1:04 PM	MCC	quarry	12043	356	276	21.4	54.8	< 0.3	NA	NA	NA	5,408
			quarry	11537	12	276	0.7	1.8	5.73	16.6	19.1	138	
8/14/2015	3:08 PM	AJC	house	5581	1058	680	40.6	120.6	0.08	42.6	46.8	125	16,877
			quarry	12043	25	680	1.0	2.8	6.74	25.2	40.8	146	
			quarry	11537	15	680	0.6	1.7	6.15	11.8	40.8	142	
9/16/2015	4:15 PM	AJC	house	5582	1166	840	40.2	123.9	0.04	39.3	15.3	123	23,688
			quarry	5581	40	840	1.4	4.2	4.12	36.5	28.3	145	

December 31st, 2015

ASE, LLC

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Attachment A 7 - Vibration Monitoring Summary Report

For blasting activities, close-in ground motion attenuation is often separated and calculated for small scaled distance values. Close-in attenuations are useful in assessing blast design and damage potential to final wall or other proximate structures. Figure 8 shows two separate attenuations for Stabler's Point Quarry blasts for close-in (smaller shot-to-seismograph) and farther (larger) scaled distances. The equations are shown below.

$$\text{For close-in } SD < 5, \quad PPV = 6.17 SD^{-0.38} \quad (5)$$

$$\text{For } SD > 5, \quad PPV = 24.8 SD^{-1.56} \quad (6)$$

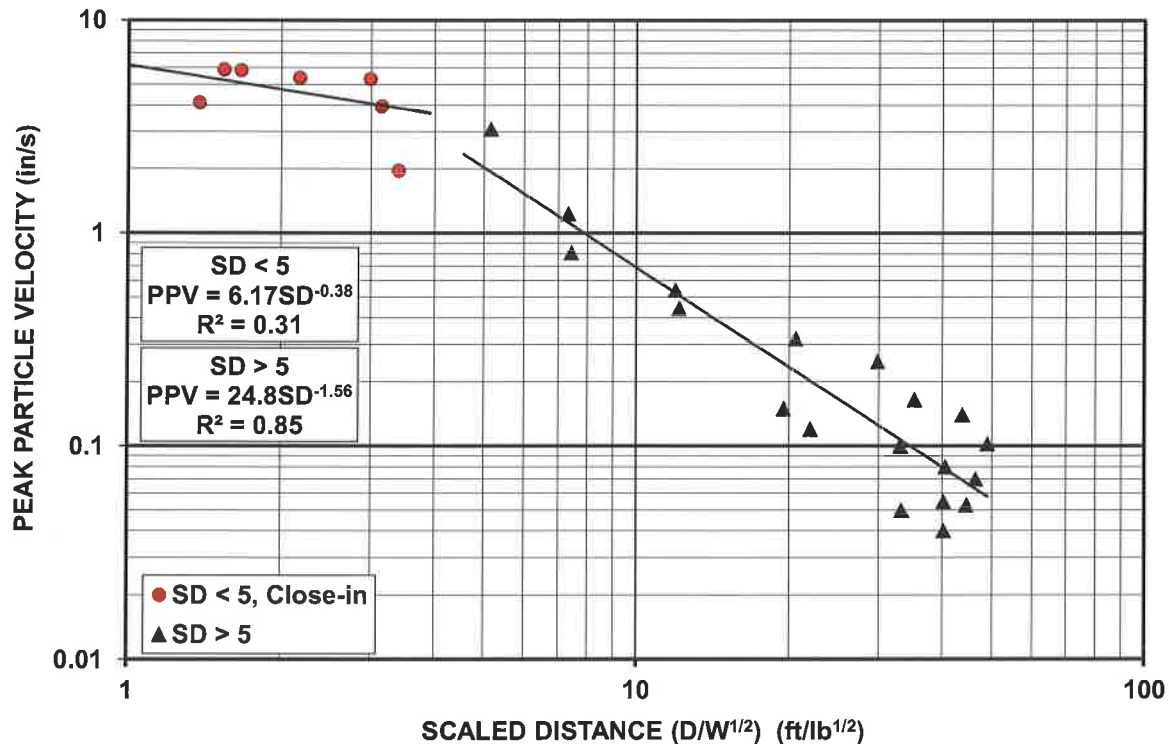


Figure 8. Site-specific attenuation models for close-in ($SD < 5$) and farther away ($SD > 5$) scaled distances. Attenuation relationships were developed from vibration data recorded during all blasts. Data include measurements taken within the quarry and at the nearest residence on Glacier Hwy.

RECOMMENDATIONS

Measurements from seismographs deployed during blasts at Stabler's Point Quarry in 2015 provided data to develop a basic model of attenuation of ground vibrations. The attenuation models in Figures 7 and 8 can be used to predict vibrations at nearby structures and to optimize blasting procedures and will be useful for future blast management. More information including additional monitoring and blast design parameters are necessary to develop an accurate close-in attenuation model.

It is recommended that the CBJ develop a Blasting Risk Management Plan specifically for Stabler's Point Quarry. A risk management plan can improve and maintain community relations as well as minimize off-site impacts and risks. Blasting concerns and impacts can include

- impacts on resources including water, air and soil quality;
- wildlife and fisheries impacts;
- blasting dust and fume control;
- impacts and damage to nearby residential and commercial structures and utilities;
- blast induced vibration and noise;
- blast induced fly rock and debris, and
- explosives security concerns.

Blast management programs often consist of project design, minimum operator/blaster qualifications, minimum performance specifications and criteria, and capable oversight. Establishing clear standards and criteria for blast induced ground vibration and air overpressure greatly minimizes owner risk to damage claims and helps to accurately address public concerns. Blast monitoring standards or minimum specifications should be established and applied for all compliance ground vibration and air overpressure monitoring. Current industry standards are recommended by the International Society of Explosives Engineers and include

- qualified seismograph operators;
- calibrated seismographs and sensors;
- record keeping including installation details and coupling method, sample rate, trigger level, date, time, distance to blast, etc.;
- comparison of ground vibrations to established criteria. The U.S. Bureau of Mines (USBM) Report of Investigations (RI) 8507 criteria is widely used to assess blast induced vibration damage.

In addition to keeping monitoring records, detailed records of each blast should be required in the form of 'post blast' or 'as-built' blast reports. Post blast reports provide a critical record of how a blast was executed and should be submitted after every blast with the minimum information.

- Date and time of blast, name of blaster-in-charge
- Location of blast
- Pattern (burden, spacing, hole diameter, depth, etc.)

- Number of holes loaded, typical loading scheme
- Maximum pounds per delay
- Timing / initiation sequence
- Type and quantity of products used
- Any irregularities (water, voids, etc.)
- Vibration and air overpressure monitoring results

Proper record keeping minimizes risk and is paramount to assessing blast performance. Blast records can be combined with additional measurement techniques for further blast optimization. Some measurement techniques available include but are not limited to face profiling, close-in ground vibration monitoring, blasted rock size (fragmentation analysis) and back break measurement, digital rock mass characterization, velocity of detonation (VOD) measurements, and face velocity movement. While advanced techniques are available, most operations can benefit from establishing a blast management program with clear goals. Since much of the blasting within the quarry is occurring near the permitted boundary, final wall parameters should be defined. A geological assessment should examine the physical rock properties, structure, and characteristics; and identify and significant water sources or drainages, and any other abnormalities or unique zones within the quarry. The geological assessment should also include recommendations for performance goals such as minimum catch bench width, batter angle and overall slope angle as shown in Figure 9. It should be noted that performance goals and slope parameters can vary depending on actual blasting results and may evolve over time.

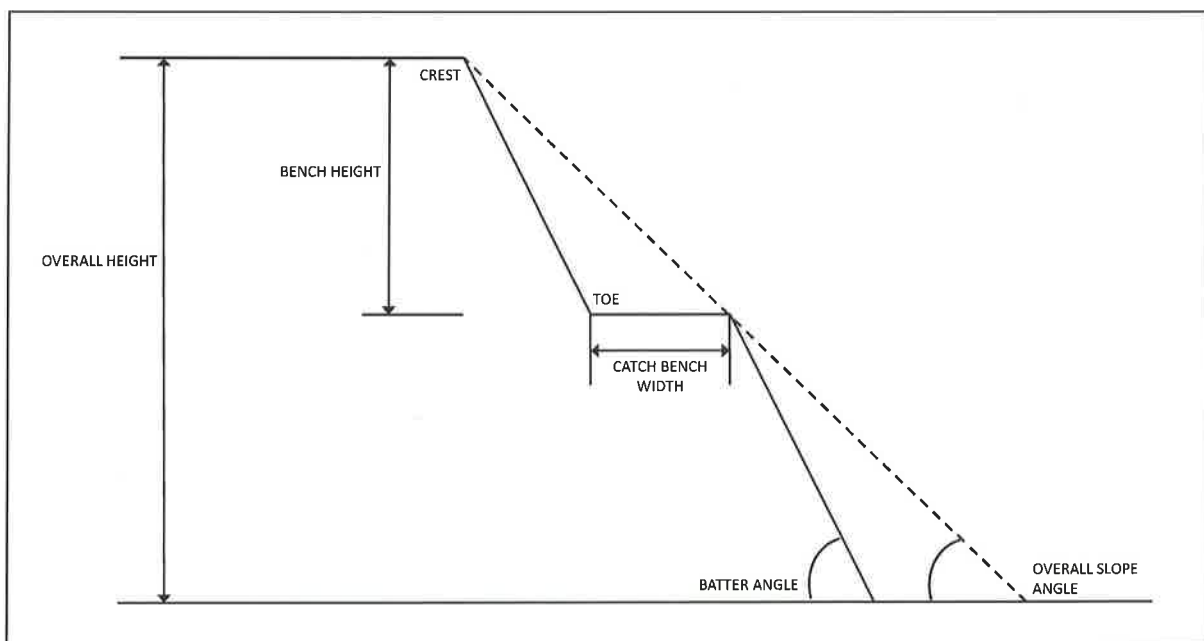


Figure 9. Illustration of slope design parameters.

Once a final slope design is established, wall control blasting techniques can be utilized to prevent damage to final slopes, reduce wall failures, comply with safety standards, improve aggregate production, and meet other performance goals.

Blasting methods and designs varied greatly during observations and monitoring of blasts during 2015. Pattern layout, product type, and timing consistently varied between the two operators (AJC and MCC) observed. Undoubtedly, some techniques were more effective in certain areas and conditions. A detailed site analysis including a geotechnical analysis and classification of the quarry could help guide design and specific goals for each blast. For example, a blast in the middle of the pit would be designed with a goal of maximizing production while a trim shot along the quarry perimeter would have the goal of minimizing impacts to the final wall. In areas where wall control blasting is necessary, aggregate production is often reduced making performance goals and effective techniques critical to efficient operations.

Wall control blasting techniques are extremely site specific and depend on many parameters and are often best determined by experienced blasters in the field. Some general considerations to decrease final wall damage potential are listed below.

- Establish a clean free face that promotes good relief
- Long and narrow blast plan, limit the number of rows
- Ensure proper drill depth and angle above catch benches and adjacent to final slopes
- Use proper product and timing configuration for conditions
- Cushion or buffer blasting
- Presplit blasting
- Line drilling

During blast monitoring at Stabler's Point Quarry in 2015, no wall control blasting techniques were observed. Operators used the same pattern layout and blast design for both production and trim shots along final walls. These methods resulted in back break, slip plane and wedge failures in some cases, and greatly reduced the width of final catch benches.

Safe, efficient blasting is a product of thorough planning, communication, and documentation and there are many advanced techniques available to assist in blast optimization. An effective blasting risk management plan will depend on many factors including site evaluation, blast design, bench preparation, pattern layout, drilling, explosives type and quality, borehole loading, record keeping, excavation, blast evaluation, and plan refinement. Since there are multiple contractors operating within the quarry a blast oversight position could assist in coordinating the efforts and actions of each operator and ensure the ultimate goals of the CBJ are met.

SUMMARY

A summary of key results and recommendations is listed below for reference.

- Continue to collect ground vibration data to improve attenuation models
- Use attenuation models to predict vibrations and optimize blasting
- Develop a site specific risk management plan
- Require additional information for compliance monitoring
- Obtain geological assessment to define final wall parameters and performance goals
- Require post blast / as-built reports verifying blast design and execution
- Provide blast oversight

Attachment 8
Stabler Quarry Noise Study 2011

Stabler Point Quarry

Noise Study

Prepared for
City and Borough of Juneau
155 South Seward Street
Juneau AK99801

Produced by
Michael Minor & Associates, Inc.
Portland Oregon

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Introduction

This technical noise study is for the continued operation of the Stabler Point Quarry, located northwest of Juneau Alaska, off Glacier Highway. The report was prepared at the request of the Engineering Department of the City and Borough of Juneau (CBJ). The report provides an introduction to noise and noise descriptors, land use near the proposed facility, project noise guidelines existing noise sources, and projected noise levels from facility operations. Project noise impacts and noise mitigation measures are also discussed as related to facility operation.

Project Description

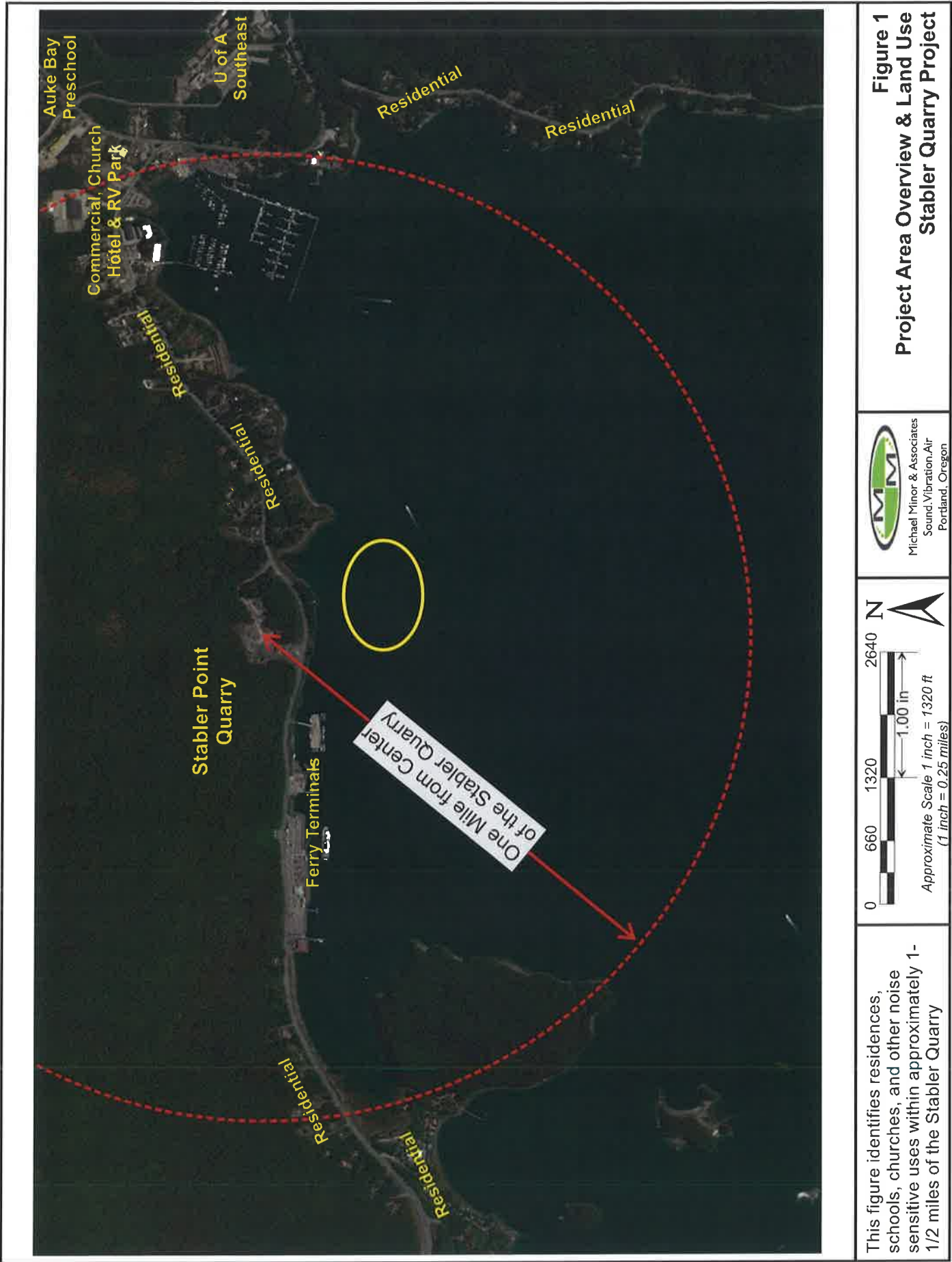
The proposed project is to continue to use the Stabler Point Quarry for approximately 20 years, and excavate the area down to an elevation that is equal to the Glacier Highway. At the end of the quarry operations there will be a fairly significant through-cut that can be used to realign the Glacier Highway and correct the existing curve. The area between the quarry and the highway, which contains three trees with nesting eagle, will be left untouched.

Currently, the top of the quarry is visible at several single family residences located east of the quarry along the coast, and at some residences across Auke Bay. The quarry operations are currently just barely visible to residential properties to the west of the quarry, past the ferry terminal. The exposure of the mine toward the west is due to the current mining operations on top of the rocky ridge in the SW corner of the current cleared area. The current plan for the next 10 years is to continue to mine the cleared area, and as the mining proceeds, the project will leave a series of stepped, 15 to 20 foot wide benches, 30 feet high down the finished quarry walls. These steps will act as a shielding from rock crushing and associated mining activities. Mine operational plans are to maintain a rock wall to shield the western and southern perimeter of the lower working levels, and to also maintain the existing overburden berms at the eastern end of the quarry to act as sound and visual barriers.

Land Use

The proposed site is an existing quarry and along the Glacier Highway, northwest of Juneau Alaska. Much of the land in the immediate area is undeveloped forest. The nearest residential areas were identified north and south of the Glacier Highway directly east of the site. Several single family residences were identified within 500 to 800 feet from the quarry entrance from the Glacier Highway. These residential areas are shielded from the quarry by existing topographical conditions, including the area with the three eagle nests and the natural earth berm to the east of the Stable Quarry access roads.

West of the site there are several single family residences, beginning approximately 4300 feet west of the site, near the ferry terminals. Several more single family homes were identified along Indian Cover Drive and Otter Way. Other noise sensitive land uses with 1 to 1.5 miles of the site include several single and multi-family residences, schools, churches, a hotel, and other commercial uses near Auke Bay. Figure 1 shows an overview of the site with the nearby residential land uses identified.



Attachment A 8 - Stabler Quarry Noise Study 2011

What is Sound (Noise) and How Do We Quantify It?

Sound is any change in air pressure that the human ear can detect, from barely perceptible sounds, to sound levels that can cause hearing damage. These changes in air pressure are translated to sound in the human ear. The greater the change in air pressure, the louder the sound. For example, a quiet whisper in the library creates a relatively small change in the room air pressure, whereas air pressure changes are much greater in the front row of a rock concert.

In addition to the loudness of sound, frequency is a term also used to describe sound. The frequency of sound is determined by the number of recurring changes in air pressure per second. A sound that contains a relatively high number of pressure changes per second is generally referred to as a high frequency noise or “high-pitched.” Common examples of high-frequency noise would include a referee’s whistle or a triangle chime. A sound that has a low number of pressure changes per second is referred to as low frequency or low-pitched noise (for example, a bass drum or helicopter).

A person’s response to noise is subjective and can vary greatly from person to person. Some key factors that can influence an individual’s response include the loudness, frequency, the amount of background noise present, and the nature of the activity taking place that the noise affects. For example, boisterous children playing outside during the day, with background traffic noise present, is generally less obtrusive than children making the same amount of noise during the nighttime sleeping hours inside a house. Keeping with this theme, when sounds are unpleasant, unwanted, or disturbingly loud, people normally consider them to be “noise.”

How Do We Measure Sound?

We measure sound both in terms of loudness and frequency. The unit used to measure the loudness of noise is called a decibel (dB). A range from 0 to 120 dB is the typical range of hearing. While the loudness of sound is an easy concept for most people, a sound’s frequency is just as important in understanding how we hear sounds.

Common Noise Units and Descriptors

Hz – Hertz, unit of frequency

dB – Decibels

dBA – Decibels with A-weighting

L_{eq} – Energy-equivalent sound pressure level

Frequency is measured in terms of the number of changes in air pressure that occur per second. The unit we use to measure the frequency of noise is called hertz (Hz). While the human ear can detect a wide range of frequencies from 20 Hz to 20,000 Hz, it is most sensitive to sounds at the middle frequencies (500 to 4,000 Hz). The human ear is progressively less sensitive to sound at frequencies above and below this middle range. For example, a noise level of 60 dB at 200 Hz would be considerably less noticeable to the average person than 50 dB at 1,000 Hz. The human ear is most sensitive to sound at frequencies of 1000 to 3000 Hz.

To account for the human ear's sensitivity to frequencies, an adjustment is made to the dB measurement scale. The adjusted scale, referred to as the A-weighted decibel scale, provides a more accurate measure of what the human ear can actually hear. When the A-weighted scale is used, the decibel levels are designated as dBA. This unit of measurement is used in this report.

For a sense of perspective, normal human conversation ranges between 44 and 65 dBA when people are about 3 to 6 feet apart. Very slight changes in noise levels, up or down, are generally not detectable by the human ear. The smallest change in broadband noise that a human ear can perceive is about 3 dBA, while increases of 5 dBA or more are clearly noticeable. For most people, a 10 dBA increase in noise levels is judged as a doubling of sound level, while a 10 dBA decrease in noise levels is perceived to be half as loud. For example, a person talking at 70 dBA is perceived as twice as loud as the same person talking at 60 dBA.

What Are Typical Neighborhood Noise Levels?

In most neighborhoods, nighttime noise levels are noticeably lower than daytime noise levels. In a quiet rural area at night, such as the residential area along Glacier Highway, noise levels can range between 32 and 35 dBA during nighttime periods with little to no wind or animal activity (birds chirping) and if no traffic, aircraft, marine, or other noise sources are active. The dominate noise source in this case would be wind, and residual noise from the City and Borough of Juneau. As residents start their day and local traffic increases, this same rural area would be expected to have noise levels ranging from 45 to 60 dBA. While noise levels in urban neighborhoods are louder than rural areas, they share the same pattern of lower noise levels at night than during the day. Quiet urban nighttime noise levels range from 40 to 50 dBA. Noise levels during the day in downtown Juneau area are predicted to frequently be as high as 65 to 75 dBA, with on-site noise measurement taken several years ago, for the Alaska Juneau Mine, supporting background noise levels of this magnitude.

How Do We Take Into Account That Noise Changes Over Time?

Noise levels from most sources tend to vary with time. For example, noise levels increase when a car approaches, then reach a maximum peak as it passes, and decrease as the car moves farther away. In this example, noise levels within a one minute timeframe may range from 45 dBA as the vehicle approaches, increase to 65 dBA as it passes by, and return to 45 dBA as it moves away. To account for the variance in loudness over time, a common noise measurement is the equivalent sound pressure level (L_{eq}). The L_{eq} is defined as the energy average noise level, in dBA, for a specific time period (for example, one minute). Therefore, assuming the energy average noise level was 60 dBA during the entire period of time the car could be heard as it passed by, the noise level would be stated as 60 dBA L_{eq} .

How Does Sound Reduce As It Travels From the Source To the Receiver?

There are several factors that determine how sound levels decrease over a distance. Under ideal conditions, a point noise source in free space will attenuate at a rate of 6 dB each time the distance from the source doubles (using the inverse square law). An ideal line source (such as constant flowing traffic on a busy highway) reduces at a rate of approximately 3 dB

each time the distance doubles. Under real-life conditions, however, interactions of sound waves with the ground often result in attenuation that is slightly higher than the *ideal* reduction factors given above. Other factors that affect the attenuation of sound with distance include existing structures; topography; foliage; ground cover; and atmospheric conditions such as wind, temperature, and relative humidity. The potential effects of these factors on sound propagation are described below:

Attenuation refers to the reduction in loudness, or amplitude, of noise as it moves away from the noise source.

- Existing structures can substantially affect noise levels. Structures can reduce noise by physically blocking the sound transmission and, under special circumstances, may cause an increase in noise levels if the sound is reflected off the structure and transmitted to a nearby receiver location. Measurements have shown that a single-story house has the potential, through shielding, to reduce noise levels by as much as 10 dB or greater. The actual noise reduction will depend greatly on the geometry of the noise source, receiver, and location of the structure. Increases in noise caused by reflection are normally 3 dB or less, which is the minimum change in noise levels that can be noticed by the human ear.
- Topography includes existing hills, berms, and other surface features between the noise source and receiver location. As with structures, topography can potentially reduce or increase sound, depending on the geometry of the area. When placed between the noise source and receiver, hills and berms can have an effect on noise levels. In many situations, berms are used as noise mitigation because they physically block the noise source from the receiver location. In some locations, however, the topography can cause an overall increase in sound levels by either reflecting or channeling the noise towards a sensitive receiver location.
- Dense foliage can slightly reduce noise levels. The Federal Highway Administration (FHWA) assumes up to a 5 dBA reduction in traffic noise for locations that have at least 100 feet of dense evergreen foliage.
- Ground cover between the receiver and the noise source can also affect noise transmission. For example, sound will travel very well across reflective surfaces such as water and pavement, but can be attenuated when the ground cover is field grass, lawn, or even loose soil. Snow pack can also increase the attenuation of sound when compared to hard soil or pavement.
- Atmospheric conditions that can affect the transmission of noise include wind, temperature, humidity, and precipitation. Wind can increase sound levels if it is blowing from the noise source to the receiver; conversely, it can reduce noise levels if blowing in the opposite direction. Noise propagation can also be affected when the temperature gradient is such that an inversion is formed. Other atmospheric conditions such as humidity and precipitation are rarely severe enough to result in noticeable changes in noise level propagation. Because weather conditions frequently change, it is not realistic to consider atmospheric conditions in traffic noise studies.

Table 1 provides some common noise sources and compares their relative loudness to that of an 80 dBA source, such as a garbage disposal or food blender.

Table 1: Sound Levels and Relative Loudness of Typical Noise Sources			
Noise Source or Activity	Sound Level (dBA)	Subjective Impression	Relative Loudness (human judgment of different sound levels)
Jet aircraft takeoff from carrier (50 ft)	140	Threshold of pain	64 times as loud
50-hp siren (100 ft)	130		32 times as loud
Loud rock concert near stage Jet takeoff (200 ft)	120	Uncomfortably loud	16 times as loud
Locomotive warning horn (90 feet)	110		8 times as loud
Jet takeoff (2,000 ft)	100	Very loud	4 times as loud
Heavy truck or motorcycle (25 ft) OHV high engine revolutions (20 ft)	90		2 times as loud
Garbage disposal, food blender (2 ft)	80	Moderately loud	Reference loudness
Passenger car at 65 mph (25 ft)	70		1/2 as loud
Large store air-conditioning unit (20 ft) OHV at idle (20 ft)	60		1/4 as loud
Light auto traffic (100 ft)	50	Quiet	1/8 as loud
Bedroom or quiet living room Bird calls	40		1/16 as loud
Quiet library, soft whisper (15 ft)	30	Very quiet	
High quality recording studio	20		
Acoustic Test Chamber	10	Just audible	
	0	Threshold of hearing	
Sources: Beranek (1988) and EPA (1971)			

Noise levels used in this analysis are stated as sound pressure levels in terms of decibels on the A-scale (dBA). The A-scale is used in most ordinances and standards, including the applicable standards for this project. The primary noise level descriptor used in this analysis is the L_{max} . A complete list of noise descriptors that are commonly used are provided below for reference. The L_{max} was selected as the main descriptor because it follows the City and Borough of Juneau Code and is the easiest to for most people to understand.

- **L_{eq} (equivalent continuous sound level):** The constant sound level in dBA that, lasting for a time "T," would have produced the same energy in the same time period "T" as an actual A-weighted noise event.
- **L_{max} (maximum A-weighted sound level):** The greatest continuous sound level, in dBA, measured during the preset measurement period.
- **L_{min} (maximum A-weighted RMS sound level):** The greatest RMS (root-mean square) sound level, in dBA, measured during the preset measurement period.
- **L_{xx} (statistical sound level descriptor):** The sound level descriptor L_{xx} is defined as the sound level exceeded XX percent of the time. For example, during a 1-hour measurement, an L_{10} of 85 dBA means the sound level was at or above 85 dBA for 6 minutes (10%) of the hour. The periods over the 85 dBA levels could also occur at different time, such as each time a truck passes by the measurement location.

Existing Area Noise Sources

Existing noise sources in the area include traffic on the Glacier Highway, aircraft from the Juneau Airport, watercraft, helicopters and floatplanes in the summer. For the residential areas along the Glacier Highway, traffic on the highway and aircraft from Juneau Airport are some of the more notable noise source in the area. Noise from the quarry operations may also be noticeable, depending on the activity and atmospheric conditions. Based on past measurement in Juneau during the AJ Mine EIS and measured noise levels in other areas of Alaska, noise levels are projected to range from 45 to 60 dBA during daytime hours, and 30 to 45 dBA during nighttime hours.

One of the dominate noise sources in the Auke Bay area, especially during summer months, are helicopters taking tourists on scenic flights to the glacier and ice fields. There are also several light planes that fly the Juneau to Skagway route across Auke Bay. Other notable noise producing activities in this area include harbor construction projects, barging operations, and noise related to the operations of the ferry system and other marine traffic, including boat traffic from the three marinas near the project site.

Project Noise Permit Conditions

The current City and Borough of Juneau regulations for this type of use are contained in Chapter 49.15, Permits, City and Borough of Juneau Municipal Code. Under Article G-11, Chapter 49.15.330, permit conditions could restrict noise levels from operation of this type of facility to 65 dBA at the property line during daytime hours, and 55 dBA at the property line during nighttime hours. Daytime is considered between 7:00 am and 7:00 pm, with nighttime defined at 7:00 pm to 7:00 am.

Current permit conditions restrict the operations of the Stabler Point Quarry to the hours of 8:00 am and 4:30 pm daily. In addition, as part of the permit conditions, the maximum allowable noise levels would be 65 dBA at the nearest property line during daytime hours. Because the facility would be closed during nighttime hours, any nighttime noise restriction for the site is not relevant.

The purpose of this analysis is to provide the predicted noise levels from the facility during typical operations. The facilities operational noise levels were predicted for several nearby residences and also at several sites where noise related complaints have been received.

Methods of Noise Projections

The analysis was performed using standard acoustical formulas, information from the City and Borough of Juneau, and reference noise levels for equipment in use at the site. The reference noise levels used in the analysis are provided in Table 2. The table provides typical noise levels during operation, noise levels that could be produced during heavy activity, and typical idle or low level operational noise.

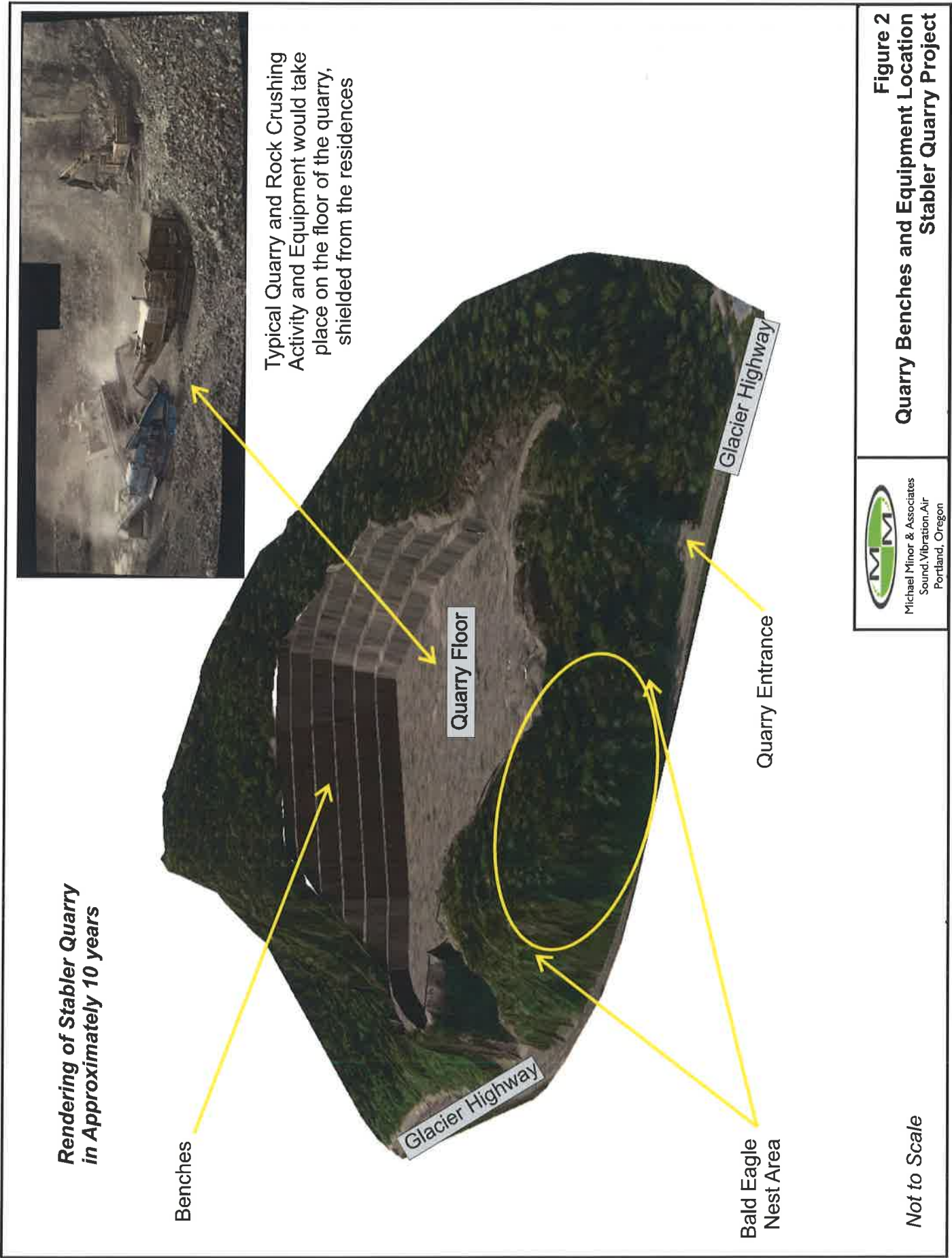
Table 2. reference Equipment Listing and Noise Levels				
Equipment	Reference Noise Levels @ 50 ft			Source
	Minimum	Typical	Full Load	
Back Hoe CAT 325	68	78	78	Measured and/or US DOT - FHWA
Compressors & Light trailers	68	74	78	Measured and/or US DOT - FHWA
Dozer D9/10/11 Cat	85	88	94	US DOT - FHWA/EPA and US Bureau of Mines
Excavator - Hitachi 3500	82	88	92	US DOT - FHWA/EPA and US Bureau of Mines
Excavator - P&H 4100 Elect	82	86	90	US DOT - FHWA/EPA and US Bureau of Mines
Grader/Scraper	80	82	84	Measured and/or US DOT - FHWA
Mine Truck - CAT 777	82	86	88	Measured and/or US DOT - FHWA
Mine Truck - Idling CAT 793/785/789	72	76	78	Measured and/or US DOT - FHWA
Mine Truck - Normal Op CAT 793/785/789	84	88	90	US DOT - FHWA/EPA and US Bureau of Mines
Rock Drill - IR DM-M2	86	92	96	US DOT - FHWA/EPA and US Bureau of Mines
Rock Jaw Crusher	76	86	89	Measured and/or US Bureau of Mines
Rock Cone Crusher	76	84	88	Measured and/or US Bureau of Mines
Rock Screen	76	82	86	Measured and/or US Bureau of Mines
Utility Trucks	68	72	76	US DOT - FHWA/EPA and US Bureau of Mines
Water Treatment Plant - Pumps	64	66	70	US DOT - FHWA/EPA and US Bureau of Mines
Utility Equipment	82	68	90	Measured and/or US DOT - FHWA
Note: All noise levels are provided in L _{max} dBA.				

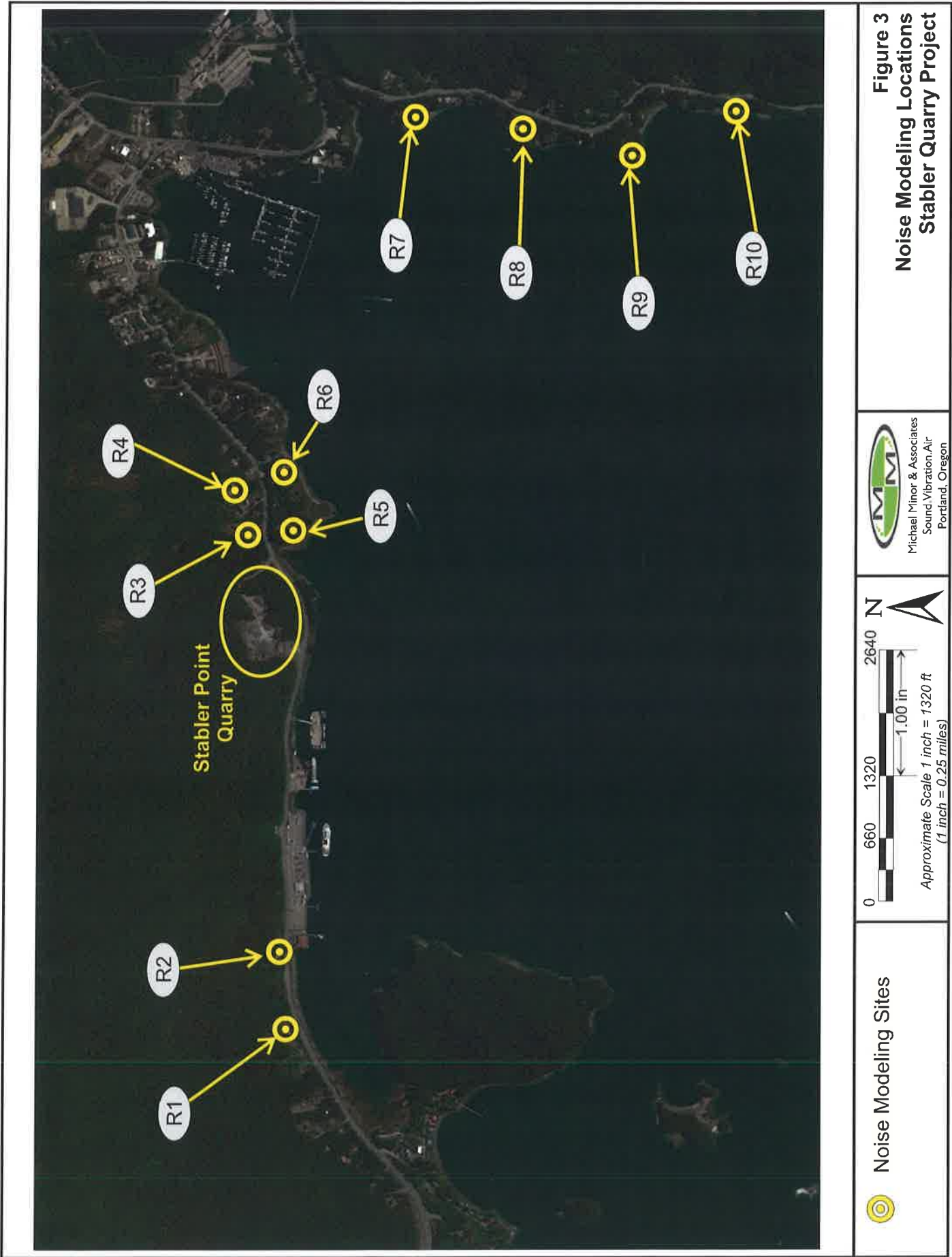
In general, the site is far enough from most noise sensitive receivers to be treated as a point source. As previously described, noise levels typically reduce by 6 dB per doubling of distance for point sources. There are several factors that contribute to the noise projections, including ground cover, shielding by the quarry walls, and topographical conditions between the quarry and the modeling site. The ground cover between the receiver locations and the

quarry site was included in the projections. Receivers located near the quarry are all shielded by dense foliage, and for those receivers, a soft ground cover was assumed. For those receivers located across Auke Bay, a hard reflective surface was assumed to account for the transmission of noise across the water. Topographical conditions in the area were also an important consideration, as the Stabler Point Quarry is located slightly up-hill from most of the noise sensitive properties. The shielding effects of the benches of the quarry were included in the analysis where appropriate.

Project noise levels were projected for the current conditions, and future conditions. The future noise levels projections are predicted using the assumptions on how the quarry will look in approximately 10 years, after the quarry is benched down and the equipment is better shielded from the receivers. Figure 2 is a depiction of how the quarry is expected to look in 10 years. Note the benches and location of equipment and the shielding that the benches provide to noise sensitive properties near the site. Figure 2 also provides a sample picture of a rock crushing operation.

The locations selected for noise modeling were based on the land use and proximity to site. Receiver R1 and R2 are located to the west of the quarry, near the Ferry terminal and the Auke Nu Cove area. Receiver R3 and R4 are some of the nearest to the site, located north the Glacier Highway east of the site near Oxford Street. Two additional noise modeling sites, R5 and R6, were selected south of the Glacier Highway, east of the site, on and near Auke Nu Drive. Finally, there are four noise modeling locations along Fritz Cove Road, southeast of the site (R7 through R10). These four sites are all located along the bay, and were modeled assuming the more efficient sound transmission characteristics of sound traveling water. Figure 3 provides an aerial view of the general area, location of the quarry, and the 10 noise modeling locations used in this analysis.





Attachment A 8 - Stabler Quarry Noise Study 2011

Project Noise Modeling Results

Noise levels were projected assuming typical operational characteristics for this type of facility. Then analysis assumes simultaneous operations of dozers for clearing and grubbing, excavators and mine haul trucks to transport the excavated material, water trucks to keep dust at a minimum, rock drills in preparation for blasting, and rock crushing operations. Although it is highly improbable that all of these operations would actually occur at the same time, using these assumptions allows for a worst case analysis of the potential noise from the site.

As previously stated, the noise projections included the noise reducing effects of topographical conditions and ground effects. For receivers R1 and R2, located west of the quarry, the shielding effects of the quarry wall and ground effects of dense foliage are assumed in the analysis. Similar topographical conditions and ground effects were also assumed for R3 and R4. R5 and R6 are located along the bay, and have similar ground effects, but less topographical shielding. Finally the receivers along Fritz Cove Road have some shielding from the walls of the site, but the noise propagation across the water was modeled as a hard site with minimal ground attenuation.

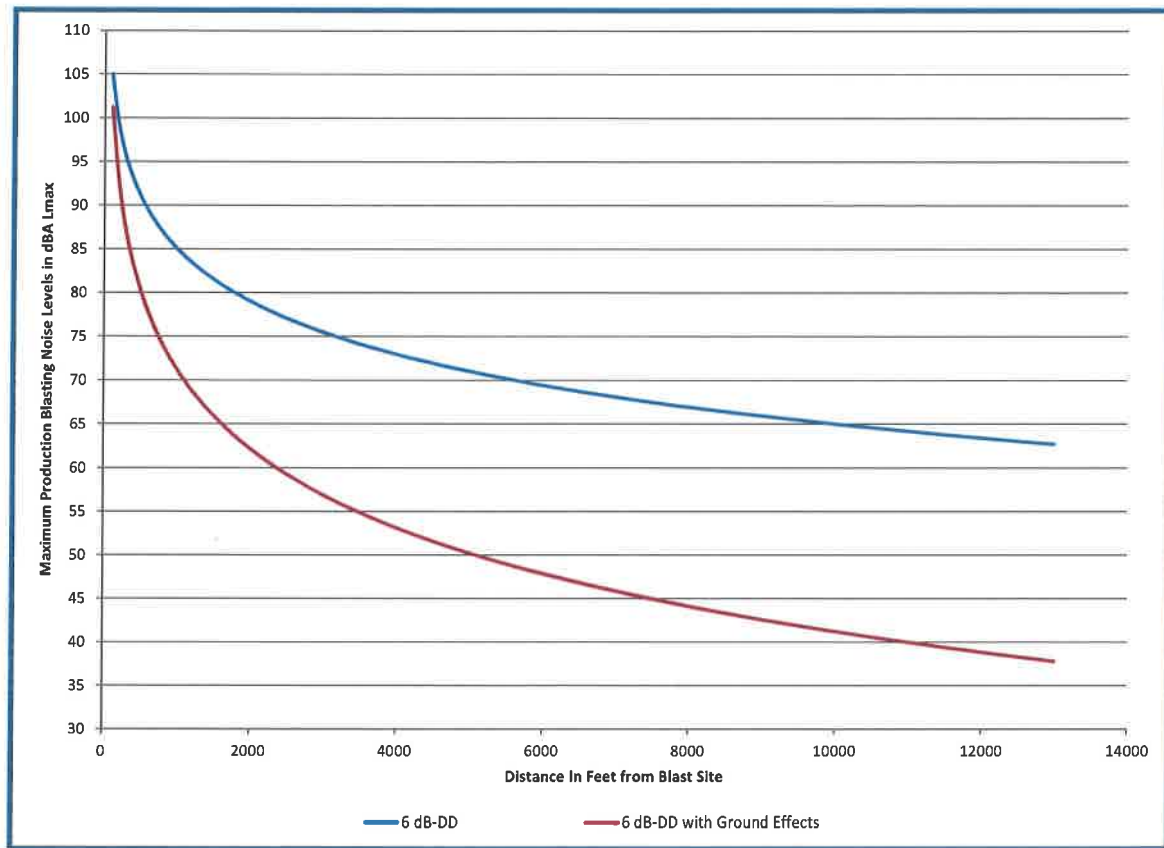
As described, the noise level projections were performed for the existing conditions and future conditions, 10 year in the future, when there will be additional shielding from the benching the quarry walls. The results of the noise levels projections are provided in Table 2. The table includes the distance from the quarry to the receivers along with the existing and future noise projections.

Table 2. Noise Modeling Results for Stabler Quarry				
Receiver Number	Site Description¹	Distance to Quarry²	Existing Noise Levels³	Future Noise Levels⁴
R1	West of Site, near Ferry Terminal	4110	39	34
R2	West of Site, near Auke Nu Cove	3200	41	36
R3	East of Site, Oxford Street Area	740	55	48
R4	East of Site, residences north of Glacier Hwy	1000	52	45
R5	East of Site, Aukenu Dr Area	860	57	52
R6	East of Site, residences south of Glacier Hwy	1440	52	47
R7	Northwest waterfront, Fritz Cove Road Area, north	5800	59	57
R8	Northwest waterfront, Fritz Cove Road Area, central	6180	58	56
R9	Northwest waterfront, Fritz Cove Road Area, central	6570	58	56
R10	Northwest waterfront, Fritz Cove Road Area, south	7610	56	54
Note: 1. Noise modeling site are shown on Figure 3 2. Distance between the quarry and the receiver site 3. Existing noise levels in L_{max} dBA 4. Future noise levels in L_{max} dBA				

Noise levels projections ranged from 34 to 59 dBA L_{max} . The highest noise levels are actually located along Fritz Cove Road due to the efficient propagation of noise across the bay. The lowest levels are predicted to the west of the site due to the shielding effects of the quarry wall and dense foliage. There are no predicted noise levels that meet the 65 dBA L_{max} permit conditions, and therefore no noise impacts are predicted. Because these projections were performed using the worst case scenario the actual noise levels would be expected to be lower, and operations of the quarry are in compliance with the permit conditions.

Blasting Noise Projections

Production blast noise levels were predicted using a reference noise level of 105 dBA at 100 feet, which is a typical blast level for quarry operations. Production blasting at the Stabler Quarry is very intermittent, and infrequent. The number of production blasts per year depends on the needs of the contractor. Between January and November of 2010 there were ten production blasts, and in 2009 there were 14 production blasts. An average frequency of two production blasts per month through the construction season is likely typical, with fewer, if any, production blasts during the winter months. The Stabler Quarry is currently permitted to have production blasts between 10:00 AM and 12:00 Noon, or between 1:00 PM and 3:00 PM, Monday through Friday. Blasting is not allowed on weekends or nighttime hours. The vast majority of production blasts are in the afternoon, between 1:00 PM and 3:00 PM. Figure 4 is a graph of typical noise attenuation for blasting out to a distance of 2 miles from the site. The graph includes a standard reduction of 6 dB per-doubling of distance and a second that also includes ground effects, which is a more likely representation of the blast levels at large distances from the quarry. Blasting is not considered under the 65 dBA permit conditions.



Noise Mitigation Measures

Because the operational noise levels from the Stabler Quarry are all predicted to remain within the City and Borough of Juneau regulations for this land use, no noise mitigation measures are being recommended. The operational hours, limits on blasting and general design of the facility along with its location are all sufficient design measures to reduce noise levels to within the City and Borough of Juneau regulations.

Summary

Noise levels predicted using a worst case scenario ranged from 34 to 59 dBA L_{max} at residential area near the site. The noise projections are all within the permit conditions of 65 dBA L_{max}. Because the noise levels projections did not show any exceedance of the criteria, and the operational hours are only during daytime hours, no noise mitigation was proposed.

Appendix A:
References and Supporting Information

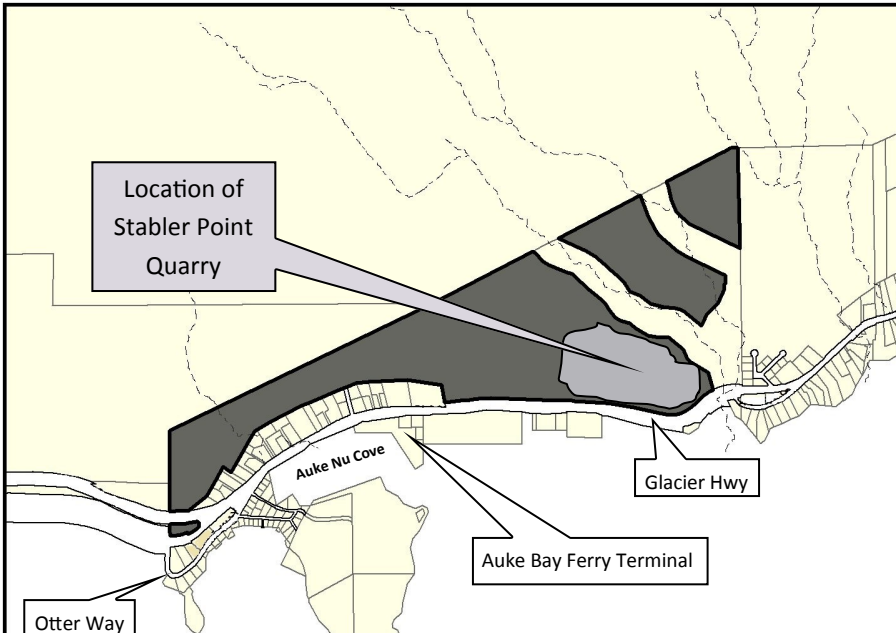
Beranek, Leo L. 1988. *Noise and Vibration Control*. Institute of Noise Control Engineering.

Juneau Area Wide Traffic Map, 2005 and 2006. Alaska Department of Transportation.

USDOT. 1977. *Highway Construction Noise: Measurement, Prediction and Mitigation*. U.S. Department of Transportation. Federal Highway Administration, Washington, DC.



NOTICE OF NEIGHBORHOOD MEETING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



Notice of Neighborhood Meeting for Stabler Point Quarry's Conditional Use Permit

UAS Egan Building, Glacier View Room, 221
Thursday, July 21, 6:30 8:00 pm

Dear Resident,

The **CBJ Community Development Department** received a Conditional Use Permit Application for an extension, to year 2026, and expansion of blast size and area of rock quarry operation for Stabler Point Quarry, near Auke Bay, at 13010 Glacier Highway.

The CBJ Community Development Department is hosting a neighborhood meeting to discuss the CBJ Conditional Use Permit process. Also, staff from the CBJ Lands & Resources and Engineering Departments will explain the details of the application. This meeting will be held on **Thursday, July 21, from 6:30 to 8:00 p.m. in the Egan Building, Glacier View Room # 221 , at UAS.**

The **purpose of the July 21st meeting is to provide information, respond to questions, and to get a sense of any concerns** that the neighborhood might have, so issues may be addressed in advance of the formal public hearing with the CBJ Planning Commission. **The project has been scheduled for review by the Planning Commission at their August 23rd regular meeting.** Prior to that meeting, all landowners within 1,000 feet of the proposed application will receive a separate notice with details on how and where to submit comments or testify on the proposal.

If you have questions or would like more information, **please contact Jonathan Lange, Community Development Planner, at 586-0218 or by email at jonathan.lange@juneau.org.**

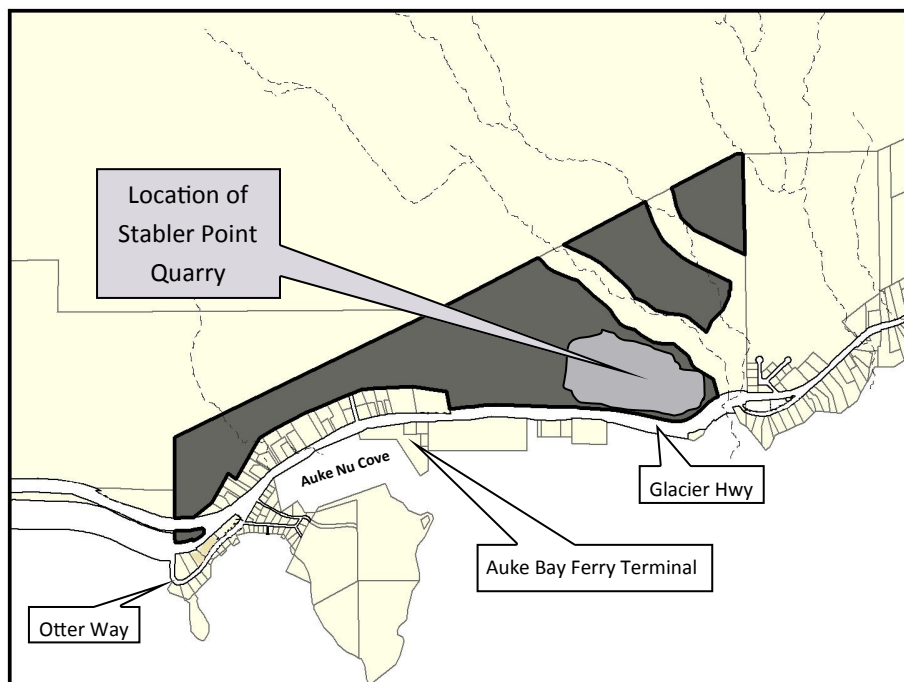
Date notice was printed: July 13, 2016



Attachment B



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



PROPOSAL: A Conditional Use Permit for an extension to year 2026 and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.

File No:	SGE20160001	Applicant:	GREG CHANEY
To:	Adjacent Property Owners	Property PCN:	4-B30-0-102-002-0
Hearing Date:	August 23, 2016	Owner:	CITY & BOROUGH OF JUNEAU LANDS AND RESOURCES
Hearing Time:	7:00 PM	Lot Size:	310.00 acres
Place:	Assembly Chambers Municipal Building 155 South Seward Street Juneau, Alaska 99801	Zoned:	RR
		Site Address:	13010 GLACIER HWY
		Accessed Via:	GLACIER HWY

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Jonathan Lange at Jonathan.Lange@juneau.org or 586.0218.

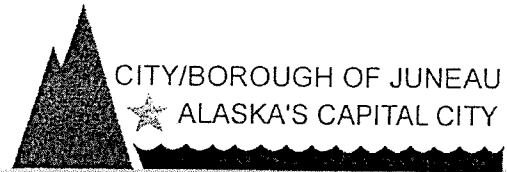


Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at <http://www.juneau.org/assembly/novus.php>

Attachment B

Date notice was printed: July 18, 2016

Conditional Use Permit



What is a Conditional Use Permit?

A Conditional Use is a use that may or may not be appropriate in a particular zoning district. For this reason it needs to be reviewed for its character, intensity, or size of that or surrounding uses. The permit is a way to review proposed projects impacts and allow different land uses in zoning districts.

What is a Conditional Use Permit for?

Some land uses are allowed outright, like a single-family home in a residential zone. However, uses like churches, libraries, or schools are examples that need additional review by the Planning Commission to be considered for residential districts.

The Table of Permissible Uses in the CBJ Land Use Code Title 49 outlines uses in different zoning districts that may be allowed outright with staff approval, allowed with a Conditional Use Permit and Planning Commission approval, or not allowed.

What criteria is used in reviewing a Conditional Use permit?

- Effect on public health and safety.
- Effect on property values and whether the project is in harmony with other uses in the neighborhood.
- Conformity with the Comprehensive Plan and other adopted land use and transportation plans; and
- Compliance with the habitat sections of the Land Use Code that address possible impacts to coastal resources, such as fish and wildlife habitat and water quality.

What should the project narrative include?

- Development schedule – Hours of operation and/or a time limit may be imposed upon specific projects to minimize conflict or disruption of other uses or neighbors.
- Use – The use of the land or structure in the proposed project or development may be restricted to that indicated in the application.
- Habitat – Development shall minimize environmental impacts near eagle's nests, wetlands, and intertidal areas.
- Sound – Conditions may be imposed to the level of noise that may be produced from a development or project.
- Screening – The commission may require construction of fencing or plantings to screen the development or portions thereof from public view.
- Lot size and development size
- Drainage – Conditions may be imposed to improve on and off-site drainage.
- Other conditions – May be imposed when reasonably necessary to protect public health, safety, and welfare.

Note: This handout does not cover all code sections and requirements as outlined in the Land Use Code. Please see Title 49 – CBJ 49.15.330 for specific code references on Conditional Use Permits.

What is the Conditional Use Permit process?

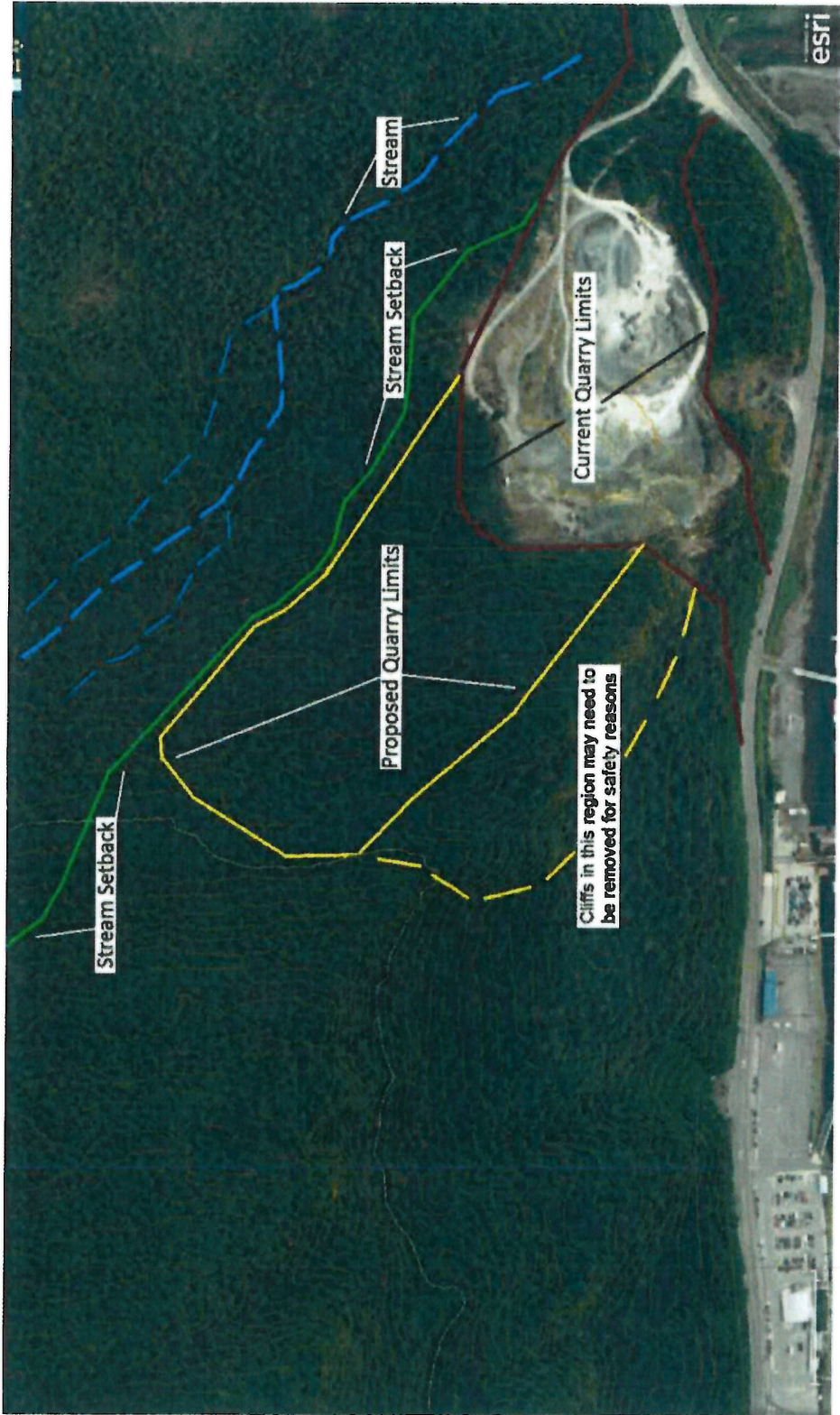
- **Pre-application Conference – Required** for all Conditional Use Permit applications. CBJ staff will talk over the Conditional Use Permit process and all required permits and information needed for a complete review.
- **Neighborhood Meeting** – These meetings can be optional but are encouraged.
- **Permit application including:**
 1. Narrative - Clearly describe proposed project. Be specific.
 2. Site plan - Show existing and proposed: buildings, lighting, vegetation, and use of land. Show parking and traffic circulation.
 3. Fees - Between \$350 to \$1,600 based on the size and scope of the project. CDD staff will assist you in determining the fee for your project.
- **Review** – CBJ staff and other external applicable agencies will review the proposed project.
- **Staff report** – The Planner assigned to your specific project will review the application for consistency with land use codes and applicable plans. Staff will then make a recommendation to the Planning Commission.
- **Public Notice** – Notice of all hearings will be sent by mail to all property owners within 500 feet of the proposed project. A larger area may be required depending on the project and area affected. Notice will also be placed in the newspaper. A public notice sign will be required to be posted on-site 14 days prior to the public hearing. A sign rental fee is \$50 with a sign deposit of \$100.
- **Public Hearing** – The hearings are open to the public and give the public a chance to testify or comment to the Planning Commission on specific projects.
- **Notice of Decision (NOD)** – Is issued once the Planning Commission reaches a decision on the proposed project.
 1. Appeal Period – Within 20 days of a decision the decision may be appealed to the Assembly. Any work done within the 20 days after a decision is done at your own risk.
 2. Expiration – Conditional Use Permits do have an expiration date. The permit will become void 18 months after its effective date if no associated permits have been issued, or substantial progress has been made on the project.

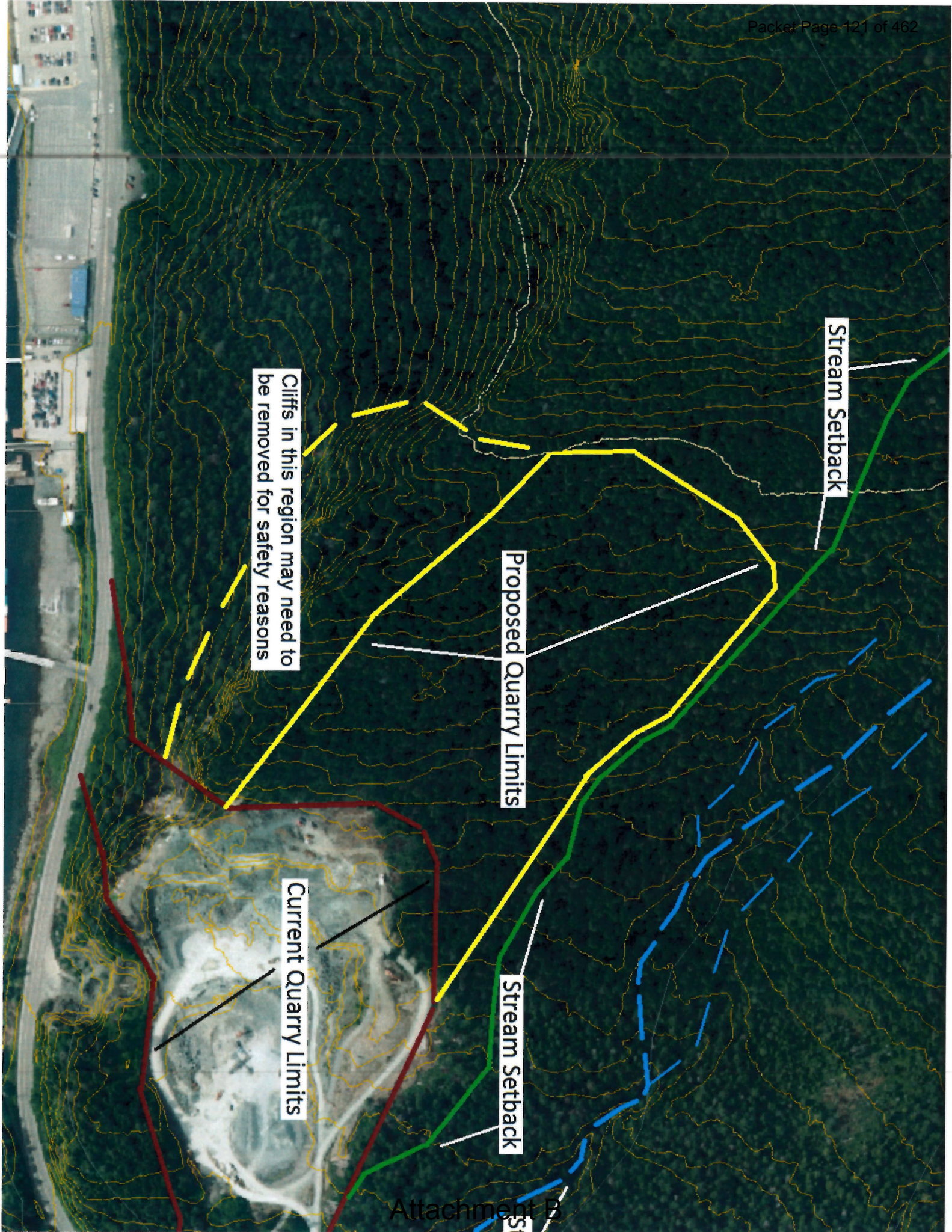
Please contact the Permit Center with any questions or to schedule a Pre-Application Conference:

230 S. Franklin Street, 4th Floor – Marine View Building
 Phone: (907) 586-0770 • Fax: (907) 586-4925
 Permits@juneau.org • www.juneau.org

Monday through Friday (except Holidays) 8am to 4:30pm
 Applications received: 8am to 4pm

Attachment 4
Proposed Expanded Stabler Quarry Limits





Stream Setback

Proposed Quarry Limits

Cliffs in this region may need to be removed for safety reasons

Current Quarry Limits

Stream Setback

Attachment B

Neighborhood Meeting –Stabler Point Rock Quarry Expansion
UAS, Egan Building, Glacier View Room #221
July 21st, 2016 6:30pm – 8pm

[illegible]

Jonathan Lange

From: Ed Mercer
Sent: Thursday, June 30, 2016 9:41 AM
To: Jonathan Lange; Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Foster; jackie.timothy@alaska.gov; marie.heidemann@alaska.gov; steve_b_lewis@fws.gov
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Hi Jonathan,

JPD does not have any issue with this.

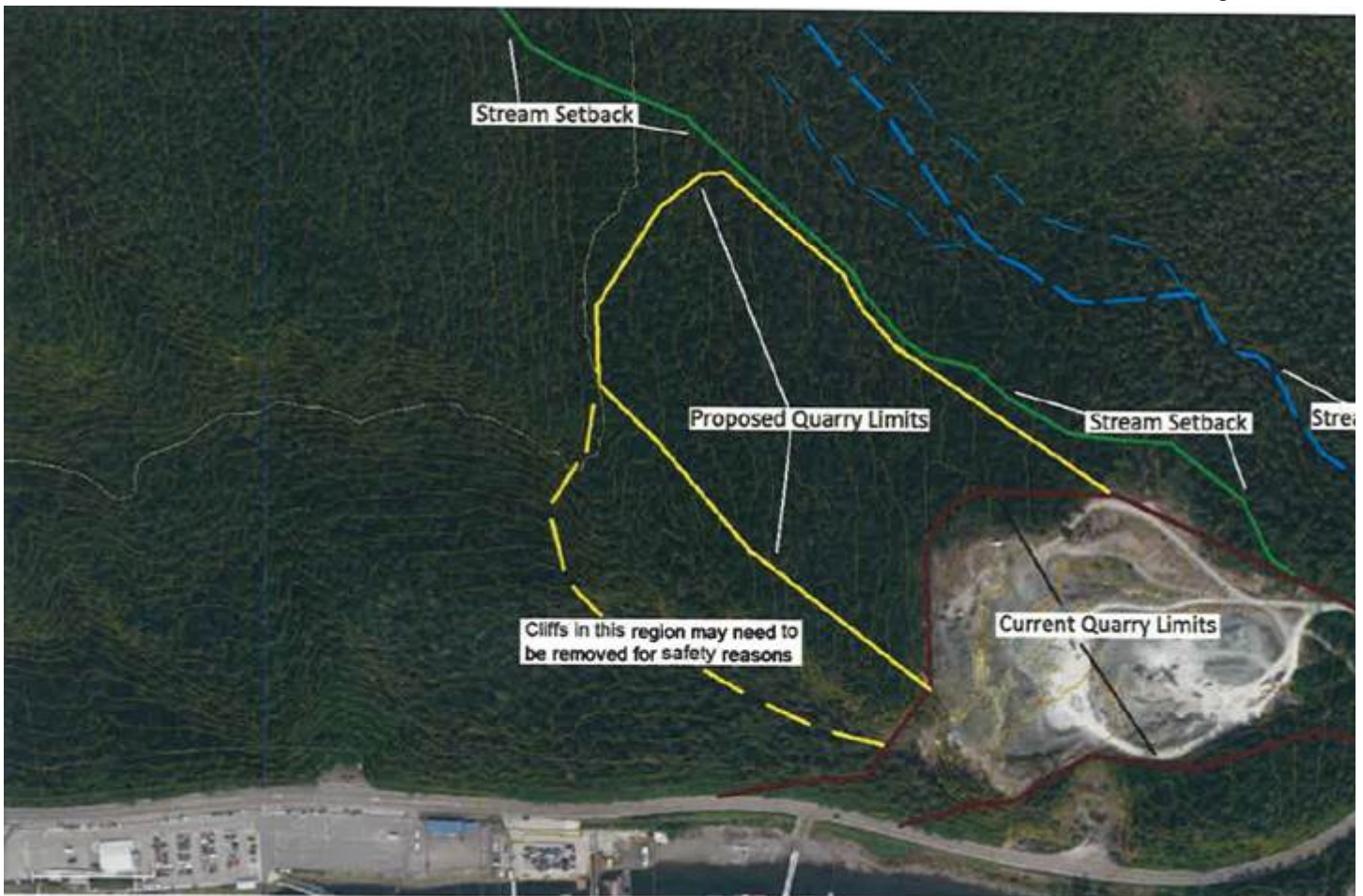
Thanks, Ed

From: Jonathan Lange
Sent: Thursday, June 30, 2016 9:39 AM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Mercer; Ed Foster; jackie.timothy@alaska.gov; marie.heidemann@alaska.gov; steve_b_lewis@fws.gov
Subject: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Subject: Please review attached documents related to a Sand and Gravel Extraction Conditional Use Permit for a 10 year extension; and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.
File: SGE2016 0001
Location: 13010 Glacier Highway



Please see the attached application and proposed plan narrative.



The application is to:

- Extend the operational life of the quarry to 2026
- Expand the horizontal area permitted within the quarry
- Increase the maximum blast size to 25,000 cubic yards

I look forward to receiving your comments. Please comment by July 14, 2016 or as soon as possible.
 Let me know if you require any additional information for this project or have any questions.
 Thank you and have a great day.

Jonathan Lange, CFM
 Planner II, Community Development Dept.
 City & Borough of Juneau, Alaska
 155 S. Seward St. Juneau, AK 99801
 Ph (907)586-0218
Jonathan.Lange@juneau.org



Jonathan Lange

From: Dan Jager
Sent: Thursday, June 30, 2016 9:47 AM
To: Jonathan Lange
Cc: Sven Pearson
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Good morning Jonathan, there are no fire dept. issues with this. Thanks.
Dan

From: Jonathan Lange
Sent: Thursday, June 30, 2016 9:39 AM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Mercer; Ed Foster; jackie.timothy@alaska.gov; marie.heidemann@alaska.gov; steve_b_lewis@fws.gov
Subject: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Subject: Please review attached documents related to a Sand and Gravel Extraction Conditional Use Permit for a 10 year extension; and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.
File: SGE2016 0001
Location: 13010 Glacier Highway

Jonathan Lange

From: Charlie Ford
Sent: Thursday, June 30, 2016 9:55 AM
To: Jonathan Lange; Ron King; Dan Jager; Sven Pearson; Ed Mercer; Ed Foster; jackie.timothy@alaska.gov; marie.heidemann@alaska.gov; steve_b_lewis@fws.gov
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Jonathan,
No Building issues with this one.
Thanks,

Charlie Ford, Building Official
Community Development Dept.
City and Borough of Juneau
Tel (907)586-0767 Fax(907)586-4529
email Charlie.Ford@juneau.org
Web page www.juneau.org/permits

From: Jonathan Lange
Sent: Thursday, June 30, 2016 9:39 AM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Mercer; Ed Foster; jackie.timothy@alaska.gov; marie.heidemann@alaska.gov; steve_b_lewis@fws.gov
Subject: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Subject: Please review attached documents related to a Sand and Gravel Extraction Conditional Use Permit for a 10 year extension; and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.
File: SGE2016 0001
Location: 13010 Glacier Highway

Jonathan Lange

From: Ron King
Sent: Thursday, June 30, 2016 10:18 AM
To: Jonathan Lange
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

No issues

Ron King PLS

General Engineering
907-586-0881

From: Jonathan Lange
Sent: Thursday, June 30, 2016 9:39 AM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Mercer; Ed Foster; jackie.timothy@alaska.gov; marie.heidemann@alaska.gov; steve_b_lewis@fws.gov
Subject: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Subject: Please review attached documents related to a Sand and Gravel Extraction Conditional Use Permit for a 10 year extension; and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.
File: SGE2016 0001
Location: 13010 Glacier Highway

Jonathan Lange

From: Alan Steffert
Sent: Tuesday, July 12, 2016 3:09 PM
To: Alec Venechuk; Greg Chaney; Jonathan Lange
Cc: Dan Bleidorn; Rachel Friedlander
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Jonathan,

Some history: The area of concern for rock fall on to the road has been a chute (lower half of chute outlined in red in photo below) that provides a straight shot from ridge top to hwy. In the past, rocks in the chute have occasionally come loose during unseasonal winter thaws (unrelated to quarry activity), but now the chute is relatively “clean” and stable. The debris fan at the base has been cleared up, and we have removed hanging and loose rock from the head of the chute. With the contributory area clear and stable I don’t see the chute as being a problem until we need to start lowering the top of the cliff prior to mine closure.

Alan



From: Alec Venechuk
Sent: Tuesday, July 12, 2016 2:20 PM
To: Greg Chaney; Jonathan Lange; Alan Steffert
Cc: Dan Bleidorn; Rachel Friedlander
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

I agree, DOT would reserve the right to do anything inside the highway ROW, but I don't see a need for CBJ to cut trees that weren't themselves a hazard.

-Alec

From: Greg Chaney
Sent: Tuesday, July 12, 2016 1:29 PM
To: Alec Venechuk; Jonathan Lange; Alan Steffert
Cc: Dan Bleidorn; Rachel Friedlander
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Hi Jonathan,

I don't agree with DOT's request to cut / "high stump" the trees that boarder the quarry because they might represent a hazard to the powerlines. The powerlines are on the opposite side of the road so a tree would have to fall downslope and across the highway to hit a powerline. As you can see from the photo below, it is unlikely that the trees would reach that far. In addition, those trees establish a visual buffer and provide some sound attenuation.

CBJ also creates some liability if we cut trees and then the slope becomes unstable. Law has cautioned us about trying to preemptively stablize slopes because we could be blamed for causing instability.

So I would prefer not to accept that recommendation.

Let me know if you have questions.

- Greg Chaney
CBJ Lands and Resources Manager



From: Alec Venechuk
Sent: Tuesday, July 12, 2016 8:22 AM
To: Jonathan Lange; Alan Steffert; Greg Chaney
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

[Thank you Jonathan](#)

From: Jonathan Lange
Sent: Monday, July 11, 2016 4:28 PM
To: Alec Venechuk; Alan Steffert; Greg Chaney
Subject: FW: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

FYI – Comments from DOT.

Jonathan Lange, CFM
 Planner II, Community Development Dept.
 City & Borough of Juneau, Alaska
 155 S. Seward St. Juneau, AK 99801
 Ph (907)586-0218
Jonathan.Lange@juneau.org



From: Heidemann, Marie E (DOT) [<mailto:marie.heidemann@alaska.gov>]
Sent: Monday, July 11, 2016 3:07 PM
To: Jonathan Lange
Subject: RE: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Jonathan,

ADOT&PF Southcoast Region offers the following comments on this proposal:

Traffic and Safety has no comment or objection provided current traffic control provisions are kept in place

Right of Way and Utilities - Would like to see all the trees on the remaining slope above the highway high stumped. Leaving high stumps would slow escaping rock from rolling down slope too fast. Removing the tall tree will keep trees from damaging the utilities on the pole line across from the pit. When alders are high stumped they still grow and get more like a hedge shrub. That too would slow escaping rock.

Thank you for the opportunity to comment.

Marie Heidemann
 Transportation Planner
 Southcoast Region, ADOT&PF
 465-1775

From: Jonathan Lange [<mailto:Jonathan.Lange@juneau.org>]
Sent: Thursday, June 30, 2016 9:39 AM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Mercer; Ed Foster; Timothy, Jackie L (DFG); Heidemann, Marie E (DOT); steve_b_lewis@fws.gov
Subject: Request for Review Comments for SGE2016 0001 - Stabler Point Quarry Expansion

Subject: Please review attached documents related to a Sand and Gravel Extraction Conditional Use Permit for a 10 year extension; and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.

Jonathan Lange

From: Rich Brenner <richbrenner.alaska@gmail.com>
Sent: Friday, July 22, 2016 4:01 PM
To: Jonathan Lange
Subject: Re: Stabler Point Quarry permit

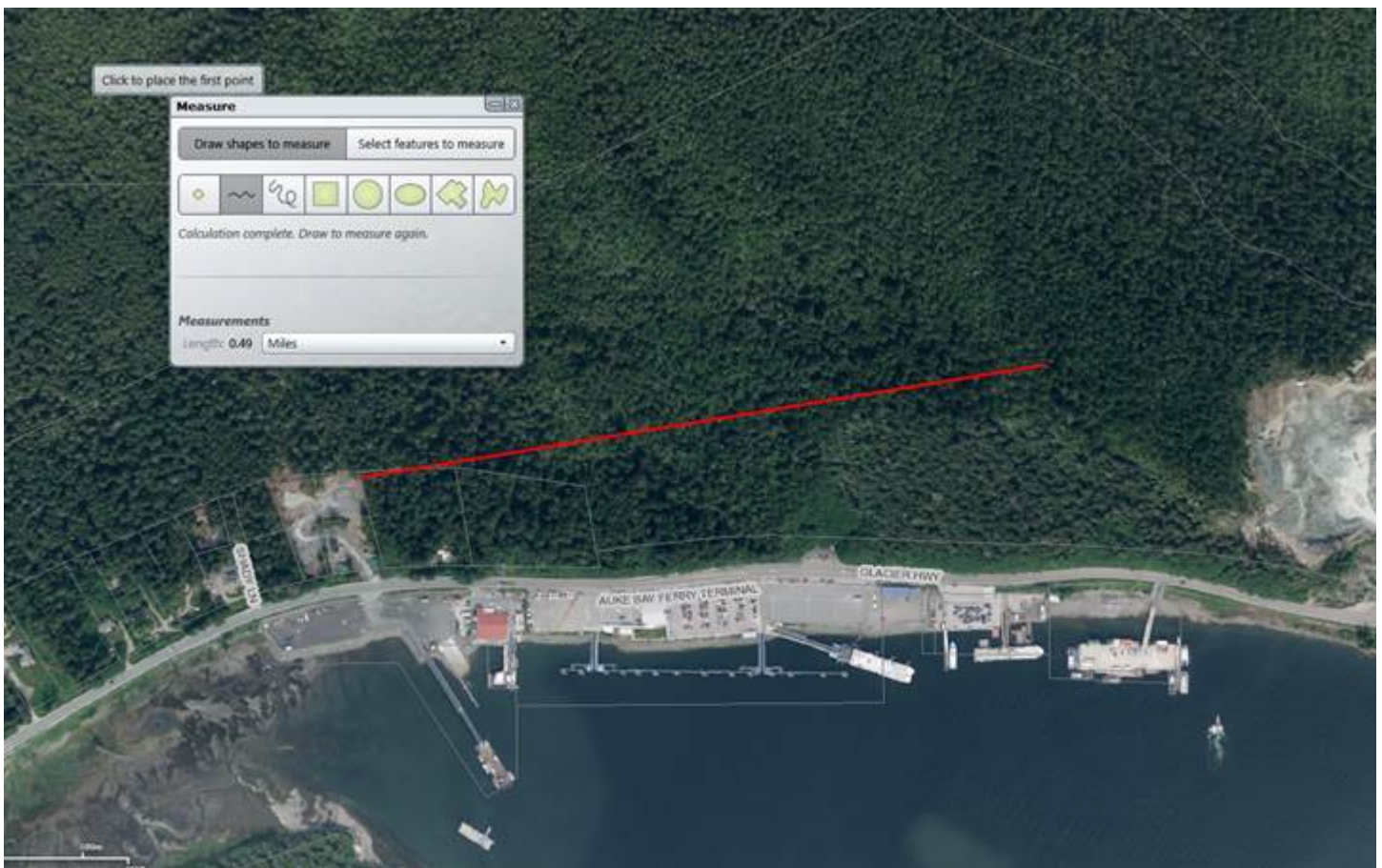
Thanks Jonathan! I really appreciate the GIS exercise and my sense of doom and gloom has faded....I'm sure my wife will be happy too.

Take care,
 Rich

On Fri, Jul 22, 2016 at 3:48 PM, Jonathan Lange <Jonathan.Lange@juneau.org> wrote:

Rich,

From my estimate using our GIS system it is approximately a ½ mile from your nearest property line to the proposed expansion line of the quarry (see below).



The re-routing of Glacier Highway would be for the curve at Stabler Point, near the quarry. DOT would like to straighten out that curve. The new alignment is not determined, but from what I understand it would start from approximately where the current entrance to the quarry is and come out on the other side (see below).



I hope this information helps.

Let me know if you have any further questions.

Have a good weekend.

Jonathan Lange, CFM

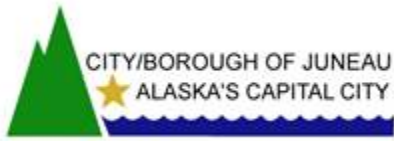
Planner II, Community Development Dept.

City & Borough of Juneau, Alaska

155 S. Seward St. Juneau, AK 99801

Ph [\(907\)586-0218](tel:907586-0218)

Jonathan.Lange@juneau.org



From: Rich Brenner [mailto:richbrenner.alaska@gmail.com]

Sent: Friday, July 22, 2016 3:01 PM

To: Jonathan Lange

Subject: Re: Stabler Point Quarry permit

Thanks Jonathan,

Our land is directly above Glacier Seafoods dock. I can't really tell from the application, but it would be good to have a better idea of how close the quarry will get to our property. The application says "1/2 mile" but I think that's for the existing quarry, not for the planned expansion. Also, the plan mentions (eventually) re-routing the highway. Is the plan to re-route the highway behind our property? If so, that would have major ramifications for our recreational opportunities back there and the value of our property.

Thank you,

Rich

On Fri, Jul 22, 2016 at 2:17 PM, Jonathan Lange <Jonathan.Lange@juneau.org> wrote:

Hi Rich,

Thanks for your email.

Please see the attached application for more information. The attachment contains the application and narrative, the Notice of Decision for their current permit, a Vibration Monitoring Summary Report, and a Noise Study.

The application is for three things:

Extending the operational life of the quarry to 2026

Expanding the horizontal area permitted within the quarry (see below and Attachment 4 to the application narrative)

Increasing the maximum blast size to 25,000 cubic yards

The operation hours are not proposing to change from the current allowed hours of Monday through Friday 8am-4:30pm.

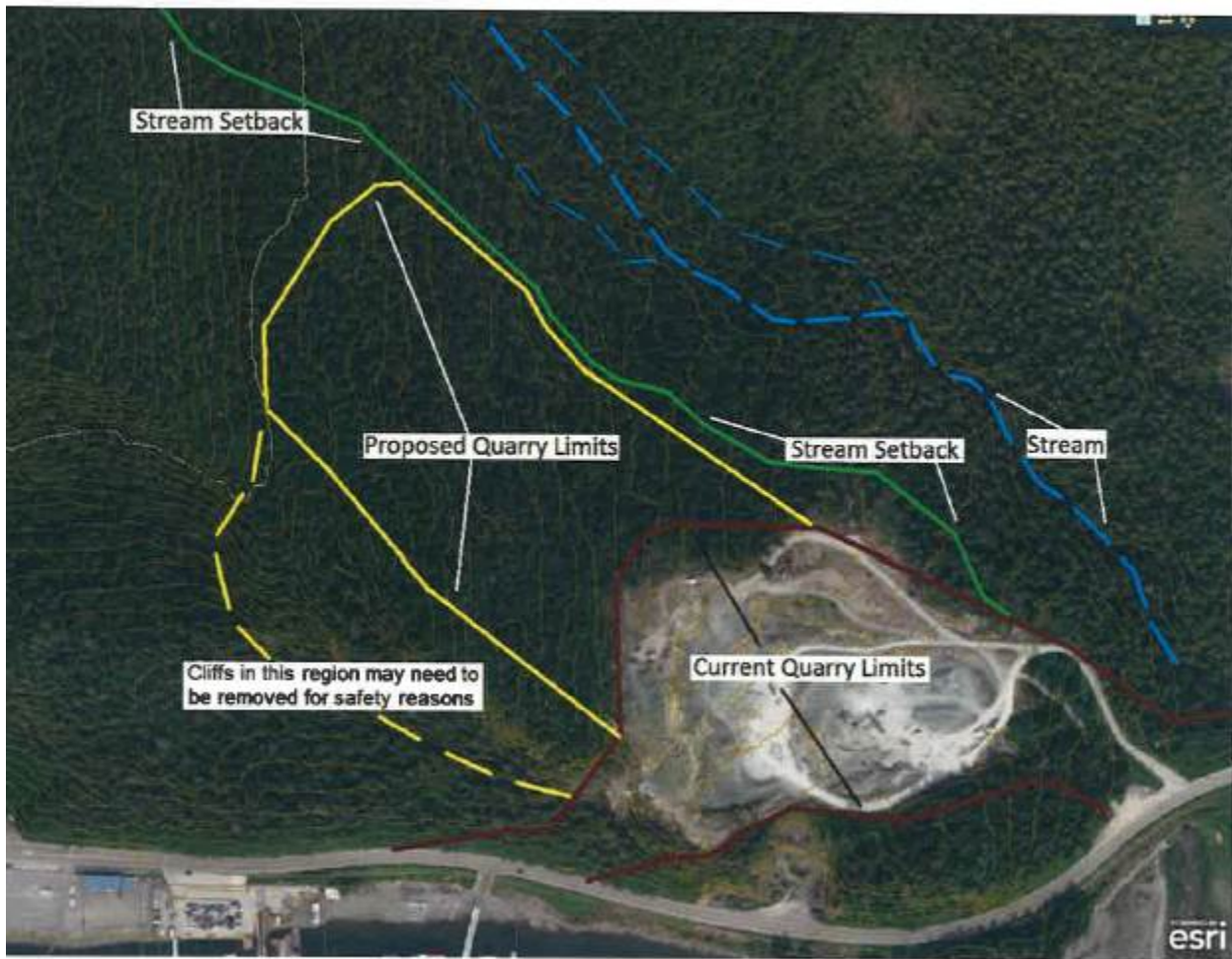
Please let me or Alec Venechuk, CBJ Project Engineer and Quarry Manager, know if you have any further questions.

Alec's contact info is as follows:

Alec.Venechuk@juneau.org

Office: [907-586-0874](tel:907-586-0874)

Cell: [907-388-1099](tel:907-388-1099)



Attachment 4
Proposed Expanded Stabler Quarry Limits

Jonathan Lange, CFM

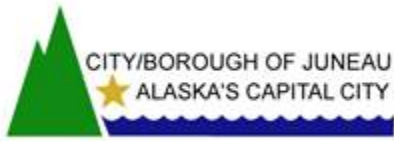
Planner II, Community Development Dept.

City & Borough of Juneau, Alaska

155 S. Seward St. Juneau, AK 99801

Ph [\(907\)586-0218](tel:(907)586-0218)

Jonathan.Lange@juneau.org



From: Rich Brenner [mailto:richbrenner.alaska@gmail.com]

Sent: Friday, July 22, 2016 12:31 PM

To: Jonathan Lange

Subject: Stabler Point Quarry permit

Hi Jonathan,

Unfortunately, my wife and I were not able to attend last night's meeting regarding the Stable Point Quarry permit application.

How can we find out more about the proposed expansion of the quarry?

Our particular concerns are noise on weekends, during mornings and evenings, and how large of an expansion is being proposed. The card you send us shows the existing quarry. I think it would be helpful to see how this compares to the proposed expansion.

Thank you,

Rich Brenner and Allison Bidlack

Auke Bay

Jonathan Lange

From: Jonathan Lange
Sent: Tuesday, August 02, 2016 1:22 PM
To: 'BobE'
Subject: RE: Stabler Point Quarry

Hello,

Thank you for your email and your interest in being involved in the public hearing. I look forward to receiving your written testimony.

Unfortunately, the Planning Commission does not have a way for the public to listen in or participate telephonically to the hearing. We encourage the public to attend the meeting and if that is not possible to send in written testimony. Please send your written comments in as soon as you can, or no later than 14 days prior to the hearing (August 9th) to have the comments included and addressed in the staff report. After that date, the public testimony will be provided to the Planning Commission the night of the hearing.

Again, sorry that we don't have the ability for you to participate telephonically.

Please let me know if you have any further questions.

Have a good rest of your day.

Jonathan Lange, CFM
 Planner II, Community Development Dept.
 City & Borough of Juneau, Alaska
 155 S. Seward St. Juneau, AK 99801
 Ph (907)586-0218
Jonathan.Lange@juneau.org



From: BobE [<mailto:besd@acsalaska.net>]
Sent: Friday, July 29, 2016 4:48 PM
To: Jonathan Lange
Subject: Re: Stabler Point Quarry

Hi Jonathan,

We would like to participate telephonically to the CBJ Public Hearing on August 23rd. We will be submitting written testimony, but would like to listen to the oral testimony during the hearing.

Could you please provide a call in number, or instructions for other means to participate.

Thank you,
 Suzanne Dvorak
 & Bob eastaugh

On Jul 24, 2016, at 6:47 PM, BobE <besd@acsalaska.net> wrote:

Hi Jonathan,

Thank you for forwarding the permit application and narrative. It's interesting reading.

We'll be in touch with either you or Alec if we have further questions.

Best,
Suzanne Dvorak
& Bob Eastaugh

On Jul 22, 2016, at 3:56 PM, Jonathan Lange <Jonathan.Lange@juneau.org> wrote:

Hi Susan,

Thanks for your call this afternoon.

Please see the attached application for more information about the Stabler Point Quarry Conditional Use Permit. The attachment contains the application and narrative, the Notice of Decision for their current permit, a Vibration Monitoring Summary Report, and a Noise Study.

The application is for three things:

- Extending the operational life of the quarry to 2026

- Expanding the horizontal area permitted within the quarry (see below and Attachment 4 to the application narrative)

- Increasing the maximum blast size to 25,000 cubic yards

The operation hours are not proposing to change from the current allowed hours of Monday through Friday 8am-4:30pm.

Please let me or Alec Venechuck, CBJ Project Engineer and Quarry Manager, know if you have any further questions.

Alec's contact info is as follows:

- Alec.Venechuk@juneau.org

- Office: 907-586-0874

- Cell: 907-388-1099

<image001.jpg>

Jonathan Lange, CFM
Planner II, Community Development Dept.
City & Borough of Juneau, Alaska
155 S. Seward St. Juneau, AK 99801
Ph (907)586-0218

Jonathan.Lange@juneau.org

<image002.jpg>

<APP_SGE16-01.pdf>

Paul M. & ChongUn Hoffman
12500 Auke Nu Drive
uneau, Alaska 99801-8638

City & Borough of Juneau

Attn: Alec Venechuk, Greg Chaney & Rob Steedle (via email)

Re: Conditional Use Permit, File No: SGE20160001
Stabler Point Quarry

As you can discern from the above address for our home, we live approximately a quarter mile from the Quarry. We have reviewed the Application for Permit, Stabler Point Quarry Noise Study and the Vibration Monitoring Summary Report, along with other materials. Since living at this address since 2002, we are well aware of the Quarry and its activities. We have a request and observation for your consideration.

Some days we are at home and haven't driven out for a day or two. Therefore we have not seen the signs put up on Glacier Highway providing notice of an imminent blast. Suddenly we feel a vibration through the house and muffled noise, with the first thought, "an earthquake." Then I go out of the house up to the road to see that there are signs out and traffic backed up on the road, and realize it was a blast at the Quarry. With this information I can reassure my wife, who is generally more afraid of earthquakes and possible tsunamis than I am.

I have lived in Auke Bay, although not at this address, since 1956. I have experienced a number of earthquakes here, such as the Lituya Bay 1958, Good Friday 1964 and a number of other, smaller ones primarily out in the ocean off of Cross Sound. Although the larger Quarry blasts provide a shorter period of vibration (shaking) than the earthquakes, the intensity at our home is between III & IV on the Modified Mercalli Intensity Scale.

For those of us who live near the Quarry, and it is not a very large number, would it be possible that a CBJ or Contractor employee a day or two before each blasting bring to or leave a notice on the front door of these nearby homes of the date and time of the blast?

Our house is built almost entirely on a bedrock point of land, about 30 feet above high tide. Perhaps because we are on bedrock, the vibrations from the blasts comes through to us more than other places. On several occasions after a blast, the jolting was strong enough that I went around the house, observing the cement floors & walls and sheetrock walls to see if any cracks had occurred. While I cannot attribute any of the cracks in the house directly to the event of a blast, yet it might be an accumulative effect of blasts, as we do have some cracks. We would suggest that blasts of a magnitude greater than in the past or that send greater shock waves through the bedrock may be a bad idea. Increasing the magnitude of the allowable blasts, as seems requested in the application, from 6,000 cubic yards to 25,000 cubic yards, more than a four-fold increase, is not going to be a wise decision.

We are not against the Quarry or getting rock for the community projects from this location. We are only asking for reasonable considerations and adjustments in blasting and operations practices for the citizens like us who live nearby to not bear a disproportionate burden. Thank you for your consideration.

Paul M. Hoffman (723-9407)

Jonathan Lange

From: Jonathan Lange
Sent: Friday, August 05, 2016 1:32 PM
To: 'Vivian H.'
Subject: RE: Quarry Expansion
Attachments: ConditionalUseHandout_06252015.pdf; APP_SGE16-01.pdf

Hello Ms. Hegg,

Thank you for your email. I will follow up with a phone call this afternoon to hopefully answer some more of your questions about the application.

At the neighborhood meeting Community Development Department staff gave an overview of the Conditional Use Permit process, and Engineering and Lands Division gave background and information about the proposed expansion to the quarry operations. Please see attached handout. We also shared the below site plan or "Proposed Expansion Stabler Quarry Limits", Attachment 4 from the applicant's narrative.

Please see the attached application for more information about the Stabler Point Quarry Conditional Use Permit. The attachment contains the application and narrative, the Notice of Decision for their current permit, a Vibration Monitoring Summary Report, and a Noise Study.

The application is for three things:

- Extending the operational life of the quarry to 2026

- Expanding the horizontal area permitted within the quarry (see below and Attachment 4 to the application narrative)

- Increasing the maximum blast size to 25,000 cubic yards

The operation hours are not proposing to change from the current allowed hours of Monday through Friday 8am-4:30pm, closed for State holidays.

You are correct, the expansion is to provide rock for the community. The realignment of Glacier Highway is the long term plan for the rock quarry and for this curve at Stabler Point. The State Department of Transportation does not have a specific date for when they would want to complete the realignment. You could speak with them if you have further questions about the plan.

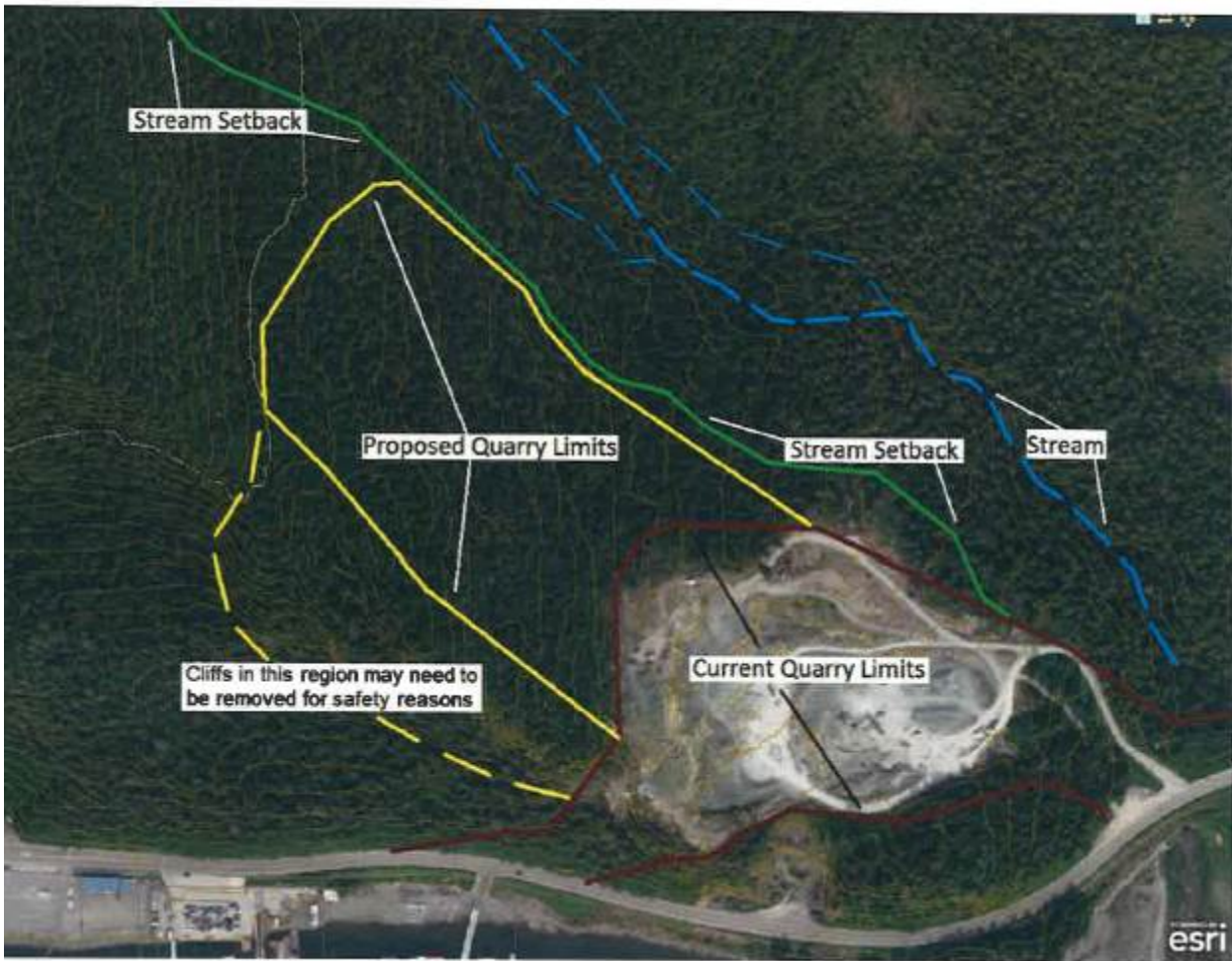
Please let me or Alec Venchuck, CBJ Project Engineer and Quarry Manager, know if you have any further questions.

Alec's contact info is as follows:

Alec.Venchuk@juneau.org

Office: 907-586-0874

Cell: 907-388-1099



Attachment 4
Proposed Expanded Stabler Quarry Limits

Talk to you soon.

Jonathan Lange, CFM
 Planner II, Community Development Dept.
 City & Borough of Juneau, Alaska
 155 S. Seward St. Juneau, AK 99801
 Ph (907)586-0218
Jonathan.Lange@juneau.org



From: Vivian H. [<mailto:goldeneye35@live.com>]
Sent: Friday, August 05, 2016 9:44 AM
To: Jonathan Lange
Subject: Quarry Expansion

Mr Lange:

We have a couple of questions about the conditional use permit for the expansion of the Stabler Point Quarry and we would appreciate a call so we could ask a little more about the

proposed project. I am most likely to be home before 10:00 am and after 2:30 pm but please call at any time that works for you.

I understand there was notification of an initial meeting to people living in the immediate area and I am curious about whether notes or other information on the staff report and discussion at that meeting are available in printed or power point form or online?

To explain our interest we live on Fritz Cove Road so the only impact on us would be visual and, more particularly, noise. For some years there have been restrictions on the hours of operation set by the Planning Commission and I'm guessing these may also change as part of the expansion project.

I understand this expansion is primarily to provide access to more rock for but also part of the long term plan to move the highway back from the coastline. Since Greg Chaney is listed as the applicant, should I ask the State Highway Department for information about the status and timeline of that second goal?

We appreciate being included in the second notification of the project.

Thank you,

Vivian Hegg

2950 Fritz Cove Road

789-7311

Response to Proposal: A Conditional Use Permit for an extension to year 2026 and expansion of blast size and area of rock quarry operations for Stable Point Quarry from K Kriens August 8, 2016.

I live in the Spaulding Beach Condos and the activities of the current quarry operations do impact the residential life of the area. An extension and even more an expansion that more than doubles the current size of blasting will increase the negative impact on the people who live in Auke Bay from the quarry operations.

There are large rocks that fall from the trucks and end up on the highway.

The driveway out of Spaulding Beach is on a curve and hard to see oncoming traffic. More than once I have had a large quarry truck come up on me fast after I have entered the highway (looking as far as I could see down the road before I pulled out and seeing no traffic). They are big vehicles and one of those on your bumper is scary.

When coming from town and going towards the Ferry Terminal, I have had the big trucks on my bumper again since the speed limit is 35 mph and they want to go faster once they clear the elementary school turn. 35 mph does not start until after the creek and after the Spaulding Beach Condo driveway.

The blasting does affect the people and wildlife in the area. During blasts that I have heard and felt, I have witness sea gulls, eagles and ducks take flight in response.

The trucks run over the new roundabout at Deharts. Many tire marks – some could be the buses since I have followed both trucks and buses and observed both of them just driving on the middle sideway like it was part of the road so they don't have to keep the vehicle within the road parameters.

From what I understand the original Conditional Use Permit was for "certain conditions". How often, by who and what was done to verify that the certain conditions of the original use permit were followed? If it was not, were there any penalties beyond making residents of Auke Bay live with them? Auke Bay is a residential area and with major plans to increase the livability of the area through community planning. How does this quarry fit into the residential atmosphere?

Even if you grant an extension to this use permit – ten years it too long. There has to be some type of accountability if you do grant an extension and ten years gives the owner or future owner of the quarry a long time to beg off and nothing can be done. Going to a five year extension gives the Planning Commission a method to stop negative behavior. It is easier to control quarry actions by keeping the ability to make the owner responsible within reasonable time frames. If they are not, then in five years the permit ends - ten years gives the owner or future owner the abilities to stretch it out and never really respond appropriately since there is no pressure to get another extension for a long time.

The reason for the expansion of the blast size has not fully been explained or reviewed. It appears that it was just thrown in there to get it by the Planning Commission. This seriously needs to be revisited, even as a normal citizen not in the business; I see many flaws with the proposed expansion acreage.

Please consider my comments to increase the livability of Auke Bay for its residents.

Robert L. Eastaugh and Suzanne Dvorak
P.O. Box 112448
Anchorage, Alaska 99511-2448
907 344-7246
(12555 Auke Nu Drive)
email: besd@acsalaska.net

August 8, 2016

Planning Commission
City & Borough of Juneau

Re: Stabler Point Quarry Proposal SGE20160001

Dear Commissioners:

We have reviewed the proposal. Although we are not enthusiastic about the quarry operations, we will not object to the proposal so long as the permit is conditioned on these five requirements (discussed in more detail below):

- (1) The permit requires that vibration and blast effects observed and reported to date not be exceeded;
- (2) The permit requires adoption and implementation of recommendations contained in the ASE Blast Monitoring Report of December 31, 2015 (pages 8-11);
- (3) The permit includes a requirement identical to paragraph 7 of the Commission's 2011 Decision, which required that the quarry operator "submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast.";
- (4) The permit allows shot frequency not exceeding that experienced in 2015; and
- (5) The permit requires a "stepped" increase to the maximum proposed; i.e., require a 15,000 cubic yard blast to determine effects (conducted under similar conditions for any 25,000 cubic yard shots) before allowing shots at the requested 25,000 cubic yard level.

We consider these five conditions critical to our willingness to accept this proposal.

We own the house at 12555 Auke Nu Drive. It was built in the 1920's by my grandparents and has been in the family ever since. We currently rent it to tenants, but we occupied it for 30 days in May and June and intend to occupy it seasonally and very possibly someday permanently.

The quarry proposal gives us concerns about potential property damage from vibration or airblast (over pressure), loss of property value and rental income from inconvenience and loss of quality of life, and increased heavy truck traffic.

As it happens, we personally have not yet been on-site during any of the blasting, but former tenants who were on-site report major blast-related "impacts;" one tenant thought an airplane had struck the house.

There has been no monitoring to date on our property, and so far we have noticed no damage that we can definitely attribute to the quarry. We have noticed cracks in drywall joints in an upstairs suite rebuilt in the summer of 2015. That suite is in the part of the house closest to the quarry; some of its windows face the quarry. We cannot say whether the cracks are related to quarry activities.

Other quarry activity that directly affects us is the relatively high level of Auke Bay-area traffic of heavy trucks from and to the quarry.

The airblast, vibration, and traffic effects are significant, and affect the quality of life of anyone living on our property. We have not yet experienced any resulting decline in the financial value of the property or in its value as a rental property. But we would be surprised if there were no decline in the future. Potential tenants with a choice of properties will be less likely to choose one subject to nearby quarrying.

Nonetheless, we also recognize that the CBJ has a valid interest in making this quarry useful, and that necessarily means some blasting and trucking.

But that doesn't mean the quarry activities should be more intrusive than they have been. There must be a balance between the impacts on existing property owners (most whose ownership long predated the quarry operations) and CBJ's interests in deriving some income and making construction materials available.

We strongly believe that balance is best struck if approval of the proposal is conditioned on these five requirements (as listed on the first page):

First, adherence to the blast effects observed to date. These effects include vibration and air overpressure. It appears from the blast reports for 2015

that shot size does not in itself necessarily determine the magnitude of the resulting effects. The effects to date are certainly unpleasant to local residents, but are bearable. Just because the recorded vibration levels are well below the theoretical maximum in the Bureau of Mines standards does not mean residents and property owners should have to endure anything greater than what they have been enduring to date, and certainly nothing approaching the theoretical maximum.

It seems clear that expert blasting operators can produce substantial amounts of rock with blast vibrations and overpressures that, although they are unpleasant, are at least bearable. I am told by Chris Breeds, a Seattle PhD mining engineer with expertise in blasting, that there are means to control blast effects, such as phased explosions and electronic detonations. To the extent these methods may increase the cost of a given shot, that is simply the price of doing business, both for the CBJ, which is selling its resource, and for ultimate users; but to the extent this cost is avoidable by using the expertise evidenced to date at the quarry, then staying within the recorded results appropriately balances the CBJ's interests as owner and its interests as regulator of activities in its borders.

The proposal implicitly proposes that the effects, if the proposal is granted, will not exceed the results recorded to date. The Commission should condition the permit on that implicit proposal. That will leave it to the quarry operator to balance extraction and cost.

Under no circumstances could any significant increases in the magnitude of the blast effects (vibration and overpressure, not to mention fly rock) be justified. It is irrelevant that the Bureau of Mines standards have not been exceeded. Residents are not happy with the current effects. Allowing effects that could be up to ten times larger than the effects experienced to date would be a startling increase to residents. The proper standard should be what has been experienced so far.

If that is not possible, then the permit should be issued only provisionally for a one-year period, and then reconsidered when residents have had a chance to experience the effects of blasting under the new permit. The proposal is for a ten-year extension, i.e., until 2026. That would mean exposure to 10 years of effects that might prove intolerable.

Second, adopting the recommendations contained in the ASE Blast Monitoring Report of December 31, 2015. Pages 8-11 of the ASE Report of December 31, 2015 contain many helpful recommendations, especially the recommendations for requiring careful blast monitoring records, to ensure compliance. The recommendations also contain observations about 2015 blasting, and note apparent deficiencies in wall control blasting techniques. That suggests

better blast planning might be beneficial to the CBJ as quarry owner. Better plans might achieve adequate production with lower vibration and over-pressure levels. As both owner and regulator of industrial activities, the CBJ also has a responsibility to use the quarry without unduly affecting local residents.

Third, requiring CBJ approval of each blast plan. The Planning Commission should adopt a requirement identical to paragraph 7 of the Commission's August 10, 2011 Decision. It requires that the quarry operator "submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast." We regard this to be an essential protection.

Fourth, limiting shot frequency. Shot frequency apparently increased by 60% in 2015 and may be up in 2016. The frequency has a major effect on how residents experience and view the quarry operations, and thus the nature of their responses to the proposal. If residents thought the blasts would be two times as frequent, for example, their responses might change. The Commission should limit the annual shot frequency to the frequency of 2015 (the most recent complete year). As noted below, the new proposed standard would control for 10 years.

Fifth, requiring a test shot. Mining engineer Chris Breeds suggested to me that it would be reasonable to require a "stepped" increase to the maximum proposed; i.e., he suggested requiring a 15,000 cubic yard blast to determine effects (under similar conditions) before allowing shots at the requested 25,000 cubic yard level. Again, the proposal is to extend the current permit, expiring in 2021, for ten years. In effect, the new levels would be in place for 10 years, from 2016 through 2026. A test of 15,000 cubic yards (under similar conditions to proposed shots of 25,000 cubic yards) would help reveal whether the Commission should grant a permit that potentially allows much larger blast effects for 10 years. If the Commission is seriously considering a proposal that will affect residents for 10 years, it should also consider the stepped test and delaying final approval.

Our comments to date are necessarily conditional, because the worst-case consequences of the proposal can't be definitively described. Based on what has been recorded and experienced so far, the Commission should adopt the conditions we discuss above to prevent the worst-case consequences from ever occurring.

Very truly yours,

Robert L. Eastaugh

Suzanne Dvorak

Alison E. Browne
P.O. Box 20589
Juneau, AK 99802-0589
907-723-6037



August 9, 2016

Planning Commission, City & Borough of Juneau
Community Development Department
155 S. Seward Street
Juneau, AK 99801

Re: Proposal: Stabler Point Quarry Conditional Use Permit

Dear Commissioners and Staff:

I am a life-long resident of Juneau and have been a homeowner since the late 1970s. I have lived in West Juneau for the past 30+ years.

I also own an undeveloped lot located at 12545 Auke Nu Drive, where I am considering building a new house during the next two years. It will become my primary residence. There has been a required pledge to the city (in the form of a Time Certificate of Deposit) that I, as owner of the Auke Nu Drive lot, connect to city water this summer, whether or not I plan to build.

As an Auke Nu Drive property owner, I received a notice of the Stabler Point Rock Quarry expansion July informational meeting (which I could not attend) and the notice for the upcoming August 23rd Planning Commission meeting.

Until now, I have never given much thought to the quarry other than it was providing fill for public purposes necessary for the development and growth of certain Juneau areas, including ports and harbors, which, in my mind, ultimately help make Juneau a better city for its residents, and a better capital city.

Because the Conditional Use Permit before you contains expansion of blast size at Stabler Point Quarry, and because I have never lived in the neighborhood where I may build in the near future, I met with Alec Venechuk, the new CBJ liaison to the quarry. He explained that CBJ oversees quarry activity protocols. He mentioned that the existing quarry is "mined out," and the planned mining expansion would continue up the hillside in a NW direction.

Mr. Venechuk also said that the quarry has been adjusting blast size as needed for efficiency's sake. In reviewing my notes, I take that to mean they have increased the blast to extract rock faster. If that's the case, I would like reassurance that the following neighborhood impacts that I describe below will not increase in terms of impact and frequency.

I began asking quarry neighbors (across the highway from the quarry -- but not at Stablers Point) if they had felt prior blasts. Five of six households have inescapably felt the blasts over the past number of years. A former tenant in the house next door to my lot told me that at the time of one blast (and she had not received prior notice of the blast), she thought a small plane had crashed into the house -- there was a loud bang/jolt, and the entire roof shook. She called the property manager who explained that it was quarry blast impact. Another neighborhood resident told me they jumped out of their chairs during two separate occasions at the sudden jolts ("big bumps") from the impact. The owner said it "really shook" their house. They were unnerved, not knowing what caused it. They had not received prior notice. The resident walked up to the highway and saw a blast warning sign posted there which they had not seen beforehand. Another resident said that it felt as though the house "jumped up" because of the blast. That resident and another said all windows rattled during blasting. Another Auke Nu property owner told me they have not felt any blasts (they work in town during blasting hours, however), but they were aware that blasting can disrupt upland rock substructure which can cause hydrogen sulfide to be released into ground water which can negatively impact streams and well water. The houses I know of along Auke Nu Drive are on city water.

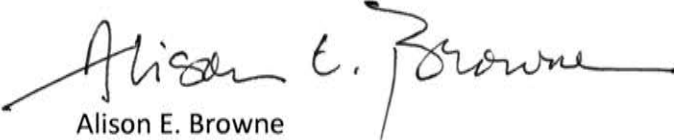
I understand that there were 10 to 14 blasts during 2015, and the number during 2016 will be higher. With the Planning Commission's approval of blast size expansion,

- (1) Could the proposed expansion of blast size negatively impact
 - (a) the substructure and slope of my lot, and/or
 - (b) any stage of homebuilding during new-home construction one or two years from now?
 - (c) the stability of tall Sitka spruce that stand on my and neighbors' lots?
- (2) Will blast impacts on neighborhood residents, land and structures cause property values to decrease?

I would like the foregoing questions answered, and I urge the Planning Commission to reconsider blast expansion. I also urge the Commission to continue requiring ongoing detailed records and testing of each blast; and continue working with neighbors who request that city seismic meters be placed on their property during a blast. It should also be incumbent on the City & Borough to ensure that residents within blast impact areas are adequately informed of blasts 3 to 4 days in advance -- and not just through signs on the road -- but also through email, smart-mail, or robocall, etc.

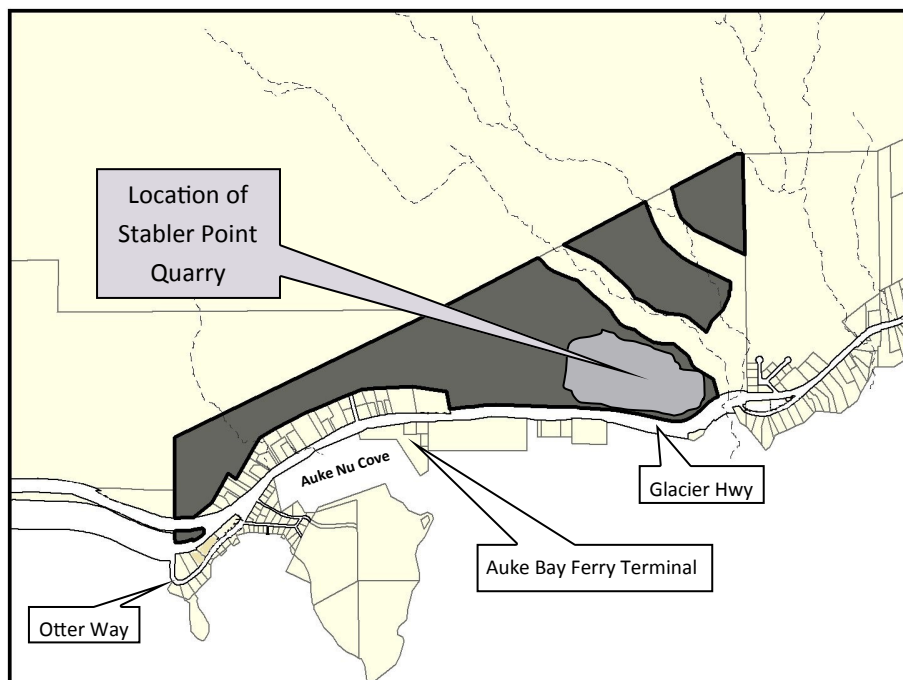
And finally: Quarry neighborhood residents may wish to postpone getting on that step-ladder to change a smoke alarm battery or light bulb, wash windows, or paint ceiling trim **until AFTER** a blast.

Sincerely,


Alison E. Browne



NOTICE OF PUBLIC HEARING

**City & Borough of Juneau**

Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:

PROPOSAL: A Conditional Use Permit for an extension to year 2026 and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.

File No:	SGE20160001	Applicant:	GREG CHANEY
To:	Adjacent Property Owners	Property PCN:	4-B30-0-102-002-0
Hearing Date:	August 23, 2016	Owner:	CITY & BOROUGH OF JUNEAU LANDS AND RESOURCES
Hearing Time:	7:00 PM	Lot Size:	310.00 acres
Place:	Assembly Chambers Municipal Building 155 South Seward Street Juneau, Alaska 99801	Zoned:	RR
		Site Address:	13010 GLACIER HWY
		Accessed Via:	GLACIER HWY

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Jonathan Lange at Jonathan.Lange@juneau.org or 586.0218.



Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at
<http://www.juneau.org/assembly/novus.php>



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: August 24, 2016

File No.: SGE2016 0001

City & Borough of Juneau
Lands Division
155 S. Seward Street
Juneau, AK 99801

Proposal: A Conditional Use Permit for an extension to year 2026 and expansion of blast size and area of rock quarry operations for Stabler Point Quarry.

Property Address: 13010 Glacier Highway

Legal Description: USS 3810 LT 1 FR

Parcel Code No.: 4-B30-0-102-002-0

Hearing Date: August 23, 2016

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated August 11, 2016, and approved the Conditional Use Permit for Stabler Point Quarry to be conducted as described in the project description and project drawings submitted with the application and with the following conditions. The Commission modified conditions 2, 21, and 26 – 28 as described below.

1. All vehicle loads shall be contained. Vehicles hauling from the site shall be operated with tailgates, covers or other similarly effective methods. The use of exhaust brakes on trucks entering or leaving the quarry shall not be used, unless required for safety reasons.
2. Public notification warning signs shall be erected a minimum of 24 hours prior to blasting. Written notification shall be given to Juneau Flight Services, Juneau Police Department and Capital City Fire / Rescue a minimum of 24 hours prior to blasting. The applicant shall issue email notification 24 hours prior to blasting to all those who request it.
3. The hours, days and dates of operation shall be 8am – 4:30pm, Monday through Friday, all year except State holidays.

City & Borough of Juneau, Lands Division

File No.: SGE2016 0001

August 24, 2016

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4. Blasting operation shall be scheduled to occur between 10am-12pm and 1pm-3pm, Monday through Friday.
5. This quarry permit shall expire 10-years after the date of approval.
6. Each quarry operator shall submit an individual mining plan that is in conformance with this Conditional Use permit and is approved by the quarry manager prior to performing any work in the quarry. Each mining plan shall be prepared by a civil engineer or other authorized professional.
7. The operator is required to comply with the requirements of CBJ Standard Specifications 02090 Blasting Controls. A quarry operator shall submit a blast plan, reviewed by an independent blast consultant, to the CBJ Engineering Department/Quarry Manager for approval prior to each blast.
8. Quarry operators shall comply with the existing ADOT/PF approved Stabler Traffic Control Plan(s) for blasting operations, quarry access, and work within the ADOT/PF ROW.
9. Explosives shall not be stored on site, except for that which is immediately necessary for the next blast.
10. The applicant shall comply with ADEC regulations governing stormwater discharges from the quarry site, with particular attention paid to protecting Auke Nu Creek.
11. The applicant shall (or shall cause to) reclaim the quarry site with finished faces and established benches, and remove loose rock during the period between projects, even if the entire quantity of rock has not been removed.
12. The applicant shall (or cause to) control dust caused by excavation, truck hauling, rock crushing, or other aspects of the operation.
13. The applicant shall (or cause to) repair any damage to Glacier Highway as a result of the quarry operation. If there is visible damage to the roadway due to hauling or mining operations, the roadway shall be repaired in cooperation with ADOT/PF.
14. The applicant shall require the posting of a bond (or equivalent if project based) from all quarry operators to ensure spilled or tracked material are removed from public roads. The applicant shall (or cause to) remove all spilled materials immediately from public roadway and ensure that mud and debris tracked onto roads be cleaned daily with the City having the ability to allow less frequency on a case by case basis as warranted. ADOT/PF reserves the right to request sweeping at any time it sees a problem or complaint.
15. The applicant shall ensure that lighting (if any) does not glare onto adjacent roadways.
16. The applicant shall (or cause to) operate the quarry according to the application proposal, including attachments and drawings, except that all conditions contained herein shall take precedence.

City & Borough of Juneau, Lands Division

File No.: SGE2016 0001

August 24, 2016

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17. The applicant shall ensure that the rock extraction is consistent with the recommendations of the US Fish & Wildlife Service for the protection of nesting eagles according to the past approved variances (VAR96-52, VAR2000-37, VAR2001-17, & VAR2008-6).
18. The applicant shall maintain a lockable security gate at the quarry entrance.
19. The applicant shall (or cause to) retain a natural buffer at the western end of the quarry similar to that at the eastern end for a visual and noise barrier. This buffer may be pierced to create the new western entrance roadway (Attachment A). Additionally, and when feasible, the buffer shall be retained during all quarry operations throughout the site for noise and visual buffering.
20. Prior to extracting the southwestern cliff face of the quarry, a qualified expert in geophysical hazard shall evaluate the site and recommend guidelines for its development. Further, these guidelines shall be made part of any approved mining plans for these areas and written notification given to all operators.
21. The noise levels (excluding blasting) as measured at the nearest property lines shall not exceed 65 dBA.
22. Rock crushers shall be operated on the lower quarry levels. Stockpiles shall be located in a way to provide additional noise screening barriers whenever possible.
23. The applicant shall have all operators of the quarry conduct their activities in accordance with all requirements of the noise management plan, blasting and noise controls, and temporary environmental controls.
24. The site clearing shall be consistent with needs to retain sound and visual barriers for the quarry operation. Prior to removal of substantial vegetation, the clearing limits shall be flagged and reviewed for approval by the Community Development Department.
25. Individual blasts shall be limited to a maximum of 25,000 cubic yards.
26. The pull out area adjacent to the quarry entrance drive near Glacier Highway is to be used for equipment transfer only. There shall not be temporary or long term parking on the pull out area. Transfer operations shall occur outside of the roadway clear zone. Access into the pull out area shall be limited to right in and right out turns.
27. A strip of land at the existing topographic level not less than 15 feet in width shall be retained at the periphery of the site wherever the site abuts a public way. This periphery strip shall not be altered except as authorized for access points. This section does not alter the applicant's duty to maintain subjacent support.
28. If the bank of any extraction area within the permit area is above the high water line or water table, it shall be left upon termination of associated extraction operations with a slope no greater than the angle of repose for unconsolidated material of the kind

City & Borough of Juneau, Lands Division

File No.: SGE2016 0001

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composing it, or such other angle as the Commission may prescribe. If extraction operations cause ponding or retained water in the excavated area, the slope of the submerged working face shall not exceed a slope of 3:1 from the edge of the usual water line to a water depth of seven feet. This slope ratio may not be exceeded during extraction operations unless casual or easy access to the site is prevented by a fence, natural barriers, or both.

Attachments: August 11, 2016, memorandum from Jonathan Lange, Community Development, to the CBJ Planning Commission regarding SGE2016 0001.

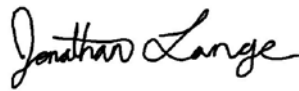
This Notice of Decision does not authorize construction activity. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with 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).

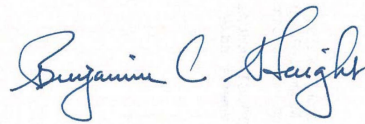
Effective Date: The permit is effective upon approval by the Commission, August 23, 2016.

Expiration Date: The permit will expire 18 months after the effective date, or February 23, 2018, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner:



Jonathan Lange, Planner Community
Development Department



Ben Haight, Chair
Planning Commission



Filed With City Clerk

8/30/16

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. 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.



Community Development

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

DATE: August 10, 2016

TO: Planning Commission

FROM: Teri Camery, Senior Planner
Community Development Department

FILE NO.: USE2016 0021

PROPOSAL: A Conditional Use Permit for the Sweetheart Lake
Hydroelectric Project

GENERAL INFORMATION

Applicant: Juneau Hydropower Inc.

Property Owner: U.S. Forest Service & the State of Alaska Department of
Natural Resources

Property Address: Not applicable

Legal Description: Not applicable

Parcel Code Number: Zero parcel

Parcel Size: 2058 acres of U.S. Forest Service land; 131 acres of State of
Alaska Department of Natural Resources land

Project Size: 15,000 square feet

**Comprehensive Plan Future
Land Use Designation:** Resource Development

Zoning: Rural Reserve

Utilities: Not available

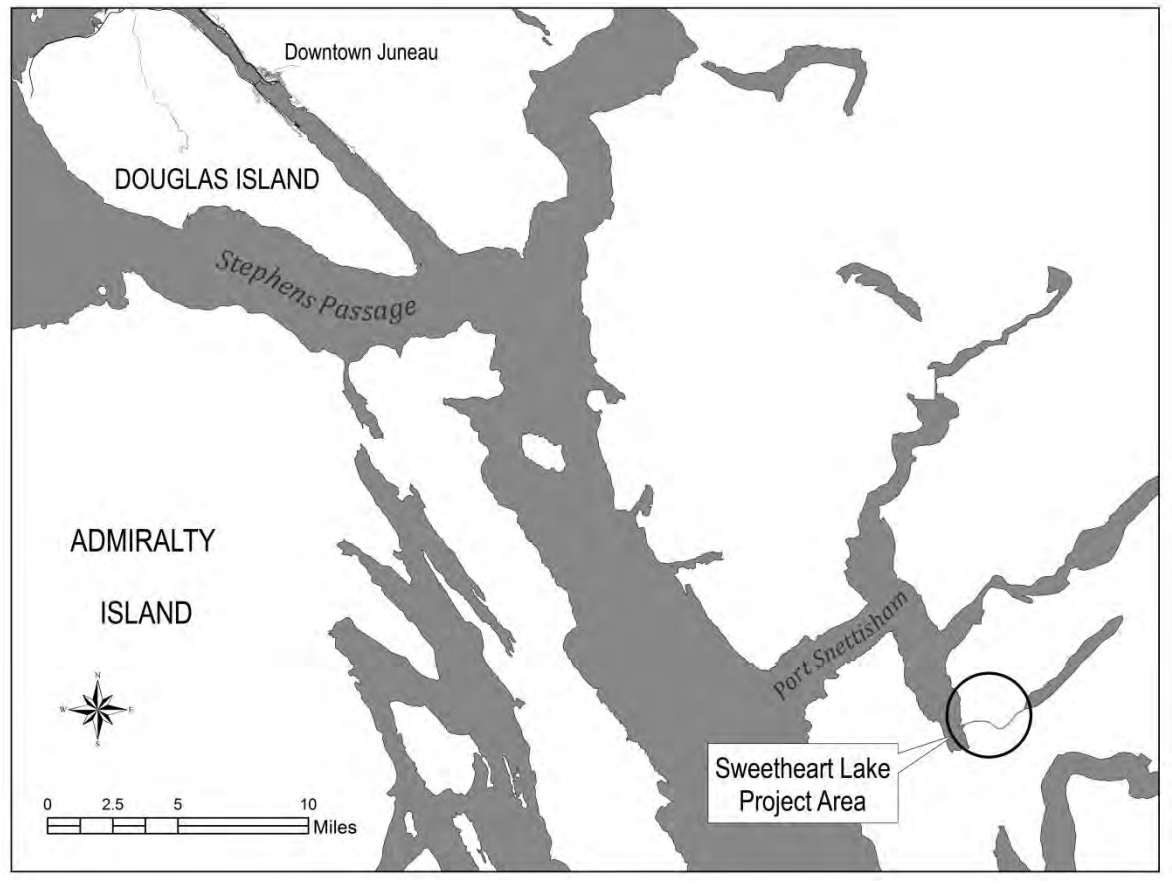
Access: Marine waters

Existing Land Use: Vacant State and Federal lands

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Surrounding Land Use:	North	- Gilbert Bay; Tongass National Forest; Rural Reserve
	South	- Tongass National Forest; Rural Reserve
	East	- Tongass National Forest; Rural Reserve
	West	- Tongass National Forest; Rural Reserve

Vicinity Map



ATTACHMENTS

Attachment 1	Development Permit Application with U.S. Forest Service signature
Attachment 2	Alaska Department of Natural Resources 6/16/16 letter of permission, in place of Development Permit Application
Attachment 3	Conditional Use Permit Application
Attachment 4	Applicant Project Narrative 5/31/16 including: project elements, employees, public and agency review process, habitat impacts, light and noise impacts, neighborhood impacts, Comprehensive Plan review, and construction timeline

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Attachment 5	Alaska Tideland Lease, Gilbert Bay - ramp site plan
Attachment 6	Project Boundary Map
Attachment 7	Federal Energy Regulatory Commission (FERC) Development Plan, Maps 1-6
Attachment 8	Final Environmental Impact Statement May 2016, project overview excerpt
Attachment 9	Final Environmental Impact Statement May 2016, Alaska Department of Fish and Game (ADFG) excerpt
Attachment 10	FERC detailed project description May 2014
Attachment 11	Recreation Management Plan with site plan maps
Attachment 12	Scenery Management Monitoring Plan
Attachment 13	FERC Stormwater Pollution Prevention Plan, Drawings 1-7
Attachment 14	Erosion and Sedimentation Control Plan, Stormwater Pollution Prevention Plan, and Solid Waste and Wastewater Plan May 2014
Attachment 15	Spoil Disposal Plan
Attachment 16	ADFG Draft Fish Habitat Permit
Attachment 17	Proposed lighting fixtures
Attachment 18	May 2016 Eagle Nest Survey
Attachment 19	National Marine Fisheries Service final concurrence letter
Attachment 20	Bear Safety Plan
Attachment 21	City and Borough of Juneau boundary map

PROJECT DESCRIPTION

The applicant requests a Conditional Use Permit for the development of the Sweetheart Lake Hydroelectric Project, located approximately 33 miles southeast of Juneau near Port Snettisham. The purpose of the project is to provide a new source of renewable hydroelectric power to address current and future energy demands in Juneau. As described in the Background Section of this report, the review process for this project first began in 2009, and the development is now in its final permitting stages. Excerpts from the Final Impact Statement have been included in this document (Attachments 7-9).

The development includes the following elements:

- 1) A 280-foot wide, 111-foot high roller-compacted concrete dam to be constructed at the existing natural outlet of Lower Sweetheart Lake, with a 125-foot wide ungated overflow spillway at a crest elevation of 636 feet;
- 2) A 525-foot long, 10-foot high, 10-foot wide arched reservoir outlet tunnel at the right dam abutment;

- 3) A 45-foot long, 25-foot wide, 16-foot high rectangular concrete intake structure, with six 7-foot diameter, 10-foot high cylindrical fish screens adjacent to the right dam abutment;
- 4) A 9,612-foot long, 15-foot wide, 15-foot high horseshoe-shaped,¹ unlined underground power tunnel;
- 5) An 896-foot long, 9-foot diameter saddle-supported steel penstock installed within the lower portion of the power tunnel;
- 6) Three 160-foot long (mean length), 7- to 9-foot diameter buried steel penstocks connecting the lower portion of the power tunnel to the powerhouse;
- 7) A 160-foot long, 60-foot wide, 30-foot high concrete and steel powerhouse;
- 8) Three 7.1-megawatt (MW) Francis turbines with 6.6-MW generators with a total installed capacity of 19.8 MW;
- 9) A 541-foot long, 30- to 90-foot wide rock tailrace with a fish exclusion structure discharging to Sweetheart Creek;
- 10) A 4,400-foot long coastal road from the powerhouse to a dock/landing site for aerial and marine vehicle access, located on the east shore of Gilbert Bay;
- 11) An 8.69-mile long, 138-kilovolt (kV) transmission line transversing Gilbert Bay, the Snettisham Peninsula, and Port Snettisham, consisting of:
 - a) Two buried segments, totaling 4,800 feet in length;
 - b) Two submarine segments, totaling 25,700 feet in length; and
 - c) One 15,400-foot long overhead segment;
- 12) A 22,000-square foot fenced switchyard adjacent to the powerhouse;
- 13) A 25-foot long, 5-foot wide, 4-foot deep salmon smolt re-entry pool² located adjacent to the powerhouse and tailrace;
- 14) A 4,225-square foot caretaker's facility near the dock;

¹ Tunnel will have a flat and drivable floor with straight walls and an arched ceiling.

² The re-entry pool will provide temporary holding of sockeye salmon smolts, collected and transported from Sweetheart Lake, for imprinting and release to the tailrace.

- 15) A 4,800-foot long, 12.47kV service transmission line and communication cable extending from the powerhouse to the dock and caretaker's facility, providing operational electricity and communications;
- 16) A 10,000-foot long, 12.47kV service transmission line and communication cable extending from the powerhouse to the dam site, providing operational electricity and communications;
- 17) A 400 square-foot shelter at the dam for employee use during smelt transport operations; and
- 18) Appurtenant facilities. (Attachment 4)

Construction of the project will raise Lower Sweetheart Lake from a water surface elevation of 551 feet mean lower low water³ and a surface area of 1,414 acres to a new maximum water surface elevation of 636 feet and surface area of 1,702 acres, and a new minimum water surface elevation of 576 feet and surface area of 1,449 acres. (Attachment 4)

Employees and Operations -

The project will be in operation continuously, 24 hours per day, 365 days per year. One or two caretakers will live on site. Additional employees and/or contractors will visit the site for routine maintenance and repairs as needed. (Attachment 4)

Construction Timeline -

Page 9 of the Project Narrative includes a construction timeline. Construction of the powerline access road is expected to begin in October 2016. The project will be completed in December 2018. (Attachment 4) The applicant notes that the FERC license for the project is valid for 50 years, and the project may be relicensed at the end of the term. The development could likely produce renewable energy forever, if maintained properly.

BACKGROUND

Property Owner Permission and Lease Agreements -

The project area includes 2058 acres of federal land under the management of the U.S. Forest Service and 131 acres of State of Alaska land, managed by the State of Alaska Department of Natural Resources and utilized by the applicant through a tideland lease for development of the Gilbert Bay access ramp and associated facilities. The CBJ Community Development Department requires a Development Permit Application (DPA) with the landowner's signature for all planning and building permits. This signature does not grant approval of the project by

³ The mean lower low water level is the 19-year average of the lower of the two daily tides and serves as the reference elevation chosen by Juneau Hydro for the project facilities.

the landowner; it says that the application is made with the landowner's understanding and permission. The application includes a DPA signed by the U.S. Forest Service and a letter from the State of Alaska Department of Natural Resources. The Community Development Director has determined that the State of Alaska's letter substantially conforms with the DPA requirements and is an acceptable alternative to the DPA form. (Attachments 1-2)

Staff notes that is also acceptable for the lessee to sign the DPA, as specifically noted on the form. The applicant is in the process of obtaining a lease agreement from the State, however that lease is not yet final at this writing.

CBJ Agency Review Period -

The agency review period, required by CBJ Code 49.15.320(d)(3) for all Conditional Use Permits, was conducted from June 22 through July 11, 2016. The review period was extended from the required 15 days to 20 days due to the size of the project. The CBJ Engineering Department, CBJ Streets Division, CBJ Building Division, and CBJ Fire Department responded with statements that they had no concerns or had no comment. The Alaska Department of Fish and Game stated that they participated in the FERC review process and sent a draft Fish Habitat Permit for the project, which is included in Attachment 16. No comments were received from the CBJ Lands Division, Alaska Department of Environmental Conservation, the Alaska Department of Natural Resources, Alaska Department of Transportation and Public Facilities, U.S. Army Corps of Engineers, or the U.S. Forest Service. Habitat issues will be addressed later in this report.

Federal Review, Public Review and Public Meetings -

In-depth development of the project first began in 2009. The applicant notes that project documents submitted to FERC and other agencies total more than 6,000 pages. All documents are available on-line at juneauhydro.com. This application provides summaries and excerpts specific to issues addressed in the CBJ Conditional Use Permit review process. The FERC final license, U.S. Army Corps of Engineers 404 Permit, and Alaska Department of Natural Resources tideland lease are expected by September 2016.

Pages 3-5 of the applicant's project narrative (Attachment 4) provide a partial early history of the site and the agency and public review process. The Sweetheart Lake area was first identified for hydropower potential by the federal government in 1906. In 1929 Sweetheart Lake and Sweetheart Creek were issued a federal power site classification that specifically reserved these waterbodies for hydropower purposes. In-depth preparation of the Sweetheart Lake Hydropower Project began in 2009 through the Federal Energy Regulatory Commission and other entities. As noted in the narrative, the applicant has worked in collaboration and communication with:

- Federal Energy Regulatory Commission (FERC, Project No. P-13563);
- Land managers – U.S. Forest Service (all project uplands) and Alaska Department of Natural Resources (tidelands and submerged waters);

- Regulatory agencies including – U.S. Fish and Wildlife Service, National Marine Fisheries Service, Army Corps of Engineers, National Park Service, U.S. Environmental Protection Agency, Bureau of Land Management (BLM), Alaska Department of Fish and Game (ADF&G), Alaska Department of Environmental Conservation and Alaska Department of Natural Resources (ADNR);
- Tribal entities - Central Council Tlingit & Haida Indian Tribes (CCTHITA), Douglas Indian Association; and
- The public - including the Juneau Commission on Sustainability.

All project documents, in chronological order, are available online at <http://www.juneauhydro.com/index.php/ferc-documents.html>. Progress reports on the site provide summarized details of meetings and contacts with various agencies and stakeholders. (Attachment 4)

Following is a partial timeline for the project:

- 2009 - Federal Energy Regulatory Commission (FERC) Preliminary Permit - Application was submitted, accepted and a permit granted. This process included review and input from the US Forest Service, National Marine Fisheries Service, and Alaska Electric Light and Power Company.
- 2010 – [Project development] included agency scoping meetings, communications protocol approved between major parties, public notice published, FERC letters to Sealaska, Goldbelt, Douglas Indian Association and CCTHITA.
- 2011 – [Project development] included additional agency and public scoping meetings in the daytime at the Forest Service offices for agency input, an evening at Centennial Hall for the public, and a site visit.
- 2012 – [Project development] included agency comments on study plans and studies.
- 2013 – [Project development] included a Successive Preliminary Permit application with review and input, with public noticing and opportunities for public comment, and application to Department of Natural Resources for the lease of state land and for transmission line easements.
- 2014 – [Project development included] ongoing agency comments and consultations, meetings with a Cultural Studies Working Group, and filing a Final License Application to FERC with a Preliminary Draft Environmental Assessment which included public notice in May 2014. In November 2014, FERC issued a notice to issue an Environmental Impact Statement (EIS) and Final Decision which included further public notice and opportunities to provide input.
- 2015 – The Draft EIS was issued by FERC and BLM in November 2015 with a comment deadline of December 29, 2015, and a public meeting was held December 29, 2015 at Centennial Hall.

- 2016 – The final EIS and license approval is anticipated in September 2016. Application for CBJ Development Permit and State of Alaska Department of Natural Resources permits are underway.

ANALYSIS

Project Site -

The project is located approximately 33 miles southeast of Juneau in Gilbert Bay, which is the southeast arm of Port Snettisham. Access is via marine waters only. The site is surrounded entirely by U.S. Forest Service land, except for tidelands owned by the State of Alaska Department of Natural Resources (ADNR). The applicant is in the process of obtaining a tidelands lease from ADNR for construction of the barge ramp in Gilbert Bay.

This remote area is used primarily for commercial, recreational, and subsistence fishing, as described in the neighborhood harmony section of this report. The project boundary map, included as Attachment 6, provides a broad overview of the area on a standard USGS map.

Project Design -

The project would generate approximately 116,000 Megawatt Hours (MWh) per year.

The FERC project description provides full details on each project element (Attachment 10). Due to its size, it is challenging to concisely and accurately summarize the project. The ADFG draft Fish Habitat Permit provides perhaps the best abbreviated summary of the project (Attachment 16).

Drawing from ADFG's description, the project includes a 280-foot wide by 111-foot high roller-compacted concrete dam, with a 125-foot wide ungated overflow spillway at the outlet of Sweetheart Lake about two miles upstream of the anadromous reach. The dam and project operation will raise the existing lake elevation from 551 feet to between 576 feet and 636 feet.

To dewater the dam construction site, the applicant will build a temporary diversion tunnel, 10 feet high by 10 feet wide and 525 feet long, through the right abutment. Following dam construction, the applicant will convert the diversion tunnel into the reservoir outlet which will release flow to the bypass reach. The applicant will install a conduit from the intake structure to the diversion tunnel including a flow meter and release valve to monitor and document discharges.

The intake will consist of a 45-foot long by 25-foot wide by 16-foot high rectangular structure with six seven-foot diameter by 10-foot high cylindrical screens mounted on top. The intake structure will lead to a 9,612-foot long, 15-foot wide by 15-foot high horseshoe shaped power tunnel. About 896 feet from the lower portal of the tunnel, the unlined tunnel will transition to a 7- to 9-foot diameter buried steel penstock before transitioning to a manifold dividing flow

between three turbines. Each turbine contains a bypass valve to provide fail-safe return of water in the anadromous reach. Once the power tunnel is excavated prior to the installation of the penstock pipe, it will be used to transport equipment and personnel to and from the site for dam construction.

The powerhouse will be located in a deep excavation about 600 feet northwest of the anadromous barrier on Sweetheart Creek. From the powerhouse, the applicant will construct a 30- to 9- foot wide and about 541-foot long rock tailrace channel to return flow near the base of the anadromous barrier falls. The tailrace is described in the Habitat Section of this report. A fish exclusion structure about 30 feet downstream of the powerhouse will prevent fish from reaching the powerhouse. The applicant will cover the upstream 94 feet of the tailrace channel with an arch culvert and backfill to provide a wildlife crossing.

Adjacent to the powerhouse at the head of the tailrace structure, the applicant will construct a 25-foot long by 5-foot wide by 4-foot deep smolt acclimation and evaluation pool. The applicant will collect sockeye salmon smolt from Sweetheart Lake using a fish collection barge comprised of an intake structure, screening module, and outlet pipe. A helicopter will transport the sockeye salmon from the lake to the acclimation and evaluation pool that will temporarily hold the fish before release into the tailrace.

Power generated by the project will be transmitted by a new 8.69 mile long transmission line that will connect into the existing 138-kV Snettisham Transmission Line. The transmission line will consist of buried cable, submarine underwater cable, and overhead transmission lines (Attachment 16).

The project also includes recreational amenities including a new coastal trail and mooring buoys for recreational boaters. These are described in the Neighborhood Harmony section of this report.

Traffic, Parking, and Circulation -

Access to the site will be via marine waters and aircraft. The project includes a caretaker home to house two full-time employees when the plant is in operation. CBJ Code does not have a relevant parking requirement in code for the development. For obvious reasons, staff determines that parking is not necessary on site; review of traffic and circulation patterns is also unnecessary.

Noise and Light -

The applicant has addressed noise and light impacts on page six of the Project Narrative (Attachment 4). The powerhouse will be located in a deep excavation approximately 600 feet northwest of the anadromous barrier on Sweetheart Creek and approximately 2,000 feet east of the confluence of Sweetheart Creek and Gilbert Bay. The applicant explains that this siting will reduce disturbances, allow infrastructure to blend in with surroundings, and mitigate light

and noise emitting from operations. During routine operation, equipment noise will be minimal with just one or two caretaking employees working on site. Snow removal noise will occur when recreational and commercial fishermen are unlikely to be in the area. Motorized traffic on the road will be restricted to that which is necessary for operations.

In addition, the project design includes construction of a vegetated landform barrier to further shield recreational users from sound and visual impacts of the powerhouse and switchyard. The applicant states that the intended goal is to lessen or virtually eliminate scenic and audio disturbance in the area of powerhouse operations.

Outside lighting at the site will incorporate downward facing, non-glare fixtures to minimize light pollution. Outside lighting requirements are anticipated to be minimal. Proposed lighting fixtures are included in Attachment 17. Staff recommends a condition to require a lighting plan, consistent with CDD's conditions on other commercial developments, as follows:

Prior to issuance of a building permit, the applicant shall submit a lighting plan illustrating the location and type of exterior lighting proposed for the development. Exterior lighting shall be designed and located to minimize offsite glare.

Public Health or Safety -

No evidence indicates that the project will have any public health or safety impacts. Project facilities will be gated and secured. The Stormwater Pollution Prevention Plan and Spoil Disposal Plan include measures to address waste and toxins (Attachments 13, 14, 15). The development also includes a bear safety plan to protect both people and bears. This plan, which overlaps with the Solid Waste plan, is included in Attachment 20.

Stream and Lake Habitat -

Sweetheart Lake and Sweetheart Creek both contain anadromous fish. According to the Alaska Department of Fish and Game (ADFG), Sweetheart Lake's drainage basin is 35 square miles. ADFG stocked Sweetheart Lake with rainbow trout eggs and fry in 1955, and Dolly Varden char and rainbow trout also exist in the lake today. In 1990, Douglas Island Pink and Chum started stocking Sweetheart Lake with about 500,000 sockeye salmon fry annually; this effort has continued annually since that time. Returning sockeye salmon adults that are not captured in the commercial fishery support a personal use fishery. Those not captured in the personal use fishery die without spawning due to the barrier waterfall described in the next paragraph.

The anadromous reach of Sweetheart Creek extends about one quarter mile upstream from tidal influence where a barrier waterfall blocks anadromous fish passage. Pink and chum salmon spawning takes place in the intertidal reach. The creek, between Sweetheart Lake and the barrier at the anadromous reach, contains high gradient, primarily bedrock habitat that contains Dolly Varden char and rainbow trout (Attachment 16).

The CBJ Land Use Code Habitat Section has two policies that apply to the development: the 50-foot no-development setback from anadromous streams and lakes and the habitat standard for streams and lakes. Both are listed below:

- *All structures and foundations located adjacent to streams or lakes listed in Table VI-2 of Appendix C of the Juneau Coastal Management Plan, shall have a 50-foot setback from each side of the stream or lake measured from the ordinary high water mark, where feasible and prudent; provided, docks, bridges, culverts and public structures whose purpose is access to or across the stream or lake are not subject to this policy, and provided further, uses which must be in or adjacent to the stream or lake in order to function, such as mining activities, fish culturing, water supply intakes and similar uses, are exempt from the setback requirement. The setback shall be vegetated or re-vegetated, where feasible and prudent, and such vegetation or re-vegetation shall be kept or arranged to maximize shade on the stream. 49.70.950(f)*
- *Rivers, streams, and lakes shall be managed so as to protect natural vegetation, water quality, important fish or wildlife habitat, and natural waterflow. (49.70.950(c)(7))*

The CBJ Community Development Director has determined that the Sweetheart Lake Dam meets the exception criteria of Section 49.70.950(f) as a “[use] which must be in or adjacent to the stream or lake in order to function.” Therefore, the 50-foot no-development setback does not apply to the Sweetheart Lake Dam. In a July 24, 2016 email message, the applicant explained that the tailrace structure is located within the 50-foot no development setback of the anadromous section of Sweetheart Creek:

“We will not have any facilities within 50 feet. However, our tailrace will enter the anadromous reach near the existing barrier falls and will therefore be within the 50 feet during the construction and integration of the natural looking tailrace into the existing anadromous reach.”

The tailrace delivers water from Sweetheart Lake to Sweetheart Creek to ensure adequate water flow to the anadromous section of the creek. The tailrace is not a structure or a pipe; it is essentially a manmade extension of the creek carved into the mountain to connect the creek with the lake. The tailrace will be 541 feet long and 30-90 feet wide. The tailrace technically meets the code definition of grading, though it is highly unusual, because it is vertical grading within the natural rock. Some sections may be fortified with concrete, if necessary, for stability.

Section 8.6 of the Recreation Management Plan (Attachment 11) explains the purpose of the tailrace in the following section:

JHI [Juneau Hydropower] will construct a rock tailrace that is aesthetic and compatible with the surroundings. The project tailrace serves two purposes. The primary purpose is to safely return water from the power tunnel and powerhouse to Sweetheart Creek. The tailrace must meet engineering standards. The other purpose is to increase the areas

available for fishing. Currently the fishing positions are located on steep bluffs above Sweetheart Creek. These locations will be retained, but the increase in fishing areas may decrease congestion. JHI will place rock to provide slope and trail stabilization.

The tailrace meets the exception criteria as a “[use] which must be in or adjacent to the stream or lake in order to function.” Therefore the project complies with this code section.

Project compliance with code section 49.70.950(c)(7) is addressed in the following analysis.

Pages 5 and 6 of the Project Narrative (Attachment 4) provide a summary of habitat issues and mitigation. Additional details are available in Attachments 8, 9, 10, and 16. The applicant has formally adopted ADFG recommendations in the Environmental Impact Statement (EIS) which include, in part, the following:

- Recommendations related to water quantity, quality and timing.
- Setbacks from Sweetheart Creek.
- Smolt passage.
- Fish screening and guards.
- Bioaquatics monitoring.
- Bear safety planning and operations.
- Wildlife passage and disturbance.
- Designing power lines and poles to protect birds.

Attachment 9 specifically addresses these issues in detail. Among other measures, the adopted recommendations ensure adequate, seasonally appropriate water flow from Sweetheart Lake to Sweetheart Creek throughout the year for fish access. The recommendations also ensure that the powerhouse and power tunnel intake structure are designed to avoid or minimize fish injury or mortality. These actions ensure conformance with CBJ Code 49.70.950(c)(7) by protecting vegetation, water quality, and water quantity.

U.S. Forest Service Review: The applicant has also complied with the U.S. Forest Service conditions recommended in the EIS, which include the following (Attachment 4):

- Avoiding the use of pesticides on National Forest System (NFS) lands or in areas affecting NFS lands without the prior written approval of the Forest Service.
- Providing a qualified environmental compliance monitor to oversee major construction activities (e.g. vegetative or land disturbing, spoil producing, blasting activities).
- Developing the following plans:
 - (1) Construction plan.
 - (2) Spoil disposal plan.
 - (3) Access and road management and maintenance plan.

- (4) Reservoir management and inundation plan.
- (5) Erosion control plan.
- (6) Solid waste and wastewater plan.
- (7) Hazardous substances plan.
- (8) Fire prevention plan.
- (9) Heritage resource protection plan.
- (10) Scenery management plan.
- (11) Vegetation management plan.
- (12) Invasive species management plan.
- (13) Wildlife mitigation and monitoring plan.
- (14) Fish mitigation and monitoring plan.
- (15) Stream flow management plan.
- (16) Stream flow measurement plan.
- (17) Aquatic habitat restoration and monitoring plan.

Stormwater and Waste Management: The application includes a Stormwater Pollution Prevention Plan (SWPPP), which includes an Erosion and Sedimentation Control Plan, a Spoil Disposal Plan, and Solid Waste and Wastewater Plan (Attachments 13, 14, 15). These documents ensure compliance with the 2010 CBJ Manual of Stormwater Best Management Practices. The Spoil Disposal Plan specifically establishes an acid rock contingency plan, if acid rock drainage should occur during construction. CBJ Engineering and the Alaska Department of Environmental Conservation did not have any comments on the application during the CBJ agency review process, as described in the Background section of this report.

Marine Mammal Protection: Page 10 of the EIS Excerpt (Attachment 8) includes a description of the marine mammal protection review, which considers the impacts of the construction of the Gilbert Bay ramp and placement of the marine cable. This section includes recommendations adopted by the applicant which include limiting vessel speeds, employing a marine mammal monitor, defining marine transportation routes that avoid sea lion haulouts, and other measures. The EIS notes that final consultation and concurrence is required from the National Marine Fisheries Service (NMFS). NMFS' concurrence letter, recently received on August 5, 2016, is included in Attachment 19.

Eagle Nests: CBJ Code 49.70.310(a)(2) states that development is prohibited within 330 feet of an eagle's nest on public land. U.S. Fish and Wildlife Service and ADFG biologists flew an eagle nest survey on May 12, 2016. They found two occupied nests within the project vicinity. Both nests are more than 330 feet from any construction area. The survey report and map are included as Attachment 18.

Property Value or Neighborhood Harmony -

The project site is surrounded by vacant U.S. Forest Service Land (2058 acres) and an area of vacant state-owned tidelands (131 acres) which will be leased by the applicant for construction

of the Gilbert Bay access ramp. Because the project is completely surrounded by government-owned property, property value will not be impacted. This review addresses neighborhood harmony through an assessment of impacts to recreational and commercial fisheries in the area. The applicant has discussed these impacts and mitigating measures on pages 6 and 7 on the Project Narrative and also in two detailed plans: a Recreation Management Plan with site plan maps and a Scenery Management and Monitoring Plan (Attachments 4, 11, 12).

The U.S. Forest Service has previously designated the vicinity of the project site as Semi-Remote Recreation, Timber Production, and Old-Growth Land Use. The applicant has developed a Scenic Management Plan that minimizes visual effects by ensuring that project features are designed and screened as much as practicable to blend in with the surrounding environment. The applicant also has a Recreation Management Plan that includes a detailed assessment of recreational, subsistence, and commercial use in the area and proposed measures to maintain or improve those uses.

The applicant notes that no public recreation facilities are located along the shoreline of Sweetheart Lake or Sweetheart Creek. Fishing is the primary recreational activity at Gilbert Bay, Sweetheart Creek, and surrounding lands, although commercially guided hunters, resident sport hunters, and trappers also use these lands. The applicant's Recreation Management Plan ensures that visitor use is accommodated in a manner that avoids resource impacts, that the potential for conflicts between bears and humans is minimized, and increased visitor use in the project area is adequately managed. Recreation enhancements of the project include footpath surface improvements and maintenance, interpretive signs that include bear safety information, trail information, ADFG and Forest Service information, and limited non-commercial use of the facility dock and landing ramp. A vegetated landform barrier between the powerhouse and footpaths will reduce visual and sound impacts.

The applicant states that the project will have no long-term, adverse effects on the commercial fishery because fishing may continue with only minor adjustments to avoid the submarine cable. The proposed smolt collection system recommended by ADFG and adopted by the applicant will help to maintain the personal-use fishery and the subsistence economy for families who fish near the project area.

Historic and Cultural Resources have been addressed through consultation with the State Historic Preservation Office (SHPO) and other entities. The applicant states that the only site eligible for listing on the Natural Register of Historic Places will be avoided during construction and operation (Attachment 8, p. 8).

Staff finds neither adverse impacts to Neighborhood Harmony from the proposed development nor any adverse impacts to property value, since the site is surrounded by state and federal land.

Conformity with Adopted Plans -

2011 Juneau Climate Action and Implementation Plan

(Adopted by City and Borough of Juneau Assembly, Resolution 2593)

The Juneau Climate Action and Implementation Plan's Goal RE-3 states, "Increase Juneau's supply of renewable energy." One of the long-term actions attached to this goal states, "Consider the feasibility of other potential hydroelectric sources to meet future needs such as Phase 2 Lake Dorothy (capacity of 94 GWh) and Sweetheart Lake (136 GWh)." The proposed development meets this goal and directly addresses the long-term action.

Draft Juneau Energy Plan

The Climate Action Plan calls for development of a draft energy plan. The draft energy plan has been recently released for public review and comment. The Executive Summary of the draft plan calls for increased use of renewable energy and an increased supply of renewable energy. Both are addressed by the proposed development.

2013 Juneau Comprehensive Plan

The 2013 Juneau Comprehensive Plan designates the project area as Resource Development. Resource Development is defined in the plan as:

Land to be managed primarily to identify and conserve natural resources until specific land uses are identified and developed. The area outside the study area of this Comprehensive Plan is considered to be designated Resource Development. As resources are identified or extracted from these lands, they should be re-designated and re-zoned appropriately.

The proposed development conserves natural resources through the minimization and mitigation measures described in the Habitat Section of this review, while developing a needed hydropower resource. The applicant notes that the project area was specifically reserved by the federal government for hydropower in 1929.

This remote area is not included in the Comprehensive Plan's sub-area maps; therefore there are not any sub-area policies to address. Comprehensive Plan Chapter Six, Energy, includes an extensive discussion of hydropower and renewable energy needs. The narrative specifically refers to the Sweetheart Lake hydropower project and an accompanying chart that depicts Juneau's hydropower supply and demand includes the project as well. The project complies with the following comprehensive plan policies and implementing actions, all of which specifically promote renewable energy:

Policy 6.2. To support the development of renewable energy resources in Juneau and in the Southeast Alaska region.

Implementing Action 6.2 – 1A1. Work with the State of Alaska, Southeast Conference,

Tlingit Haida Central Council, Douglas Indian Association, AEL&P, independent energy producers, and other interested entities toward the planning, funding, and development of renewable resources in Juneau and within the region.

Implementing Action 6.2 – 1A3. Promote the development and use of renewable energy sources to help meet the goals, strategies, and objectives of the Juneau Climate Action and Implementation Plan of 2011.

Policy 6.6. To maximize the ratio of local, renewable-source energy to imported fossil-source energy in Juneau's internal energy economy.

(Staff notes that the Comprehensive Plan policies cited in the applicant's project narrative are not current, and therefore have not been listed here.)

FINDINGS

CBJ §49.15.330 (e)(1), Review of Director's Determinations, states that the Planning Commission shall review the Director's report to consider:

1. Whether the application is complete;
2. Whether the proposed use is appropriate according to the Table of Permissible Uses; and,
3. Whether the development as proposed will comply with the other requirements of this chapter.

The Commission shall adopt the Director's determination on the three items above unless it finds, by a preponderance of the evidence, that the Director's determination was in error, and states its reasoning for each finding with particularity.

CBJ §49.15.330 (f), Commission Determinations, states that even if the Commission adopts the Director's determination, it may nonetheless deny or condition the permit if it concludes, based upon its own independent review of the information submitted at the public hearing, that the development will more probably than not:

1. Materially endanger the public health or safety;
2. Substantially decrease the value of or be out of harmony with property in the neighboring area; or,
3. Not be in general conformity with the comprehensive plan, thoroughfare plan, or other officially adopted plans.

Per CBJ §49.15.330 (e) & (f), Review of Director's & Commission's Determinations, the Director makes the following findings on the proposed development:

1. *Is the application for the requested conditional use permit complete?*

Yes. Staff finds the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. *Is the proposed use appropriate according to the Table of Permissible Uses?*

Yes. The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ §49.25.300, Section 17.200 for the Rural Reserve zoning district.

3. *Will the proposed development comply with the other requirements of this chapter?*

Yes. The proposed development complies with the other requirements of this chapter. Public notice of this project was provided in the August 12, 2016 and August 22, 2016 issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to the Alaska Department of Natural Resources, the U.S. Forest Service and all Neighborhood Associations registered with the CBJ City Clerk in accordance with CBJ Code 11.35. Moreover, a Public Notice Sign was posted on the subject parcel, visible from the shoreline. Additional signs were posted at Aurora Harbor, Harris Harbor (at both the C and H ramps), Douglas Harbor, and Statter Harbor.

The development also complies with CBJ Title 49 regulations and policies regarding noise, light, traffic and parking, neighborhood harmony and property value, and habitat.

4. *Will the proposed development materially endanger the public health or safety?*

No. Based on the preceding analysis, no evidence indicates that the proposed development will materially endanger the public health or safety. Project facilities will be gated and secured. The Stormwater Pollution Prevention Plan, Erosion and Sedimentation Plan, and Spoil Disposal Plan include measures to address waste and toxins. A Bear Safety plan also addresses public safety issues.

5. *Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?*

No. As described in the preceding analysis, no evidence indicates that the proposed development will substantially decrease the value of or be out of harmony with property in the neighboring area. The project site is surrounded by vacant state and federal lands; therefore there are no property value impacts. The application includes significant measures to reduce visual impacts from the development and to preserve or enhance local recreational and

Planning Commission
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 August 10, 2016
 Page 18 of 18

commercial fishing use.

6. Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?

Yes. As described in the analysis, the project conforms with the 2013 Juneau Comprehensive Plan, specifically policies 6.2 and 6.6 regarding renewal energy. The development also complies with the 2011 Juneau Climate Action and Implementation Plan and the 2016 Draft Juneau Energy Plan.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

7. Will the proposed development comply with the Juneau Coastal Management Program?

Yes. As described in the preceding analysis, the proposed development conforms with the streamside setback ordinance (49.70.950(f) and the CBJ Habitat Standard on rivers, lakes and streams, 49.70.950(c)(7).

RECOMMENDATION

Staff recommends that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use Permit for the Sweetheart Lake Hydroelectric Project, with the following condition:

- 1) Prior to issuance of a building permit, the applicant shall submit a lighting plan illustrating the location and type of exterior lighting proposed for the development. Exterior lighting shall be designed and located to minimize offsite glare.

DEVELOPMENT PERMIT APPLICATION

Project Number USE 2016 0021	CITY and BOROUGH of JUNEAU	Date Received: 6/8/16
Project Name (City Staff to Assign Name)		

INFORMATION	Project Description Sweetheart Lake Hydroelectric Project (see attached letter dated 31 May 2016 for detailed description)		
	PROPERTY LOCATION		
	Street Address		City/Zip Juneau
	Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) Meridian Copper River Township 45 S Range 72 E Sections 4-7 and 22-25		
	Assessor's Parcel Number(s)		
	LANDOWNER/ LESSEE		
	Property Owner's Name Uplands - Federal - US Department of Agriculture - USFS		Contact Person: Brad Orr
	Mailing Address P.O. Box 21628, Juneau, Alaska 99802-1628		Work Phone: 907 586-7847
	E-mail Address borr@fs.fed.us		Home Phone: Fax Number:
	Other Contact Phone Number(s):		
PROJECT / APPLICANT	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	<u>Brad Orr, District Ranger</u>	<u>6/1/16</u>
		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" and sign and date at X below		
Applicant's Name Juneau Hydropower Inc.		Contact Person: Duff Mitchell	
Mailing Address P.O. Box 22775, Juneau, Alaska 99802		Work Phone: 907 789-2775	
E-mail Address duff.mitchell@juneauhydro.com		Home Phone: Fax Number:	
Other Contact Phone Number(s): Kriss Hart 206 849-4812			
X	<u>[Signature]</u>	<u>5-31-16</u>	
	Applicant's Signature	Date of Application	

STAFF APPROVALS	OFFICE USE ONLY BELOW THIS LINE			
	☒	Permit Type	***SIGN	Date Received
		Building/Grading Permit		
		City/State Project Review and City Land Action		
		Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)		
		Mining Case (Small, Large, Rural, Extraction, Exploration)		
		Sign Approval (If more than one, fill in all applicable permit #'s)		
		Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)		
	☒	Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)		USE 2016 0021
		Variance Case (De Minimis and all other Variance case types)		
	Wetlands Permits			
	Zone Change Application			
	Other (Describe)			
Comments:				
			Permit Intake Initials TC	

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



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Natural Resources

DIVISION OF MINING, LAND & WATER
SOUTHEAST REGIONAL OFFICE

400 Willoughby Ave. 4th Floor
P.O. Box 111020

Juneau, Alaska 99811-1020
Main: 907.465-3400
Fax: 907.465-3886

June 6, 2016

Teri Camery, Senior Planner
City and Borough of Juneau
Community Development Department
155 S. Seward
Juneau, AK 99801

Ms. Camery:

Juneau Hydropower Inc. (JHI) has requested that our agency sign the attached consent form¹ as landowner for the City and Borough of Juneau (CBJ) to accept their application for a CBJ Conditional Use permit.

Our agency has received an application from JHI requesting land use authorization for this project. However, the adjudication process has not been completed and no decision has been issued as to whether a lease and/or easement would be approved for this project.

The state has no objection to JHI submitting an application to CBJ.

For state owned land, certain activities can be conducted as a "generally allowed use" under 11 AAC 96.020 without written authorization. At this project location, all of the state owned land is situated below the natural line of mean high water (MHW). The limited access needs to the site that were described could be accomplished under that regulation. Any activity that would exceed the parameters established under 11 AAC 96.020 would require written land use authorization.

DNR grants permission to City and Borough officials, employees, and agents to enter the site during reasonable hours, to examine and inspect the site as part of the permitting procedure, as allowed by a "generally allowed use" under 11 AAC 96.020.

Hopefully, this letter of non-objection will serve your purposes, should CBJ determine to begin its review of the applicant's project.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert H. Edwardson".

Robert H. Edwardson
Southeast Regional Manager

¹ 'Development Permit Application'

ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

Project Number	Project Name (15 characters)	Case Number	Date Received
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TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED

☐ Accessory Apartment*** (AAP) ☐ Driveway in Right-of-Way (ADW)
☒ Use Listed in §49.25.300 (USE)
 (Table of Permissible Uses)

Please list the Table of Permissible Uses Category: 17.200 Utilities Facilities

***An Accessory Apartment Application will also be required.

DESCRIBE THE PROJECT FOR WHICH AN ALLOWABLE OR CONDITIONAL USE APPROVAL IS NEEDED.

JHI Sweetheart Lake Hydroelectric Project (FERC No. P-13563) See Attachment "A"

IS THIS A MODIFICATION OF AN EXISTING APPROVAL? ☒ NO ☐ YES – Case # _____

CURRENT USE OF LAND OR BUILDING(S): Undeveloped

PROPOSED USE OF LAND OR BUILDING(S): Development and Operation of Hydroelectric Generating and Transmission Facility.

UTILITIES PROPOSED: **WATER:** ☐ Public ☒ On Site **SEWER:** ☐ Public ☒ On Site

SITE AND BUILDING SPECIFICS:

Total Area of Lot see attachment A square feet Total Area of Existing Structure(s) 0 square feet

Total Area of Proposed Structure(s) 15,000 square feet

EXTERNAL LIGHTING:

Existing to remain ☐ No ☐ Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

Proposed ☐ No ☒ Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

PROJECT NARRATIVE AND SUBMITTAL CHECKLIST:

☒ Site Plan ☒ Floor Plan of proposed buildings ☒ Elevation view of existing and proposed buildings ☒ Proposed Vegetative Cover	☒ Existing and proposed parking areas (including dimensions) and proposed traffic circulation ☒ Existing Physical Features of the site (drainage, habitat, hazard areas, etc.)
---	---

For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side. If you need any assistance filling out this form, please contact the Permit Center at 586-0770.	ALLOWABLE/CONDITIONAL USE FEES				
		Fees	Check No.	Receipt	Date
	Application Fees	\$ _____	_____	_____	_____
	Admin. of Guarantee	\$ _____	_____	_____	_____
	Adjustment	\$ _____	_____	_____	_____
	Pub. Not. Sign Fee	\$ _____	_____	_____	_____
	Pub. Not. Sign Deposit	\$ _____	_____	_____	_____
Total Fee	\$ _____	_____	_____	_____	

NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM

Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802
www.juneauhydro.com
Telephone: (907) 789-2775
Fax: (907) 375-2973



May 31, 2016

Teri Camery, Senior Planner
City and Borough of Juneau
Community Development Department
155 South Seward Street
Juneau, Alaska 99801

RE: Sweetheart Lake Hydroelectric Project
Case Number PAC2016 0013

Dear Ms. Camery:

Juneau Hydropower Inc is applying for a development permit and a conditional use permit to begin construction on the Sweetheart Lake Hydroelectric Project.

Hydro power development is in alignment with policies and implementing actions in the 2013 CBJ Comprehensive Plan including:

POLICY 4.8. IT IS THE POLICY OF THE CBJ TO ENCOURAGE THE PROVISION OF AN ADEQUATE SUPPLY OF HYDROELECTRIC POWER TO PROVIDE FOR THE CONTINUED GROWTH AND DEVELOPMENT OF THE COMMUNITY.

4.8.1. Encourage the continued development of hydroelectric power generating facilities to provide for future community needs.

Juneau Hydropower has worked closely with the community, regulators and federal permitters since 2009 to develop this project. Project documents submitted to federal regulators total approximately 6,000 pages and provide extensive details. These documents are all available for review online at www.juneauhydro.com. For this application we have specifically addressed topics you requested in summary form and provide selected backups with details on these topics. The entire plan has been reviewed by Federal Energy Regulatory Commission (FERC), US Army Corps of Engineers, and USDA Forest Service staff. The FERC final EIS and license, and Army Corps 404 permit are anticipated to be issued in July 2016.



The Sweetheart Lake Hydroelectric Project project consists of the following new facilities:

- 1) a 280-foot-wide, 111-foot-high roller-compacted concrete dam to be constructed at the existing natural outlet of Lower Sweetheart Lake, with a 125-foot-wide ungated overflow spillway at a crest elevation of 636 feet;
- 2) a 525-foot-long, 10-foot-high, 10-foot-wide arched reservoir outlet tunnel at the right dam abutment;
- 3) a 45-foot-long, 25-foot-wide, 16-foot-high rectangular concrete intake structure, with six 7-foot-diameter, 10-foot-high cylindrical fish screens adjacent to the right dam abutment;
- 4) a 9,612-foot-long, 15-foot-wide, 15-foot-high horseshoe-shaped,¹ unlined underground power tunnel;
- 5) an 896-foot-long, 9-foot-diameter saddle-supported steel penstock installed within the lower portion of the power tunnel;
- 6) three 160-foot-long (mean length), 7- to 9-foot-diameter buried steel penstocks connecting the lower portion of the power tunnel to the powerhouse;
- 7) a 160-foot-long, 60-foot-wide, 30-foot-high concrete and steel powerhouse;
- 8) three 7.1-megawatt (MW) Francis turbines with 6.6-MW generators with a total installed capacity of 19.8 MW;
- 9) a 541-foot-long, 30- to 90-foot-wide rock tailrace with a fish exclusion structure discharging to Sweetheart Creek;
- 10) a 4,400-foot-long coastal road from the powerhouse to a dock/landing site for aerial and marine vehicle access, located on the east shore of Gilbert Bay;
- 11) an 8.69-mile-long, 138-kilovolt (kV) transmission line transversing Gilbert Bay, the Snettisham Peninsula, and Port Snettisham, consisting of:
 - a) two buried segments, totaling 4,800 feet in length;
 - b) two submarine segments, totaling 25,700 feet in length; and
 - c) one 15,400-foot-long overhead segment;
- 12) a 22,000-square-foot fenced switchyard adjacent to the powerhouse;

¹ Tunnel will have a flat and drivable floor with straight walls and an arched ceiling.



13) a 25-foot-long, 5-foot-wide, 4-foot-deep salmon smolt re-entry pool² located adjacent to the powerhouse and tailrace;

14) a 4,225-square-foot caretaker's facility near the dock;

15) a 4,800-foot-long, 12.47kV service transmission line and communication cable extending from the powerhouse to the dock and caretaker's facility, providing operational electricity and communications;

16) a 10,000-foot-long, 12.47kV service transmission line and communication cable extending from the powerhouse to the dam site, providing operational electricity and communications;

17) a 400-square-foot shelter at the dam for employee use during smelt transport operations; and

18) appurtenant facilities.

Construction of the project will raise Lower Sweetheart Lake from a water surface elevation of 551 feet mean lower low water³ and a surface area of 1,414 acres to a new maximum water surface elevation of 636 feet and surface area of 1,702 acres, and a new minimum water surface elevation of 576 feet and surface area of 1,449 acres.

Employees and Operations

- The project will be in operation continuously - 24 hours per day, 365 days per year in perpetuity.
- One or two caretakers will live on site.
- Additional employees and/or contractors will visit the site for routine maintenance and repairs as needed.

Federal Review, Public Review and Public Meetings

1929 - The Sweetheart Lake area was identified as having potential water power value and was withdrawn as Power Site Classification 221 on May 29, 1929. In accordance with the provisions of Section 24 of the Federal Power Act of June 10, 1920, these lands are reserved from entry, location, or other disposal under the public land laws until otherwise directed by the Federal Energy Regulatory Commission (FERC) or by Congress. The intent was to set aside and protect

² The re-entry pool will provide temporary holding of sockeye salmon smolts collected and transported from Sweetheart Lake, for imprinting and release to the tailrace.

³ The mean lower low water level is the 19-year average of the lower of the two daily tides and serves as the reference elevation chosen by Juneau Hydro for the project facilities.



those lands with potential water power value until that potential could be realized or developed.⁴

1962 - The Sweetheart Creek Powersite location was again identified by the U.S. Department of the Interior in Geological Survey Water-Supply Paper 1529.⁵

2009 - Juneau Hydropower Inc (JHI) began preparing a plan to develop Sweetheart Lake hydropower resource. JHI has worked in collaboration and communication with:

- Federal Energy Regulatory Commission (FERC, Project No. P-13563);
- Land managers - US Forest Service (all project uplands) and Alaska Department of Natural Resources (tidelands and submerged waters);
- Regulatory agencies including - US Fish and Wildlife Service, National Marine Fisheries Service, Army Corps of Engineers, National Park Service, US Environmental Protection Agency, Bureau of Land Management (BLM), Alaska Department of Fish and Game (ADF&G), Alaska Department of Environmental Conservation and Alaska Department of Natural Resources (ADNR);
- Tribal entities - Central Council Tlingit & Haida Indian Tribes (CCTHI), Douglas Indian Association; and
- The public - including the Juneau Commission on Sustainability.

This is a complicated process that has involved extensive review and involvement. Some landmarks are presented here to indicate the timeline. All documents, in chronological order, are available online at <http://www.juneauhydro.com/index.php/ferc-documents.html>. Look at the progress reports for summarized details of meetings and contacts with various agencies and stakeholders.

- 2009 - Federal Energy Regulatory Commission (FERC) Preliminary Permit - Application was submitted, accepted and a permit granted. This process included review and input from the US Forest Service, National Marine Fisheries Service, and Alaska Electric Light and Power Company.
- 2010 - included agency scoping meetings, communications protocol approved between major parties, public notice published, FERC letters to Sealaska, Goldbelt, Douglas Indian Association and CCTHI.
- 2011 - included additional agency and public scoping meetings in the daytime at the Forest Service offices for agency input, evening at Centennial Hall for public, and a site visit.
- 2012 - included agency comments on study plans and studies.

⁴ November 11, 2011 Federal Register Vol. 76, No. 215 Page 68783 The Bureau of Land Management opened the reserved lands to state land selection while specifically retaining power rights to the United States.

⁵ <http://pubs.usgs.gov/wsp/1529/report.pdf>



- 2013 - included a Successive Preliminary Permit application with review and input, with public noticing and opportunities for public comment and application to Department of Natural Resources for the lease of state land and for transmission line easements.
- 2014 - ongoing agency comments and consultations. Meetings with a Cultural Studies Working Group. Filed a Final License Application to FERC with a Preliminary Draft Environmental Assessment which included public notice in May 2014. In November 2014 FERC issued a notice to issue an Environmental Impact Statement (EIS) and Final Decision which included further public notice and opportunities to provide input.
- 2015 - the Draft EIS was issued by FERC and BLM in November 2015 with a comment deadline of December 29, 2015 and a public meeting held December 29, 2015 at Centennial Hall.
- 2016 - final EIS and license approval anticipated for July 2016. Application for CBJ Development Permit and Natural Resources permits underway.

Habitat, Fish and Wildlife Issues and Mitigation Summary

Juneau Hydro has complied with all of the Forest Service preliminary 4(e) and ADF&G 10(j) recommended conditions as prescribed in the EIS. ADNR deferred to ADF&G for mitigation recommendations. ADF&G was the only agency to respond with 10(j) recommendations.

Forest Service 4(e) conditions include: avoiding the use of pesticides on National Forest System (NFS) lands or in areas affecting NFS lands without the prior written approval of the Forest Service; providing a qualified environmental compliance monitor to oversee major construction activities (e.g., vegetative or land disturbing, spoil producing, blasting activities); and developing the following plans: (1) construction plan; (2) spoil disposal plan; (3) access and road management and maintenance plan; (4) reservoir management and inundation plan; (5) erosion control plan; (6) solid waste and wastewater plan; (7) hazardous substances plan; (8) fire prevention plan; (9) heritage resource protection plan; (10) scenery management plan; (11) vegetation management plan; (12) invasive species management plan; (13) wildlife mitigation and monitoring plan; (14) fish mitigation and monitoring plan; (15) stream flow management plan; (16) stream flow measurement plan; and (17) aquatic habitat restoration and monitoring plan.

The Alaska Department of Fish and Game 10 (j) recommendations relate to water quantity, quality and timing; setbacks from Sweetheart Creek; smolt passage; fish screening and guards; bioaquatics monitoring; bear safety planning and operations; wildlife passage and disturbance; and designing power lines and poles to protect birds.

The Army Corps of Engineers Clean Water Act Section 404 Permit application has been submitted. The Army Corps is a cooperating agency with FERC on the review and approval of the EIS. Recommended mitigations will be reviewed and resolved through the EIS and application process. The issuance of the Section 404 Permit with final recommendations is anticipated in July, concurrent with the EIS and FERC license approval.



US Fish and Wildlife Service and ADF&G biologists flew an eagle nest survey on May 12, 2016. They found two occupied nests within the project vicinity. Both are more than 331 feet from any construction area.

Light and Noise Impacts During Operation

The powerhouse will be located in a deep excavation approximately 600 feet northwest of the anadromous barrier on Sweetheart Creek and approximately 2,000 feet east of the confluence of Sweetheart Creek and Gilbert Bay. This siting will reduce disturbances, allow infrastructure to blend in with surroundings, and mitigate light and noise emitting from operations. A vegetated landform barrier will be constructed to further shield recreational users from sound and visual impacts of the powerhouse and switchyard. The intended goal is to lessen or virtually eliminate scenic and audio disturbance in the area of powerhouse operations.

Outside lighting at the site will incorporate downward facing non-glare fixtures to minimize light pollution. Operational outside lighting requirements are anticipated to be minimal.

During routine operation equipment noise will be minimal with just one or two caretaker employees working on site. Snow removal noise will occur when others are unlikely to be in the area. Motorized traffic on the road will be restricted to that necessary for operations.

Impacts to Surrounding Properties and Uses, including Mitigation⁶

Proposed project facilities will be constructed within Semi-Remote Recreation, Timber Production, and Old-Growth Land Use Forest Service Designations. Implementing Juneau Hydro's Scenic Management and Monitoring Plan and Spoil Disposal Plan will minimize visual effects by ensuring that project features are designed and screened as much as practicable to blend with the surrounding environment.

No public recreation facilities are located along the shoreline of Sweetheart Lake or Sweetheart Creek. Fishing is the primary recreational activity at Gilbert Bay, Sweetheart Creek, and surrounding lands, although commercially guided hunters, resident sport hunters, and trappers also use these lands. Implementing Juneau Hydro's Recreation Management Plan will ensure that visitor use is accommodated in a manner that avoids resource impacts, the potential for conflicts between bears and humans is minimized, and increased visitor use in the project area is adequately managed. Recreation enhancements of the project include footpath surface improvements and maintenance, interpretive signs that include bear safety, trail information, ADF&G and Forest Service information, and limited non-commercial use of the facility dock and landing ramp. A vegetated landform barrier between the powerhouse and footpaths will reduce visual and sound impacts.

⁶ Excerpted from "ENVIRONMENTAL IMPACT STATEMENT FOR HYDROPOWER LICENSE Sweetheart Lake Hydroelectric Project—FERC Project No. 13563-003 Alaska" with minor edits. [http://184.154.226.3/~juneauhy/20151029-3010\(30991904\).pdf](http://184.154.226.3/~juneauhy/20151029-3010(30991904).pdf)



Project construction and operation will not affect any cultural resources because the only site eligible for listing on the Natural Register of Historic Places will be avoided during construction and operation.

The project will have no long-term, adverse effects on the commercial fishery because fishing can continue as it does currently with only minor adjustments to avoid the submarine cable. The proposed smolt collection system, if successful, will help to maintain the personal-use fishery and the subsistence economy of families who live and fish in the project area.

CBJ Comprehensive Plan Relationship

The entire project area is designated Resource Development in the 2013 CBJ Comprehensive Plan:

Land to be managed primarily to identify and conserve natural resources until specific land uses are identified and developed. The area outside the study area of this Comprehensive Plan is considered to be designated Resource Development. As resources are identified or extracted from these lands, they should be re-designated and re-zoned appropriately.

As noted under the federal review heading above, this area was specifically reserved by the federal government in 1929 for hydro power development. Although this designation is not noted in the Comprehensive Plan, development of Sweetheart Hydro development is specifically mentioned on pages 67 and 68.

Hydro power development is in alignment with policies and implementing actions in the 2013 CBJ Comprehensive Plan including:

POLICY 4.8. IT IS THE POLICY OF THE CBJ TO ENCOURAGE THE PROVISION OF AN ADEQUATE SUPPLY OF HYDROELECTRIC POWER TO PROVIDE FOR THE CONTINUED GROWTH AND DEVELOPMENT OF THE COMMUNITY.

4.8.1. Encourage the continued development of hydroelectric power generating facilities to provide for future community needs.

POLICY 2.27. IT IS THE POLICY OF THE CBJ TO TAKE ADVANTAGE OF JUNEAU'S FAVORABLE ELECTRICAL ENERGY ASSETS TO ADD QUALITY JOB OPPORTUNITIES.

2.27.2. Encourage planning for the next increment of hydroelectric power to be brought on-line in Juneau.

POLICY 2.28. IT IS THE POLICY OF THE CBJ TO ENCOURAGE THE TRANSPORTATION OF CBJ RESIDENTS, VISITORS, FREIGHT, MAIL, AND



PARCELS WITH RENEWABLE ENERGY OR ON PUBLIC TRANSPORTATION.

POLICY 2.29. IT IS THE POLICY OF THE CBJ TO REQUIRE COST EFFECTIVE ENERGY EFFICIENT BUILDING AND REMODELING PRACTICES.

2.29.1. Encourage the installation of renewable sources of electrical energy-heating systems in new construction.

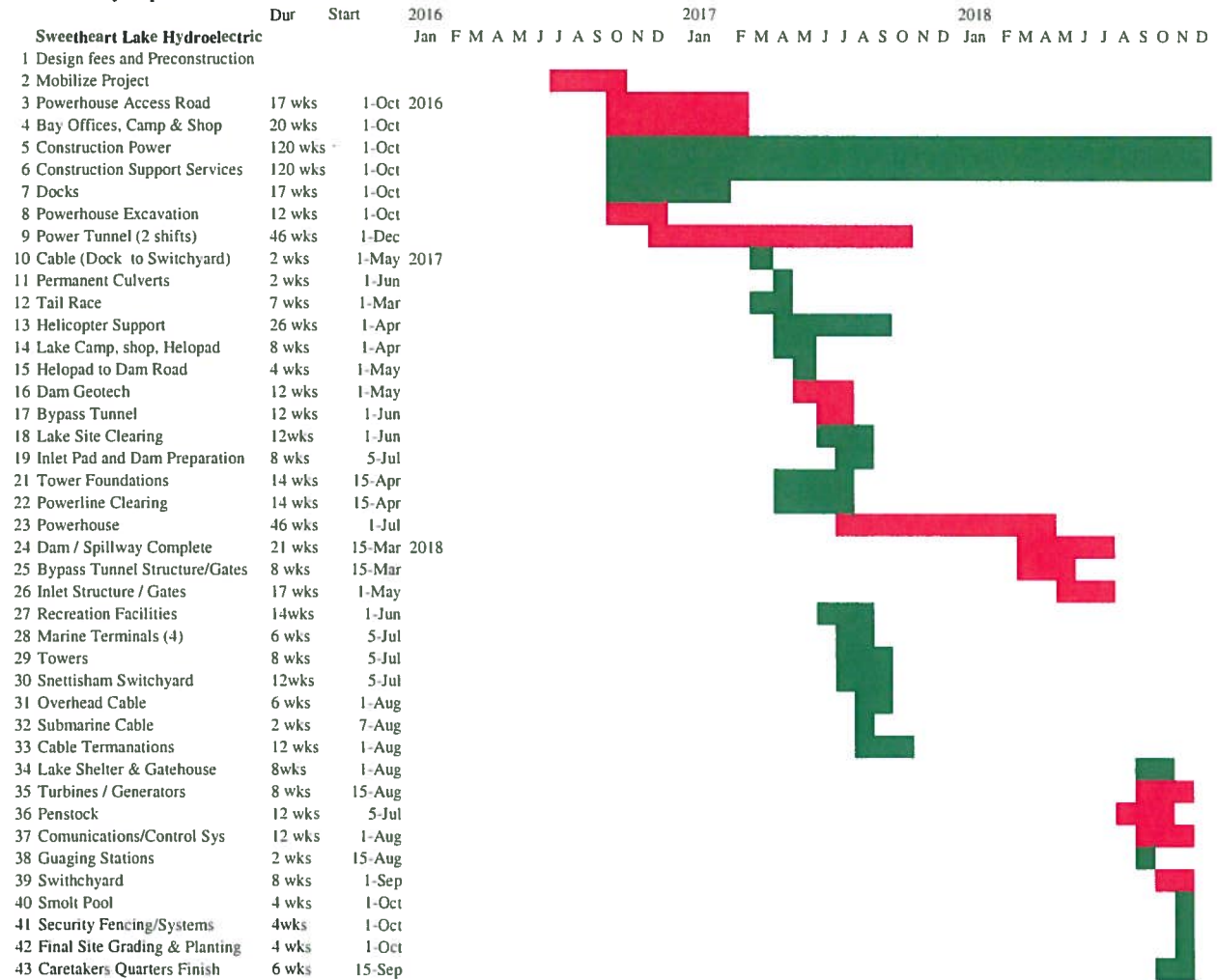
2.29.2. Encourage the conversion of existing heating systems from fossil fuel to renewable sources of electrical energy.

POLICY 2.30. IT IS THE POLICY OF THE CBJ TO ENCOURAGE LARGE INDUSTRIAL USERS TO BE AS EFFICIENT AS POSSIBLE IN THEIR USE OF ENERGY; USE RENEWABLE (E.G. HYDROPOWER) SOURCES AND TO MAKE ENERGY BY-PRODUCTS AVAILABLE FOR USE ELSEWHERE IN THE COMMUNITY.

Construction Timeline (with FERC license issued in July 2016) :



Juneau Hydropower Construction Schedule



Detailed site plans with property lines and the location of all structures, residential units, docks, and access are attached.

We look forward to working with you to provide any further details or information required. You may contact me at duff.mitchell@juneauhydro.com and 907-789-2775.

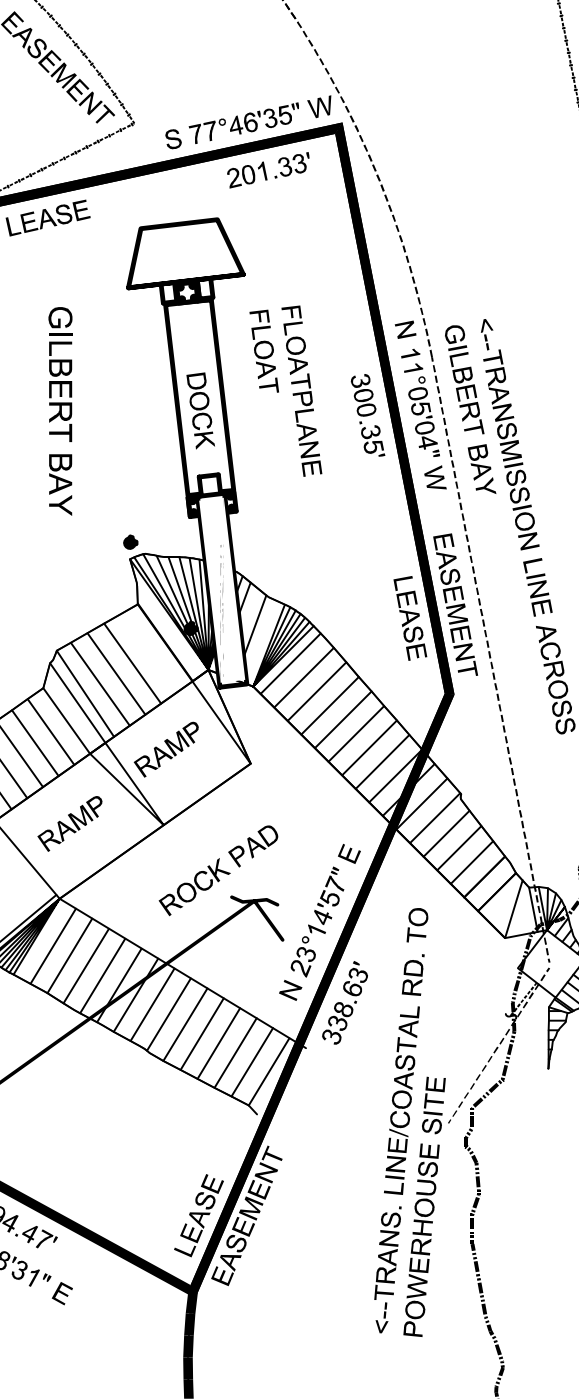
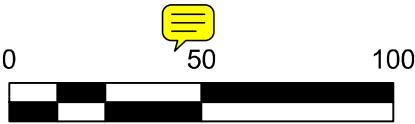
Sincerely,

Duff Mitchell
Managing Director

AK1 SPCS (FT)
N: 2,236,648
E: 2,680,938

TIDELAND LEASE
BOUNDARY
3.3 ACRES +/-

APPX. 200'x200' CLEAN
ROCK FILL FOR LEASE
AREA OF DOCK, 35k+/-
CUBIC YARDS



SWEETHEART LAKE HYDROELECTRIC PROJECT
FERC PROJECT NOS. P-13563

DATE PREPARED:
5/15/2016

APPLICANTS NAME:
JUNEAU HYDROPOWER, INC.

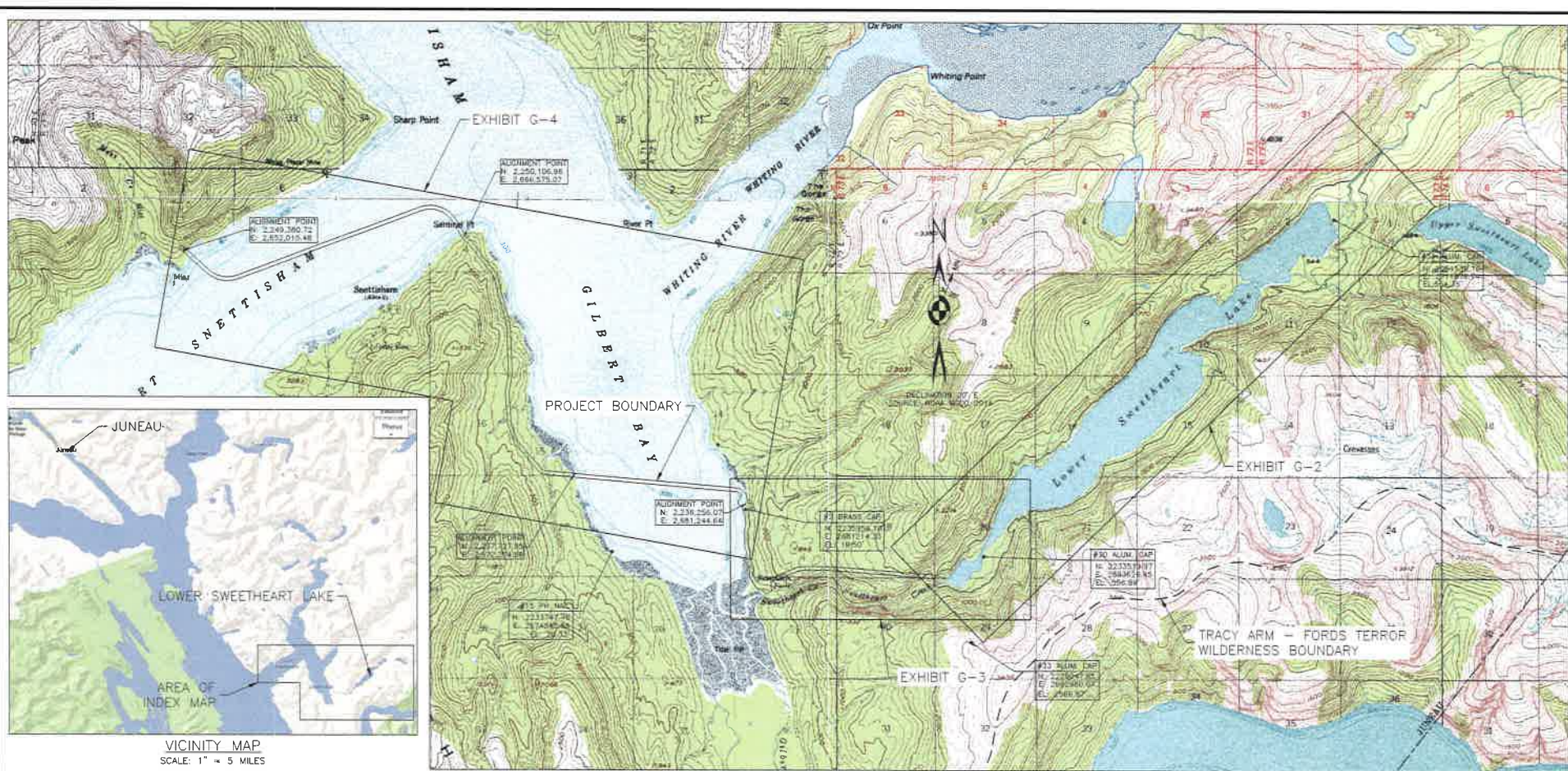
ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND, AND WATER
LAND USE PERMIT

ALASKA TIDELAND LEASE

Sections 4-7, 15, 22-25 T45S R72E and Sections 1, 12 T45S R71E C.R.M.

SHEET 1 OF 1

LAS#



PROJECT LAND AREAS

SHEET	TYPE	ACREAGE	DESCRIPTION
C-2	Federal: Non-Transmission	1922.70	Reservoir, Dam, East End of Tunnel
C-3	Federal: Non-Transmission	62.41	Tunnel, Powerhouse, Road, Dock Uplands
C-4	Federal: Transmission	73.13	Transmission Lines
C-2,3,4	State Owned: Transmission	131.18	Transmission, Dock
TOTAL FEDERAL LANDS =		2058.24 ACRES	
TOTAL LAND (FED+STATE) =		2189.42 ACRES	

PROJECT CONTACT:
DUFF MITCHELL
PO BOX 22775
JUNEAU AK 99802
ph. 907-789-2775
fax. 907-375-2973

DATE: April 8, 2014

Juneau
Hydropower Inc.

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INDEX MAP
SCALE: 1" = 1/2 MILE

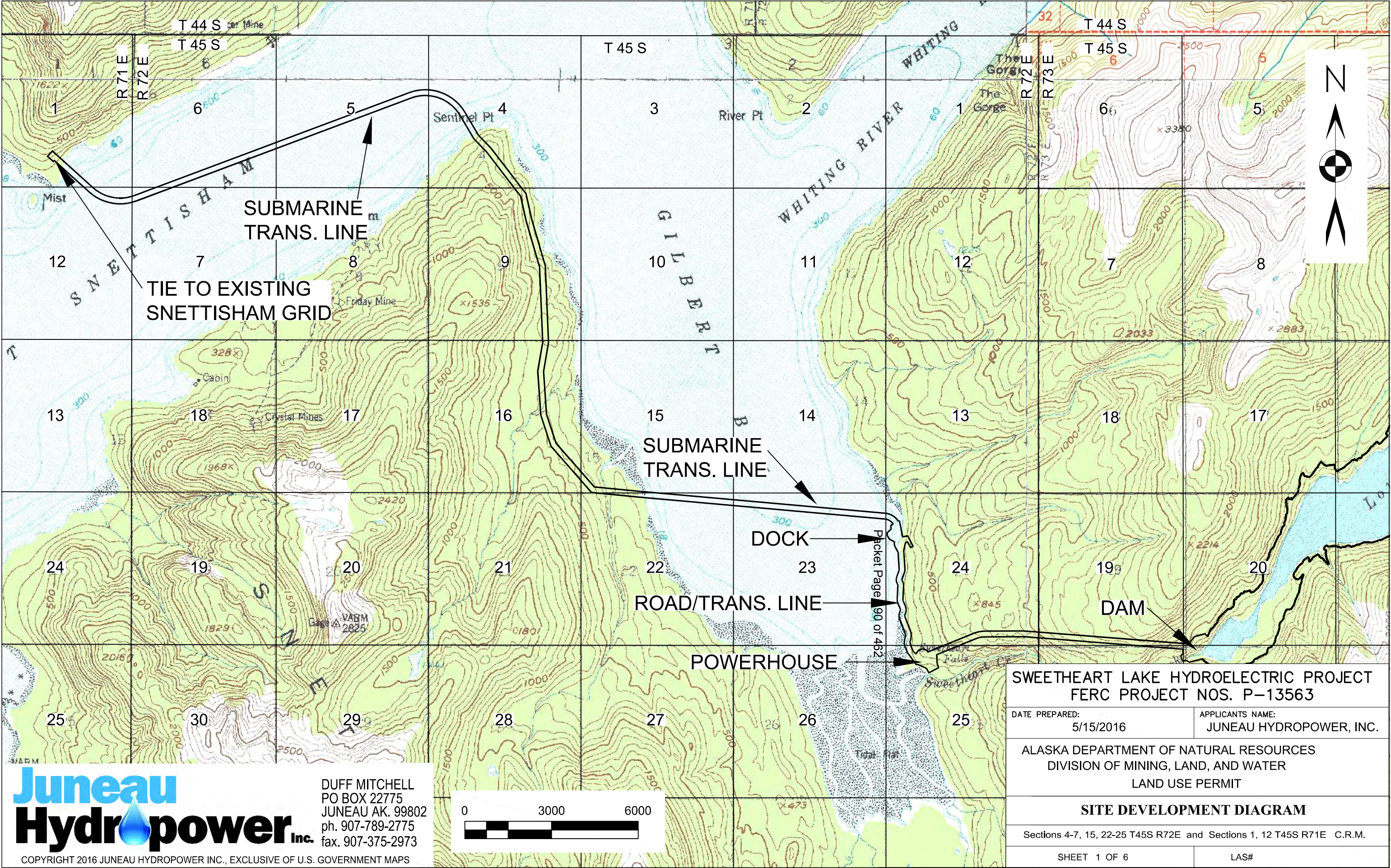


This drawing is a part of the application for license
made by the undersigned this 28th day of March, 2014.

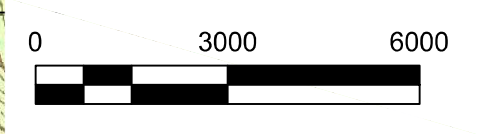
Duff W. Mitchell, Business Manager
Juneau Hydropower, Inc.

SWEETHEART LAKE HYDROELECTRIC PROJECT
FERC PROJECT NOS. P-13563

EXHIBIT G-1
PROJECT BOUNDARY
SHEET 1 OF 4
LOCATION, VICINITY, AND INDEX MAPS



DUFF MITCHELL
PO BOX 22775
JUNEAU AK. 99802
ph. 907-789-2775
fax. 907-375-2973



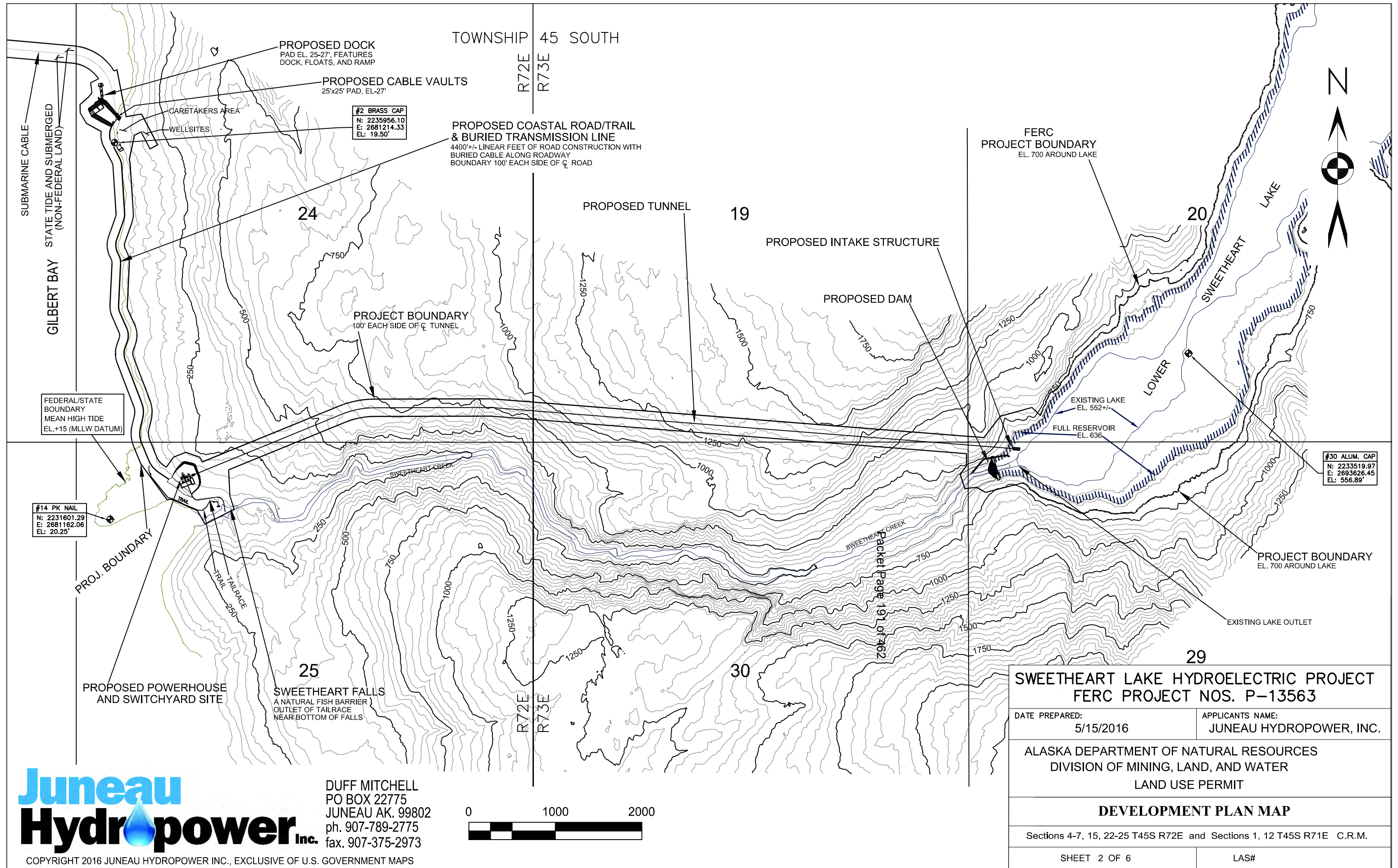
**SWEETHEART LAKE HYDROELECTRIC PROJECT
FERC PROJECT NOS. P-13563**

DATE PREPARED: 5/15/2016	APPLICANTS NAME: JUNEAU HYDROPOWER, INC.
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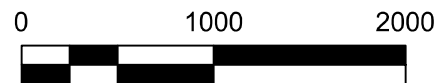
ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND, AND WATER
LAND USE PERMIT

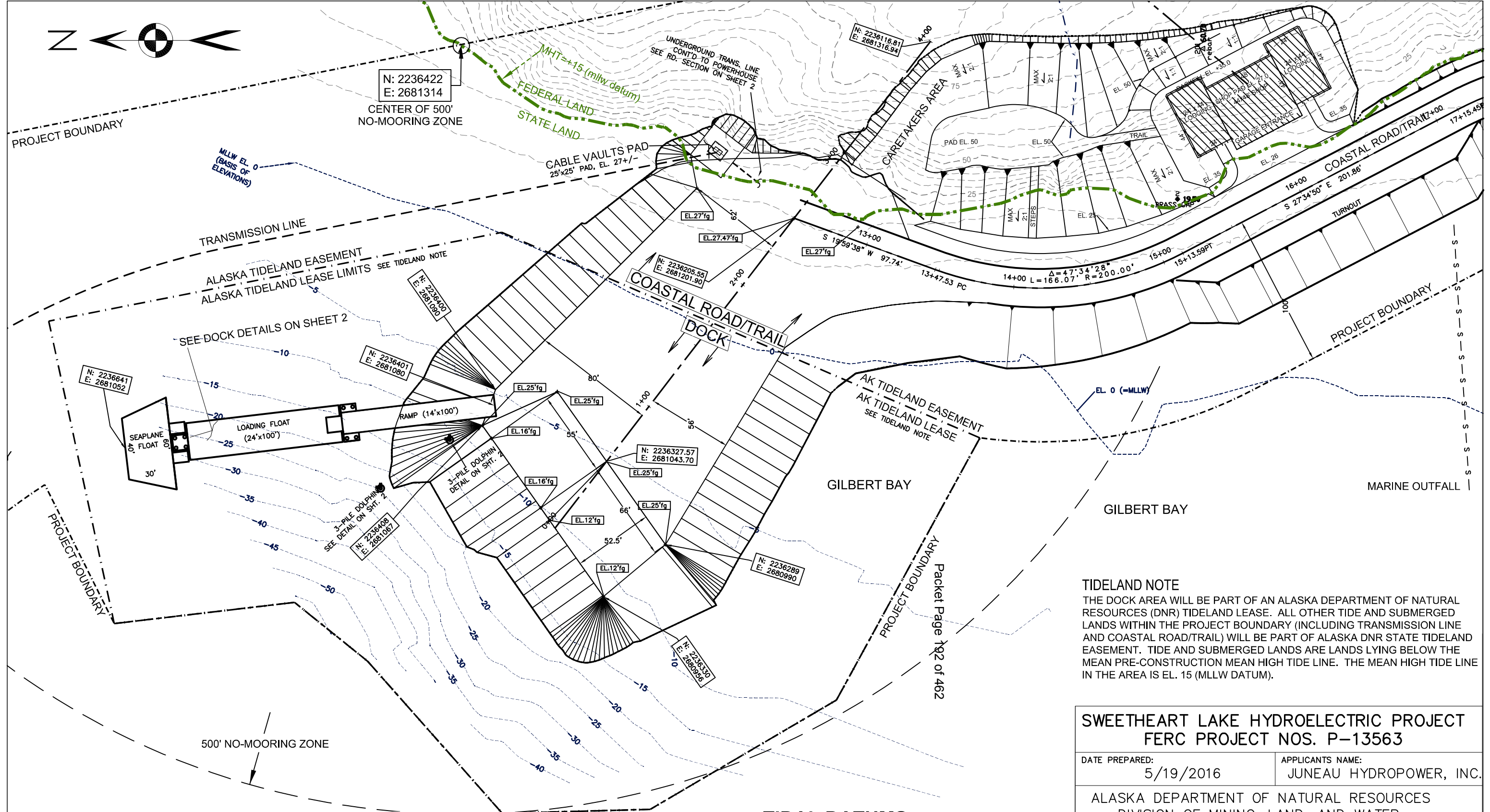
SITE DEVELOPMENT DIAGRAM

Sections 4-7, 15, 22-25 T45S R72E and Sections 1, 12 T45S R71E C.R.M.



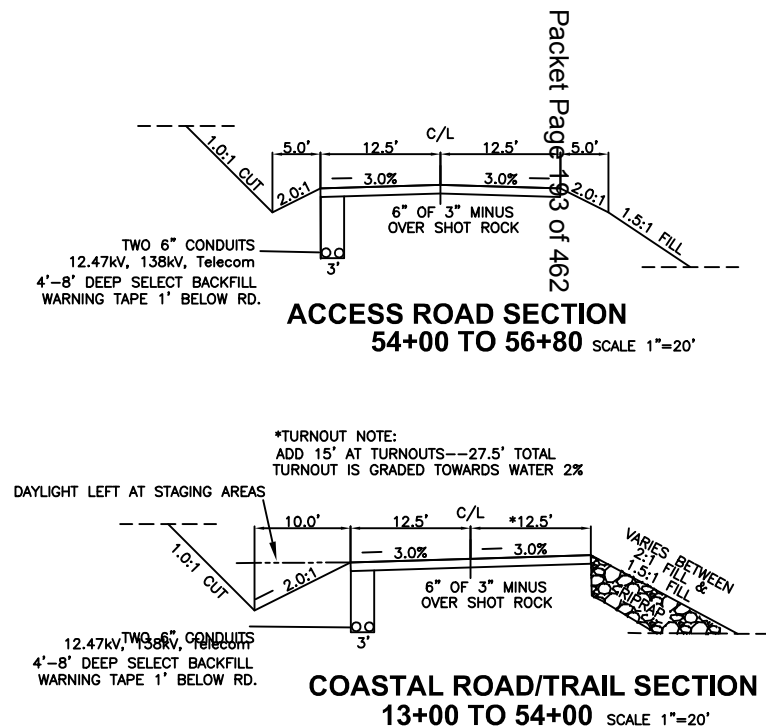
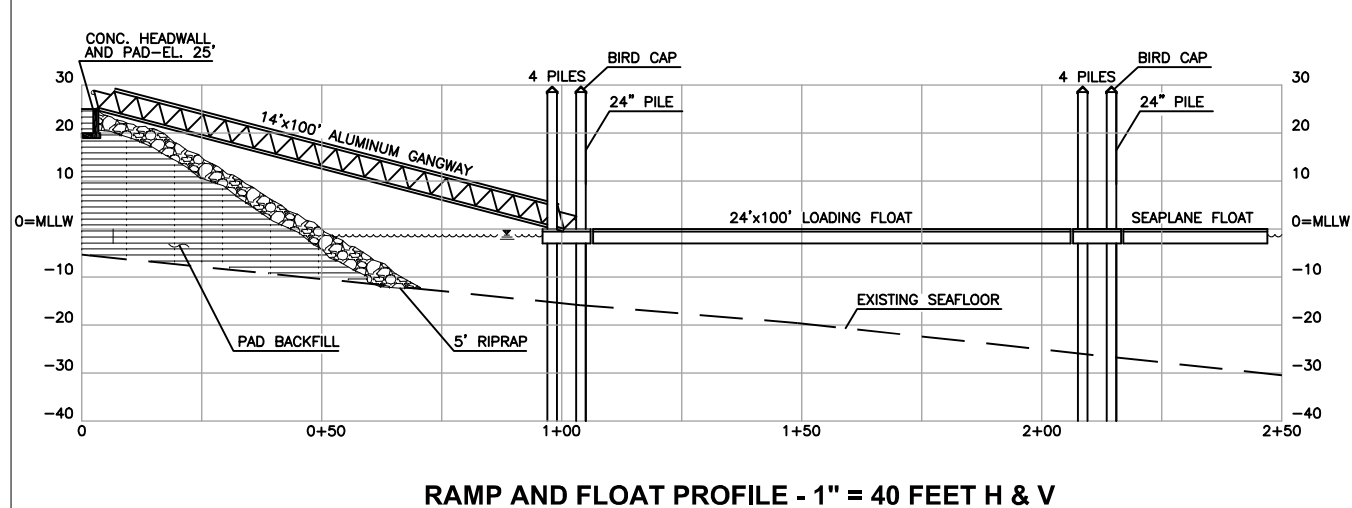
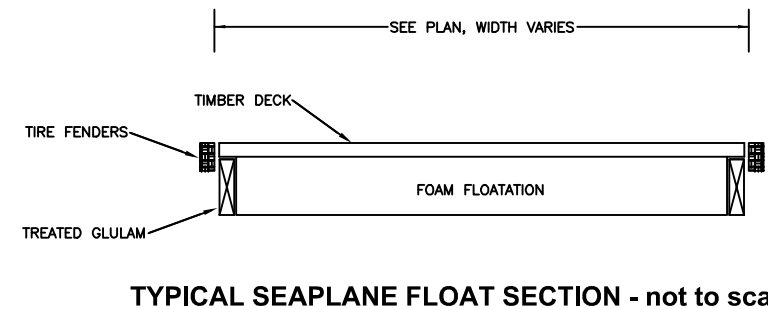
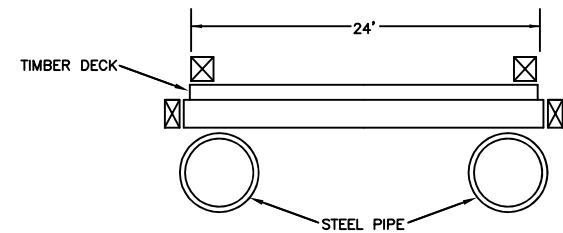
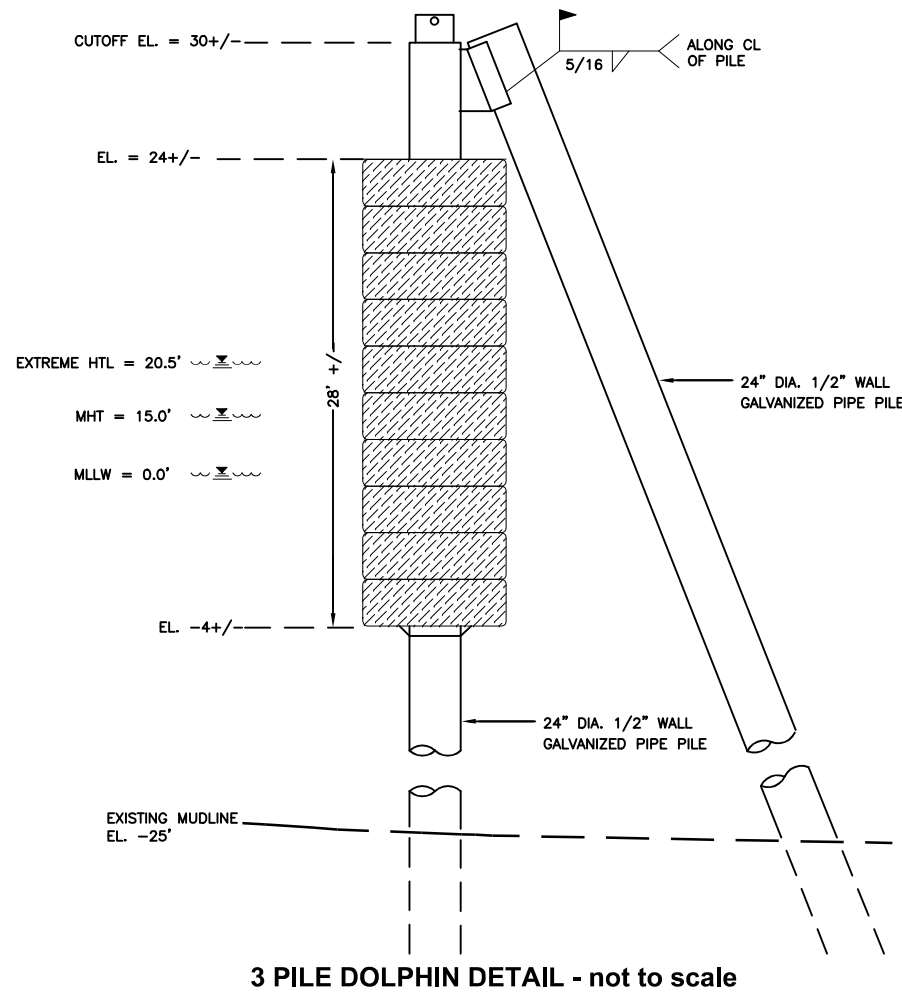
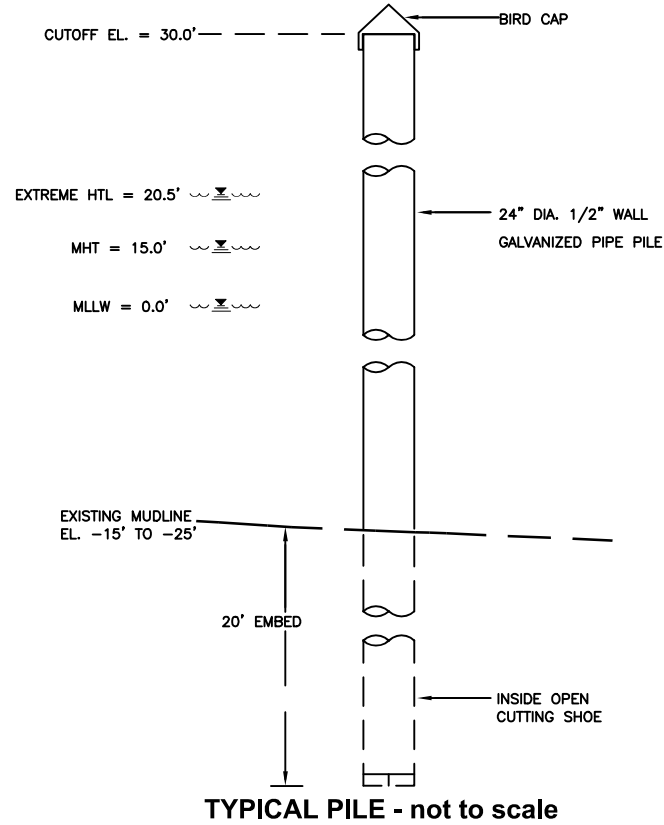
DUFF MITCHELL
PO BOX 22775
JUNEAU AK. 99802
ph. 907-789-2775
fax. 907-375-2973





TIDELAND NOTE
THE DOCK AREA WILL BE PART OF AN ALASKA DEPARTMENT OF NATURAL RESOURCES (DNR) TIDELAND LEASE. ALL OTHER TIDE AND SUBMERGED LANDS WITHIN THE PROJECT BOUNDARY (INCLUDING TRANSMISSION LINE AND COASTAL ROAD/TRAIL) WILL BE PART OF ALASKA DNR STATE TIDELAND EASEMENT. TIDE AND SUBMERGED LANDS ARE LANDS LYING BELOW THE MEAN PRE-CONSTRUCTION MEAN HIGH TIDE LINE. THE MEAN HIGH TIDE LINE IN THE AREA IS EL. 15 (MLLW DATUM).

SWEETHEART LAKE HYDROELECTRIC PROJECT FERC PROJECT NOS. P-13563		
DATE PREPARED: 5/19/2016		APPLICANTS NAME: JUNEAU HYDROPOWER, INC.
ALASKA DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINING, LAND, AND WATER LAND USE PERMIT		
SITE DEVELOPMENT DIAGRAM		
Sections 4-7, 15, 22-25 T45S R72E and Sections 1, 12 T45S R71E C.R.M.		
SHEET 3 OF 6		LAS#

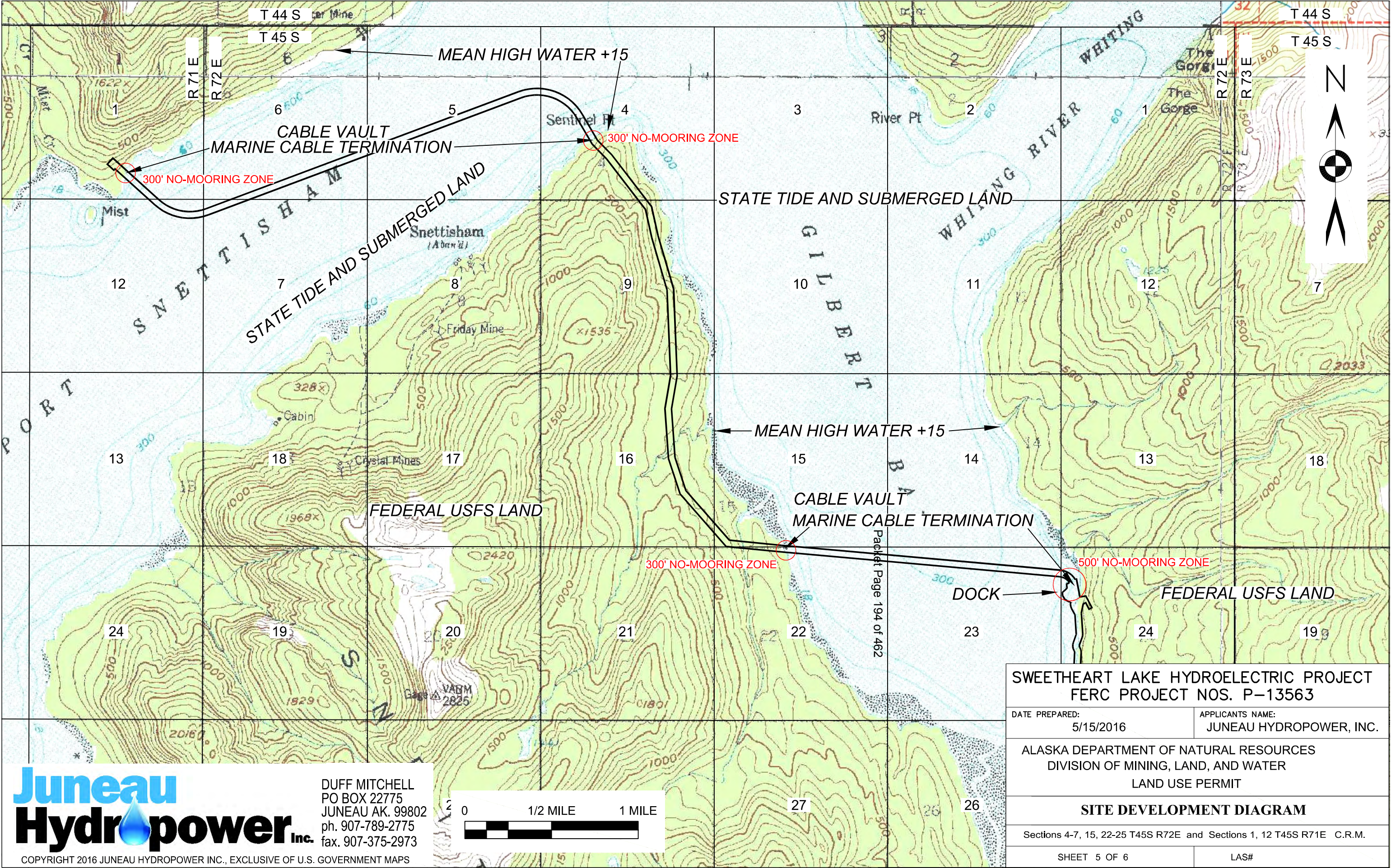


Juneau Hydropower Inc.

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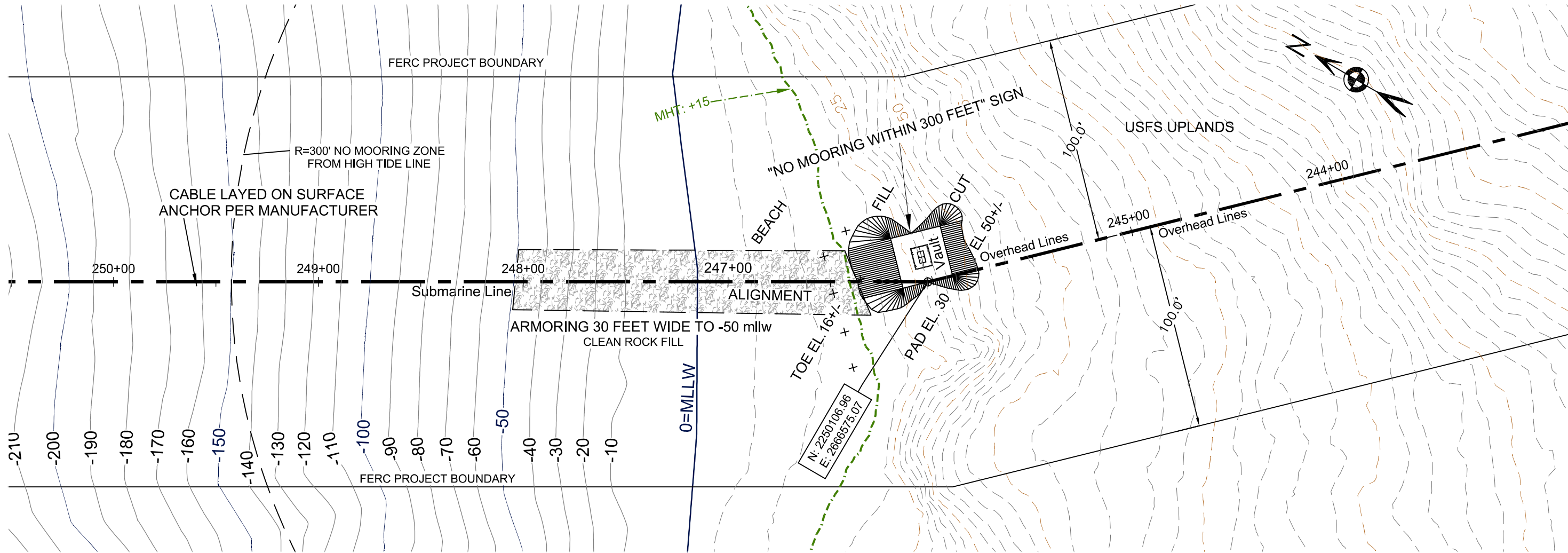
SWEETHEART LAKE HYDROELECTRIC PROJECT FERC PROJECT NOS. P-13563		
DATE PREPARED: 5/15/2016		APPLICANTS NAME: JUNEAU HYDROPOWER, INC.
ALASKA DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINING, LAND, AND WATER LAND USE PERMIT		
SITE DEVELOPMENT DIAGRAM		
Sections 4-7, 15, 22-25 T45S R72E and Sections 1, 12 T45S R71E C.R.M.		
SHEET 4 OF 6		LAS#



Juneau Hydropower Inc.

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FERC/EIS-0263F
POA-2009-1064

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR HYDROPOWER LICENSE**

Sweetheart Lake Hydroelectric Project—FERC Project No. 13563-003

Alaska

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
888 First Street, NE
Washington, DC 20426

U.S. Army Corps of Engineers District, Alaska
Juneau Regulatory Field Office
44669B Sterling Highway
Soldotna, AK 99669

May 2016

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

To the Agency or Individual Addressed:

Reference: Final Environmental Impact Statement

Attached is the final environmental impact statement (EIS) for the proposed Sweetheart Lake Hydroelectric Project (No. 13563-003), which would be located in the City and Borough of Juneau, Alaska.

This final EIS documents the view of governmental agencies, non-governmental organizations, affected Indian tribes, the public, the license applicant, and Federal Energy Regulatory Commission (Commission) staff. It contains staff evaluations of the applicant's proposal and the alternatives for licensing the Sweetheart Lake Project.

Before the Commission makes a licensing decision, it will take into account all concerns relevant to the public interest. The final EIS will be part of the record from which the Commission will make its decision. The final EIS was sent to the U.S. Environmental Protection Agency and made available to the public on or about June 10, 2016.

Copies of the final EIS are available for review in the Commission's Public Reference Branch, Room 2A, located at 888 First Street, N.E., Washington, DC 20426. The final EIS also may be viewed on the Internet at www.ferc.gov/docs-filing/elibrary.asp. Please call (202) 502-8222 for assistance.

Attachment: Final Environmental Impact Statement

COVER SHEET

- a. Title: Licensing the Sweetheart Lake Hydroelectric Project, FERC Project No. 13563-003
- b. Subject: Final Environmental Impact Statement (EIS)
- c. Lead Agency: Federal Energy Regulatory Commission
- d. Cooperating Agency: U.S. Army Corps of Engineers
- e. Abstract: Juneau Hydropower, Inc. filed an application for original license for the proposed 19.8-megawatt Sweetheart Lake Hydroelectric Project located on Lower Sweetheart Lake and Sweetheart Creek in the City and Borough of Juneau, Alaska. The proposed project would occupy 2,058.24 acres of federal lands within the Tongass National Forest, administered by the U.S. Department of Agriculture, Forest Service. The proposed project would generate an average of about 116,000 megawatt-hours of energy annually.

The staff's recommendation is to license the project as proposed, with certain modifications and additional measures recommended by the agencies and staff.
- f. Contact: John Matkowski
Federal Energy Regulatory Commission
Office of Energy Projects
888 First Street, N.E.
Washington, DC 20426
(202) 502-8576
- g. Transmittal: This final EIS on the application to license the proposed Sweetheart Lake Hydroelectric Project is being made available to the public on or about June 10, 2016, as required by the National Environmental Policy Act of 1969¹ and the Federal Energy Regulatory Commission's Regulations Implementing the National Environmental Policy Act (18 CFR, Part 380 (2015)).

¹ National Environmental Policy Act of 1969, amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), September 13, 1982).

FINAL ENVIRONMENTAL IMPACT STATEMENT

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, DC

U.S. Army Corps of Engineers District, Alaska
Juneau Regulatory Field Office
Soldotna, Alaska

Sweetheart Lake Hydroelectric Project FERC Project No. 13563—Alaska

1.0 INTRODUCTION

1.1 APPLICATION

On May 29, 2014, Juneau Hydropower, Inc. (Juneau Hydro or applicant), filed an application for an original license with the Federal Energy Regulatory Commission (Commission or FERC) for the proposed Sweetheart Lake Hydroelectric Project (Sweetheart Lake Project or project). The 19.8-megawatt (MW) hydropower project would be located on 5.4-mile-long, 0.6-mile-wide Lower Sweetheart Lake that flows into Sweetheart Creek, which is located in the City and Borough of Juneau, Alaska (City and Borough; figure 1-1). The proposed project would occupy 2,058.24 acres of federal lands within the Tongass National Forest, administered by the U.S. Department of Agriculture, Forest Service (Forest Service). The proposed project would generate an average of about 116,000 megawatt-hours (MWh) of energy annually.

1.2 PURPOSE OF ACTION AND NEED FOR POWER

1.2.1 Purpose of Action

The purpose of the proposed project is to provide a new source of hydroelectric power that would provide a renewable source of electric energy to meet the current and future energy demands of the Juneau area, and reduce the area's reliance on non-renewable power generation during peak demand periods. Therefore, under the provisions of the Federal Power Act (FPA), the Commission must decide whether to issue a license to Juneau Hydro for the Sweetheart Lake Project and what conditions should be placed on any license issued. In deciding whether to issue a license for a hydroelectric project, the Commission must determine that the project will be best

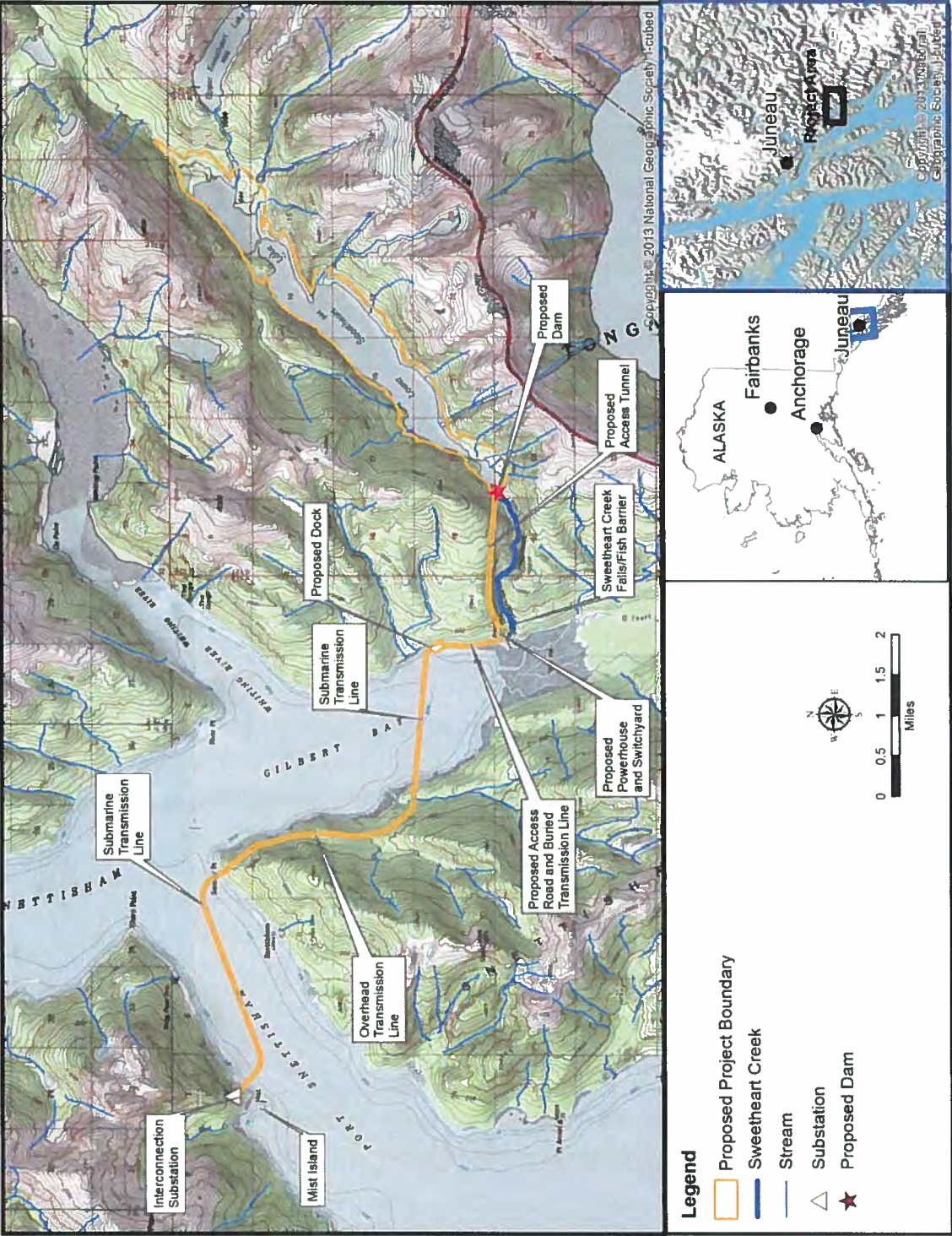


Figure 1-1. Location of the Sweetheart Lake Hydroelectric Project (Source: staff).

adapted to a comprehensive plan for improving or developing a waterway. In addition to the power and developmental purposes for which licenses are issued (such as flood control, irrigation, or water supply), the Commission must give equal consideration to the purposes of: (1) energy conservation; (2) the protection of, mitigation of damage to, and enhancement of fish and wildlife resources; (3) the protection of recreational opportunities; and (4) the preservation of other aspects of environmental quality.

Issuing an original license for the Sweetheart Lake Project would allow Juneau Hydro to generate electricity at the project for the term of the license, making electrical power from a renewable resource available to its customers.

This final environmental impact statement (final EIS) assesses the effects associated with construction and operation of the project and alternatives to the proposed project. It also includes recommendations to the Commission on whether to issue an original license, and if so, includes the recommended terms and conditions to become a part of any license issued.

In this final EIS, we assess the environmental and economic effects of constructing and operating the project: (1) as proposed by the applicant, and (2) with our recommended measures. We also consider the effects of the no-action alternative. Important issues that are addressed include effects of construction and operation on geology and soils; water quality; aquatic resources, including effects from submarine cable transmission lines and on downstream fish passage; vegetation and wildlife; federally listed species; and aesthetics. We also assess the effects of the proposed transmission line on recreation; resident and migratory birds, including the bald eagle; and marine mammals.

1.2.2 Need for Power

The Sweetheart Lake Project would provide hydroelectric generation to meet part of Alaska's power requirements, resource diversity, and capacity needs and lower the Juneau area's dependence on non-renewable sources of power generation. The project would have an installed capacity of 19.8 MW and generate about 116,000 MWh per year.

The Juneau area has an isolated electric system, and the only power supplies in the Juneau area are 102.8 MW from hydroelectric facilities and 84.8 MW from diesel-fueled power plants.

According to the Alaska Energy Authority's (2011) *Southeast Alaska Integrated Resource Plan*, between 2015 and 2024 annual energy consumption could increase from 441,237 to 461,494 MWh (4.59 percent), and peak demand could increase from 85.4 to

89.3 MW.¹⁴ This energy consumption estimate assumes continued operation of this isolated system without outside intervention (i.e., business as usual), moderate population growth, and a high cost for diesel and other petroleum fuels. It does not include additional current or future electricity users beyond the assumed population growth.

However, significant additional load growth potential exists in the Juneau area. Currently, several mining operations are fully or partially¹⁵ self-generating, relying on petroleum fuel sources for electricity. For example, Hecla Greens Creek Mine, which is connected to the Juneau electric grid but subject to interruptible service, represents a peak load of approximately 7.5 MW. Coeur Alaska Kensington Mine is located in Berners Bay north of Juneau, and it is fully reliant on self-generated diesel-based power. If the mines were connected to the grid, it would represent a load of approximately 10 MW (Alaska Energy Authority, 2011).

Cruise ships in the port of Juneau are also often required to generate their own electricity due to a lack of generation capacity. Currently there are two public cruise ship docks in Juneau Harbor, with plans to expand the existing public docks to accommodate two additional cruise ships (Juneau, 2015a). However, only one of the existing docks¹⁶ is equipped with a shore power facility, which provides interruptible power service to a docked cruise ship. Ships using the shore power facility represent peak loads of between 8 and 10 MW depending on their size, and such ships have consumed approximately 4,100 MWh annually since the shore power facility's construction. The second dock has not been equipped with a shore power facility because of a lack of grid capacity (Juneau, 2015b). If the additional existing dock and proposed expansion had use of shore power facilities, this could represent a peak load increase of 24 to 30 MW.

Additionally, some homeowners have begun to convert to electricity for home heating as a result of the increasingly volatile cost of heating oil and other fuels. According to the Alaska Energy Authority (2011), estimates of current and forecast load from building electric heating vary widely, and are imprecise because of a lack of adequate data on electric loads, end-users, and the prevalence of electric home heating in Southeast Alaska. Additionally, multiple factors impact future conversion from non-electric to electric heat, including the cost of electricity, heating system conversion to

¹⁴ Megawatt is a measure of power capacity; megawatt-hour is a measure of energy produced or consumed. Existing capacity does not always translate to available power during peak periods due to system limitations, such as water availability. Hence, a projected peak demand of 89.3 MW may not be fully met by existing hydropower resources, resulting in reliance on diesel and natural gas to meet peak generation needs.

¹⁵ Partially self-generating means they are subject to interruptible service contracts, where they are supplied electricity only when excess is available.

¹⁶ The South Franklin Dock.

electric, and heating system fuel (e.g., heating oil, propane, wood). The variability of these factors and the lack of available data make any estimate of future power use increases from building heating conversion unreliable. However, when oil prices increased in 2008 and 2010, many customers with access to relatively low-cost hydroelectric electricity converted their homes to electric heat (Alaska Energy Authority, 2011). While the United States is currently in a period of low oil prices compared to those of the past, based on the trends of the past few decades it is likely that such low oil prices are temporary. It is therefore likely that additional conversions to electric heat will occur in the future.

In its response to comments on the draft EIS, Juneau Hydro stated that it has two power sales agreements that would cover all of the annual generation from the project. The first agreement is with the Coeur Alaska Kensington Mine and would displace the mine's current diesel power generation. The second agreement is with a large customer for the balance of generation in 2018 that is not already sold to the Coeur Alaska Kensington Mine and would displace that customer's diesel-fueled heating. Additionally, this second power sales agreement allows for additional excess electricity to potentially be sold seasonally to other consumers.

We conclude that power from the project would help meet a need for power, from a clean and renewable source, in the Juneau area in both the short and long term. The proposed project would provide relatively low-cost power that displaces generation from non-renewable diesel sources. Displacing the operation of non-renewable facilities may avoid some power plant emissions, thus creating an environmental benefit.

1.3 STATUTORY AND REGULATORY REQUIREMENTS

A license for the Sweetheart Lake Project is subject to requirements under the FPA and other applicable statutes. The major regulatory and statutory requirements are described in the following sections.

1.3.1 Federal Power Act

1.3.1.1 Section 18 Fishway Prescriptions

No fishway prescriptions were filed by the U.S. Department of the Interior (Interior) or National Marine Fisheries Service (NMFS).

1.3.1.2 Section 4(e) Conditions

Section 4(e) of the FPA provides that any license issued by the Commission for a project within a federal reservation will be subject to and contain such conditions as the Secretary of the responsible federal land management agency deems necessary for the adequate protection and use of the reservation. The Forest Service filed preliminary conditions by letter dated January 7, 2014, and final terms and conditions by letter filed December 24, 2015, pursuant to section 4(e) of the FPA. These conditions are described under section 2.2.5, *Modifications to Applicant's Proposal—Mandatory Conditions*.

1.3.1.3 Section 10(j) Recommendations

Under section 10(j) of the FPA, each hydroelectric license issued by the Commission must include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, or enhancement of fish and wildlife resources affected by the project. The Commission is required to include these conditions unless it determines that they are inconsistent with the purposes and requirements of the FPA or other applicable law. Before rejecting or modifying an agency recommendation, the Commission is required to attempt to resolve any such inconsistency with the agency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency.

Alaska Department of Fish and Game (Alaska DFG) timely filed, on January 16, 2015, recommendations under section 10(j), as summarized in table 5-1, in section 5.4.1, *Fish and Wildlife Recommendations*. In section 5.4.1, we also discuss how we address the agency recommendations and comply with section 10(j).

1.3.2 Clean Water Act

Under section 401 of the Clean Water Act (CWA), a license applicant must obtain certification from the appropriate state pollution control agency verifying compliance with the CWA. By letter dated May 7, 2014, the Alaska Department of Environmental Conservation (Alaska DEC) waived its right to issue a Certificate of Reasonable Assurance for licensing the Sweetheart Lake Project, in accordance with section 401 of the CWA.¹⁷

1.3.3 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.¹⁸ Federally listed species known to occur, or that may occur, in the vicinity of the project include the humpback whale and the western distinct population segment (DPS) Steller sea lion.

¹⁷ In addition, on January 25, 2016, Juneau Hydro filed a second letter from Alaska DEC dated December 31, 2015, which again waived its right to issue a Certificate of Reasonable Assurance for licensing the Sweetheart Lake Project.

¹⁸ When project planning began in 2009, the eastern DPS Steller sea lion was a federally listed species; however, the eastern DPS Steller sea lion was delisted on December 4, 2013.

Our analyses of project impacts on threatened and endangered species are presented in section 3.3.4, *Threatened and Endangered Species*, and our recommendations are in section 5.2, *Comprehensive Development and Recommended Alternative*. This analysis serves as the biological assessment for compliance with section 7 consultation.

Noise from proposed construction activities, including noise from pile driving and vessel operations, could exceed noise thresholds known to disturb the humpback whale and western DPS Steller sea lion. Implementing Juneau Hydro's proposed measures to reduce noise disturbance, including ceasing pile driving when a marine mammal is observed within 1,000 meters (1,094 yards) of in-water pile driving activity, and the short-term and localized nature of the construction activities, would minimize potential adverse effects on humpback whales and Steller sea lions. Further, Juneau Hydro's additional protection measures, including employing a dedicated marine mammal monitor; implementing pile driving ramp-up procedures to minimize sudden exposure of marine mammals to loud noises; using hammer cushions to minimize noise effects on marine mammals during impact pile driving; monitoring for marine mammals during construction; reducing vessel speeds or stopping when marine mammals are present; and defining flight paths and marine transportation routes to avoid disturbance of Steller sea lions would reduce the potential for vessel collisions and disturbance to humpback whales and Steller sea lions to discountable and insignificant levels.

Therefore, we conclude that licensing of the Sweetheart Lake Project, with conditions to implement the aforementioned measures, may affect but is not likely to adversely affect the humpback whale and the western DPS Steller sea lion. A letter requesting concurrence with this determination was sent to NMFS on October 29, 2015. On November 4, 2015, NMFS filed a request for additional information on the estimated distances to the 120-decibel (dB) and 160-dB isopleths for any in-water activities that may approach or exceed these sound levels, and the 100-dB isopleths for any in-air activities that may approach or exceed that sound level. On November 16, 2015, Commission staff issued a letter providing the additional information requested by NMFS. On December 30, 2015, NMFS filed a letter stating that the estimated distances did not use measurements from comparable pile driving activities and provided information on the marine mammal mitigation measures proposed for pile-driving activities for the Ketchikan Ferry Dock Project. Based on this additional information, we have updated the proposed mitigation measures and analysis of effects in this EIS and will be seeking NMFS concurrence.

1.3.4 Coastal Zone Management Act

Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA), 16 United States Code [U.S.C.] § 1456(3)(A), the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program,

or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

On July 7, 2011, by operation of state law, the federally approved Alaska Coastal Zone Management Plan expired, resulting in a withdrawal from participation in the CZMA's National Coastal Management Program. The CZMA federal consistency provision, section 307, no longer applies in Alaska.

1.3.5 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires that every federal agency "take into account" how each of its undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register).

In response to Juneau Hydro's August 12, 2010, request, the Commission designated Juneau Hydro as a non-federal representative for the purposes of conducting section 106 consultations under the NHPA on August 24, 2010. Pursuant to section 106, and as the Commission's designated non-federal representative, Juneau Hydro consulted with the Alaska State Historic Preservation Office (Alaska SHPO) and affected Indian tribes to locate, determine National Register eligibility, and assess potential adverse effects on historic properties associated with the project. Juneau Hydro and the Commission consulted with the Douglas Indian Association (DIA), and no specific concerns about the project's effect on such sites were identified. The Alaska SHPO responded in a letter dated March 28, 2014, filed with Juneau Hydro's final cultural resources report on June 20, 2014, concurring with Juneau Hydro's findings, and ultimately concluded that no historic properties would be affected by the federal licensing action. Commission staff also concurs with this finding, and as a result, the section 106 process has been completed for the undertaking.

At the request of the Forest Service and the Alaska SHPO, Juneau Hydro prepared a Heritage Resource Protection Plan to address any cultural resources that may be discovered during project construction and operation. In such a case, the plan includes the necessary procedures to comply with section 106, including stopping all activities at the discovery site; consulting with the SHPO, Forest Service, and DIA on what particular measures are needed to resolve any adverse effects on the historic properties; and preparing a historic properties management plan, if needed. Revising the plan to include cultural resources training and monitoring protocols as specified in the Forest Service's December 24, 2015, comments, would ensure that the environmental compliance monitor (ECM) is capable of identifying and protecting cultural resources.

1.3.6 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS on all actions that may adversely affect essential fish habitat (EFH). The proposed project area includes habitats that have been designated as EFH for various life-history stages of pink salmon, chum salmon, and sockeye salmon.

Based on our analysis in section 3.3.2, *Aquatic Resources*, and recommended measures in section 5.2, *Comprehensive Development and Recommended Alternative*, we concluded in the draft EIS that issuing a license for the proposed project would not adversely affect pink and chum salmon EFH in lower Sweetheart Creek, or sockeye, pink and chum salmon EFH in Gilbert Bay. On October 29, 2015, Commission staff informed NMFS of staff's conclusion.

By letter filed December 30, 2015, NMFS notified staff that it did not agree that the project would not affect EFH for spawning and incubating pink and chum salmon, but it provided conservation recommendations to address its concerns. NMFS recommended that Juneau Hydro consult with NMFS on the development of the Aquatic Habitat Restoration and Monitoring Plan (Aquatic Habitat Plan) to ensure the timely identification of any reduction in spawning gravels and timely and effective replacement of spawning habitat to avoid adverse effects on EFH. As explained in sections 3.3.2.2 and 5.2.2, we recommend that any license issued to Juneau Hydro include this measure.

1.3.7 Marine Mammal Protection Act

The 1972 Marine Mammal Protection Act (MMPA) prohibits, with certain exceptions, the “take” (defined under statute to include harassment)¹⁹ of marine mammals in U.S. waters and the high seas. In 1986, Congress amended the MMPA, under the incidental take program, and the ESA, to authorize incidental takings of depleted, endangered, or threatened marine mammals, provided the “taking” (defined under the statute as actions which are or may be lethal, injurious, or harassing) was small in number and had a negligible impact on marine mammals. With this relationship between the MMPA and the ESA, NMFS cannot complete section 7 consultation and

¹⁹ Under the 1994 amendments to the MMPA, “harassment” is statutorily defined as “any act of pursuit, torment, or annoyance that has the potential to: (a) injure a marine mammal or marine mammal stock in the wild (Level A Harassment); or (b) disturb a marine mammal or marine mammal stock in the wild by causing a disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or mammal stock in the wild (Level B Harassment)” (MMPA Amendments of 1994, Pub. L. No. 103-238, 108 Stat. 432 [1994]; see also 50 CFR, section 216.3 [2010]).

issue an Incidental Take Permit for listed marine mammals until an Incidental Harassment Authorization²⁰ has been issued.

The humpback whale and western DPS Steller sea lion are federally listed endangered species and may occur in the vicinity of the proposed project. Additional non-listed marine mammals that are known to occur in the vicinity of the proposed project include the eastern DPS Steller sea lions and harbor seals. Implementing the following measures would avoid or minimize potential adverse effects of construction-related activities on marine mammals, including the humpback whale and Steller sea lion, to insignificant or discountable levels: employing a dedicated marine mammal monitor, ceasing pile driving when a marine mammal is observed within 1,000 meters of in-water pile driving activity, implementing pile driving ramp-up procedures to minimize sudden exposure of marine mammals to loud noises, using hammer cushions to minimize noise effects on marine mammals during impact pile driving, slowing vessel speed or stopping movement when a marine mammal is within 100 yards of vessels to prevent collisions between service boats and marine mammals, and defining flight paths and marine transportation routes to avoid disturbance of Steller sea lions at their haulout sites. Juneau Hydro's proposal to bury portions of the submarine cable and cover the cable with rock where it comes ashore would help reduce the extent of the magnetic field during project operation to negligible levels.

1.4 PUBLIC REVIEW AND COMMENT

The Commission's regulations (18 Code of Federal Regulations [CFR], Part 4.38) require that applicants consult with appropriate resource agencies, tribes, and other entities before filing an application for a license. This consultation is the first step in complying with the Fish and Wildlife Coordination Act, the ESA, the NHPA, and other federal statutes. Pre-filing consultation must be complete and documented according to the Commission's regulations.

1.4.1 Scoping

Before preparing this EIS, we conducted scoping to determine what issues and alternatives should be addressed. Scoping Document 1 was distributed to interested agencies and others on August 8, 2011. It was noticed in the Federal Register on August 17, 2011. Two scoping meetings, both advertised in the *Juneau Empire*, were held on September 7, 2011, in Juneau, Alaska, to request oral comments on the project. A court

²⁰ In 1994, MMPA section 101(a)(5) was amended to establish an expedited process by which citizens of the United States can apply for an authorization, referred to as an Incidental Harassment Authorization, to incidentally take small numbers of marine mammals by harassment.

reporter recorded all comments and statements made at the scoping meetings, and these are part of the Commission's public record for the project. In addition to comments provided at the scoping meetings, the following entities provided written comments:

<u>Commenting Entity</u>	<u>Date Filed</u>
State Representative Cathy Munoz	October 3, 2011
Forest Service	October 7, 2011
Alaska DFG	October 7, 2001
U.S. Department of the Interior, National Park Service (Park Service)	October 7, 2011
U.S. Department of the Interior, Fish and Wildlife Service (FWS)	October 11, 2011
NMFS	October 11, 2011

A revised scoping document (Scoping Document 2), addressing these comments, was issued on February 1, 2012.

1.4.2 Interventions

On July 31, 2014, the Commission issued a notice that Juneau Hydro had filed an application for an original license for the Sweetheart Lake Project. This notice set September 29, 2014, as the deadline for filing protests and motions to intervene. In response to the notice, the following entities filed motions to intervene:

<u>Intervenor</u>	<u>Date Filed</u>
Forest Service	July 31, 2014
Alaska Electric Light and Power (AEL&P)	August 15, 2014

1.4.3 Comments on the Application

A notice requesting comments, final terms, conditions, and recommendations was issued on November 17, 2014. The following entities commented:

<u>Commenting Agency and Other Entity</u>	<u>Date Filed</u>
Alaska Energy Authority	December 23, 2014
State Representative Cathy Munoz	January 15, 2015
Alaska DFG	January 16, 2015
Forest Service	January 16, 2015
Interior	January 20, 2015

<u>Commenting Agency and Other Entity</u>	<u>Date Filed</u>
Alaska Department of Natural Resources (Alaska DNR)	January 20, 2015
U.S. Environmental Protection Agency	January 26, 2015
U.S. Senator Lisa Murkowski	January 26, 2015
U.S. Representative Don Young	January 26, 2015
State Senator Dennis Egan	February 11, 2015

The applicant filed reply comments on February 28, 2015.

1.4.4 Comments on the Draft Environmental Impact Statement

The draft EIS for the Sweetheart Lake Project was issued on October 29, 2015. Comments on the draft EIS were due by December 29, 2015. Written comments on the draft EIS were filed by the following entities:

<u>Commenting Entity</u>	<u>Date Filed</u>
U.S. Environmental Protection Agency	December 22, 2015
Interior	December 23, 2015
Representative Cathy Muñoz	December 23, 2015
Forest Service	December 24, 2015
Carol Bookless	December 28, 2015
Alaska DFG	December 29, 2015
Alaska DNR	December 29, 2015
Alaska Electric Light and Power Company	December 29, 2015
NMFS	December 29, 2015
Scott Spickler	December 29, 2015
International Union of Operating Engineers	January 6, 2016

In addition, the Commission accepted oral testimony on the draft EIS at two public meetings, both held on December 2, 2015, in Juneau, Alaska. The transcripts from these meetings were filed in the administrative record for the project.

The applicant filed reply comments on January 20, 2016.

Appendix A summarizes the oral and written comments, includes our responses to those comments, and indicates where we made modifications to the draft EIS.

FERC/EIS-0263F
POA-2009-1064

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR HYDROPOWER LICENSE**

Sweetheart Lake Hydroelectric Project—FERC Project No. 13563-003

Alaska

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
888 First Street, NE
Washington, DC 20426

U.S. Army Corps of Engineers District, Alaska
Juneau Regulatory Field Office
44669B Sterling Highway
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May 2016

overhead transmission line could result in bird collisions which could cause direct injury or mortality of individual animals. Designing the overhead line consistent with practices outlined by APLIC, including marking anadromous stream crossings to increase visibility would minimize this potential to the greatest extent practicable. A greater presence of humans during construction and to a lesser degree during operation, would increase the chances of bear-human interactions and the potential need to kill or relocate bears. Juneau Hydro's bear protection plan would minimize such interactions to the extent practicable.

Existing recreational access to the project area would be periodically interrupted during the 2-year construction period. Noise generated by project construction activities would temporarily reduce the wilderness-type experience presently offered to recreationists in the project vicinity. Decreased flow over the upper falls in the project bypassed reach during project operation would reduce the aesthetic appeal of the falls to fishermen in the area. Construction of project facilities would introduce man-made modifications to an existing unmodified natural landscape that could not be mitigated to meet all Tongass National Forest Land and Resource Management Plan scenery management objectives.

5.3.2 Irreversible and Irretrievable Resource Commitments

An irreversible commitment of resources refers to the loss of production or use of a resource from a land use decision, that once executed, cannot be changed. An irretrievable commitment of resources applies to losses of production or use of renewable resources for a period of time.

The construction and operation of the proposed project under the action alternatives would commit lands and waters from their current use to use for energy production. Therefore, any land or water occupied by the proposed project, including vegetated areas, wetlands, and wildlife habitat occupied by project facilities, would be irretrievably lost for at least the duration of any licenses issued.

During project construction, the loss of productive soils resulting from erosion would be irreversible. Road construction, excavating the power tunnel, and construction of the visual landform barrier in front of the powerhouse under the staff alternative would cause the greatest concentration of soil displacement and sediment movement.

5.4 SUMMARY OF SECTION 10(j) RECOMMENDATIONS AND 4(e) CONDITIONS

5.4.1 Fish and Wildlife Recommendations

Under the provisions of section 10(j) of the FPA, each hydroelectric license issued by the Commission shall include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife resources affected by the project.

Section 10(j) of the FPA states that whenever the Commission believes that any fish and wildlife agency recommendation is inconsistent with the purposes and the requirements of the FPA or other applicable law, the Commission and the agency shall attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency.

Alaska DFG was the only agency to file 10(j) recommendation in response to our notice of intent to prepare an EIS and request for comments, final recommendations, terms and conditions, and prescriptions. On January 16, 2015, Alaska DFG filed 22 section 10(j) recommendations. In the draft EIS, we determined that 18 of the 22 recommendations fell within the scope of section 10(j). Of those recommendations, we determined that the recommendation to evaluate pulse flows may be inconsistent with the substantial evidence standard of section 313(b) of the FPA. We also determined that the pink and chum salmon monitoring component of the agency's recommended Biotic (Aquatic) Habitat Monitoring Plan may be inconsistent with the FPA.

On October 29, 2015, we informed Alaska DFG of the inconsistencies. On December 29, 2015, Alaska DFG filed additional information to support the need for evaluating pulse flows and modified its recommendation to include details of its recommended pulse flow release and monitoring plan. After analyzing this information in section 3.3.2.2 and weighing the benefits in section 5.2.2, we now recommend developing a plan to evaluate the effectiveness of releasing pulse flows in any license issued; therefore, this issue is resolved.

In a December 29, 2015 letter, Alaska DFG also stated that because Alaska DFG conducts annual escapement counts on Sweetheart Creek as part of its pink salmon Index Stream monitoring, FERC's recommendation to not require pink and chum monitoring is acceptable to Alaska DFG; therefore, we consider this issue resolved.

After considering the comments and information filed on the draft EIS, we revised our findings as discussed above. Table 5-1 lists the recommendations subject to section 10(j), and whether the recommendations are adopted under the staff alternative. Environmental recommendations that we consider outside the scope of section 10(j) have been considered under section 10(a) of the FPA and are addressed in the specific resource sections of this document and our recommendations provided in section 5.2.2. Of the 18 recommendations that we consider to be within the scope of section 10(j), we wholly include 17, and include 1 in part.

Table 5-1. Alaska Department of Fish and Game recommendations for the Sweetheart Lake Project (Source: staff).

Recommendation	Agency	Within the Scope of Section 10(j)	Annual Cost	Adopted?
1. Continuously release 3 cfs from the dam site into the Sweetheart Creek bypassed reach. This flow may be temporarily modified, if required, by operating emergencies beyond the control of Juneau Hydro, or for short periods upon agreement between Juneau Hydro, Alaska DFG, and other requesting agencies.	Alaska DFG	Yes	No cost; any potential lost energy is already included in the annual generation estimate	Yes
2. Operate the project to maintain instantaneous instream flows in the anadromous reach, pursuant to the schedule below: - January–February (40 cfs) - March (45 cfs) - April (119 cfs) - May–October (300 cfs) - October–December (117 cfs)	Alaska DFG	Yes	No cost; flows would be released through the powerhouse turbines	Yes

Recommendation	Within the Scope of Section 10(j)			Annual Cost	Adopted?
	Agency				
3. Release a minimum of four pulse flows of up to 486 cfs between July 1 and August 31 of each year and develop a pulse flow release and monitoring plan, in consultation with the resource agencies.	Alaska DFG	Yes		\$5,440	Yes
4. Operate and maintain a stream gage in the project tailrace (according to USGS standards). Data would be recorded at a frequency of not greater than 15-minute intervals. Consult with resource agencies regarding how to monitor and ensure compliance with the instream flow provisions.	Alaska DFG	Yes		\$9,720	Yes
5. Provide fail-safe provisions to ensure that flow releases are provided continuously to the bypassed and anadromous reaches of Sweetheart Creek during routine maintenance periods, emergency project shutdowns, and interruptions to the power grid.	Alaska DFG	Yes		Included in the cost of construction	Yes

Recommendation	Agency	Within the Scope of		Annual Cost	Adopted?
		Section 10(j)	Section 10(j)		
6. Design and construct the powerhouse tailrace to exclude fish from entering the turbine draft tubes to avoid or minimize the potential for fish injury or mortality.	Alaska DFG	Yes		\$16,120	Yes
7. Install a fish screen at the power tunnel intake structure in Sweetheart Lake to prevent the entrainment and impingement of salmonid fry. The screen shall be designed based on NMFS fish screening criteria.	Alaska DFG	Yes		\$87,630	Yes
8. Prepare a sockeye smolt transport plan.	Alaska DFG	Yes		\$53,280	Yes
9. Consult with resource agencies and prepare a Biotic (Aquatic Habitat) Monitoring Plan. The plan would include the following components: (1) monitoring of pink and chum salmon spawning in the anadromous reach and intertidal areas of Sweetheart Creek; and (2) monitoring of resident Dolly Varden char and rainbow trout spawning and young of year recruitment in Sweetheart Lake and the inlet streams.	Alaska DFG	Yes, with regard to preparation and implementation of the plan. No, with regard to consultation, because consultation is not a specific fish and wildlife measure.		\$4,310	Yes, except for requirement to monitor pink and chum salmon spawning.

Recommendation	Agency	Within the Scope of Section 10(j)	Annual Cost	Adopted?
10. Establish timing windows for instream construction activities and stream crossings (in consultation with the Alaska DFG habitat biologist assigned to the project).	Alaska DFG	Yes, except for agency consultation, which is not a specific fish and wildlife measure.	Negligible	Yes
11. Locate all clearings and road/trail corridors a minimum of 100 feet, measured horizontally, away from ordinary high water of Sweetheart Creek and its tributaries. Clearings and road/trail corridors for the powerhouse and appurtenant facilities, penstock, and tailrace are excluded from this requirement. Except for stream crossings, locate the transmission line corridor a minimum of 100 feet, measured horizontally, away from ordinary high water of all streams identified in the latest (2011) edition of Alaska DFG's Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes.	Alaska DFG	Yes	Included in the cost of the Erosion Control Plan.	Yes

Recommendation	Agency	Within the Scope of Section 10(j)		Annual Cost	Adopted?
12. Construct transmission line power poles to conform to guidelines accepted by FWS and described in <i>Suggested Practices for Avian Protection on Power Lines—State of the Art in 2006</i> .	Alaska DFG	Yes		\$26,100	Yes
13. Implement a Bear Safety Plan that includes: (1) operating practices when in bear country that minimize possible conflict; (2) minimizing encounters and avoid areas often used by bears, if possible; (3) keeping construction sites and refuse areas clean of substances that attract bears; (4) installing bear-proof garbage receptacles and other measures during construction to prevent bears from obtaining food or garbage; (5) dealing with problem bears; and (6) notifying Alaska DFG of any bear-human conflicts.	Alaska DFG	Yes, except that the provision for notifying a resource agency of any bear-human conflicts is not a specific fish and wildlife measure.		\$1,780	Yes

Recommendation	Within the Scope of Section 10(j)			Annual Cost	Adopted?
	Agency	Yes	No		
14. Aircraft shall maximize their distance away from mountain goat habitat and observed mountain goats. To the extent possible, a 1,500-foot vertical or horizontal clearance should be maintained from mountain goat habitat and observed mountain goats. Of particular concern is use of kidding habitat between May 15 and June 15.	Alaska DFG	Yes		\$1,310	Yes
15. Construct the project penstock underground, to protect wildlife movement.	Alaska DFG	Yes		Included in the cost of construction	Yes
16. Restrict employees, contractors and subcontractors from hunting, sport fishing, or trapping within 0.5 mile of project features.	Alaska DFG	No, because hunting, fishing, and trapping are state-regulated activities over which the Commission has no jurisdiction.		Negligible	No, enforcement of hunting, fishing, and trapping regulations are the responsibility of the state.

Recommendation	Agency	Within the Scope of Section 10(j)	Annual Cost	Adopted?
17. Develop and implement an Erosion Control Plan that includes (1) a description of site characteristics to include: soils, landscape, vegetation, topography, nearby waters including springs and seeps; (2) preventative measures based on site-specific conditions; (3) location of areas for storage or deposition of removed overburden including erosion control to be utilized in those areas; (4) detailed descriptions, functional design drawings, and specific topographic locations of all control measures, including riprap placement and stream setback and proposed stabilization measures for spoil material; and (5) prescriptions for revegetation of all disturbed areas including treatment of overburden deposition sites, plant species, and methods to be used. Also, file the final plan with the Commission at least six months before the start of any land disturbance or land clearing activities.	Alaska DFG	Yes, except that the timing of the filing of the plan is an administrative matter, and therefore, is not a specific fish and wildlife measure.	\$9,090	Yes, except for the timing of filing the plan with the Commission

Recommendation	Agency	Within the Scope of Section 10(j)		Annual Cost	Adopted?
18. Provide for an ECM who: (1) is employed through the duration of project construction; (2) has the authority to issue cease work orders in the field as deemed necessary; (3) documents compliance with license conditions; and (4) is responsible for preparation of weekly construction reports to be filed with the Commission and Alaska DFG.	Alaska DFG	No; not a specific measure to protect, mitigate, or enhance fish and wildlife resources		\$18,500	Yes
19. Monitor turbidity in Sweetheart Creek upstream and downstream of construction activities on a daily basis.	Alaska DFG	Yes	Included in the cost of the Erosion Control Plan.		Yes
20. Implement the Hazardous Substances Plan filed with the license application that includes procedures for reporting and responding to releases of hazardous substances.	Alaska DFG	Yes		\$320	Yes

Recommendation	Agency	Within the Scope of Section 10(j)	Annual Cost	Adopted?
21. Within 10 days of detecting events that are out-of-compliance with license requirements, notify the Commission, Alaska DFG, and other requesting agencies that the event occurred. Take immediate steps to correct the out-of-compliance event including causes of such events so that they do not recur, and document those steps in a detailed description of the event to be filed with FERC and requesting agencies, no later than 30 days following detection of the event.	Alaska DFG	No; these are administrative measures related to compliance, and therefore, they are not specific measures to protect, mitigate, or enhance fish and wildlife resources	Negligible	Yes
22. Provide representatives of Alaska DFG free and unrestricted access to, through, and across project lands and waters and project works, in the performance of their official duties upon appropriate advance notification.	Alaska DFG	No; not a specific measure to protect, mitigate, or enhance fish and wildlife resources	\$0	Yes

SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



EXHIBIT A: PROJECT DESCRIPTION

PREPARED BY:

**Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802**

MAY 2014

**JUNEAU HYDROPOWER INC.
SWEETHEART LAKE HYDROELECTRIC PROJECT
EXHIBIT A**

PROJECT DESCRIPTION

Exhibit A is presented herein and addresses the FERC regulation 18 CFR 4.41 (b).

The proposed 19.8 MW Sweetheart Lake Hydroelectric Project (Project) would be a storage hydroelectric generation project located on the east shore of Gilbert Bay and Sweetheart Lake within the limits of the City and Borough of Juneau. Maps showing the location of the Project and the proposed Project Boundary are provided in this Draft License Application at 4.41 (h) **Exhibit G- Project Maps**.

Updated Description from FERC EIS 10/29/2015:

The proposed project would consist of the following new facilities: (1) A 280- foot-wide, 111-foot-high roller-compacted concrete dam to be constructed at the existing natural outlet of Lower Sweetheart Lake, with a 125-foot-wide ungated overflow spillway at a crest elevation of 636 feet; (2) a 525-foot-long, 10-foot-high, 10-foot-wide arched reservoir outlet tunnel at the right dam abutment; (3) a 45-foot-long, 25-foot-wide, 16-foot-high rectangular concrete intake structure, with six 7-foot-diameter, 10-foot-high cylindrical fish screens adjacent to the right dam abutment; (4) a 9,612-foot-long, 15- foot-wide, 15-foot-high horseshoe-shaped, unlined underground power tunnel; (5) an 896-foot-long, 9-foot-diameter saddle-supported steel penstock installed within the lower portion of the power tunnel; (6) three 160-foot-long (mean length), 7- to 9-foot-diameter buried steel penstocks connecting the lower portion of the power tunnel to the powerhouse; (7) a 160-foot-long, 60-foot-wide, 30-foot-high concrete and steel powerhouse; (8) three 7.1-MW Francis turbines with 6.6-MW generators with a total installed capacity of 19.8 MW; (9) a 541-foot-long, 30- to 90-foot-wide rock tailrace with a fish exclusion structure, discharging to Sweetheart Creek; (10) a 4,400-foot-long coastal road from the powerhouse to a dock/landing site for aerial and marine vehicle access, located on the east shore of Gilbert Bay; (11) an 8.69-mile-long, 138-kilovolt (kV) transmission line traversing Gilbert Bay, the Snettisham Peninsula, and Port Snettisham, consisting of: (a) two buried segments, totaling 4,800 feet in length; (b) two submarine segments, totaling 25,700 feet in length; and (c) one 15,400-foot-long overhead segment; (12) a 22,000-square-foot fenced switchyard adjacent to the powerhouse; (13) a 25-foot-long, 5-foot-wide, 4-foot-deep salmon smolt re-entry pool located adjacent to the powerhouse and tailrace; (14) a 4,225-square-foot caretaker's facility near the dock; (15) a 4,800-foot-long, 12.47-kV service transmission line and communication cable extending from the powerhouse to the dock and caretaker's facility, providing operational electricity and communications; (16) a 10,000-foot-long, 12.47-kV service transmission line and communication cable extending from the powerhouse to the dam site, providing operational electricity and communications; (17) a 400-square-foot shelter at the dam site for employee use during smolt transport facility operations; and (18) appurtenant facilities.

Construction of the project would raise Lower Sweetheart Lake from a water surface elevation of 551 feet mean lower low water and a surface area of 1,414 acres to a new maximum water surface elevation of 636 feet and surface area of 1,702 acres, and a new minimum water surface elevation of 576 feet and surface area of 1,449 acres.

Preliminary drawings of the proposed project facilities and supporting information used as the basis of the conceptual design are presented in **4.41 (g) Exhibit F-General Design Drawings and Preliminary Supporting Design Report**. This exhibit contains information defined as Critical Energy Infrastructure Information (CEII) and therefore filed under separate cover as required by the Commission's regulation at 18 CFR 4.32(k) and 18 CFR 388.112 and 388.113. Requests for access to information defined as CEII should be made to the Commission's CEII Coordinator.

(b) Exhibit A is a description of the project. If the project includes more than one dam with associated facilities, each dam and the associated component parts must be described together as a discrete development. The description for each development must contain:

4.41(b)(1) The physical composition, dimensions, and general configuration of any dams, spillways, penstocks, powerhouses, tailraces or other structures to be included as part of the project;

PROJECT STRUCTURES

Dam

The Sweetheart Lake Dam would be a roller-compacted concrete (RCC) gravity-type dam with an estimated height of 111 feet (from the downstream toe to the top of dam) and a crest length of 280 feet. The Dam would have a thickness of 100 feet at the base of the dam. The top of dam would be at EL 651.1 feet mean lower low water (MLLW), and the overflow spillway crest would be at EL 636 feet MLLW (the high normal pool elevation). The top of dam elevation was selected to match the routed probable maximum flood (PMF), which is discussed below under "Spillway." The dam section would consist of a vertical upstream face and a stepped downstream face with an overall slope of 0.85 horizontal to 1.0 vertical (0.85H:1.0V). It is anticipated that the steps on the downstream face would be 4 feet high with a horizontal "tread" of 3.4 feet. The overall section geometry was selected based on preliminary gravity stability analyses in accordance with FERC criteria.

The RCC dam would extend across the full valley and tie into approved rock foundation on both abutments. An overflow spillway would be constructed in the center of the RCC dam, and flow would be discharged directly down the stepped downstream face of the RCC to the base of the dam. Outside of the spillway limits, the dam would

include a 25-foot-wide vertical chimney section. Concrete parapets would be constructed at the crest of the dam to EL 651.1 feet MLLW.

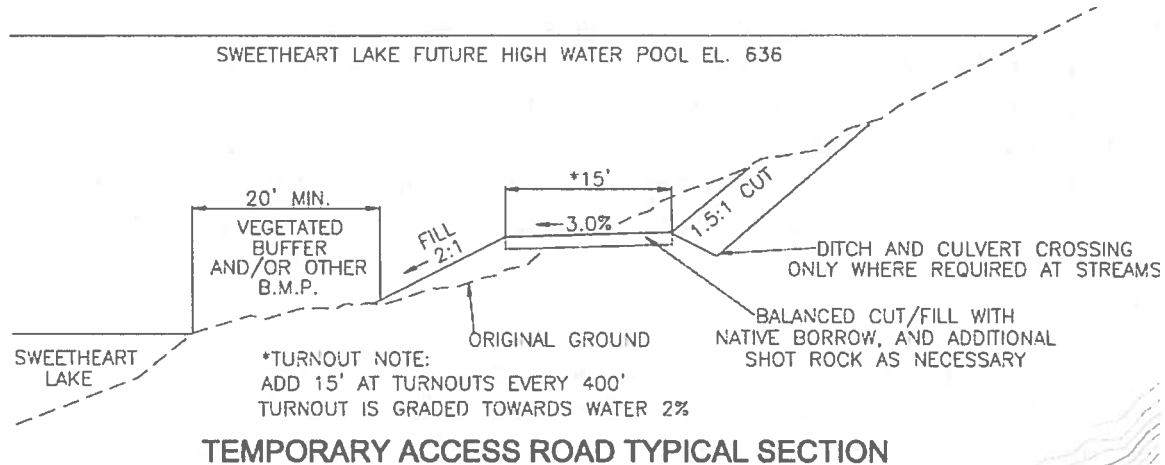
RCC would be placed sequentially in 1-foot-thick lifts. There is a tendency for leakage to develop along the lift lines, particularly when using dry (high Vebe time) RCC mixes. To control leakage along these lift lines, most RCC dams include a low-permeability upstream-facing system in combination with carefully designed RCC mix, with attention to lift joint preparation and treatment. The proposed dam would include a grout-enriched RCC (GERCC) upstream face or a conventional concrete facing system to lower the permeability between adjacent lifts of RCC. Air-entrained RCC may be used to improve the freeze-thaw durability. In addition, a low Vebe time (wetter mix) would be used in conjunction with a retarding admixture to improve the bond between lifts.

Dental and leveling concrete would be used in the foundation to fill discontinuities and to provide a level surface to start efficient RCC production. On the abutments, dental concrete would be applied and GERCC would be used against the steep irregular rock surface. Following construction of the RCC dam, a foundation grouting program would be initiated from the crest of the dam. Drill holes would be advanced through the dam in an orientation to intercept potential discontinuities based on geologic mapping performed on the foundation prior to construction. Grouting after construction of the RCC dam would take this activity off of the critical path and would provide better access to steep abutment slopes from the top of the dam.

Reservoir Area Temporary Access Road

The reservoir area temporary access road primarily located on the southern shoreline of Sweetheart Lake provides vehicle, material and personnel access to and from the damsite and temporary construction camp and staging area.

Exhibit F-3 (1) shows a typical section and the location of the road, and is partially included below. The materials will be native rock, balanced cut and fill. The road simply provides temporary access between the dam site and staging/camp areas located in a relatively flat and safe location east of the dam site. Road is temporary and will be inundated by the minimum reservoir level. Full details appear in Exhibit F-3(1).

Figure A-1 Reservoir Area Road Profile

Spillway

The spillway would be located in the center of the dam. The spillway would consist of the following:

The 125-foot-wide ungated overflow spillway would pass the full PMF rainfall event with the maximum water surface at EL 651.1 feet MLLW, considering only flow over the spillway (no outlet works or power plant discharge). All routings assume that the starting reservoir elevation is at the spillway crest EL 636 feet.

The peak outflow for the 100-year rainfall event is estimated to be 7,007 cubic feet per second (cfs). The peak outflow during the PMF is 20,350 cfs.

The downstream face of the dam has a slope of 0.85H:1.0V and 4-foot-high steps for energy dissipation. Based on preliminary geologic investigations and evaluation of topographic conditions downstream of the dam, we have assumed that a formal stilling basin would not be required. An engineering assumption has been made that some armoring and anchoring of weak seams in the rock may be warranted. Additional geotechnical investigations and rock scour analyses would be performed during final design.

Reservoir Outlet Works

At the end of dam construction, the diversion tunnel would be converted to reservoir outlet works. During excavation of the diversion tunnel, a vertical shaft would be constructed from the right nonoverflow section of the dam. Following dam construction, a concrete bulkhead would be constructed downstream of the shaft, and a roller gate would be installed to control future discharges. A portion of the tunnel under the dam would be lined, and the rock would be grouted from the interior of the tunnel, as needed. A concrete vault would be constructed in the top of dam to protect the gate hoist system. The outlet works would consist of the following:

- A concrete headwall structure at the upstream portal of the diversion tunnel, with provisions for installing trashracks and stoplogs or a steel bulkhead.

- A concrete-lined section of the tunnel under the dam crest, with a concrete bulkhead for mounting the roller gate.

- A single 6-foot X 8-foot roller gate for draining the lake if required.

- A conduit would extend from the screened intake structure and extend through the diversion tunnel to maintain a discharge of 3 cubic feet per second into Sweetheart Creek just downstream of the dam. This conduit would include a flow meter and release valve at the diversion tunnel vertical shaft to monitor and document discharges. The system would be designed for local or remote operation.

The outlet works have been sized to allow drawdown of the reservoir from EL 636 feet MLLW (maximum normal pool) to EL 576 feet MLLW (minimum normal pool) in 53 days assuming a 6-foot by 8-foot gate installed in the diversion tunnel, a base flow of 500 cfs into the reservoir, and no flow through the power tunnel. The maximum discharge through the gate is 1,850 cfs at the normal pool elevation of 636 feet MLLW.

Stream Diversion Tunnel and Cofferdam

During construction, the creek would be diverted through a tunnel in the right abutment. The tunnel would be excavated by the drill-and-blast method (DBM) to a 10-foot-wide by 10-foot-high straight-leg horseshoe shape, and would be approximately 525 feet long. Temporary lined rockfill cofferdams would be constructed upstream and downstream of the proposed dam to provide protection from routine storms and to provide vehicular access across the stream channel.

An upstream cofferdam would be constructed approximately 150 feet upstream of the main dam to approximately EL 565 feet MLLW, which would be roughly 14 feet above the current pool elevation. This height of cofferdam would provide 5 feet of freeboard during a 100-year rainfall event. The downstream cofferdam would be constructed to approximately EL 555 feet MLLW to control water from entering the dam excavation footprint from the downstream direction.

In order to construct the dam a diversion tunnel will have to be installed to divert the water around the dam construction footprint. This tunnel will be nominally 10 feet wide by 10 feet tall strait leg horseshoe and is 525 feet long (Exhibit F-6). The diversion tunnel will be excavated using conventional drill and blast methods. The tunnel will be driven from one heading and will be excavated with a top and bottom bench. Blast hole drilling will be executed with jack-leg drills. Anticipated drill depths are 6 feet with the leading top bench height being approximately 5 feet and the trailing bottom bench height being approximately 5 feet. Muck handling and removal for the diversion tunnel will be with small LHD loaders and/or large skid steer loaders. The machinery needs to be small enough so that it can be transported to the Sweetheart Lake site by heavy lift helicopter. The tunnel rock produced from the diversion tunnel may be processed for future RCC aggregate at the Sweetheart Lake site. Muck bays will not be utilized for construction of the Diversion Tunnel

Fish Collection and Transportation

A fish collection barge would be seasonally placed in Sweetheart Lake to collect out-migrating sockeye smolts. Smolts would be collected and prepared for helicopter transport from Sweetheart Lake and delivered to the smolt reentry pool located in the powerhouse/switchyard area. The fish collection barge would be hauled out and stored on the northern lakeshore near the intake area. A ramp with a winch would be used to remove the fish collection barge system when not in use.

Intake, Power Tunnel, and Penstock

The intake for the power tunnel would consist of a rectangular structure with six cylindrical screens mounted on top. The screens would be manufactured of wedge wire with an opening of 3/32 inch and designed for an approach velocity of 0.4 feet per second or less. A log boom would be installed to help protect the screens from floating debris. The screens would be equipped with a water jetting system operated by submersible pumps. This system would flush smaller debris off of the screens to improve hydraulic efficiency. The approximate dimensions of the intake would be 45 feet long, 25 feet wide and 16 feet tall. The structure would have an invert of EL 529 feet MLLW.

The power tunnel would have a 15-foot by 15-foot straight-leg horseshoe shape and would be a 9,621-foot-long tunnel from portal to portal. The tunnel would be excavated by DBM, and the spoil volume would be approximately 71,225 bank cubic yards. The main tunnel heading would be excavated from the lower portal near the powerhouse, and the spoils would be used for surfacing the access roads, building an aesthetic mound to mask the powerhouse from Sweetheart Creek, and as aggregate for the dam. Rock quality based on initial tests is very good; therefore, it is expected that the tunnel would be mostly unlined. The alignment has been selected to minimize the length of the lined tunnel and to provide a convenient location for future construction of a surge tank if that becomes warranted. Rock bolts and other support elements would be installed as necessary, and the tunnel would be lined with shotcrete in areas of poor-quality rock such as shear zones, faults, or highly fractured zones.

The majority of the power tunnel is planned to be unlined. Approximately 896 feet from the lower portal of the tunnel, the flow would transition to a 9-foot-diameter saddle-supported steel penstock with a wall thickness of about 1 inch. At the lower portal, the steel penstock would transition to a manifold supplying flow to the three turbines and synchronous bypass valves; the average length of the manifold would be about 160 feet. The manifold would initially transition to 7-foot diameter and ultimately branch into 4-foot-diameter pipes that would neck down to 3-foot diameter pipe right before the spherical valves before entering into the turbines. Bifurcations of the manifold would be encased in concrete as required for thrust resistance. The upper portion of the manifold would be above ground, but the balance of the manifold would be buried in fill under the switchyard. A 12-foot-long section of the upper portion of the manifold would be removable to provide access into the tunnel; the removable section would be supported on rails for convenient movement.

The power tunnel will be excavated using conventional drill and blast methods. The tunnel will be driven with two headings, upstream and downstream. The downstream heading will be the primary heading and will commence after the downstream portal is developed. Blast hole drilling at the downstream heading will be executed with a two boom drilling jumbo. Anticipated drill depths are 12-foot which will result in an approximately 11-foot round pull. It is anticipated that the downstream heading will be taken full face. The upstream heading will commence from the design inlet portal at Lower Sweetheart Lake. This heading will be secondary and will only be active when the Lower Sweetheart Lake site is accessible. Blast hole drilling will be executed with jack-leg drills. Anticipated drill depths are 6-foot' and the heading will excavated with a leading top bench and a trailing bottom bench at with bench heights of approximately 6 feet and 9 feet respectively. Muck handling and removal methods for the downstream tunnel heading are:

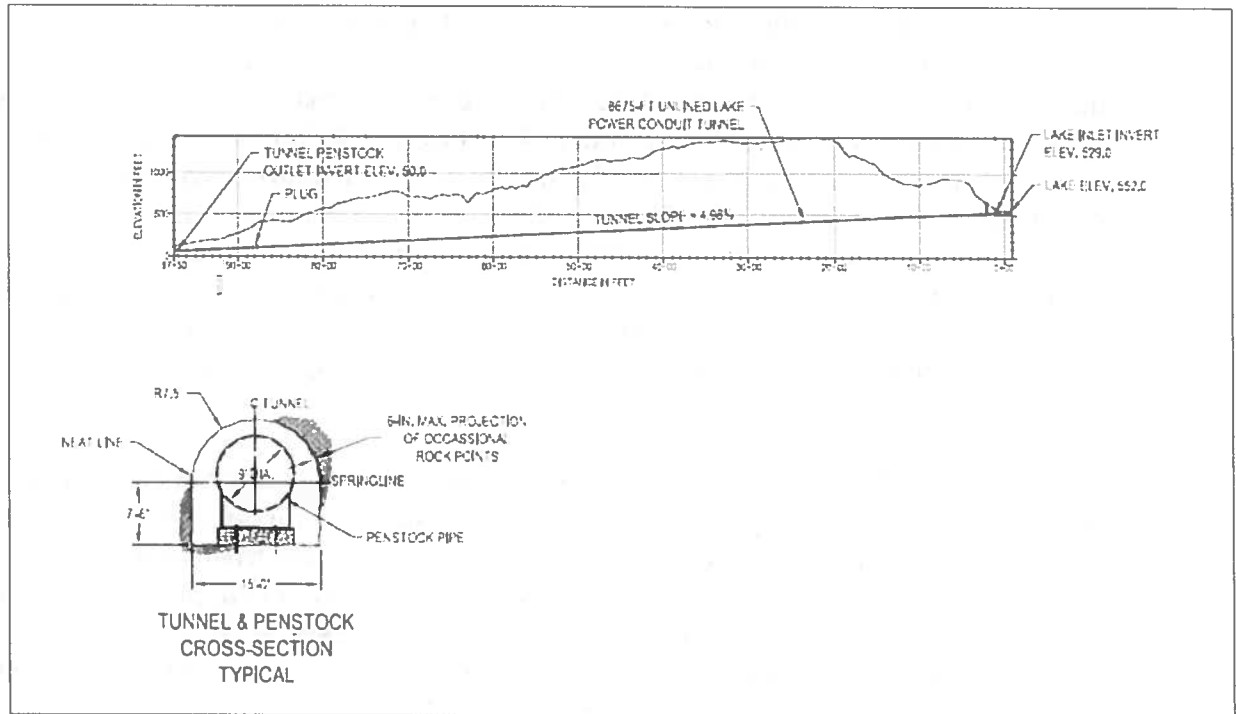
Rolling stock muck removal: This would be executed with a combination of low profile haul trucks and load haul dump (LHD) loaders. To increase efficiency of the mucking operation, muck/passing bays will be excavated in the tunnel at prescribed stations. The bays consist of a widened tunnel cross section that allows for temporary storage of tunnel muck. These bays also provide a location for machinery to pass in the tunnel.

Conveyor muck removal: This would be executed with a combination of electric conveyors and LHD loaders. As the tunnel excavation proceeds conveyor sections will be installed. It is anticipated that the conveyors will be maintained to within 200 to 500 feet of the active tunnel face. Muck bays will still likely be incorporated to increase the efficiency of the tunnel mucking operations.

Muck handling and removal for the upstream tunnel heading will be with small LHD loaders and/or large skid steer loaders. Muck bays will also be employed in the upstream tunneling operations. The machinery needs to be small enough so that it can be transported to the Sweetheart Lake site by heavy lift helicopter. Tunnel rock produced from the downstream heading will be used to build the coastal road and dock areas. The tunnel rock produced from the upstream heading will be processed for future RCC aggregate at the Sweetheart Lake site. All tunnel rock will be used at the project site. No export of tunnel muck material is anticipated.

Once the power tunnel is completely excavated and prior to the installation of the penstock pipe it will be used to transport equipment and personnel to and from the site for RCC dam construction activities.

Figure A-2 shows the planned tunnel and penstock.

Figure A-2 Power Tunnel and Penstock Profile**Powerhouse**

The powerhouse would be located in a deep excavation approximately 600 feet northwest of the anadromous barrier on Sweetheart Creek and approximately 2,000 feet east of the confluence of Sweetheart Creek and Gilbert Bay. JHI would build the powerhouse in the deep excavation to reduce disturbances, to allow infrastructure to blend in with surroundings, and to mitigate light and noise emitting from operations. The intended goal is to lessen or virtually eliminate scenic and audio disturbance in the area of powerhouse operations.

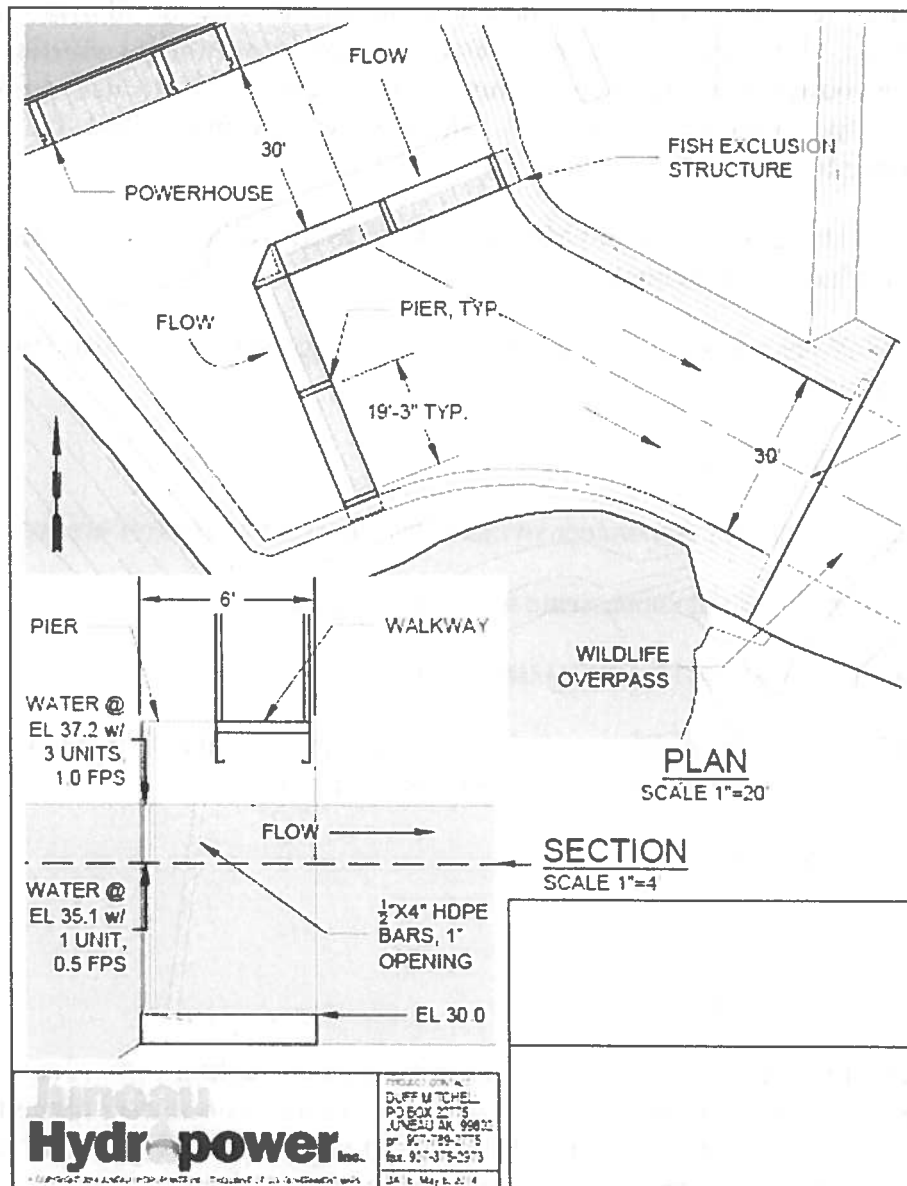
The powerhouse would be approximately 60 feet wide and 160 feet long. The floor level of the powerhouse would be at EL 44.5 feet, and the floor level of the machine hall would be EL 34.5 feet MLLW. Most electrical equipment would be located on a mezzanine that would extend along one side of the powerhouse at EL 44.5 feet MLLW. The bottom of the powerhouse foundation would be at EL 18 feet MLLW, and the top of the superstructure would be at EL 75 feet MLLW. The powerhouse superstructure would

be a steel frame with precast concrete wall panels and a metal or concrete roof. The powerhouse will include three generator bays and a service area.

Tailrace

The tailrace would be an excavated channel approximately 541 feet long. At the powerhouse, the excavation would be 32 feet deep and 90 feet wide. The channel would transition over a length of about 120 feet to a trapezoidal channel with a 30-foot base width and varying side slopes. The initial 94 feet of the 30-foot-wide channel would be covered with an arch culvert and backfilled to provide a natural-looking wildlife crossing over the channel of the tailrace. The backfill over the wildlife crossing would allow revegetation and assist in screening the powerhouse and associated facilities. Downstream of the wildlife crossing, the channel would resemble a natural creek and would provide approximately 250 linear feet of additional channel for personal-use fishermen before discharging into Sweetheart Creek near the base of the anadromous barrier falls.

A fish exclusion structure would be located in the tailrace channel approximately 30 feet downstream of the powerhouse to prevent fish from reaching the powerhouse. The fish exclusion structure would include four panels of high-density polyethylene (HDPE) bar screen with 1-inch bar clear spacing and a maximum approach velocity of 1 foot per second. The fish exclusion device would be installed at the upper end of the 30-foot-wide channel to prevent fish from reaching the powerhouse". The fish exclusion devise is shown on Exhibit F-9 and in section F-12(2).

Figure A-3 Tailrace showing Fish Exclusion Structure**Smolt Reentry Pool**

The smolt reentry pool would be located adjacent to the powerhouse and at the head of the tailrace structure. The smolt reentry pool would provide temporary holding of sockeye salmon smolt for imprinting and release into the tailrace. The reentry pool would measure 500 cubic feet (25 feet length X 5 feet width X 4 feet depth).

Switchyard

The switchyard would be located adjacent to the powerhouse on fill over the penstock manifold. This location has been selected to allow screening by existing vegetation and the powerhouse to the maximum extent possible. The switchyard would cover approximately 22,000 square feet (ft²). The switchyard would include the following equipment:

- Three 7.5/8.4 megavolt-ampere (MVA) 12.47-138-kilovolt (kV) transformers with concrete basin foundations.

- Three 145-kV circuit switchers for disconnect and isolation of the main power transformers.

- One 145-kV SF₆¹ circuit breaker.

- Three pairs of manual disconnect switches for isolating the circuit breaker.

- Interconnection with the submarine transmission cable.

- Associated buswork and metering transformers.

- A 100-kW diesel generator for providing station service when the plant is not operating, including a double-walled fuel storage tank.

- An oil-water separator.

Marine Access Facilities

The Project is not accessible by road, as none exists emanating from Juneau, Alaska, the closest community to the Project, which is 33 miles northwest of the Project. Any road from Juneau would traverse the TNF; would require the navigation of multiple water crossings, steep terrain, and possibly snow and ice fields; and would cause visual impacts not compatible with the TLMP. In addition, this area is predominantly under the Inventoried Roadless Area Conservation Rule, making a road of this length unlikely and

¹ Circuit breaker to 6,000 mechanical operations, and 3,000 operations at 6 kA

highly controversial. For these reasons, an access road between the Project and Juneau is not feasible.

However, the Project is accessible by air and water. Therefore, the Applicant plans to access the Project sites for both construction and operation primarily by water, with additional access by air. The Applicant proposes to construct a dock and supporting infrastructure to accommodate both watercraft and floatplane. The proposed dock location on Gilbert Bay just north of Sweetheart Creek provides a convenient and safe deep-water location for construction of marine access facilities, as follows:

A dual-height marine ramp would be used for loading and unloading freight barges and landing craft. The ramps would have a minimum width of 50 feet, a slope of 15 to 20%, and a compacted rock surface. The toe of the ramp would be near EL (-15) feet MLLW, allowing low-tide access without grounding of the vessels. The ramp would slope up to EL 25 feet MLLW for high-tide access. The sides and front slopes would be protected with rock riprap.

Floating docks would provide floatplane and boat access for passengers and freight during construction and maintenance. The floatplane float would be nearly 1,800 ft² with three fendered faces for multidirectional access to accommodate weather conditions. It would be attached to a 3,000-ft² heavy-duty steel and timber small boat float. The floats would be secured by 8- to 24-inch-diameter steel piles. A 100-foot by 14-foot drive-down ramp would connect the float to the staging area concrete abutment. The ramp would have an open grating deck.

The staging area would be constructed adjacent to the docks and float ramp and connect them to a powerhouse access corridor. Similar to the access ramps, the staging area would be constructed of clean shot rock with side slopes protected with rock riprap. The staging area would be approximately 150 feet wide by 200 feet long to allow for materials, equipment, and personnel needs during construction.

Rock for the ramps, staging area, and access corridor would come from the powerhouse and tunnel excavation.

The dock and marine facilities are located on State of Alaska lands and provided to JHI through a tidelands lease that would consist of : 1.06 acres State of Alaska.

Coastal Road/Trail

There would be one main access road for the Project. JHI has designed a 4,400-foot-long coastal road/trail. The road/trail would be constructed with clean shot rock and built in accordance with the USACE Coastal Engineering Manual (CEM) principles.

The road is not for public vehicle access and is constructed only for project construction and maintenance vehicles. Upon completion of the Project construction, the road/trail surface would be condensed to a one-lane road, by vegetating 40% of the construction width for scenic mitigation. The road/trail would contain a buried 138-kV high-voltage transmission line and a 12.47-kV distribution service line. The service line would provide power to the marine facility and caretaker facility. The buried 138-kV high-voltage transmission line would enter Gilbert Bay at the marine transition terminal adjacent to the staging area.

The coastal road/trail would traverse southward along the eastern shore of Gilbert Bay for just over 4,400 feet. The road would be constructed of processed rock derived from the powerhouse and tunnel excavations. The subgrade width would be up to 25 feet to provide for large construction machinery and materials. The road shoulders would be constructed with rock riprap layers to protect from coastal erosion. The seaward shoulders slope would be varied and patterned to further mitigate scenic impacts.

The coastal road/trail would sit on both federal and State of Alaska lands: 1.15 acres of federal land and 7.61 acres of State of Alaska tidelands. This coastal road/trail would tie in and go over the existing man/bear main trail that currently exists in the Sweetheart Creek area.

JHI has agreed to work with the Forest Service on this main trail, as well as work with the Forest Service to improve the trail system that emanates from the coastal road/trail. Per consultations and draft Recreation Management Plan (Appendix Z) with the Forest Service, existing side trails and locations for new trails have been mutually identified to strategically improve, reroute to channel recreation visitors in a manner to decrease bear and human interactions.

Cut and fill quantities are listed below. Total road tidal fill is 152,000 cubic yards and Dock Fill is 35,000 cubic yards.

The project is designed to be balanced in cut and fill. There are no off-site quarry sites and borrow areas. The project quantities are estimated and presented in Table A-1:

Table A-1 Project Cut and Fill Quantities

Fill Areas	Cubic Yards
DOCK	35,000
ROAD Tidelands	152,000
ROAD Uplands	6,000
ROAD Construction Staging Areas	8,000
VISUAL LANDFORM BARRIER	28,000
Tailrace and powerhouse backfill	8,000
Dam	22,000
Submarine Cable Armoring	7,000
Total Fill	266,000

Cut Areas	Cubic Yards
ROAD CUT	1,000
CARETAKERS FACILITY	2,000
POWERHOUSE to el 50	121,000
POWERHOUSE foundation and tailrace	34,000
POWER TUNNEL	71,225
DIVERSION TUNNEL	2,000
DAM OVERBURDEN	13,000
Total Cut	244,225
Total Cut assuming 15% swell	280,850

Quantity Balance Summary	Cubic Yards
Excess Material (=Total Swelled Cut - Total fill)	14,850
Solution Stockpile Height in Feet Assuming 200x300 and 150X300 feet Dam Temp. Const. Areas	4.1

Typical net swell factor will be 10-20% depending on excavated soil the final use of it (riprap, road, dam). The project assumes 15%. Excess fill material can be distributed evenly on temporary construction areas at the dam level of the Project.

Operations Facilities

A planned caretaker/shop facility would be located along the access road on Gilbert Bay. This facility would house a full-time caretaker at the location to secure and safeguard infrastructure and to perform maintenance. The facility would measure 4,225 ft². Electricity would be furnished to the facility by the hydropower project.

Potable water would be supplied from a well system that is designed to meet Alaska DEC and CBJ requirements.

There would be a planned shelter facility located at Sweetheart Lake near the dam site to provide overnight accommodations to operations and maintenance (O&M) and fish collection and transport personnel. This facility would measure approximately 400 ft².

These operations facilities would be located on federal land managed by the Forest Service.

4.41(b)(2) The normal maximum water surface and normal maximum water surface elevation (mean sea level), gross storage capacity of any impoundments to be included as part of the Project; {Note Project Datum is Mean Lower Low Water*}

*In order to apply datums for surveying or coastal management they must be reduced to Mean Lower Low Water (MLLW), which is the reference datum for predictions, bench mark publication and nautical charting.

IMPOUNDMENT

The reservoir created by the main dam will have the following characteristics:

Normal maximum water level	636 feet mllw
Surface area at normal maximum water level	1,701.5 acres
Storage capacity at normal maximum water level	128,019 acre-feet
Normal minimum water level	576 feet mllw
Surface area at normal minimum water level	1449 acres
Storage capacity at normal minimum water level	33,969 acre-feet
Active storage capacity	94,069 acre-feet

Maximum water level (PMF)..... 651.1 feet mllw

Storage capacity at PMF water level 153,176 acre-feet

4.41(b)(3) The number, type, and rated capacity of any proposed turbines or generators to be included as part of the project;

GENERATING UNITS

(i) Turbines and generators

The powerhouse will contain three generating units with the following characteristics (preliminary):

Turbine type 6.6 MW Francis, horizontal axis

Turbine rated head 558 feet

Turbine rated flow 158 cfs

Turbine speed 900 rpm

Generator type Synchronous

Generator voltage 12.47 kV

Generator rated capacity..... 3 X 6,600 kW@0.8P.F.

4.41(b)(4) The number, length, voltage and interconnections of any primary transmission line proposed to be included as part of the project [See 16 USC 796(11)];

PRIMARY TRANSMISSION LINE

A 138-kV transmission line would connect the powerhouse to the Snettisham Hydroelectric Project on the north side of Port Snettisham.

The transmission line from the Project to the Snettisham Transmission Line would consist of five component segments:

1. A buried 138-kV transmission cable from the proposed powerhouse to a marine cable vault situated on the eastern shore of Gilbert Bay with a length of 4,400 feet. A 12.47-kV service line of approximately 4,400 feet would run next to the 138-kV

buried cable from the powerhouse to the caretaker facility and dock to provide electrical service to these pieces of infrastructure.

2. A 9,700-foot-long 138-kV submarine transmission cable from the marine cable vault on the eastern shore of Gilbert Bay to a marine cable vault on the western shore of Gilbert Bay.
3. A 15,400-foot-long 138-kV overhead transmission cable from the marine cable vault on the western shore of Gilbert Bay to a marine cable vault located past Sentinel Point on the southern shore of Port Snettisham.
4. A 16,000-foot-long 138-kV submarine transmission cable from the marine cable vault on the southern shore of Port Snettisham to a marine cable vault on the northern shore of Port Snettisham.
5. A 400-foot-long 138-kV buried transmission cable and switchyard from the marine cable vault on the northern shore of Port Snettisham to the Snettisham Transmission Line.
6. Additionally, a 10,000-foot-long 12.47-kV service line from the powerhouse through the power tunnel and to the dam site would service and provide power at the dam site during operations.

4.41(b)(5) The description of any additional mechanical, electrical, and transmission equipment pertinent to the Project;

APPURTENANT EQUIPMENT

Accessory Mechanical and Electrical Equipment

The Powerhouse will contain the following accessory mechanical and electrical equipment:

- 25 Ton bridge crane with 10 ton auxiliary hook
- 36 inch *spherical type turbine shutoff valves* (per generating unit)
- 20-inch energy-dissipating synchronous bypass valves
- Hydraulic power units (per generating unit)
- Electronic governors (per generating unit)

- Static exciters (per generating unit)
- 125 VDC station battery
- 12.47 kV switchgear (per generating unit)
- Electronic control system for remote automatic operation

(iii) Plant Switchyard

The switchyard at the Sweetheart power plant will include:

- Three 7.5/8.4 MVA 6.6-138 kV transformers
- Three 145 kV circuit switchers
- One 145 kV SF6 circuit breaker
- Associated buswork, metering transformers, fencing, and containment systems
- 100 kW emergency diesel generator.

(iv) Dam site equipment

- One 30 ton Crane
- Automatic control
- Log booms
- Log moving vessel
- Smolt Collection barge, ramp and accessory equipment
- Minimum Instream Flow Release Facility
 - Six stainless Steel screens 3/32 inch opening, 10 feet high, 7 feet diameter (shared with power intake)
 - Water jetting system including submersible pumps and controls
 - Digital readout box in power tunnel shaft building

- 18-inch gate valve
- 18-inch diameter pipe to diversion tunnel
- Flow meter, digital readout at dam site, and communication lines
- 18-inch butterfly valve with local and remote control

Because the project is only be accessible by boat, seaplane or helicopter, for operation and maintenance the Applicant will assign to the project a landing craft for moving large equipment and materials and two boats for moving personnel and small cargo. Other O&M equipment on site will include a backhoe, ATV with trailer, snowcat, and snow removal equipment.

4.41(b)(6) Lands of the United States enclosed within the project boundary

LANDS OF THE UNITED STATES

All project features except for portions of the coastal road/trail, marine facilities, and adjacent buried transmission line will be located on lands of the United States (Tongass National Forest).

The project boundary shown on Exhibit G-1 encompasses 2054.24 acres of Tongass National Forest land, as indicated in the table A-1 below. Additionally, the Project encompasses 131.18 Acres of non-federal tideland and submerged lands of the State of Alaska, as indicated in the table A-2 below. The project boundary has been determined as follows:

- For the reservoir, the 700 foot contour,
- For the power tunnel, 100 feet each side of the centerline,
- For the access trail/road, 100 feet each side of the centerline,
- For other features, a boundary was created with sufficient room to ensure that all project temporary construction areas and permanent improvements stay within the boundary and these features typically does not exceed 200 feet beyond the expected area of disturbance.

Table A-2 – Lands of the United States

Lands of the United States			
Township and Range	Section(s)	Project Features	Acres
T44S, R73E	32	Lake and Reservoir	6.49
T45S, R73E	1	Lake and Reservoir	94.08
	2	Lake and Reservoir	326.83
	3	Lake and Reservoir	6.83
	9	Lake and Reservoir	3.63
	10	Lake and Reservoir	358.8
	11	Lake and Reservoir	151.3
	15	Lake and Reservoir	221
	16	Lake and Reservoir	353.63
	17	Lake and Reservoir	23.38
	19	Tunnel	20.54
	20	Lake and Reservoir	225.84
	21	Lake and Reservoir	109.15
	29	Lake, Res, and Dam	41.74
	30	Tunnel	3.05
T45S, R72E	24	Dock and Road, Tunnel	23.18
	25	Powerhouse and Road	15.64
T45S, R72E	4,9,15,16,22	Snettisham OH Line	70.07
T45S, R71E	1	Snettisham UG Line	3.06
TOTAL FEDERAL LAND			2058.24

LANDS OF THE STATE OF ALASKA**Table A-3 – Lands of the State of Alaska**

Lands of the STATE OF ALASKA			
Township and Range	Section(s)	Project Features	Acres
T45S R72E	24	Dock and Road tideland	18.43
	25	Road tideland	0.13
T45S R72E	22,23	Gilbert Bay Submarine Line	38.8
S R72E , R	R72E Sec 4-7, R71E Sec 1,12	Port Snettisham Submarine Line	73.82
STATE OF ALASKA land			131.18

PROJECT BOUNDARY

The Project Boundary is presented by township and section in Figure A- 3 and Figure A-4 below:

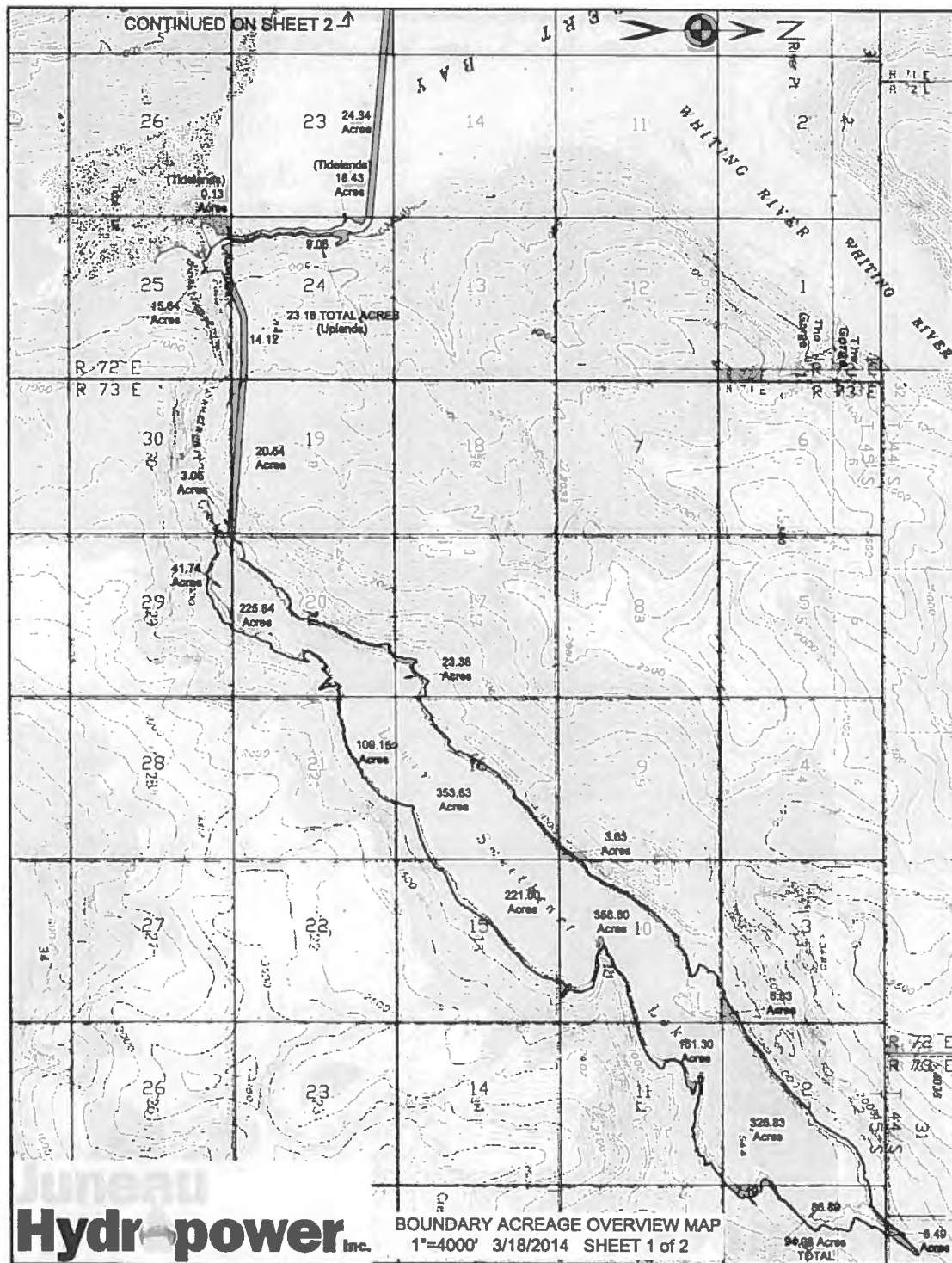
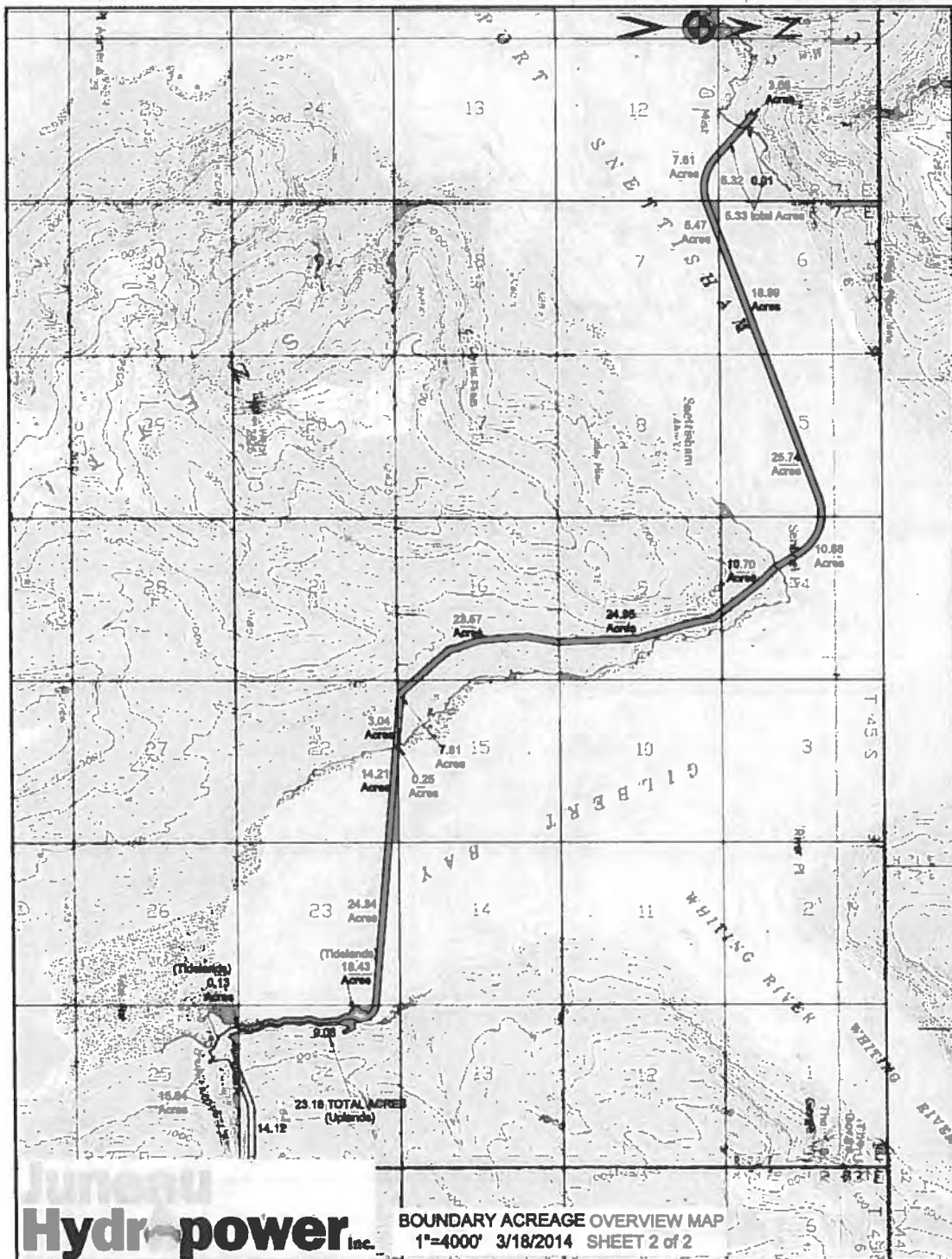
Figure A-3- Project Boundary US and State of Alaska Lands Map by township and section Sheet 1

Figure A-4 Project Boundary US and State of Alaska Lands Map by township and section Sheet 2



PROJECT SUMMARY DATA**Table A-4 – Tabular Presentation - Sweetheart Lake Hydroelectric Project
Summary Data**

Project Feature	Description
Project Boundary	
Federal land	2058.24 acres
State of Alaska land	131.18 acres
Power Output	
Nameplate capacity	19.8 MW
Average annual generation	116 GWh
Drainage Area	
Natural drainage area	35 square miles
Average annual natural outflow from Lower Sweetheart Lake	336 cfs
Sweetheart Lake Reservoir	
Normal maximum water elevation	EL 636 ft. MLLW
Surface area at normal maximum water elevation	1,701.5 acres
Active storage capacity	94,069 acre-feet
Maximum annual fluctuation of reservoir	60 ft.
Maximum water level (PMF)	EL 651.1 ft. MLLW
Dam	
Roller-compacted concrete gravity structure	111 ft. high, 280 ft. long, 100 ft. wide
Spillway hydraulic capacity	20,350 cfs
Diversion Tunnel	
Length	525 ft.
Tunnel straight leg horseshoe	10 ft. high X 10 ft. wide
Gate operation vertical shaft	10 ft.
Hydraulic capacity	1,850 cfs
Intake Structure and Fish Screens	
Elevation of intake top of screens	557.5 ft.
Intake structure concrete length	45 ft.
Intake structure concrete width	25 ft.
Intake structure height	16 ft.
Fish screens	6 cylinders
Cylinder size	7 ft. diameter X 10 ft. high

Project Feature	Description
Power Tunnel	
Total length	9,621 ft.
Steel lined length	as required
Concrete lined length	as required
Horseshoe shape dimensions	15 ft. high X 15 ft. wide
Excavation method	drill-and-blast method (DBM)
Penstock	
Penstock length (to lower portal)	896 ft.
Penstock diameter and material	9 ft., steel
Penstock manifold length (lower portal to powerhouse)	160 ft.
Penstock manifold diameter	7 ft. to 5 ft. 8 in. to 4 ft to 3 ft. steel
Powerhouse	
Powerhouse floor area	9,600 ft ²
Length	160 ft.
Width	60 ft.
Height (above floor)	30 ft.
Switchyard dimensions ¹	Approx. 22,000 ft ²
Generating Units, Number, and Size Type	
Number of units	3
Turbine type and orientation	Francis, horizontal axis
Net head (rated)	558 ft.
Flow (rated)	158 cfs
Specific speed metric units	160
Rotational speed	900, rpm
Turbine power (rated)	7,081 kW
Required submergence	-2.4 ft.
Generator rated capacity	6,600 kW
Generator voltage	12.47 kV
Total installed capacity	19.8 MW
Cooling system	water
Smolt Reentry Pool	
Interior dimensions	25 ft. X 5 ft. X 4 ft. deep
Tailrace	
Length	541 ft.
Bottom width	Varies, 30-90 ft.
Transmission Line	
Total submarine 138 kV	25,700 ft.
Total overhead 138 kV	15,400 ft.

Project Feature	Description
Total buried 138 kV	4,800 ft.
Total service line 12.47 kV	14,400 ft.
Access Road/Trail	
Length	4,400 ft.
Construction width-shoulder to shoulder	25 ft.
Final width (reverted to one lane-vegetated)	15 ft.
State acres for road/trail	7.26 acres
Federal acres road/trail	1.51 acres
Fill volume required	approx. 158,000 cy
Dock and Marine Facility	
State acres	1.06
Fill required	approx. 35,000 cy
Pad elevations	El 25 ft. to 27 ft. MLLW
Gilbert Bay Caretaker Facility, Shop	
Size	4,225 ft ²
Wells	3
Well depth	approx. 50-150 ft.
Line length	approx. 700 ft.
Sweetheart Lake Shelter Facility	
Size	400 ft ²

Note:

1. Fenced and gated, located adjacent to powerhouse – contains power transformer, circuit breakers, and disconnect switches.

SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



RECREATIONAL MANAGEMENT PLAN (RMP)

PREPARED BY:

**Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802**

MAY 2014

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SWEETHEART LAKE HYDROELECTRIC PROJECT

RECREATIONAL MANAGEMENT PLAN (RMP)

1.0 AGENCY PLAN REQUESTS

In October 2013, Juneau Hydropower Inc. (JHI) submitted a subsequent draft license application and draft Preliminary Draft Environmental Assessment (PDEA) for the Sweetheart Lake Hydroelectric Project to the Federal Energy Regulatory Commission (FERC). On October 22, 2013, FERC published notice and issued a request for comments and preliminary terms and conditions. FERC in its January 16, 2014, Comments (B-15), Recreation and Land Use, requested that a Recreational Management Plan (RMP) be submitted. JHI concurs that this is a necessary plan and is submitting this plan for comment.

1.1. Project Description

The Project consists of: (1) the existing Lower Sweetheart Lake, raised from a surface water elevation of 551 feet mean lower low water (MLLW) and a surface area of 1,414 acres to a new minimum surface water elevation of 576 feet and a new surface area of 1,449 acres and a maximum surface water elevation of 636 feet with a surface area of 1,702 acres; (2) a new, roller-compacted concrete dam 111 feet high (from the downstream toe to the top of the dam), 280 feet long, 100 feet thick at the base, constructed at the outlet of Lower Sweetheart Lake; (3) an independent intake structure with fish screen adjacent to the dam right abutment, which conveys water to a 15 X 15-foot horseshoe-shaped, 9,621-foot-long unlined tunnel; (4) a 9-foot-diameter, approximately 896-foot-long penstock installed within the lower portion of the tunnel, with approximately another 160 feet of buried 7-foot-diameter penstock and manifold connecting to the powerhouse; (5) a powerhouse containing three new Francis generating units (6.6 MW each) with a total installed capacity of 19.8 MW; (6) a 541-foot tailrace discharging flows to Sweetheart Creek, including a salmon smolt reentry pool located adjacent to the powerhouse and tailrace; (7) a fenced switchyard adjacent to the powerhouse; (8) a new, approximately 4,400-foot-long road from the powerhouse to the dock/landing site; (9) a new dock/landing site for boat, seaplane, barge/landing craft ramp and/or helicopter access, located on the east shore of Gilbert Bay; (10) a new, 138-kilovolt transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments); (11) a new, 14,800-foot, 12.47-kV service transmission line extending from the dam site to the marine facility providing operational electricity and communications for operations; (12) a caretaker facility with shop and maintenance facilities; (13) a shelter facility at the dam site; (14) appurtenant facilities.

To construct and operate the Sweetheart Lake Hydroelectric Project systems, JHI has developed designs and specifications to meet federal, state, and local regulations. In addition, JHI has developed the following plans to implement procedures to construct, monitor, and mitigate the safety, health, and environmental impacts to the Project. These plans are prepared to meet regulatory requirements of various involved agencies and some plans address similar issues. Together, these plans form a comprehensive resource to guide Project management through all phases of construction and into operation:

1.2. Appendix Z - JHI Preliminary Plans

The plans included in Appendix Z of the PDEA are as follows:

Access Management Plan (AMP)

Aquatic Habitat Restoration and Monitoring Plan (AHRMP)

- Fish Mitigation and Monitoring Plan (FMMP)

Bear Safety Plan (BSAFE)

Construction Plan (CP)

Environmental Compliance Monitoring Plan (ECMP)

Erosion and Sediment Control Plan (ESCP)

- Storm Water and Pollution Prevention Plan (SWPPP)

Fire Prevention Plan (FPP)

Hazardous Substances Plan (HSP)

Heritage Resource Plan (HRP)

Recreational Management Plan (RMP)

Scenery Management and Monitoring Plan (SMMP)

Solid Waste and Wastewater Plan (SWWP)

Spoils Disposal Plan (SDP)

- Acid Rock Disposal Contingency Plan (ARDCP)

Vegetation Management Plan (VMP)

A. Invasive Species Management Plan (ISMP)

B. Threatened, Endangered, Proposed for Listing, and Sensitive Plant Species Plan (TEPLSPSP)

Water Management Plan (WMP)

- A. Reservoir Management and Inundation Plan (RMIP)
- B. Stream Flow Management Plan (SFMP)
- C. Stream Flow Measurement Plan (SMP)

Wildlife Mitigation and Monitoring Plan (WMMP)

- Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan (TEPLSSP)

2.0 EXECUTIVE SUMMARY

The Recreational Management Plan (RMP) describes Juneau Hydropower, Inc.'s (JHI's) plan for operations and maintenance, design, and development of Sweetheart Creek Hydroelectric Project (Project) recreation facilities within the Project boundary. The goal of the RMP is to sustain recreational opportunity at the Project throughout the term of the FERC license in accordance with the relevant FERC requirements and the needs of the Project. This RMP provides guidance for addressing current recreational uses and opportunities in the Project area and provides a process for identifying the need over time for any new measures to enhance the use and enjoyment of the recreational resources associated with the Project.

Measures proposed within this plan are based on the recreational resources available at the Project. Proposed measures are defined within two programs: 1) the Recreation Facility Improvement Program; and 2) the Recreation Facility Operation, Maintenance and Monitoring Program.

3.0 INTRODUCTION

The development of the RMP is an important component of the licensing of the Project. The RMP will be used during the term of the license and incorporates a large investment by JHI to preserve and enhance the recreational aspects of the Project Area near Sweetheart Creek. This investment is intended to offset all non-wetland environmental effects associated with the Project. The RMP has two major components: These two major components are as follows:

- Recreation Facility Improvement Program (Section 8.0); and
- Recreation Facility Operation, Maintenance, and Monitoring Program (Section 9.0).

Additionally, the RMP establishes a schedule for providing improvements for recreational facilities during the term of the license.

JHI developed this plan based on agency comments and in consultation with the U.S. Forest Service (Forest Service), Alaska Department of Fish and Game (Alaska DFG), National Park Service (NPS), and other stakeholder members involved in the Alternative Licensing Process for FERC licensing.

4.0 BACKGROUND

JHI gathered information from printed and published resources on the types of recreational facilities and opportunities in the Project area and region to establish a regional context for the recreation study. Major sources included area recreation guidebooks, historical reports, regional maps, Forest Service reports, Alaska Department of Fish and Game (Alaska DFG) sources, and Internet research. These resources are listed in the References section of the PDEA.

Electronic surveys of **Personal-use Fishermen** permit holders were collected and analyzed. JHI received a list of all 2010 and 2011 Sweetheart Creek Personal-use Fishermen Permit holders from the Alaska DFG. JHI sent multiple letters of invitation to participate in this survey to each permit holder. Cassie Thomas of the National Park Service (NPS) suggested that JHI offer incentives to help increase survey participation. As a result, JHI developed a survey incentive program. Each survey participant was entered into a lottery for gift certificates to Western Auto in Juneau for cast nets that are sold there and used specifically in the personal-use fishery. Gift certificates for cast nets were awarded to randomly selected participants as an incentive to participate. This survey had 140 participants and represents a 39% survey response rate, which is considered a highly successful response rate for any survey.

JHI also used a list of all registered **Guides and Outfitters** that was obtained from the Forest Service Juneau Ranger District for guides and outfitters registered and authorized to operate in the JHI Project area. JHI sent multiple mailed invitations to participate to all valid guide and outfitter registrants. A second invitation was sent to any potential survey participant who failed to respond via the first invitation. Guides and outfitters were encouraged to participate with a survey incentive drawing for a submersible VHF hand-held radio. This survey had five participants, representing a 16% response rate. It should be noted that registered guides and outfitters have wider areas to operate in beyond the Project area, so it is likely that while some guides and outfitters could operate in and around the Project area, most do not or have not historically used the Project area.

JHI conducted personal interviews with the six Juneau-based commercial **air charter** companies to determine the number, frequency, and purpose of flights arriving to or leaving from the proposed Project area by recreational users. All of the air charter operators queried participated.

JHI also contacted and interviewed **commercial fishers** who use Gilbert Bay for a livelihood. Commercial fishermen's data and identity are protected as confidential information and cannot be disclosed per Alaska regulations. JHI observed fishing activity during the summer of 2012 and contacted 100% of the Dungeness fishermen known (by JHI) to use the Gilbert Bay area. Additionally, JHI interviewed two long-term fishermen who have gillnetted in the Port Snettisham drift gillnet fishery for several decades.

JHI contractors conducted multiple (25+) extended **site visits** to the proposed Project area, including Sweetheart Lake, Sweetheart Creek, and Gilbert Bay. During these visits, scientific observations were performed by qualified personnel from multiple scientific disciplines. Various data were collected that encompassed site habitat, geology, wildlife, and hydrology. Additional data collected included site photographs and in-field observations, as well as information relating to site conditions, operations, and recreational activities.

These sources along with agency comments provide the basis for the RMP.

5.0 RMP PURPOSE, PRINCIPLES, AND GOALS

5.1. Purpose

The purpose of the RMP is to describe JHI's role and responsibilities related to the management of the recreation resources of the Project during the term of the license. This RMP contains a comprehensive list of measures (in Section 7.0) for the maintenance and development of Project-related recreation facilities during the term of the license. The RMP also describes the process and procedures for managing recreation resources identified in PDEA Section 3.3.6 and monitoring recreation use and trends over the term of the new license.

5.2. Principles

The following principles were used to guide the development of the RMP:

- Recreation at the Project is an important resource that must be actively managed;
- JHI shall provide adequate access to Project lands and waters for recreational purposes in a manner that is consistent with responsibilities for protecting other resources at the Project;
- Management of the Project requires a balancing of energy, environmental, and social values;

- There is a desire to maintain and/or improve the experience now enjoyed by recreation users at the Sweetheart Creek area;
- It is acknowledged that capital improvements to recreation facilities can be costly and require adequate time to design, permit, and implement;
- JHI is responsible for the implementation of the RMP. The RMP does not include commitments by other agencies or organizations; and
- Other entities may propose and fund recreation site improvements and maintenance on Project lands with JHI approval and the approval of the Forest Service.

5.3. Goals

The goal of the RMP is to provide recreational opportunity at the Project throughout the term of the new Federal Energy Regulatory Commission (FERC) license in accordance with the relevant FERC and Forest Service requirements and the needs of the Project. This includes providing for current recreational uses and opportunities within the Project Boundary and identifying the need for any new measures or improvements to enhance recreational opportunity at the Project over the term of the license. This management plan provides a list of measures to support recreation uses and opportunities at the Project. This plan also serves as the roadmap for operating and maintaining recreational improvements.

The goal of the RMP will be met through the implementation of two major components that encompass JHI's overall approach to managing recreation resources for the term of the license. These two major components are as follows:

- Recreation Facility Improvement Program (Section 8.0); and
- Recreation Facility Operation, Maintenance, and Monitoring Program (Section 9.0).

6.0 EXISTING RECREATIONAL CONDITIONS

The Project area primarily concentrated around Sweetheart Creek provides recreational opportunities for local residents and personal-use fishermen participating in the Alaska DFG's Sweetheart Creek Personal-use Fishery. Alaska residents must secure a personal-use permit to participate in this fishery. Recreational infrastructure and facilities are nonexistent.

6.1. Gilbert Bay and Sweetheart Creek

Local residents have access to Gilbert Bay and Sweetheart Creek by vessel from Juneau, the closest community to the Project. This requires a 34-mile vessel ride to the location that requires open water crossing of Taku River and Stephens Passage.

Recreation surveys revealed that air travel to the Project area for recreational and personal-use fishers was nonexistent. The sockeye salmon run is the primary recreation target for visitors to the Project area.

There are no trail improvements or any form of recreational infrastructure at the Project area. Typically, vessels moor at the Gilbert Bay tidal flats and then come ashore via an inflatable or skiff. Bears have been known to investigate and puncture inflatable vessels left on the beach.

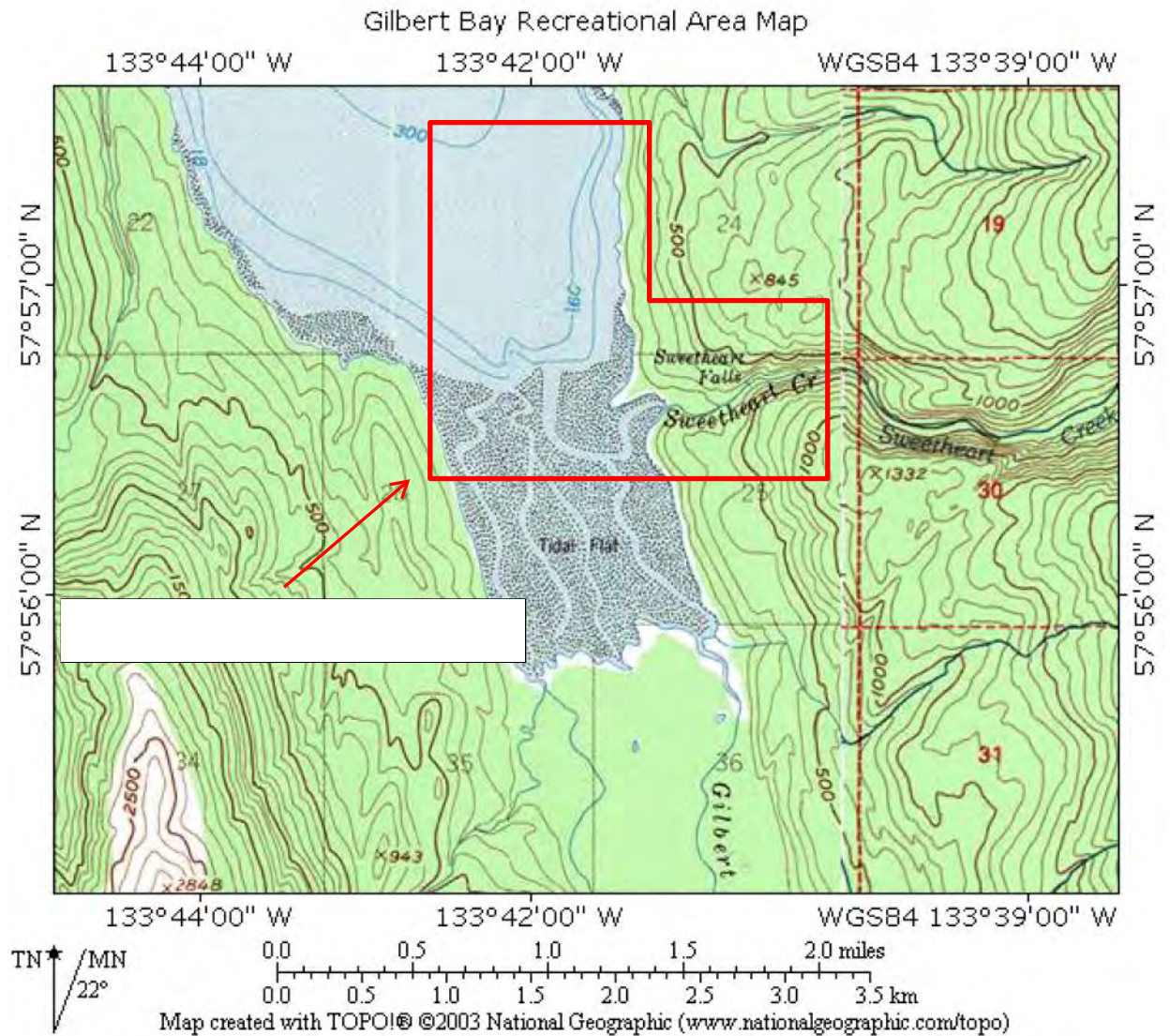
There are numerous animal and human trails leading from the beach area to the prime fishing areas approximately ¼ mile upstream. These trails are unimproved and become worn very quickly with traffic.

6.2. Sweetheart Lake

There is no trail leading to Sweetheart Lake, and cross-country routes are extremely difficult. Sweetheart Lake can only be accessed by plane or helicopter. Air charter surveys revealed that there are no recreational visitors to the lake, and there are no existing recreation sites at Sweetheart Lake. The lake does contain a 1950s-stocked rainbow trout population and naturally occurring Dolly Varden, but sport fishers are not drawn to Sweetheart Lake since there are more productive lakes with larger rainbow as practical and more cost-effective alternatives. There are no public facilities or watercraft available at the lake. Due to steep slopes, high banks, and cliffs around the lake, it is a difficult to impossible to traverse the lake shoreline. There are no planned trails by the Forest Service or JHI from tidewater to the lake expected during the term of the license.

7.0 RMP MEASURES

The RMP measures are provided in two components. One Program focuses on recreational facilities and infrastructure to be provided by the Project. The other program focuses on these facilities Operation, Maintenance and Monitoring. Below Figure 1 provides a map of the areas of concentrated recreation that exists in the Project Area.

Figure 1 Area of Concentrated Recreation within or near the Project Boundaries

8.0 RECREATION FACILITY IMPROVEMENT PROGRAM

The location of all proposed recreational facilities and measures are identified on a map included in Appendix A of this plan. Below are the narrative descriptions of the facilities and measures of the Recreational Facility Improvement Program.

These combined recreational features and measures as part of the Project are intended to meet, conform to, and support the recreational and other management prescriptions for a Semi-Remote Recreation Land Use Designation (LUD).

8.1. Sweetheart Creek Bear Safety and Interpretive Displays

In order to provide safety, as well as educational and interpretive information about the Project and Sweetheart Creek fishing areas, JHI will design and build permanent interpretive display panels at the head of the Sweetheart Creek Trail. Exhibits will include Project information; bear safety measures, current Alaska DFG personal-use regulations, and trail identification maps.

Appendix A of this plan includes conceptual designs of the proposed interpretive exhibits. Designs are subject to change over the life of the Project based on site conditions, permitting, and cost.

JHI will be responsible for the design, construction, and maintenance of the bear safety and interpretative displays for the term of the license. The Forest Service and the Alaska DFG will be responsible to design and approve their agency information that will be displayed for the term of the license.

8.2. Coastal Road/Trail and Hardened Trail System at Sweetheart Creek

To provide ease of travel, safety, and environmental protection from soil erosion that can come from human impact on wet trails, JHI will create a sloped hardened trail system to channelize traffic away from the creek and toward the traditional fishing areas located at Sweetheart Creek. JHI will design, construct, and maintain trails to Forest Service standards and in compliance with Alaska DFG Habitat permit for trails that are within stream buffers.

JHI will provide a gated one-lane road that will act as a trail from the boat float location to the powerhouse location. This route will allow boaters a deep-water route to access the trail to Sweetheart Creek. The coastal road/trail will not allow public use of motorized vehicles.

Trail users entering the forested area near Sweetheart Creek will be provided with direct access to primary fishing locations to alleviate and minimize the multiple trails that

occur during the personal-use fishery season. JHI plans to use crushed compacted rock to provide trails that can withstand the traffic with minimal maintenance.

JHI, upon guidance from the Forest Service, will not improve any trails on the southern shore of Sweetheart Creek to discourage human traffic in that areas to habituate bears to use the southern shore side of the creek and decrease human/bear interactions.

Appendix B of this plan includes designs and a map outline of the proposed trails. Designs are subject to change based on annual consultation with the Forest Service.

JHI will be responsible for the design, construction, maintenance, and cost of the improved trails for the term of the license.

8.3. Mooring Buoys

To provide safer moorage for noncommercial recreational visitors, JHI will place up to three moorings of sufficient size to anchor typical sport fishing vessels in Gilbert Bay near the mouth of Sweetheart Creek.

JHI will be responsible for the design, construction, maintenance, and cost of the moorings for the term of the license.

8.4. Visually Obscured Powerhouse and Switchyard Area

The powerhouse and switchyard as proposed are designed to decrease the infrastructure impact on the recreational environment.

JHI will be responsible for the design, construction, maintenance, and cost of the visual berms to be placed at the powerhouse and switchyard area.

8.5. Sockeye Collection and Transportation System

The personal-use sockeye fishery that was developed and is regulated by the Alaska DFG and maintained by the Douglas Island Pink and Chum, Inc. (DIPAC) hatchery is the most important recreational draw to the Sweetheart area. The hatchery raised sockeye smolt are released into Sweetheart Lake annually by DIPAC. JHI, collaborating with DIPAC, has designed a system to collect and transfer sockeye smolts from Sweetheart Lake to a reentry pool below the powerhouse for return to Lower Sweetheart Creek.

The construction and development of the fish collection barge and smolt reentry pool will take place during the construction phase of the Project. The smolt collection and transportation system will be fully functional 1 year after the commercial operations date. JHI also has made arrangements with DIPAC that DIPAC would assist JHI in

providing smolts should problems exist with the smolt collection barge. This measure is to ensure adequate release for the personal-use fishery.

JHI will be responsible for the design, construction, operations, maintenance, and cost of the smolt collection and transportation system for the life of the Project.

8.6. Rock Tailrace

JHI will construct a rock tailrace that is aesthetic and compatible with the surroundings. The Project tailrace serves two purposes. The primary purpose is to safely return water from the power tunnel and powerhouse to Sweetheart Creek. The tailrace must meet engineering standards. The other purpose is to increase the areas available for fishing. Currently, the fishing positions are located on steep bluffs above Sweetheart Creek. These locations will be retained, but the increase in fishing areas may decrease congestion. JHI will place rock to provide slope and trail stabilization.

8.7. Subsurface Transmission Lines

The 138-kilovolt (kV) high-voltage transmission cable and the 12.47-kV distribution cable in the Sweetheart Creek area will be buried. The transmission line crossing Gilbert Bay from the float dock will be a submarine cable. Buried and submarine transmission lines minimize visual landscape disturbances for recreational users and visitors to the area with the additional benefit of removing overhead transmission line hazards in the waterfowl sensitive area of southern Gilbert Bay.

JHI is responsible for the design, development, construction, operations, maintenance, and safety for all transmission line segments.

8.8. Dock and Ramp Access

JHI will construct a private dock and intertidal ramp on the eastern shore of Gilbert Bay north of the confluence of Sweetheart Creek. In our design, JHI has placed the dock and marine facility in a location that provides close deep water and will not intrude on the traditional mooring area of Gilbert Bay used by recreational boaters.

Limited (no overnight) noncommercial public access for the personal-use fishery on a use-at-your-own-risk basis will be allowed at the float and ramp.

JHI will be responsible for the design, construction, operation, maintenance, and cost of the dock facility for the life of the Project.

8.9. Litter Control

At no time, will there be public trash receptacles or other public access trash containers allowed on the Project area, particularly for bear safety. Visitors will be encouraged to adhere to the “pack it in, pack it out” philosophy. However, JHI will be responsible and provide limited litter collection to remove obvious trail litter and debris.

9.0 RECREATION FACILITY OPERATION, MAINTENANCE, AND MONITORING PROGRAM

For the term of the license, JHI will operation and maintain the recreation facilities described in this RMP. Table 1 provides a general description of the type of operations, maintenance, and monitoring activities anticipated to occur at each of the recreation facilities.

Table 1 General Recreational Maintenance Activities Performed by JHI

Maintenance Activity	Frequency
Visual Berm: Rock berm structures will be safe and maintained in good repair. If a structure is deemed in need of repair, it will be scheduled for repair.	Visual berms will be inspected and maintained annually for 5 years following commercial operations date (COD).
Barge Ramp: Surfaces are to be kept in serviceable condition and free of debris.	Boat ramps will be inspected and maintained annually by June.
Boat Docks: Dock surfaces, hardware, bumper strips, and other components will be maintained to provide safe and effective use.	Docks will be inspected and maintained annually by June. Maintenance and repairs will be performed on an as-needed basis.
Sweetheart Creek Bear Safety and Interpretive Displays: Signage and support structure will be kept in good and serviceable condition.	Bear safety and interpretative displays will be inspected and maintained annually by June and inspected weekly during the remainder of the summer.
Trash/Litter Collection: No trash containers will be provided to eliminate bear interaction. JHI will provide limited litter collection.	Limited litter collection will be conducted during the months of July and August.
Coastal Access Road/Trail: The Access Road/Trail will be maintained in good and passable condition.	The Access Road/Trail will be inspected annually by June and repaired as needed.
Trails: Trail surfaces will be maintained in good condition, and barriers will be removed to allow use of the trail. Trees and shrubs along the trails will be trimmed or removed seasonally, and weeds will be controlled as needed.	Trails will be inspected and maintained annually by June. Brush will be trimmed annually by mid-July.
Mooring Buoys: Moorings will be maintained in good condition.	Mooring buoys will be inspected annually by June.

10.0 RECREATION RESOURCES MONITORING AND EVALUATION PROGRAM

Recreation use monitoring will be an important component in determining when changes are required at Project recreation facilities to ensure adequate recreation access during the license term. JHI will collect recreation data in the Project area as needed to complete the FERC Form 80 requirement¹. JHI will use appropriate monitoring and analysis techniques to complete FERC Form 80 reporting. Recreation facility condition will be determined by periodic on-site inspections of each facility managed under this RMP. Every 20 years during the term of the license, JHI will conduct a comprehensive recreation review with the Forest Service Juneau Ranger District and the Alaska DFG to assess recreation use and needs related to the Project. The scope of the recreational review will be similar to assess and determine any collectively agreed-upon changes by all three parties.

Any changes to the RMP must be based on documented changes in use patterns, visitor needs (including facility upgrades), new Forest Service Tongass Land Management Plan standards, or new state mandates or regulations that are relevant to recreation in the Project area during the license term. Any disagreements regarding revisions to the RMP will be submitted to FERC for resolution.

11.0 RMP IMPLEMENTATION SCHEDULE AND BUDGET

The RMP will become effective following FERC approval and issuance of a FERC license.

A summary of the specific implementation measures and schedule is provided in Table 2. A summary of capital and annual budget for specific implementation measures is provided in Table 3.

¹ The FERC Form 80, *Licensed Hydropower Development Recreation Report*, is a brief summary of the existing recreation conditions and facilities associated with a FERC licensed hydroelectric project. Based on current FERC regulations, the forms must be completed every six years to document current public recreation use within the Project area.

Table 2 RMP Implementation Schedule

Action	Timeline
Visual Berms: Construct visual berms to provide scenic, sound, and light barrier between the powerhouse and switchyard area from Sweetheart Creek recreational areas.	By commercial operations date.
Barge Ramp: Construct a vessel ramp and make available for limited noncommercial use to the public.	1 year after commercial operations date.
Boat Dock: Construct a boat dock and make available for limited seasonal, noncommercial use to the public.	1 year after commercial operations date.
Sweetheart Creek Bear Safety and Interpretive Displays: Construct signage and a signage support structure for public display.	Installed during first year of construction.
Trash/Litter Collection: Provide limited litter collection on access road and side trails.	Commence during the first year of construction.
Access Road/Trail: Allow limited public access to road/trail.	1 year after commercial operations date,
Trails: Construct trails and maintain surfaces in good condition. Trees and shrubs along the trails will be trimmed or removed seasonally, and weeds will be controlled as needed.	Commence during the first year of construction.
Mooring Buoys. Mooring buoys will be constructed, emplaced, and maintained in good working condition.	One year after commercial operations date.
Recreation Resources Monitoring and Evaluation Program: FERC Form 80 reports and any relevant monitoring data, will be provided to the Forest Service and the Alaska DFG.	Every 6 years or as determined by FERC.
Recreation Resources Monitoring and Evaluation Program: Conduct a Recreation Use/Needs Review to document changes in recreation use and needs.	Every 20 years.

Table 3 RMP Budget

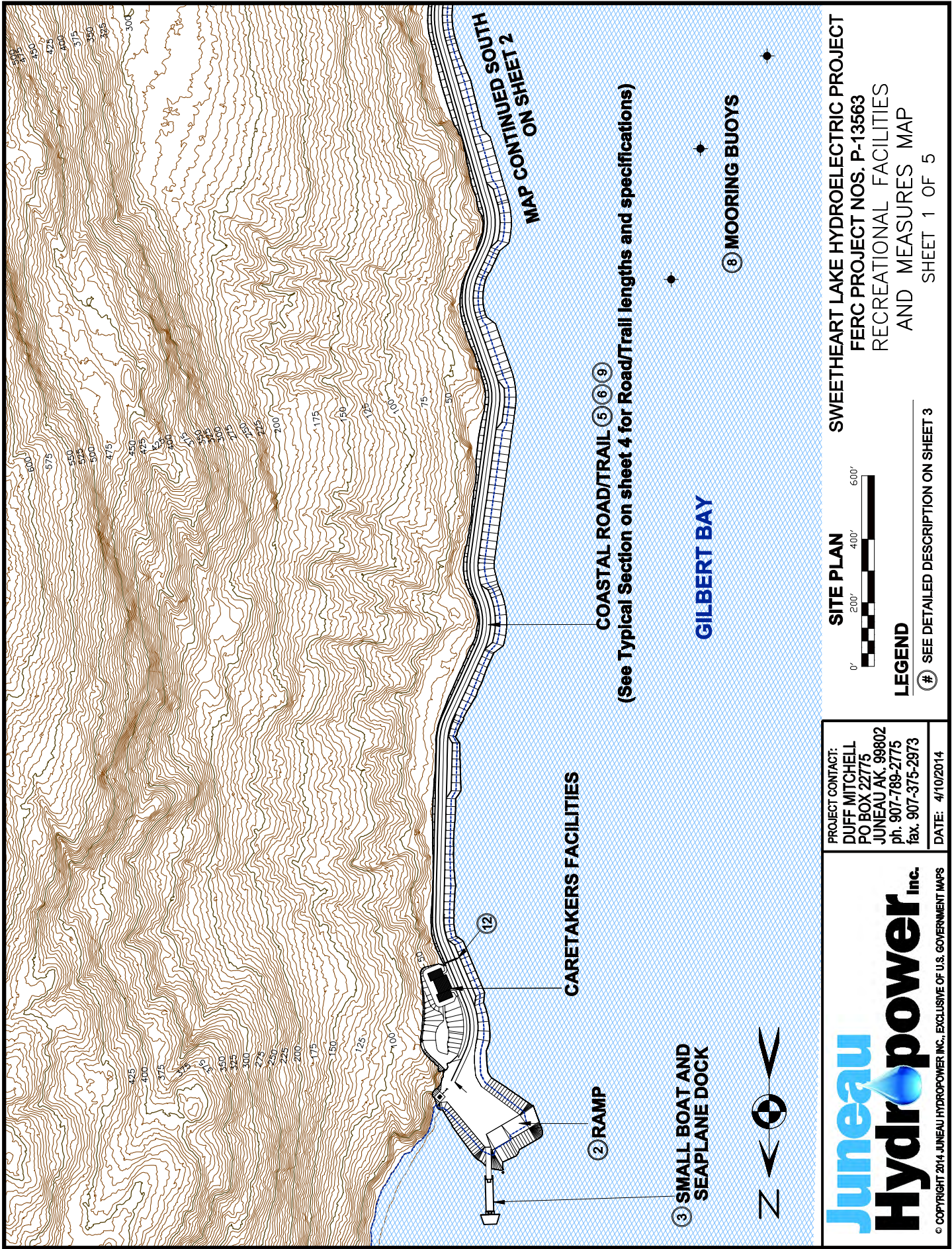
Measure or Infrastructure	Capital	Annual
Fish Collection Barge system and smolt pool	\$1,270,000	\$65,000
Mooring Buoys	\$25,000	\$5,000
Trails and Landform barrier maintenance	\$50,000	\$10,000
Sign Display	\$5,000	\$1,000
Dock signage and safety	\$5,000	\$1,000
Litter Control	\$0	\$10,000
Insurance-Limited Liability		\$25,000
	<u>\$1,355,000</u>	<u>\$117,000</u>

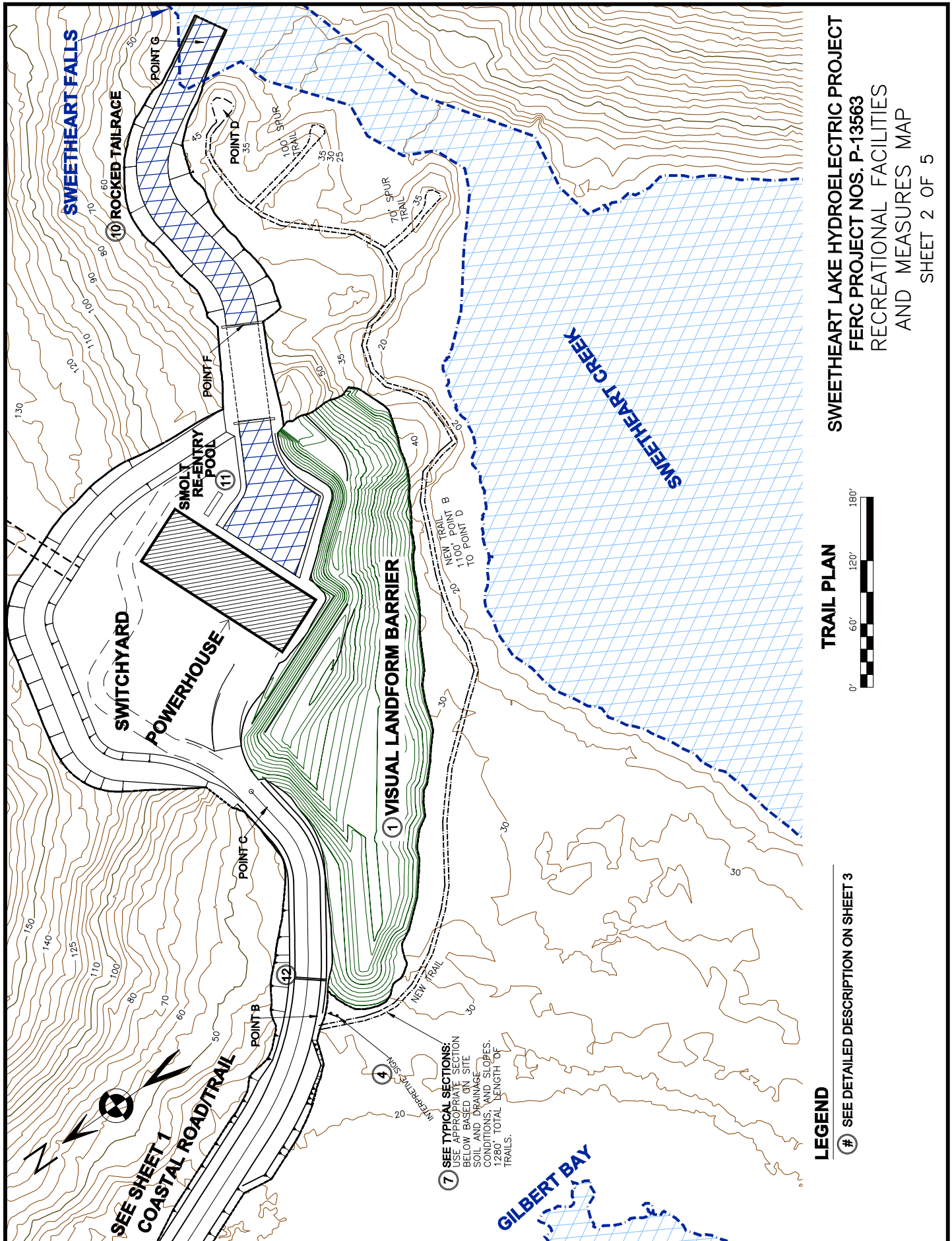
12.0 AGENCY COMMENTS

Agency comments will be listed by date received and by which agency.

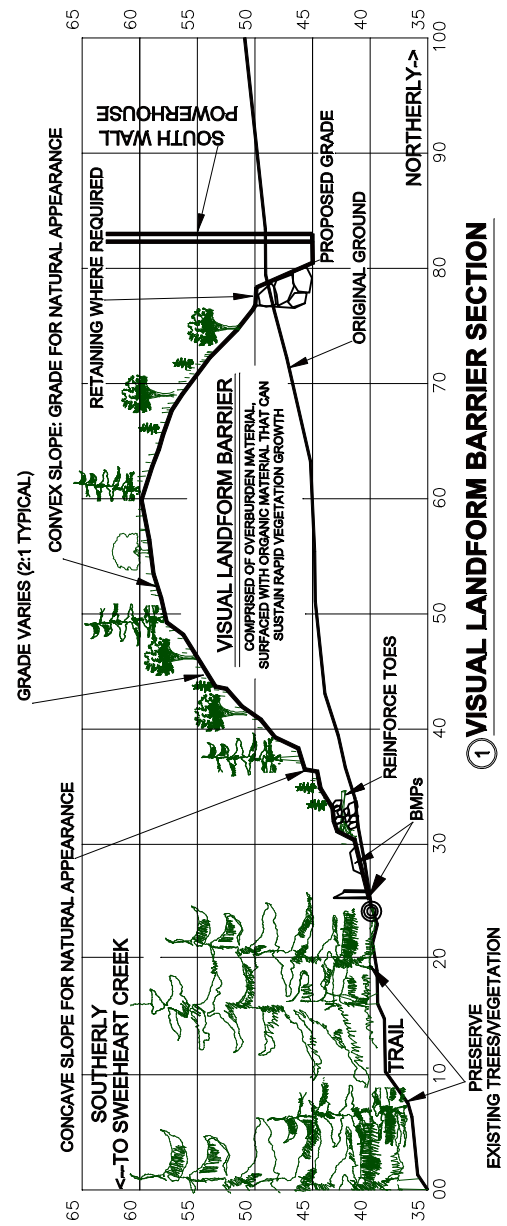
13.0 APPENDIX A: RECREATIONAL FACILITIES, MEASURES MAP & TRAIL DESIGN

Maps of proposed recreational facilities and measures follow.



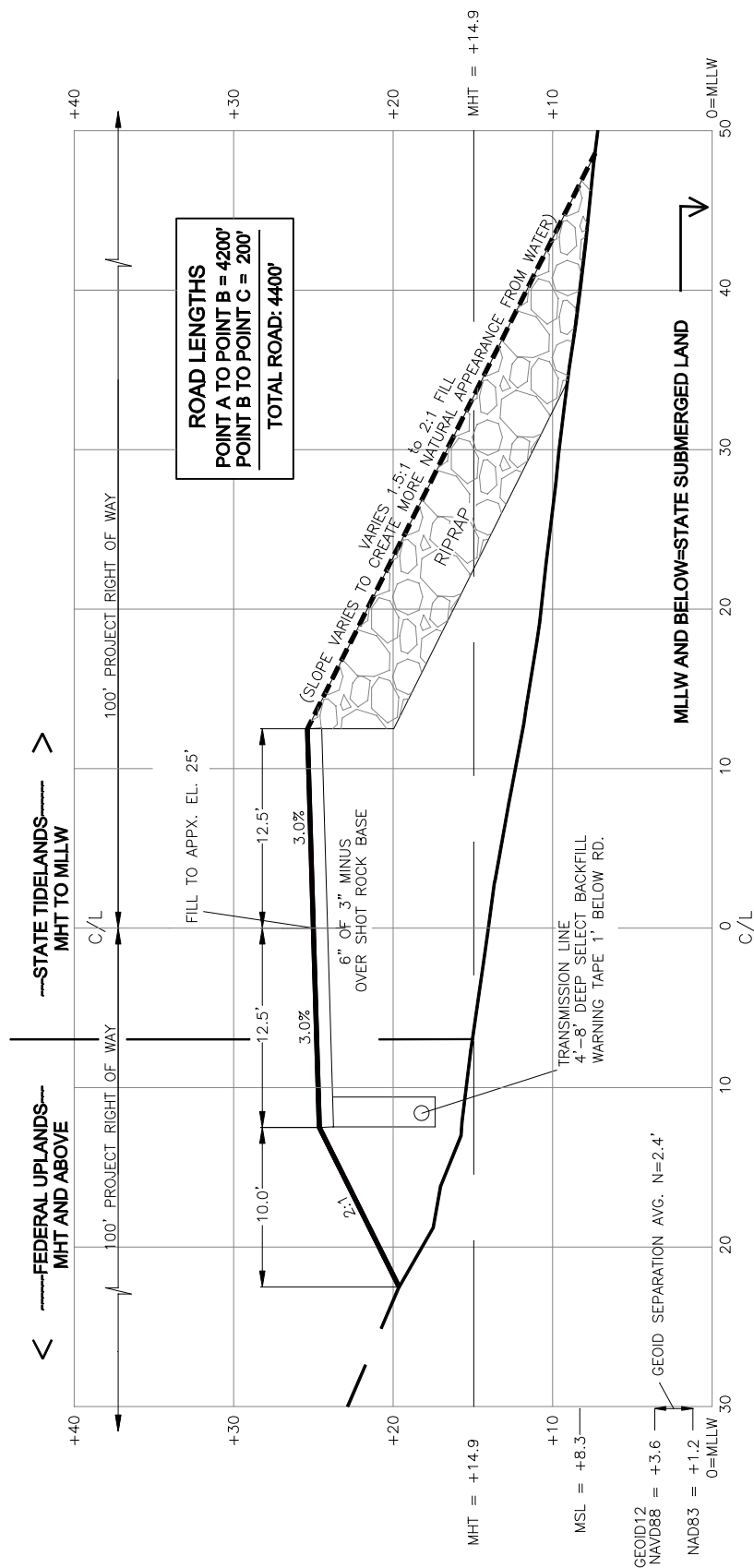


SWEETHEART LAKE HYDROELECTRIC PROJECT
FERC PROJECT NOS. P-13563
RECREATIONAL FACILITIES
AND MEASURES MAP
SHEET 3 OF 5



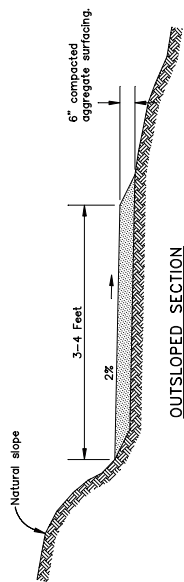
RECREATIONAL FACILITIES NOTES

- ① VISUAL LANDFORM BARRIER: will be constructed and vegetated, which will recreational users from sound and visual impacts of the powerhouse and switchyard. See typical section on sheet 2.
- ② RAMP: will be installed at the dock area for limited non-commercial boat landings. See sheet 1.
- ③ DOCK: will be installed for limited non-commercial boat and floatplane landings. See sheet 1.
- ④ INTERPRETIVE SIGNS: will be installed at the beginning of the footpath trail, to include bear safety, trail information, ADF&G information, and USFS information. See sheet 2.
- ⑤ TRASH AND LITTER COLLECTION: will be collected along access road and trail at a limited seasonal basis. Public trash receptacles will not be provided. This is a "pack it in, pack it out" recreational area.
- ⑥ ACCESS ROAD/TRAIL: will be maintained in sufficient condition to allow both caretaker truck access and non-motorized recreational user access. See typical section on sheet 4.
- ⑦ TRAILS: will be maintained in good condition and trees and weeds will be controlled as necessary. See sheet 2.
- ⑧ NON-COMMERCIAL MOORING BUOYS: will be maintained in good condition to allow temporary non-commercial small boat mooring. See sheet 1.
- ⑨ SNOW REMOVAL: will occur on the Access Road/Trail to ensure safe operational access to the powerhouse and switchyard. Snow removal will not be provided on the side trails.
- ⑩ ROCKED TAILRACE: the tailrace surfaces will be rock instead of concrete, which will enhance natural appearance and allow additional fishing area. Length from Point F to Point G is 300 feet. See sheet 2.
- ⑪ SOCKEYE COLLECTION AND TRANSPORTATION SYSTEM: a smolt re-entry pool will be located at the powerhouse site, which will allow fish acclimation before release into the tailrace. This fish collection and transportation systems have been designed in collaboration with Douglas Island Pink and Chum (DIPAC). See sheet 2.
- ⑫ GATED ACCESS: gates will be installed at the locations shown such that motorized use of the coastal road/trail will be limited to the caretaker. Recreational motorized use of the coastal road/trail will not be permitted. See sheet 2.

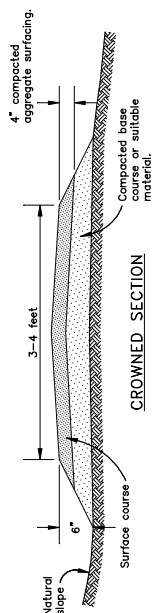


COASTAL ROAD/TRAIL TYPICAL SECTION

SWEETHEART LAKE HYDROELECTRIC PROJECT
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AND MEASURES MAP
SHEET 4 OF 5

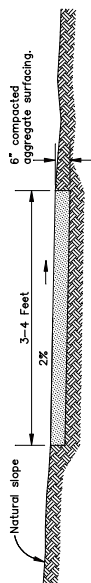


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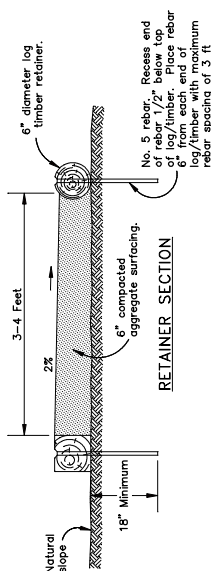


CROWNED SECTION

TYPICAL TRAIL SECTIONS NOT TO SCALE
Source: USFS Trail Detail 941-1 (per EM-7720-103 rev 3/97)



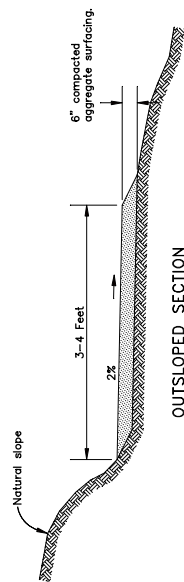
EXCAVATED SECTION



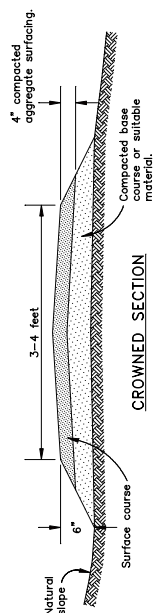
RETAINER SECTION

TYPICAL TRAIL SECTIONS NOT TO SCALE

Source: USFS Trail Detail 941-1 (per EM-7720-103 rev 3/97)

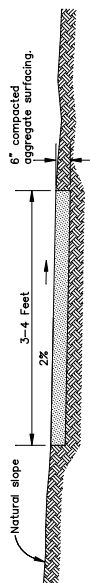


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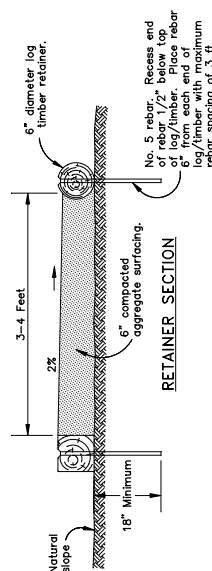


CROWNED SECTION

TYPICAL TRAIL SECTIONS NOT TO SCALE
Source: USFS Trail Detail 941-1 (per EM-7720-103 rev 3/97)



EXCAVATED SECTION



RETAINER SECTION

SWEETHEART LAKE HYDROELECTRIC PROJECT
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RECREATIONAL FACILITIES
AND MEASURES MAP
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SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



SCENERY MANAGEMENT & MONITORING PLAN (SMMP)

PREPARED BY:

**Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802**

MAY 2014

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SWEETHEART LAKE HYDROELECTRIC PROJECT

SCENERY MANAGEMENT & MONITORING PLAN (SMMP)

1.0 AGENCY PLAN REQUESTS

In October 2013, Juneau Hydropower, Inc. (JHI) submitted a subsequent draft license application and draft Preliminary Draft Environmental Assessment (PDEA) for the Sweetheart Lake Hydroelectric Project to the Federal Energy Regulatory Commission (FERC). On October 22, 2013, FERC published notice and issued a request for comments and preliminary terms and conditions. The U.S. Department of Agriculture (USDA) Forest Service (Forest Service) reviewed these documents, and in its January 10, 2014, Preliminary 4(e) Terms and Conditions, number 22, requested the following plan: j) Scenery Management Plan. The U.S. Department of the Interior National Park Service (NPS) in its January 12, 2014, comments on the aesthetics section of the PDEA expressed the need for protecting the visual resource for visitors and those fishing. JHI is submitting this preliminary Scenery Management Plan (SMP) with the Final License Application and PDEA for comment.

2.0 PROJECT DESCRIPTION

The Project consists of: (1) the existing Lower Sweetheart Lake, raised from a surface water elevation of 551 feet (MLLW) and a surface area of 1,414 acres to a new minimum surface water elevation of 576 feet and a new surface area of 1,449 acres and a maximum surface water elevation of 636 feet with a surface area of 1,702 acres; (2) a new, roller-compacted concrete dam 111 feet high (from the downstream toe to the top of the dam), 280 feet long, 100 feet thick at the base, constructed at the outlet of Lower Sweetheart Lake; (3) an independent intake structure with fish screen adjacent to the dam right abutment, which conveys water to a 15 X 15-foot horseshoe-shaped, 9,621-foot-long unlined tunnel; (4) a 9-foot-diameter, approximately 896-foot-long penstock installed within the lower portion of the tunnel, with approximately another 160 feet of buried 7-foot-diameter penstock and manifold connecting to the powerhouse; (5) a powerhouse containing three new Francis generating units (6.6 MW each) with a total installed capacity of 19.8 MW; (6) a 541-foot tailrace discharging flows to Sweetheart Creek, including a salmon smolt reentry pool located adjacent to the powerhouse and tailrace; (7) a fenced switchyard adjacent to the powerhouse; (8) a new, approximately 4,400-foot-long, road from the powerhouse to the dock/landing site; (9) a new dock/landing site for boat, seaplane, barge/landing craft ramp, and/or helicopter access, located on the east shore of Gilbert Bay; (10) a new, 138-kilovolt transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments); (11) a new, 14,800-foot, 12.47-kV service

transmission line extending from the dam site to the marine facility, providing operational electricity and communications for operations; (12) a caretaker facility with shop and maintenance facilities; (13) a shelter facility at the dam site; (14) appurtenant facilities.

To construct and operate the Sweetheart Lake Hydroelectric Project systems, JHI has developed designs and specifications to meet federal, state, and local regulations. In addition, JHI has developed the following plans to implement procedures to construct, monitor, and mitigate the safety, health, and environmental impacts of the Project. These plans are prepared to meet regulatory requirements of various involved agencies and some plans address similar issues. Together these plans form a comprehensive resource to guide Project management through all phases of construction and into operation:

2.1. Appendix Z - JHI Preliminary Plans

The plans included in Appendix Z of the PDEA are as follows:

Access Management Plan (AMP)

Aquatic Habitat Restoration and Monitoring Plan (AHRMP)

- Fish Mitigation and Monitoring Plan (FMMP)

Bear Safety Plan (BSAFE)

Construction Plan (CP)

Environmental Compliance Monitoring Plan (ECMP)

Erosion and Sedimentation Control Plan (ESCP)

- Storm Water and Pollution Prevention Plan (SWPPP)

Fire Prevention Plan (FPP)

Hazardous Substances Plan (HSP)

Heritage Resource Plan (HRP)

Recreational Management Plan (RMP)

Scenery Management and Monitoring Plan (SMMP)

Solid Waste and Wastewater Plan (SWWP)

Spoil Disposal Plan (SDP)

- Acid Rock Disposal Contingency Plan (ARDCP)

Vegetation Management Plan (VMP)

- A. Invasive Species Management Plan (ISMP)
- B. Threatened, Endangered, Proposed for Listing, and Sensitive Plant Species Plan (TEPLSPSP)

Water Management Plan (WMP)

- A. Reservoir Management and Inundation Plan (RMIP)
- B. Stream Flow Management Plan (SFMP)
- C. Stream Flow Measurement Plan (SMP)

Wildlife Mitigation and Monitoring Plan (WMMP)

- Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan (TEPLSSP)

3.0 SCENERY MANAGEMENT & MONITORING PLAN (SMMP)

This Scenery Management and Monitoring Plan (SMMP) includes measures to keep the visual character of the Project area consistent with the standards and guidelines of the Tongass National Forest Land and Resource Management Plan (2008).

Expected scenery impacts by the Project and proposed mitigation measures for the various Project features are described in the following sections:

4.0 VISIBLE PROJECT FEATURES

4.1 Marine Access Facilities

The marine access facilities are as described below and shown on Exhibit F drawings and SWPPP drawings.

- A dual-height marine ramp for loading and unloading freight barges and landing craft constructed of clean shot rock. The ramps will have a minimum width of 50 feet, a slope of 15-20 %, and a compacted rock surface. The toe of the fill will be near -15 (MLLW) allowing low tide access without grounding of the vessels. The ramps will slope up from +12 to +25 (MLLW) for access at all tidal conditions. The sides and front slopes will be protected with rock riprap.
- Floating docks will provide seaplane and boat access for both passengers and freight during construction and maintenance. The floats will be secured by 8 galvanized steel piles. A drive down ramp will connect the float to the staging area concrete abutment.

4.2. Coastal Road/Trail

There will be one short road along the coast 4400 feet from the dock to the powerhouse. The road and dock will be constructed with clean shot rock and protected with riprap produced from the excavation of the powerhouse site and power tunnel. The subgrade width would be up to 25 feet to provide for large construction machinery such as cranes and powerhouse turbines. The surface width will be reduced following construction for aesthetics to 16 feet by shaping and planting.

4.3. Powerhouse

The powerhouse will be located in a deep excavation approximately 600 feet northwest of the anadromous barrier on Sweetheart Creek, and approximately 2,000 feet east of the confluence of Sweetheart Creek and Gilbert Bay. The powerhouse will be approximately 50 feet wide and 120 feet long. Floor level of the powerhouse will be at Elevation 50 (MLLW), with an eave height of about 35 feet and concrete substructure up to 32 feet deep. The powerhouse will be constructed with concrete walls and a metal or concrete roof.

4.4. Switchyard

The switchyards will be located adjacent to the powerhouse on fill over the penstocks and next to the Existing Snettisham Transmission lines. These locations have been selected to allow screening by existing vegetation to the maximum extent possible.

4.5. Transmission Lines

Power generated by the Project would be transmitted by new transmission lines that would connect into an existing 138 kV Snettisham Transmission Line owned by the State of Alaska, Alaska Industrial Development and Export Authority (AIDEA).

5.0 SCENERY IMPACTS

Scenery impacts are primarily expected to be from the overhead transmission line corridor, marine access facilities, and the coastal road/trail, which will be along the shoreline. These features would be visible from the Visual Priority Route (VPR) in the middle of Gilbert Bay. A visual simulation was prepared to determine what impacts the Project will have on the VPR (Final Scenery Resources Report – Appendix T).

The following Project features will not have a visual impact to the VPR in the middle of Gilbert Bay because they will be hidden from view by the existing terrain and vegetation:

- Dam

- Tunnel Portals / Penstock
- Intake Structure
- Reservoir
- Switchyard / Diesel generator

Project features that could have an impact on the VPR are discussed below.

5.1. Marine Facilities

The expected scenery impacts from the Marine Access Facilities are expected to be as follows:

- The permanent features of the Marine Access Facilities (staging area, barge ramp, boat, and floatplane float) will present features that will initially stand out because of their new surfaces.
- Eventually, wood products will weather and rock or concrete that are exposed to marine water will gain a “marine patina” of browns and greens; consisting of staining, seaweed, and/or barnacles and mussels.
- Metal surfaces may rust, get a “marine patina,” or if painted, have a reduced visual impact.
- Riprap armoring will initially be fairly visible until they weather or they acquire the “marine patina.”
- The submarine cable landings will have buried structures above the tidal zone to convert from terrestrial to submarine and vice-versa; excavation through the beach and intertidal zone for the cables will be recovered with native material from the beach and within a few months should be invisible due to tidal action.

5.2. Coastal Road / Trail

The expected scenery impacts from the Coastal Road / Trail are expected to be as follows:

- Riprap armoring of road will initially be fairly visible until it weathers or they acquire the “marine patina.”
- The grass/sedges naturally found along the shoreline in Gilbert Bay will also find footholds on and around the riprap of the coastal road.

5.3. Powerhouse

The expected scenery impacts from the Powerhouse are expected to be as follows:

- Removal of vegetation to clear the powerhouse area.
- Powerhouse structure may be visible from the VPR in Gilbert Bay; roof reflectivity would be the largest concern because of the height, increasing its potential to be seen from the VPR.
- Rock spoil from powerhouse and tunnel excavation used to create a visual screen berm may create a visual that can be seen from the VPR because of it being newly exposed rock that does not have a weathered patina (see the simulations in the Final Scenery Resources Report – appendix T of the PDEA).

5.4. Transmission Line Poles and Corridor Clearing

The expected scenery impacts from the transmission line poles and corridor clearing are expected to be as follows:

- Poles may be visible if left with a highly reflective surface.
- Clearing of vegetation along the transmission route will be necessary to not just install the transmission line but also to keep in place a single-lane access road for maintenance.
- Conductors may be visible if bird deflectors (reflective devices) and airplane visual aids (orange balls) are used to mark them.

6.0 PROJECT WIDE PROPOSED MITIGATION MEASURES

The following protection measures are prescribed for the entire Project and should be applied where appropriate and feasible.

- Prior to beginning construction, once survey and layout of the corridor, clearing limits and location of facilities has been field located, verify Project conditions and note any deviations from the original Licensing Document. Modifications, including minor ones, to the routing of corridor, clearing limits, and the location and size of facilities may have a positive or negative expected scenery impact.
- Where possible, feather edges of clearing limits rather than hardline clearing on the uphill slope of the corridor to reduce visual impacts. Match existing lines

found in the immediate surrounding landscape to mimic meadow openings, rock outcrops, and avalanche and rock slide formations where present.

- Transmission structures that support the overhead lines will be constructed of metal. To minimize their visual impact the towers should be grey in color.
- The removal of vegetation within the clearing limits of the corridor should be limited to only trees that can obtain a mature height of thirty feet or greater or will require removal later as part of the transmission corridor maintenance. Maintain shrubby vegetation, perennials, and smaller trees within the clearing limits to minimize visual contrast after construction and after maintenance of clearing limits. Avoid exposure of soil.
- Facilities that require security fencing (powerhouse, switchyard) should be colored grey to reduce visual impacts and allow these features to blend into the surrounding landscape.
- Allow vegetation to reestablish itself over disturbed areas where possible

7.0 SPECIFIC PROTECTION MEASURES

The main Area of Concern is identified as the east side of Gilbert Bay where the Project is viewed as foreground in a Semi-Remote Recreation LUD. This is the area immediately surrounding the marine access facility, storage yard, access road, and caretaker's site.

Plant vegetative screening between the water's edge and the caretaker's facilities. Color the marine access facilities to blend into the surrounding landscape and avoid the use of materials that would reflect sunlight. Minimize the storage of materials and vehicles in the immediate vicinity of the marine access facility. Store materials and other items where they would be screened from the Gilbert Bay VPR. Utilize building colors and materials that blend into the character landscape.

Utilize rock along the coastal road where fill would be exposed to Gilbert Bay. Although most portions of the road are on submerged lands, incorporate native vegetation along the water's edge on all fill slopes for the road to the greatest extent possible. For all areas to be vegetated, utilize organic native soils that support and will allow native plant material to grow and create quick and effective visual screening. Use the correct native plants for the soil available.

Avoid the use of exterior lighting; if needed, use "cut-off" style lighting that minimizes light pollution and prevents light from spilling beyond the intended areas.

Where clearing limits and transmission structures may be seen in the middle-ground distance zone and will dominate the visual landscape beyond five years, select appropriate colors to paint the structures (towers and transition facilities) to match the surrounding landscape would likely reduce impacts. Soften edges of the clearing limits where possible by feathering edges rather than straight hardline clearing of the corridor to reduce visual impacts.

8.0 DOCUMENTATION

Photos will be submitted with a report by December 31st of each year to the Forest Service to document current conditions for use in the annual review.

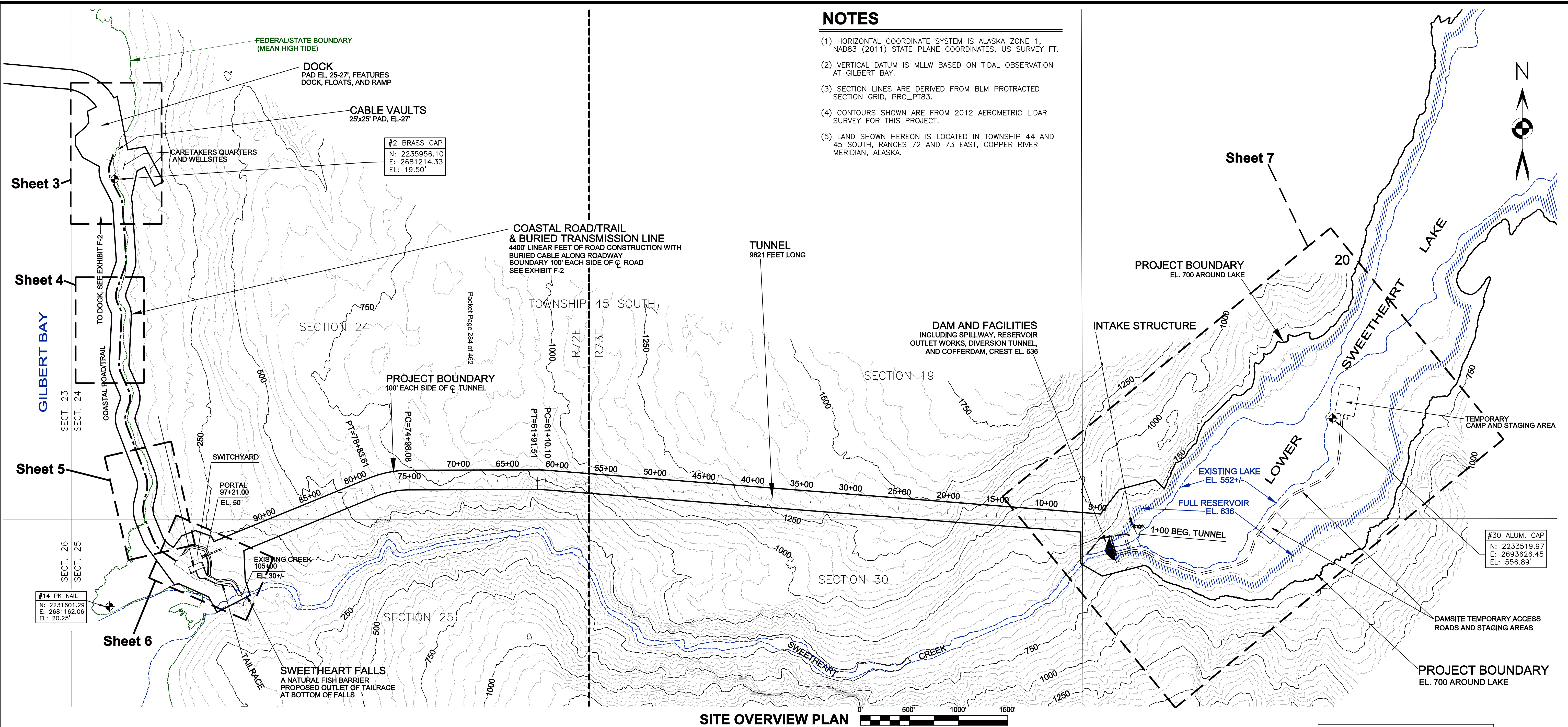
From the Tongass National Forest Land and Resource Management Plan (2008) guidance - Upon completion of construction, Licensee will photograph the approved facilities from the middle of Gilbert Bay to document scenery management mitigation measures approved in the Plan. Each summer for the first ten years of the license, from approximately the same location along the Visual Priority Route (VPR), the Licensee will photograph the approved facilities to document vegetation, and continued success of scenery management mitigation. Photos taken will be submitted to the Forest Service at the end of each year as part of the annual consultation.

9.0 COMPLIANCE

Compliance with the plans objectives will be documented and enforced by the Environmental Compliance Monitor through commercial operations and then JHI management will be responsible for reporting to the Forest Service as directed.

10.0 AGENCY COMMENTS

Agency comments will be listed by date received and by which agency.



GENERAL PROJECT NOTES

1. Minimize Disturbed Areas to Protect Existing Vegetation
Minimizing disturbed areas is not only one of the most effective erosion control BMP, but it is also consistent with Juneau Hydropower's overall philosophy to reduce environmental impacts and aesthetic change caused by the project.
2. Phase Construction Activities.
The project will attempt to limit areas of disturbance only to places where construction activities are currently underway. This reduces the time that bare soil is exposed to the elements, thereby reducing the likelihood of sediment transport. Exposed areas should be stabilized as soon as possible after the end of immediate construction activities. This is not only consistent with Juneau Hydropower's philosophy, the permit requires stabilization within 14 days in portions of the site where construction activities have ceased.
3. Proactively Manage Storm Events.
The project is situated in a very rainy climate. The project will plan for potential storm water by installing drainage diversions around major excavation sites, and adequately sizing culverts and sediment control BMPs for the climatic conditions. Sediment control BMPs include sediment traps, sediment basins, rock check dams, brush berms, and other materials. Being prepared and anticipating stormwater events is easier than attempting to repair failed BMP's during a storm events.
4. Utilize Natural BMPs where possible.
The project will have preference in using onsite natural BMPs where possible is preferred over man-made BMPs. The site is remote, and has an abundance of natural vegetation and rocky soil. Where possible during excavations, topsoil and vegetation should be separated from rock such that the rock can be used in roads, ditchlines, check dams, and docks, and the topsoil can be re-applied to areas ready for final stabilization. Natural BMP's include rock check dams, brush barriers, and aggressive re-planting with native vegetation. Any non-biodegradable man-made BMP's shall be removed from the site at the completion of final stabilization.
5. Inspect and Maintain Erosion and Sediment Controls.
The project will adequately inspect and maintain the installed BMPs, and take corrective action where required. Inspection and corrective actions for insufficient controls are part of the requirements of the Construction General Permit.

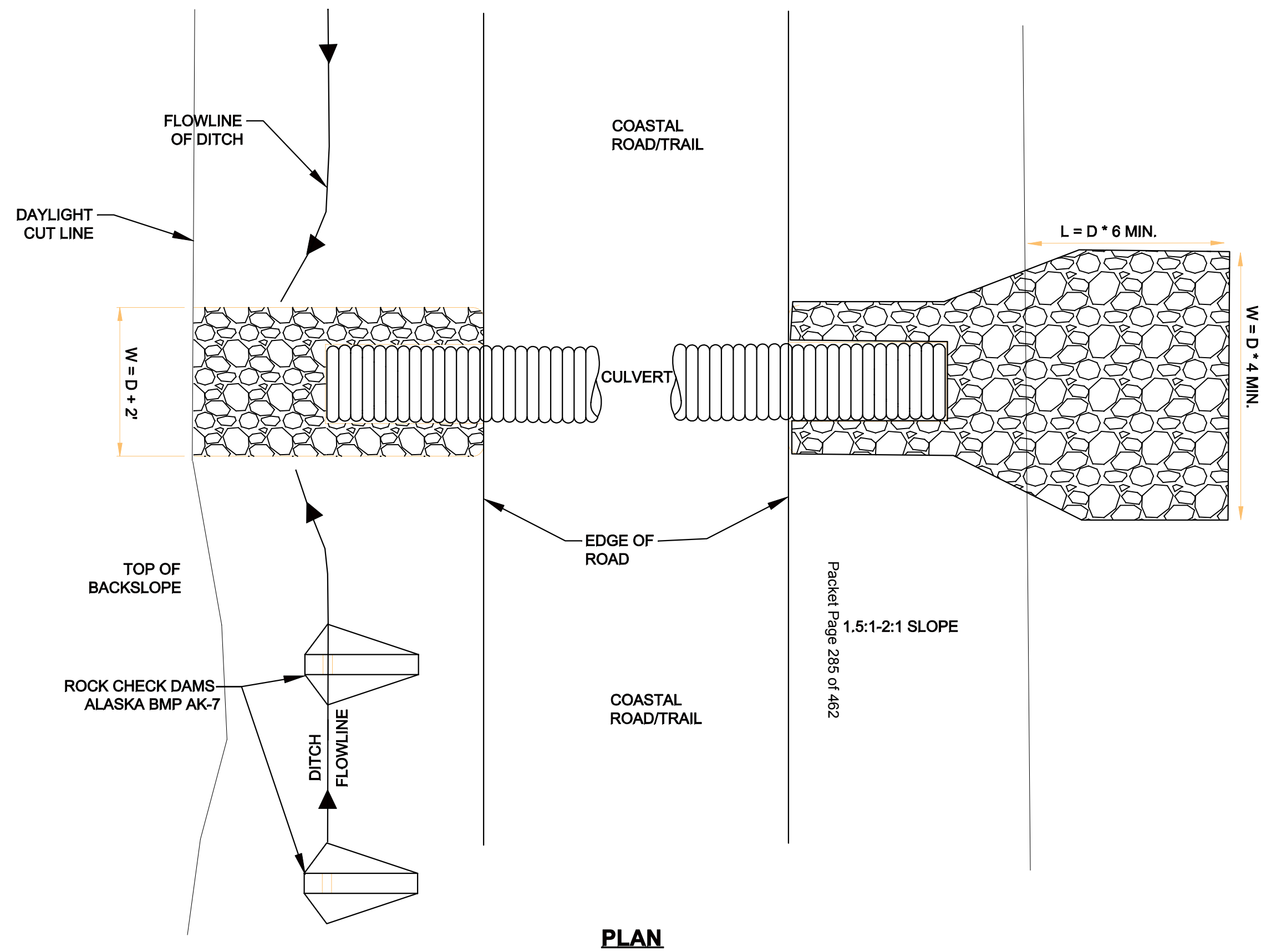


Juneau Hydropower Inc.

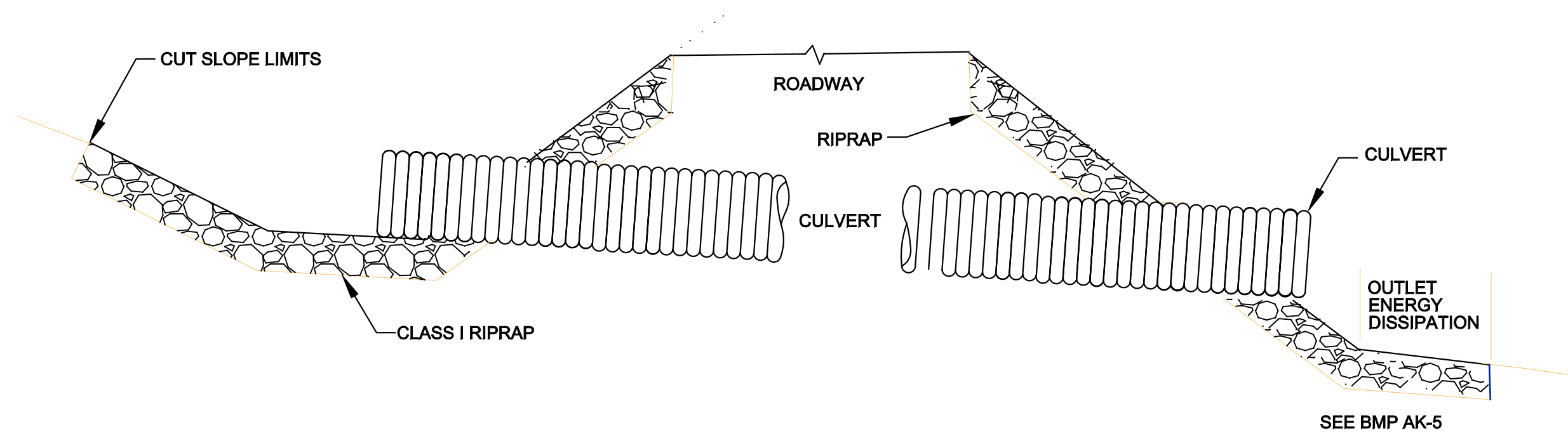
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DATE: 4/2/2014

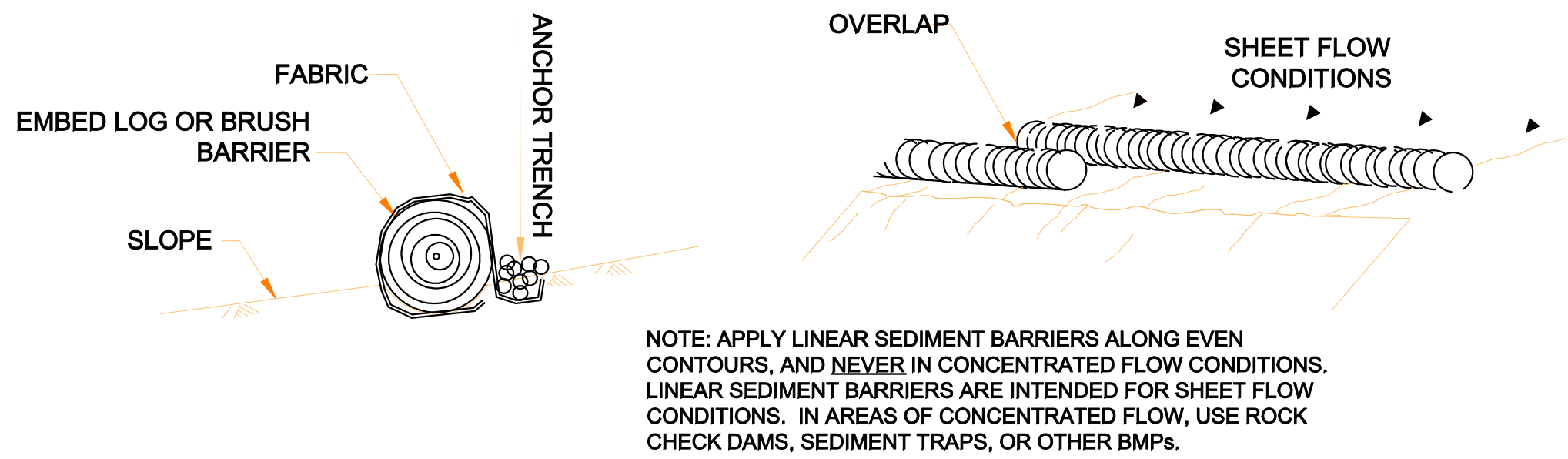


PLAN



PROFILE

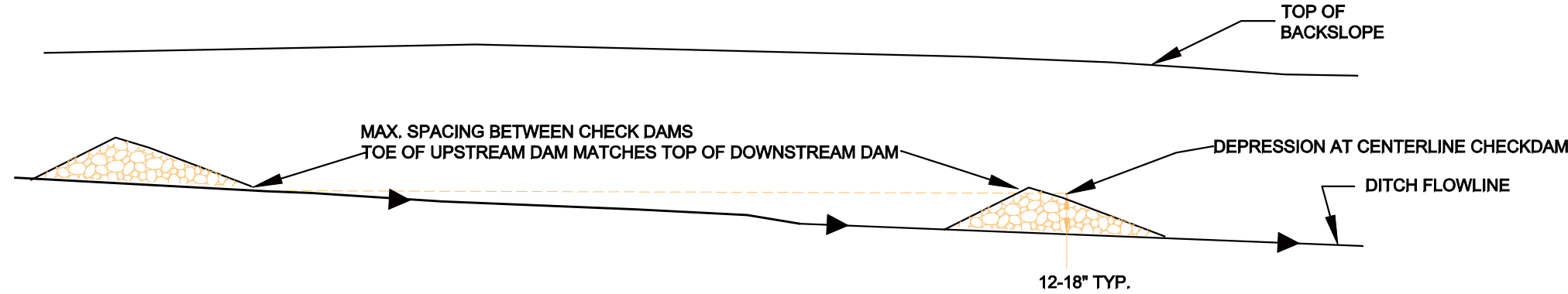
TYPICAL DITCH AND CULVERT PROTECTION
SEE ALASKA STANDARD BMP AK-2, AK-5, AK-6, AND AK-11



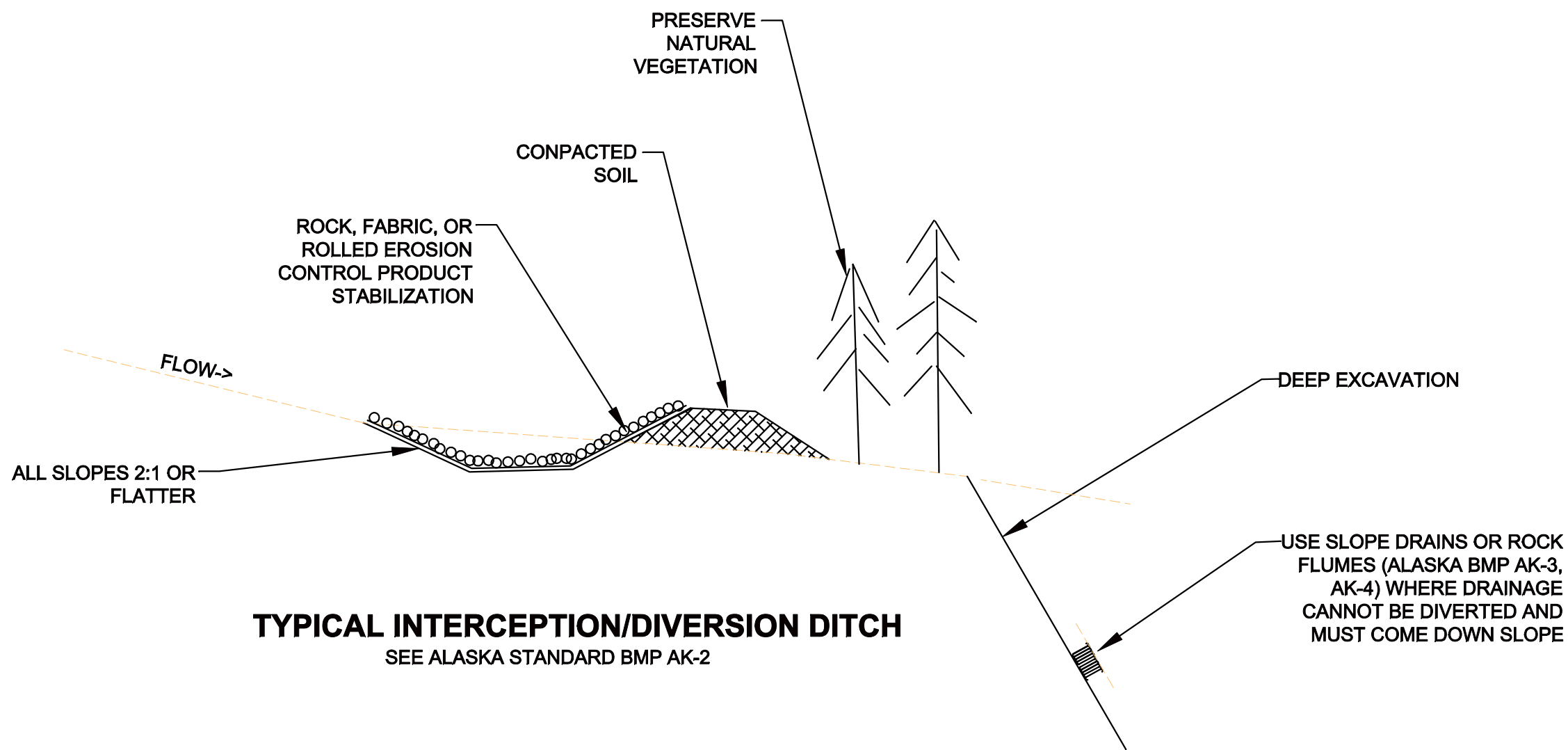
SECTION

PERSPECTIVE

TYPICAL LINEAR SEDIMENT BARRIERS
SEE ALASKA STANDARD BMP AK-8, AK-18, OR AK-20

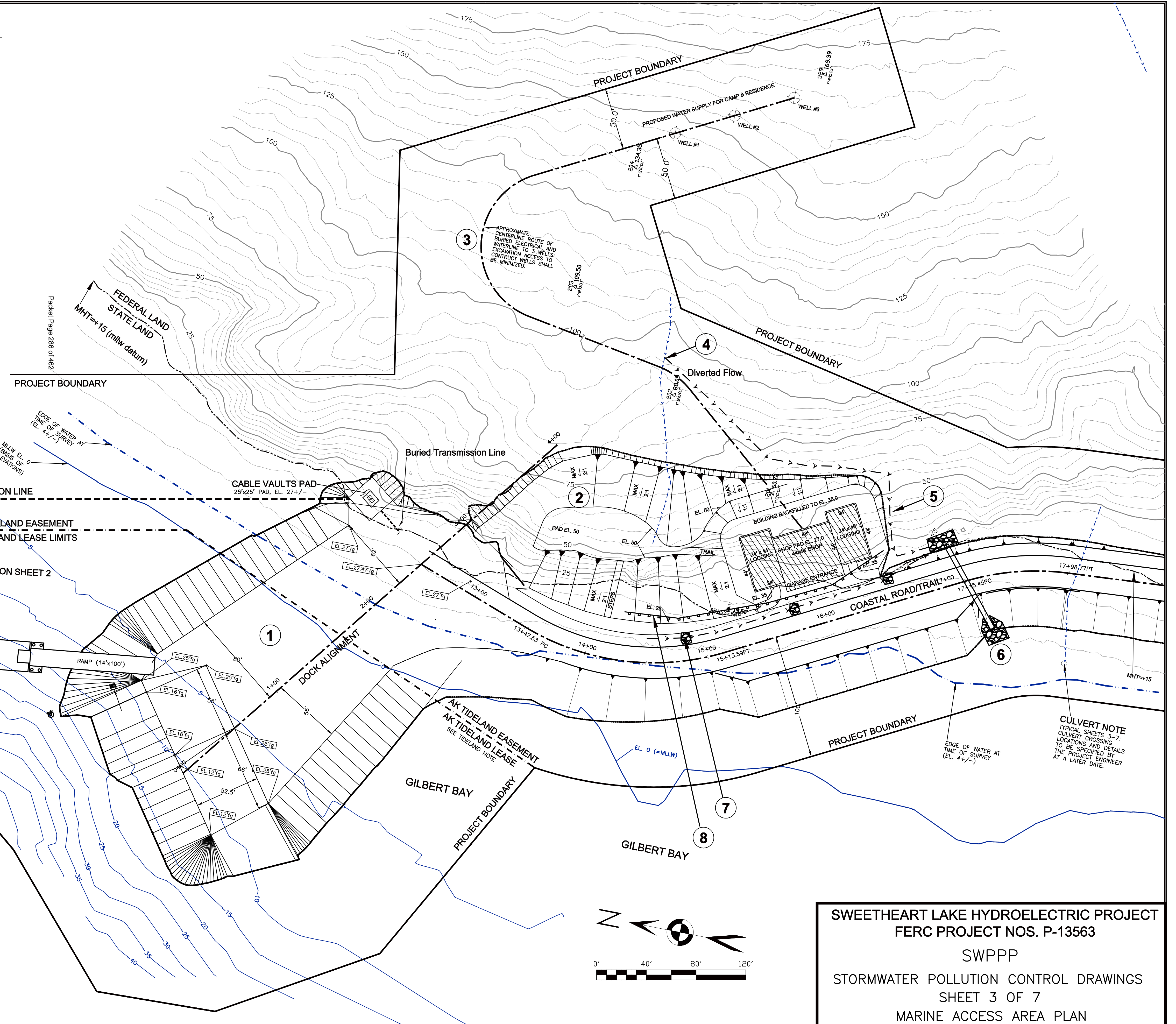


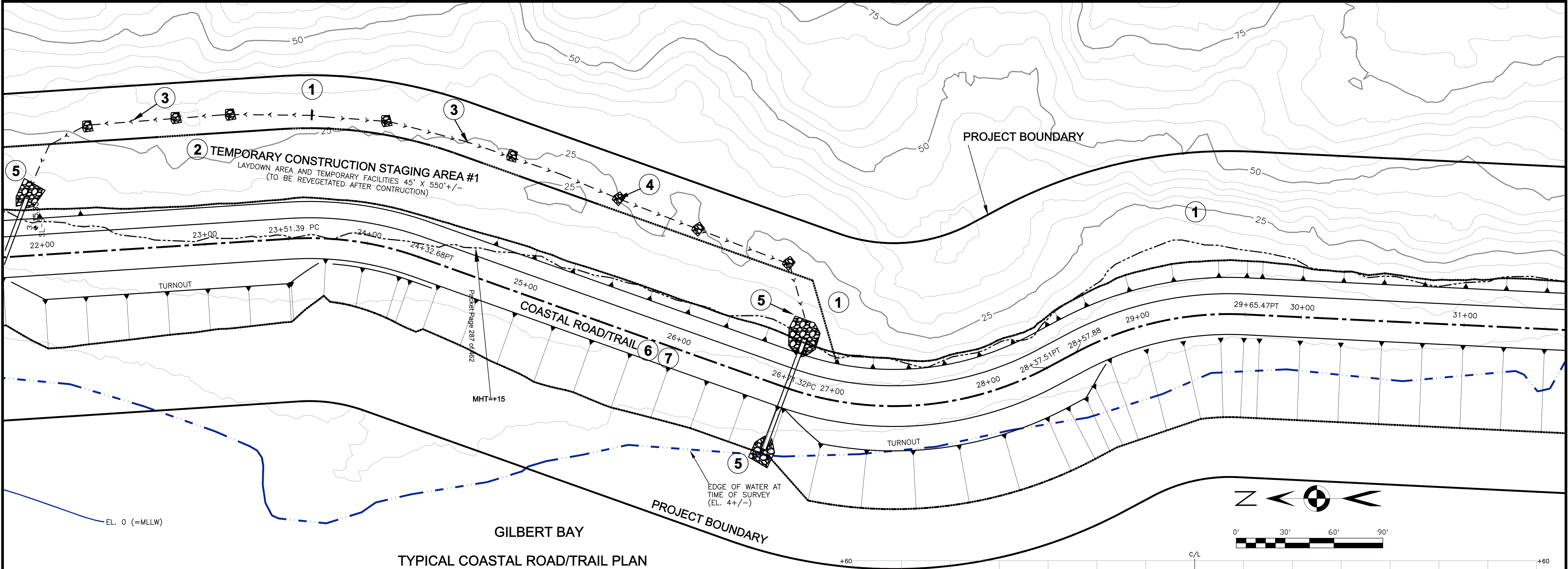
TYPICAL ROCK CHECK DAM PROFILE
SEE ALASKA STANDARD BMP AK-7



TYPICAL INTERCEPTION/DIVERSION DITCH
SEE ALASKA STANDARD BMP AK-2

- ① Dock is constructed with clean rock fill and will not be re-seeded. Construction materials, fuels, lubricants, etc. will be unloaded from barges, and non-stormwater BMP's such as inspection of offloaded materials will be necessary. (See all Alaska "good housekeeping" BMPs)
- ② Caretakers area. Caretakers shop and lodging will be constructed. Site grading will be required. Topsoil will be spread on reconstructed slopes to allow re-vegetation. Reconstructed slopes will be graded at 2:1 (or flatter) to allow re-seeding and planting with trees. Rolled erosion control products may be required to prevent erosion until vegetation grows. (See BMP AK-10, AK-12, AK-14)
- ③ Caretaker's shop and lodging will require a water source for sanitation. A well site above the Caretakers area is shown. Construction to access the well site will be minimized and existing vegetation/topography will be preserved where possible. (See BMP AK-1)
- ④ Typical stream diversions above the excavation area will prevent surface water from running over exposed soil. (See BMP AK-6)
- ⑤ Where stream diversion drop slopes steep slopes, rock flumes or slope drains will be required to prevent erosion. (See BMP AK-3, AK-4)
- ⑥ Construction along Gilbert Bay is built with Rip-Rap and clean rock, see coastal road/trail typical section on sheet 4. Coastal Road/Trail is graded towards land such that runoff must pass through sediment traps and check dams before exiting to Gilbert Bay. All culvert crossings will require inlet and outlet protection (See BMP AK-5).
- ⑦ Rock Check Dams and Sediment Traps as required (See Alaska AK-7, BMP AK-15)
- ⑧ Use linear sediment barriers throughout the construction process where required. They are effective in sheet flow conditions along level contours of gentle slopes (See BMP AK-18, AK-20)

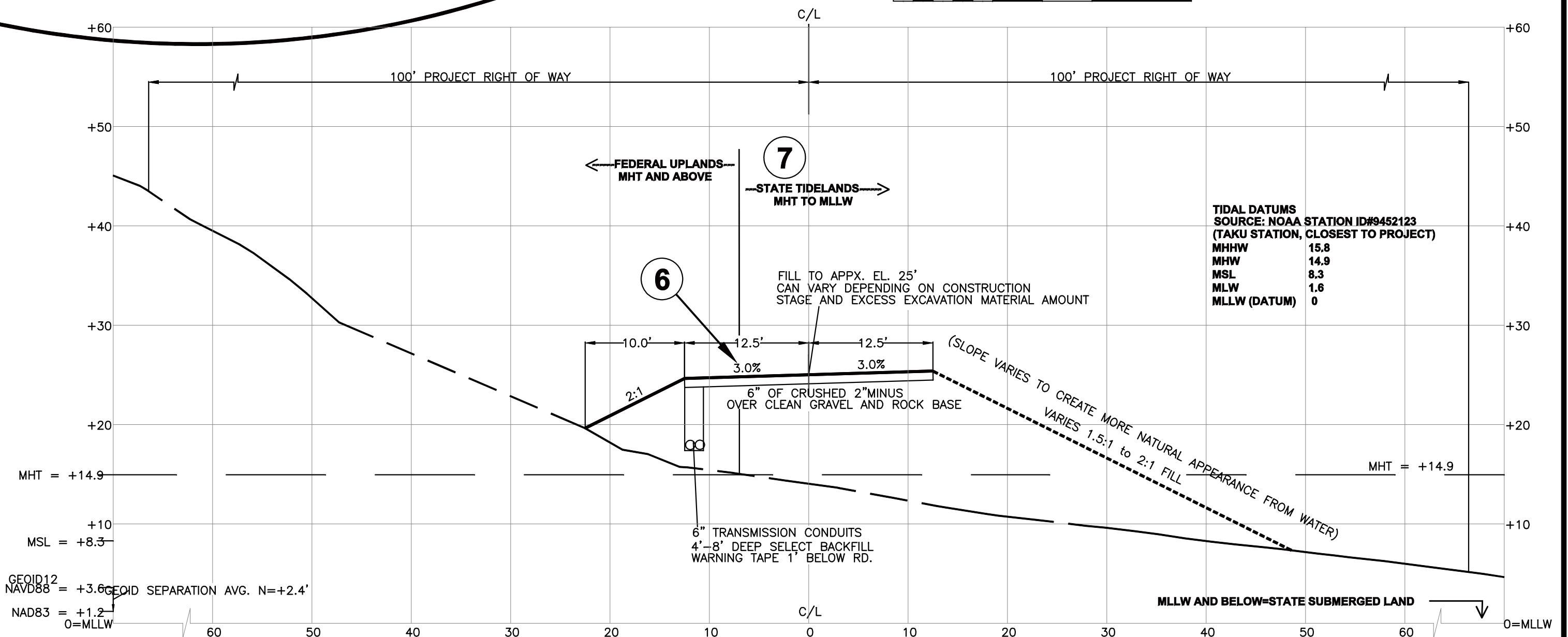




TYPICAL COASTAL ROAD/TRAIL PLAN

SHEET 4 NOTES (including Alaska Standard BMP Number)

- 1 Preserve existing vegetation wherever possible. (See BMP AK-1)
- 2 This staging area is temporary, to be re-seeded and re-planted after construction. All materials storage and good housekeeping BMP's apply.
- 3 Divert drainage around pad (See BMP AK-2)
- 4 Rock Check Dams and Sediment traps in areas of concentrated flow (See BMP AK-7, AK-15)
- 5 Inlet/outlet protection required for all culverts (See BMP AK-5)
- 6 Road is graded towards land such that runoff can be intercepted in ditchlines and rock check dams. This also lessens the visual impact of the road as viewed from Gilbert Bay.
- 7 Road is constructed with clean rock fill predominantly on State tidelands. This measure helps reduces road areas on U.S. forest service land, and lessens the vegetative impact of the road (thereby reducing land erosion).



TYPICAL COASTAL ROAD/TRAIL SECTION



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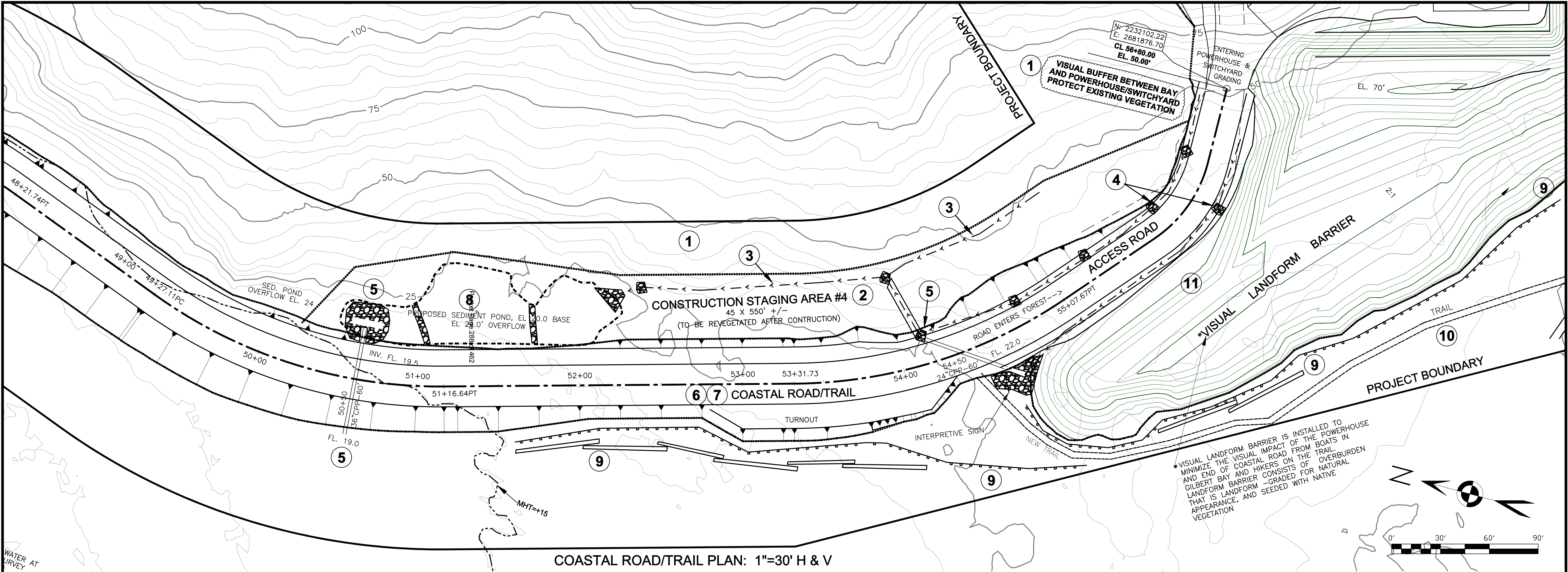
SWEETHEART LAKE HYDROELECTRIC PROJECT
FERC PROJECT NOS. P-13563

SWPPP

STORMWATER POLLUTION CONTROL DRAWINGS

SHEET 4 OF 7

TYPICAL COASTAL ROAD/TRAIL PLAN



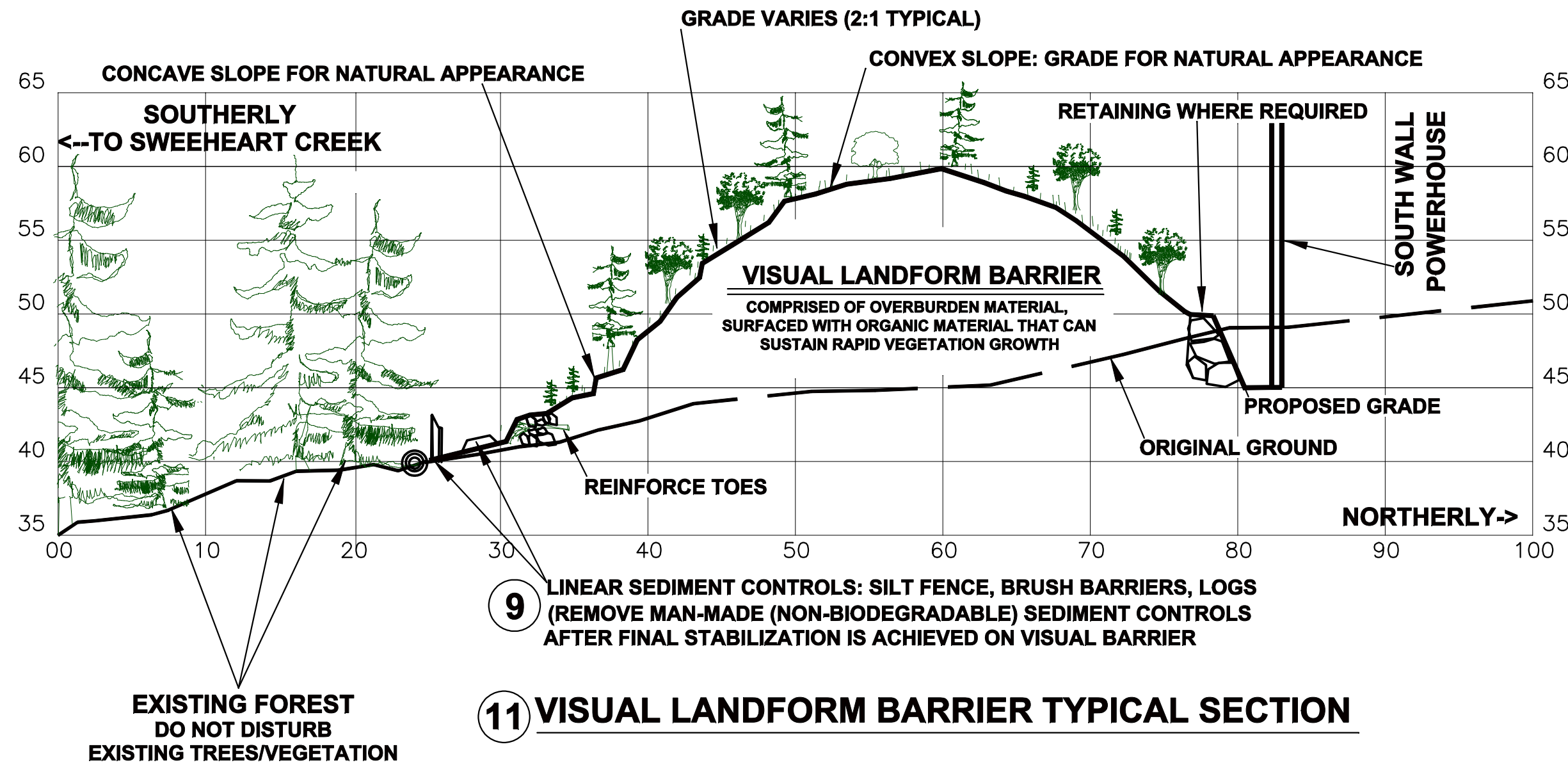
COASTAL ROAD/TRAIL PLAN: 1"=30' H & V

SHEET 5 NOTES (including Alaska Standard BMP Number)

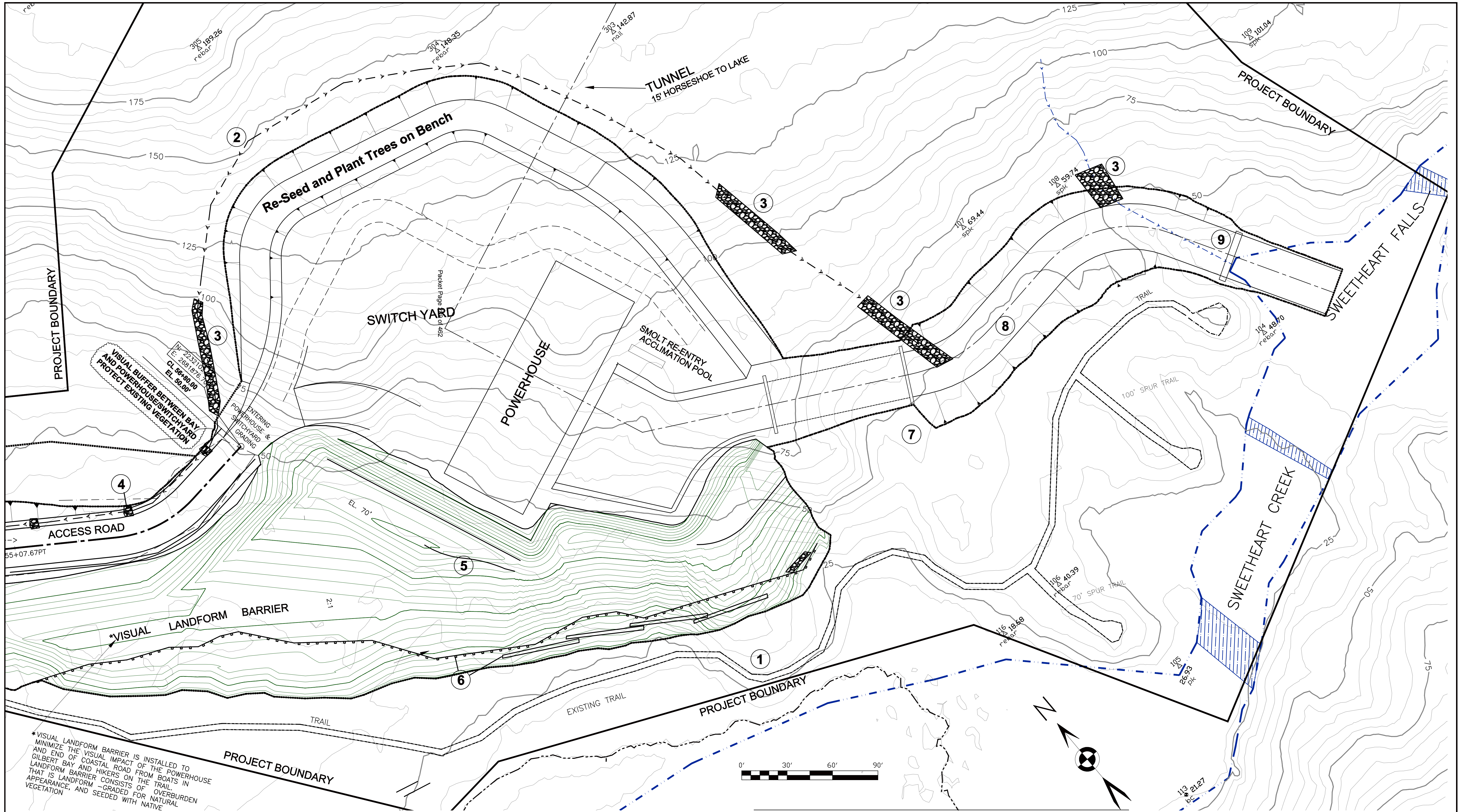
- 1** Preserve existing vegetation wherever possible. This is especially important in the end of the road area as it is the primary visual buffer of the powerhouse and switchyard. (See BMP AK-1)
- 2** This staging area is temporary, to be re-seeded and re-planted after construction. All materials storage and good housekeeping BMP's apply.
- 3** Divert drainage on towards sediment pond (See BMP AK-2)
- 4** Rock Check Dams and Sediment traps in areas of concentrated flow (See BMP AK-7, AK-15)
- 5** Inlet/outlet protection required for all culverts (See BMP AK-5)
- 6** Road is graded towards land such that runoff can be intercepted in ditchlines and rock check dams. This also lessens the visual impact of the road as viewed from Gilbert Bay.
- 7** Road is constructed with clean rock fill predominantly on State tidelands. This measure helps reduces road areas on U.S. forest service land, and lessens the vegetative impact of the road (thereby reducing land erosion).
- 8** Sediment Pond Area, water velocity in pond must be slowed enough to allow suspended sediment to settle on bottom of the pond. Upon completion of project and final stabilization. Sediment pond can be a permanent BMP of the project.

(Continued)

- 9** Use linear sediment barriers throughout the construction process where required. Linear sediment barriers include silt fence, wattles, brush barriers, and other structures that follow the contours. Remove non-biodegradable linear barriers once their use is not required. They are effective in sheet flow conditions along level contours of gentle slopes. Excess logs can be embedded in landscape for natural appearance. (See BMP AK-18, AK-20)
- 10** Trail improvements are defined on the Recreation Plan and Drawings which were created in correspondence with the U.S. Forest Service. Do not disturb existing vegetation along trails.
- 11** Visual Landform Barrier, See Typical Section



11 VISUAL LANDFORM BARRIER TYPICAL SECTION



SHEET 6 NOTES (including Alaska Standard BMP Number)

- ① **Preserve existing vegetation along trail. (See BMP AK-1)**
- ② **Divert water around excavations. (See BMP AK-2)**
- ③ **Slope Drain or Rock Flume on steep diversions. (See BMP AK-3, AK-4)**
- ④ **Use Rock Check Dams in areas of concentrated flow. (See BMP AK-7)**
- ⑤ **See previous page for Visual Landform Barrier Typical Section.**

- ⑤ See previous page for Visual Landform Barrier Typical Section.
- ⑥ Linear sediment barriers include silt fence, wattles, brush barriers, as described on previous page (See BMP AK-18, AK-20)
- ⑦ Tailrace wildlife crossing. Cut in tailrace, install culverts and re-cover to original topography. Re-deed and plant with native trees.
- ⑧ Tailrace open excavation will be constructed with riprap to prevent erosion.
- ⑨ Tailrace cofferdam installed using fabric bags of clean rock with membrane.

SWEETHEART LAKE HYDROELECTRIC PROJECT FERC PROJECT NOS. P-13563

SWPPP

STORMWATER POLLUTION CONTROL DRAWINGS

SHEET 6 OF 7

POWERHOUSE AREA PLAN

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SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



EROSION AND SEDIMENT CONTROL PLAN (ESCP) & STORM WATER AND POLLUTION PREVENTION PLAN (SWPPP)

PREPARED BY:

**Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802**

MAY 2014

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SWEETHEART LAKE HYDROELECTRIC PROJECT

EROSION AND SEDIMENT CONTROL PLAN (ESCP) & STORM WATER AND POLLUTION PREVENTION PLAN (SWPPP)

1.0 AGENCY PLAN REQUESTS

In October 2013, Juneau Hydropower, Inc. (JHI) submitted a subsequent draft license application and draft Preliminary Draft Environmental Assessment (PDEA) for the Sweetheart Lake Hydroelectric Project to the Federal Energy Regulatory Commission (FERC). On October 22, 2013, FERC published notice and issued a request for comments and preliminary terms and conditions. The Alaska Department of Fish and Game (Alaska DFG) recommends as a preliminary condition, Article 17, that the licensee develop and file an Erosion and Sediment Control Plan (ESCP) to reduce soil disturbances and events that could adversely impact aquatic resources. The Alaska Region U.S. Department of Agriculture (USDA) Forest Service (Forest Service) as Preliminary 4(e) Condition No. 22 e) has requested an Erosion Control Plan be developed and submitted. JHI submitted a draft ESCP in October 2013 and received comments from FERC requesting additional information. JHI concurs this plan is necessary and submits this revised draft plan after consultation for additional comments and review. The Storm Water and Pollution Prevention Plan (SWPPP) is a component of the ESCP.

1.1.1. Project Description

The Project consists of: (1) the existing Lower Sweetheart Lake, raised from a surface water elevation of 551 feet mean lower low water (MLLW) and a surface area of 1,414 acres to a new minimum surface water elevation of 576 feet and a new surface area of 1,449 acres and a maximum surface water elevation of 636 feet with a surface area of 1,702 acres; (2) a new, roller-compacted concrete dam 111 feet high (from the downstream toe to the top of the dam), 280 feet long, 100 feet thick at the base, constructed at the outlet of Lower Sweetheart Lake; (3) an independent intake structure with fish screen adjacent to the dam right abutment, which conveys water to a 15 X 15-foot horseshoe-shaped, 9,621-foot-long unlined tunnel; (4) a 9-foot-diameter, approximately 896-foot-long penstock installed within the lower portion of the tunnel, with approximately another 160 feet of buried 7-foot-diameter penstock and manifold connecting to the powerhouse; (5) a powerhouse containing three new Francis generating units (6.6 MW each) with a total installed capacity of 19.8 MW; (6) a 541-foot tailrace discharging flows to Sweetheart Creek, including a salmon smolt reentry pool located adjacent to the powerhouse and tailrace; (7) a fenced switchyard adjacent to the powerhouse; (8) a new, approximately 4,400-foot-long, road from the powerhouse to the dock/landing site; (9) a new dock/landing site for boat, seaplane, barge/landing craft ramp, and/or helicopter access, located on the east shore of Gilbert

Bay; (10) a new, 138-kilovolt transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments); (11) a new, 14,800-foot, 12.47-kV service transmission line extending from the dam site to the marine facility, providing operational electricity and communications for operations; (12) a caretaker facility with shop and maintenance facilities; (13) a shelter facility at the dam site; (14) appurtenant facilities.

To construct and operate the Sweetheart Lake Hydroelectric Project systems, JHI has developed designs and specifications to meet federal, state, and local regulations. In addition, JHI has developed the following plans to implement procedures to construct, monitor, and mitigate the safety, health, and environmental impacts of the Project. These plans are prepared to meet regulatory requirements of various involved agencies and some plans address similar issues. Together these plans form a comprehensive resource to guide Project management through all phases of construction and into operation.

1.1.2. Appendix Z – JHI Preliminary Plans

The plans included in Appendix Z of the PDEA are as follows:

Access Management Plan (AMP)

Aquatic Habitat Restoration and Monitoring Plan (AHRMP)

- Fish Mitigation and Monitoring Plan (FMMP)

Bear Safety Plan (BSAFE)

Construction Plan (CP)

Environmental Compliance Monitoring Plan (ECMP)

Erosion and Sedimentation Control Plan (ESCP)

- Storm Water and Pollution Prevention Plan (SWPPP)

Fire Prevention Plan (FPP)

Hazardous Substances Plan (HSP)

Heritage Resource Plan (HRP)

Recreational Management Plan (RMP)

Scenery Management and Monitoring Plan (SMMP)

Solid Waste and Wastewater Plan (SWWP)

Spoil Disposal Plan (SDP)

- Acid Rock Disposal Contingency Plan (ARDCP)

Vegetation Management Plan (VMP)

- A. Invasive Species Management Plan (ISMP)
- B. Threatened, Endangered, Proposed for Listing, and Sensitive Plant Species Plan (TEPLSPSP)

Water Management Plan (WMP)

- A. Reservoir Management and Inundation Plan (RMIP)
- B. Stream Flow Management Plan (SFMP)
- C. Stream Flow Measurement Plan (SMP)

Wildlife Mitigation and Monitoring Plan (WMMP)

- Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan (TEPLSSP)

2.0 SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1. Project/Site Information

Project/Site Name: Sweetheart Lake – Juneau Hydropower		
Project Street/Location: Sweetheart Lake		
City: Juneau	State: AK	ZIP Code: 99803
County or Similar Subdivision:		
Latitude/Longitude (Use one of three possible formats, and specify method)		
Latitude: (degrees, minutes, decimal) 57° 56.706' N	Longitude: (degrees, minutes, decimal) 133° 38.221' W	
Method for determining latitude/longitude:		
☒ USGS topographic map (specify scale: 1 inch = 2 miles) ☐ EPA Web site ☐ GPS ☐ Other (please specify):		
Is the project located in Indian country? ☐ Yes ☒ No		
If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable."		
Is this project considered a federal facility? ☐ Yes ☒ No		
NPDES project or permit tracking number*:		
What is the function of the construction activity? ☐ Residential ☐ Commercial ☒ Industrial ☐ Road Construction ☐ Linear Utility		

☐ Other (please specify):

Estimated Project Start Date: 3/1/2015

Estimated Project Completion Date: 7/1/2018

** This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) construction general permit.*

2.2. Contact Information of Responsible Parties

2.2.1. Operator

Juneau Hydropower, Inc.
P.O. Box 22775
Juneau, AK 99802
P: 907-789-2775; F: 907-375-2973

2.2.2. Project Manager

Duff Mitchell
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P: 907-789-2775; F: 907-375-2973

2.2.3. SWPPP Contacts

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Seattle, WA 98126
P: 206-622-9161; F: 206-622-9170

2.2.4. This SWPPP Was Prepared by

Western Marine Construction, Inc. (WMC)
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2.2.5. Emergency 24-Hour Contact

Western Marine Construction, Inc. (WMC)
 Patrick McHugh
 P: 866-622-9161, Cell: 206-599-9666

Joseph Zech
 P: 206-622-9161, Cell: 206-849-4816

2.3. Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type(s): A detailed survey of Juneau soils was completed by the Soil Conservation Service (SCS, 1974) (now called the Natural Resource Conservation Service) in 1974, but did not extend to the Project area. However, low-elevation soils in the Project area may be expected to be similar to those mapped along the northeast shore of Gastineau Channel due to their similar parent rock, slope orientation, and climatic exposure.

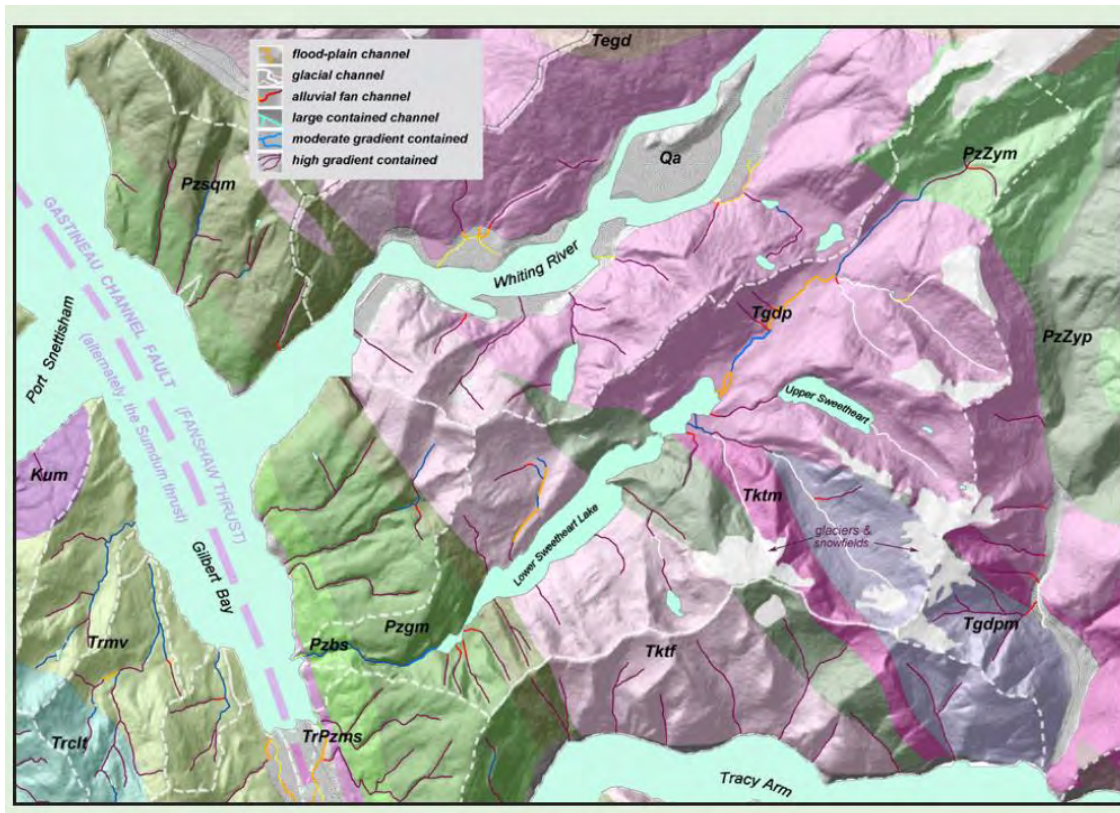
The northeast shore and mountain slope of Gastineau Channel have been mapped as a Tolstoi-McGilvery complex (very stony silt loam to very gravelly sandy loam) on steep slopes (35 to 75 percent), Kupreanof gravelly silt loam in isolated locations on less steep slopes (less than 35 percent), and a Wadleigh gravelly silt loam on the lowest slopes (12 to 20 percent). Only the Wadleigh soil type is considered to be hydric by the Natural Resource Conservation Service. The Wadleigh Series consists of somewhat poorly drained soils that occur on lower mountainous slopes. These soils are composed of very gravelly loamy material underlain by glacial till, and covered by a forest mat. Coarse fragments and cobbles dominate the soil below 10-inch soil depths. Firm substratum is usually reached within 25 inches of the surface forest mat. These soils support western hemlock and scattered Sitka spruce.

The U.S. Forest Service (Forest Service) soil inventory, conducted in the area of the Project and summarized in the 1980 “Forest Service Final Environmental Impact Statement FEIS): Proposed Recreational Development and Independent Timber Sale Gilbert Bay/Holkam Bay,” presented the following information. Shallow mineral soils (less than 4 feet) on steep, V-notch dissected sideslopes are common in glacially formed U-shaped valleys of southeast Alaska, such as Gilbert Valley. Local sideslope soils are formed from colluvium, residuum, and glacial till. Inclusions of fine textured (clay) soils of glacial origin occur infrequently along lower sideslopes. Small areas of organic solids are found on sideslope benches where subsurface drainage is impaired. Sideslope soils, other than clay soils, pose few hazards to developmental activities. These soils have low susceptibility to mass erosion on slopes less than 65 percent and are resistant to surface erosion and surface disturbance due to a thick (greater than 6 inches) organic layer. Valley bottom soils, such as near the shoreline at Gilbert Bay, are comprised of coarse

glacial outwash and morainal gravels with inclusions of alluvial deposits and organic soils. The glacial gravel soils are youthful, have relatively shallow (less than 6 inches) surface organic layers, and occur on nearly level (less than 10 percent) terrain.

Observations in July and August 2012 in the proposed access road and powerhouse area indicate the presence from ground surface of these soil layers:

- Moss, spruce needles, and leaves – Approximately 0 to 12 inches thick.
- Mineral soil, very stony to gravelly sandy loam – Approximately 0 to potentially several feet thick. Includes colluvium.
- Talus – Gravel to very large boulders, often covered with Layer 1 and likely mixed with Layer 2 near the base. Common near outcrops and on steep valley slopes.
- Stream deposits – Gravel to boulder-sized rock in drainages and streams, typically at the base of slope and extending below the water surface of Sweetheart Lake.
- Glacial till – Identified by the presence of rounded tonalite gravel to boulders. Observed along access road alignment.

Figure 5 Geology Map of Sweetheart Lake and Gilbert Bay

Slopes: Topography in the Project watershed area is primarily steep and mountainous with dense spruce-hemlock forests extending from rock and glacial areas to tidewater. Maximum mountain elevations above Lower and Sweetheart Lakes are over 4,000 feet, while the average elevation is about 2,000 feet.

Topography between the Sweetheart Creek powerhouse and extending to the Gilbert Bay marine terminal/dock area is rocky and forested on the upland and has lower elevation forest and rock beach fringe at the lower elevations along the shoreline.

Drainage Patterns: Current drainage flow is based on natural topography. With the exception of a couple road crossings (culverts), the intent will be to leave existing drainage patterns as they exist.

The area of work has been previously stripped of vegetation for mining. Current conditions include exposed rock with very little soils or vegetation, riprap slopes and drainage swales.

2.4. Construction Site Estimates

The following are estimates of the construction site.

Total Project boundary:2,189.4 acres

Construction site area to be disturbed: 18.79 acres

Percentage impervious area before construction:.....<1 %

Description of unique features that are to be preserved:

The anadromous reach of lower Sweetheart Creek downstream of the tailrace. Estuarine wetlands, designated es2, in the wetland delineation (Appendix L, Bosworth). This area will be marked and protected from Project traffic (construction and permanent)

Runoff coefficient before construction:10

Percentage impervious area after construction:.....<1 %

Runoff coefficient after construction10

2.5. Receiving Waters

Description of receiving waters: Gilbert Bay

Description of storm sewer systems: N/A

Description of impaired waters or waters subject to total maximum daily loads (TMDLs):

There are no impaired waters or TMDLs.

2.6. Site Features and Sensitive Areas to Be Protected

Sensitive sites and specific protections are:

- The anadromous reach of lower Sweetheart Creek adjacent to the new tailrace. This area will have the trails improved to avoid erosion.
- The anadromous reach of Sweetheart Creek just below the new tailrace. Powerhouse area drainage will be kept out of the reach (both during and after construction).

2.7. Potential Sources of Pollution

Potential sources of sediment to stormwater runoff: Include suspended fines produced by exposed soils, rock excavation, and processing. Tunnel excavation, powerhouse excavation, dam site excavation, and associated work will produce sediments. Concrete construction activities will produce sediments.

Potential pollutants and sources, other than sediment, to stormwater runoff are listed in Table 1.

Table 1 Potential Pollutants and Sources Other Than Sediment

Trade Name Material	Stormwater Pollutants	Location
Diesel	Petroleum	Earthwork/Tunneling Equipment
Gas	Petroleum	Trucks and Boats
Oils and Lubrications	Petroleum	Equipment/Machinery
Aviation Fuels	Petroleum	Planes and Helicopters

2.8. Endangered Species Certification

Are endangered or threatened species and critical habitats on or near the project area?

☐ Yes

☒ No

2.9. Historic Preservation

Are there any historic sites on or near the construction site?

☐ Yes

☒ No

Describe how this determination was made:

Register of Historic Places and State Historic Preservations Office

2.10. Applicable Federal, Tribal, State, or Local Programs

None.

2.11. Maps

See the Storm Water and Pollution Prevention Plan (SWPPP) drawings, Attachment A (Section 8 of this Plan) sheets 1-7.

3.0 EROSION AND SEDIMENT CONTROL BMPS**3.1. Minimize Disturbed Area and Protect Natural Features and Soil**

Only the areas necessary for construction activities and Project facilities will be disturbed during Project construction. All existing vegetation will be maintained

wherever possible to minimize soil movement. Clearing activities will be limited to only those areas that can be graded and stabilized during that season. Disturbed areas will be revegetated after construction is complete, see Vegetation & Invasive Species Management Plan, Appendix Z, for details of planting, maintaining, and monitoring.

3.2. Phase Construction Activity

The construction on site will continue year around until completed. The Sweetheart Lake areas of dam and tunnel construction will be secured for the heavy snow and avalanche activity.

3.3. Control Stormwater Flowing onto and through the Project

The areas surrounding the Project have established native vegetation. Surface water that flows from higher elevations will be diverted around exposed soil and settling ponds.

3.4. Stabilize Soils

Exposed soils will be stabilized to prevent erosion. For further information, please reference the Project Spoil Disposal Plan (SDP) and the Vegetation Management Plan (VMP) (both in Appendix Z). Attached SWPPP drawings show the design for stabilizing the majority of Project soils on sheet 5, note 11 in Attachment A (in Section 8 of this Plan).

3.5. Protect Slopes

Exposed slopes that may erode will be protected using a combination of rock riprap and vegetation. Most Project excavation is in rock with drilling and blasting required. Most slopes will not produce sediment other than initial fines.

3.6. Protect Storm Drain Inlets

The only storm drain inlet will be inside the powerhouse switchyard, and it will be installed after all other construction is complete. It will drain to a sediment trap.

3.7. Establish Perimeter Controls and Sediment Barriers

Brush barriers, check dams, fence, and other methods will be utilized as sediment barriers and perimeter control. For further information, reference the attached SWPPP drawings, sheet 2.

3.8. Retain Sediment On Site

All sediment collected on site will be stabilized, placed as fill, and covered with topsoil and vegetation.

3.9. Establish Stabilized Construction Exits

The construction site is remotely located where no vehicles or equipment can exit and track pollution outside the Project limits. Prior to barge shipment, equipment will be cleaned of sediment in an established area with containment.

3.10. Additional BMPs

Maintain check dams in effective condition. Perform maintenance on check dams as soon as possible if needed. If BMPs need modification, they will need to be modified before the next storm event. Remove sediment from ponds/traps when design capacity hits 50 percent.

Details are included in the SWPPP drawings with BMPs on sheets 1-7 in Attachment A (in Section 8 of this Plan).

Cofferdams will be installed to allow construction of the Sweetheart Lake dam and for the Sweetheart Creek tailrace. Both cofferdams will be constructed using rock-filled fabric bags to hold an impervious liner.

The cofferdam at the outlet of Sweetheart Lake will divert Sweetheart Creek into the diversion tunnel and around the construction site for the roller-compacted concrete (RCC) dam. Construction of the diversion cofferdam will be done with clean rock contained in 1-cubic-yard fabric bags placed onto the existing rock in the lake outlet. This process will generate minimal sediment. The impervious liner will be placed downstream of the bag diversion and will be protected with clean shot rock. The cofferdam at the downstream side of the dam will be constructed similarly with fabric bags on the downstream side and a liner and rock on the upstream side. This cofferdam will be left in place and inundated when the reservoir is filled.

The tailrace cofferdam will be installed at the junction of the tailrace and lower Sweetheart Creek. This cofferdam will keep Sweetheart Creek water out of the tailrace area during construction. The cofferdam will be constructed entirely of clean rock-filled fabric bags holding an impervious liner. The Sweetheart Creek area where this dam will be constructed is bedrock and clean rounded rock streambed, and no significant sediment is expected. Any water entering the tailrace construction area will be pumped by electric pumps into the powerhouse site to run into the settling ponds and discharge to Gilbert Bay. This cofferdam is expected to be used for 30 days of construction. Upon

completion of the tailrace, this cofferdam will be removed and disposed of and materials reincorporated into other project elements.

To monitor the effectiveness of the above measures, daily monitoring of turbidity will be conducted upstream and downstream of active construction on Sweetheart Creek. The test results will be used to assess if water quality standards are being met, and if not, to adjust to appropriate controls quickly. These test will be conducted by the Environmental Control Monitor.

Transmission Towers: Measures will be developed in conjunction with JHI contractors and will be monitored by the ECM or designee.

Water Quality: Short-term construction phase shifts in pH, specific conductivity, and turbidity would be controlled by the following two-pronged approach.

1. Build the diversion tunnel and structure as designed to minimize the need to work within flowing water. Plan and schedule soil-disturbing work within the Project area to reduce and control sediment from the immediate work area to the extent practical. Measures will be reviewed and developed as necessary in coordination with ECM and relevant regulatory agencies.
2. Execute construction work in all areas of soil-disturbing activities according to plan and in accordance with the Alaska Pollutant Discharge Elimination System Construction General Permit. Use procedural (e.g., construction phasing, etc.), as well as structural best management practices during construction. Measures will be reviewed and developed as necessary in coordination with ECM and relevant regulatory agencies.

4.0 GOOD HOUSEKEEPING BMPS

4.1. Material Handling and Waste Management

Do not allow trash receptacles to be overfilled. Solid waste containment must be properly maintained to prevent spillage. For waste handling, storage, and disposal, refer to the Project Solid Waste and Wastewater Plan (SWWWP), Appendix Z.

4.2. Establish Proper Building Material Staging Areas

Areas are established and designated for building material storage and equipment on the attached SWPPP drawings for both Gibert Bay sites and Sweetheart Lake sites.

4.3. Designate Washout Areas

Due to the remote location of the site, there will not be equipment or vehicles entering or leaving the Project limits. Equipment will be cleaned in the powerhouse site, and water will be treated in the sediment pond (SWPPP drawing 5 note 8).

4.4. Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Site equipment will be fueled by on-site lube and fuel trucks. The trucks will be outfitted with spill containment kits in case of emergencies.

4.5. Control Equipment/Vehicle Washing

Vehicles and equipment will not be washed on site on a regular basis. If equipment needs to be cleaned before demobilization, this activity shall take place in the powerhouse area near Staging Area #4 (sheet 5, area note 2) where all runoff will be collected and treated as required in the sediment traps.

4.6. Any Additional BMPs

Please reference notes on sheets 1-7 SWPPP drawings in Attachment A (Section 8 of this Plan).

4.7. Allowable Non-Stormwater Discharge Management

Concrete wash and waste will be contained and discharged to the settlement pond adjacent to the powerhouse construction site.

5.0 SELECTING POST-CONSTRUCTION BMPS

Following the completion of the Project, the owner/developer will have a site presence to maintain the facility. Review of the grounds for erosion and stabilization will be one of the responsibilities of the facility manager.

6.0 INSPECTIONS

6.1. Inspection Personnel

Patrick McHugh – Certified Erosion Control Lead

Kurt Larson – Certified Erosion Control Lead

Joe Zech – Certified Erosion Control Lead

Max Schillinger – Certified Erosion Control Lead

6.2. Inspection Schedule and Procedures

An inspection report shall be completed and posted in the site office. Inspections shall take place every 7 days. During rain events, inspections shall be made daily.

See Appendix E of this plan for a sample inspection report.

6.3. Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Western Marine Construction, Inc. (WMC)

Patrick McHugh

2775 Harbor Ave. SW Suite A

Seattle, WA 98126

P: 206-622-9161; F: 206-622-9170

Attach a copy of the signed delegation of authority form in Appendix K of this plan.

6.4. Corrective Action Log

See Attachment F (in Section 8 of this Plan).for the Corrective Action Log.

7.0 RECORDKEEPING AND TRAINING

7.1. Recordkeeping

Records will be retained for a minimum period of 3 years after the permit is terminated.

7.2. SWPPP Amendment Log

See Attachment G (in Section 8 of this Plan) for the SWPPP Amendment Log.

7.3. Training

Individual(s) responsible for training are:

- Joe Zech – WMC, Certified Erosion and Sediment Control Lead
- Patrick McHugh - WMC, Certified Erosion and Sediment Control Lead

See Attachment J (in Section 8 of this Plan) for training logs.

8.0 SWPPP APPENDICES

The following documentation is attached to this SWPPP:

- Attachment A – General Location Map and Site Map with BMPs
- Attachment B – General BMPs
- Attachment C – Construction General Permit
- Attachment D – Notice of Intent (NOI) and Acknowledgement Letter from EPA/State
- Attachment E – Inspection Reports
- Attachment F – Corrective Action Log
- Attachment G – SWPPP Amendment Log
- Attachment H – Subcontractor Certifications/Agreements
- Attachment I – Grading and Stabilization Activities Log
- Attachment J – Training Log
- Attachment K – Delegation of Authority

8.1. Attachment E – Stormwater Construction Site Inspection Report

General Information			
Project Name	Juneau Hydropower		
NPDES Tracking No.		Location	Sweetheart Lake, AK
Date of Inspection		Start/End Time	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			
Inspector's Qualifications			
Describe present phase of construction			
Type of Inspection: ☐ Regular ☐ Pre-storm event ☐ During storm event ☐ Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? ☐ Yes ☐ No If yes, provide: Storm Start Date & Time: Storm Duration (hrs): Approximate Amount of Precipitation (in):			
Weather at time of this inspection? ☐ Clear ☐ Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snowing ☐ High Winds ☐ Other: Temperature:			
Have any discharges occurred since the last inspection? ☐ Yes ☐ No If yes, describe:			
Are there any discharges at the time of inspection? ☐ Yes ☐ No If yes, describe:			

Site-Specific BMPs

- Number the structural and non-structural BMPs identified in your SWPPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

Corrective Action Log

No.	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1		☐ Yes ☐ No	☐ Yes ☐ No	
2		☐ Yes ☐ No	☐ Yes ☐ No	
3		☐ Yes ☐ No	☐ Yes ☐ No	
4		☐ Yes ☐ No	☐ Yes ☐ No	
5		☐ Yes ☐ No	☐ Yes ☐ No	
6		☐ Yes ☐ No	☐ Yes ☐ No	
7		☐ Yes ☐ No	☐ Yes ☐ No	
8		☐ Yes ☐ No	☐ Yes ☐ No	
9		☐ Yes ☐ No	☐ Yes ☐ No	
10		☐ Yes ☐ No	☐ Yes ☐ No	
11		☐ Yes ☐ No	☐ Yes ☐ No	
12		☐ Yes ☐ No	☐ Yes ☐ No	
13		☐ Yes ☐ No	☐ Yes ☐ No	
14		☐ Yes ☐ No	☐ Yes ☐ No	
15		☐ Yes ☐ No	☐ Yes ☐ No	
16		☐ Yes ☐ No	☐ Yes ☐ No	
17		☐ Yes ☐ No	☐ Yes ☐ No	
18		☐ Yes ☐ No	☐ Yes ☐ No	
19		☐ Yes ☐ No	☐ Yes ☐ No	
20		☐ Yes ☐ No	☐ Yes ☐ No	

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

Site Issues List

No.	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐ Yes ☐ No	☐ Yes ☐ No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	☐ Yes ☐ No	☐ Yes ☐ No	
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐ Yes ☐ No	☐ Yes ☐ No	
4	Are discharge points and receiving waters free of any sediment deposits?	☐ Yes ☐ No	☐ Yes ☐ No	
5	Are storm drain inlets properly protected?	☐ Yes ☐ No	☐ Yes ☐ No	
6	Is the construction exit preventing sediment from being tracked into the street?	☐ Yes ☐ No	☐ Yes ☐ No	
7	Is trash/litter from work areas collected and placed in covered dumpsters?	☐ Yes ☐ No	☐ Yes ☐ No	
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	☐ Yes ☐ No	☐ Yes ☐ No	
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	☐ Yes ☐ No	☐ Yes ☐ No	
10	Are materials that are potential stormwater contaminants stored inside or under cover?	☐ Yes ☐ No	☐ Yes ☐ No	
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	☐ Yes ☐ No	☐ Yes ☐ No	
12	(Other)	☐ Yes ☐ No	☐ Yes ☐ No	

Noncompliance

Describe any incidents of non-compliance not described above:

CERTIFICATION STATEMENT

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Print name and title: _____

Signature: _____

Date: _____

8.2. Attachment F – Corrective Action Log

Project Name: Juneau Hydropower, Inc. – Sweetheart Lake

SWPPP Contact: Patrick McHugh

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person

8.3. Attachment G – SWPPP Amendment Log

Project Name: Juneau Hydropower – Sweetheart Lake

SWPPP Contact: Patrick McHugh

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

8.4. Attachment H – Subcontractor Certifications/ Agreements

SUBCONTRACTOR CERTIFICATION STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above-designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____ Date: _____

8.5. Attachment I – Grading and Stabilization Activities Log

Project Name: Juneau Hydropower – Sweetheart Lake

SWPPP Contact: Patrick McHugh

Date Grading Activity Initiated	Description of Grading Activity	Date Grading Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location

8.6. Attachment J – Stormwater Pollution Prevention Training Log

Project Name:	Juneau Hydropower – Sweetheart Lake
Project Location:	Juneau, AK
Instructor's Name(s):	
Instructor's Title(s):	

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ☐ Erosion Control BMPs
 ☐ Emergency Procedures
☐ Sediment Control BMPs
 ☐ Good Housekeeping BMPs
☐ Non-Stormwater BMPs

Specific Training Objective: _____

Attendee Roster: (attach additional pages as necessary)

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

8.7. Attachment K – Delegation of Authority Form

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the Sweetheart Lake construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)

_____ (company)

_____ (address)

_____ (city, state, zip)

_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in _____ (Reference State Permit), and that the designee above meets the definition of a “duly authorized representative” as set forth in _____ (Reference State Permit).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

9.0 AGENCY COMMENTS:

FERC January 16, 2014, Comments on Subsequent Draft License, Attachment B-17 requested addition information regarding installation and disposition of construction cofferdams for dam and tailrace construction.

JHI has addressed these comments in the SWPPP drawings and the Construction Plan (Appendix Z of the PDEA).

SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



SOLID WASTE & WASTEWATER PLAN (SWWP)

PREPARED BY:

**Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802**

MAY 2014

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SWEETHEART LAKE HYDROELECTRIC PROJECT

SOLID WASTE & WASTEWATER PLAN (SWWP)

1.0 AGENCY PLAN REQUESTS

In October 2013, Juneau Hydropower, Inc. (JHI) submitted a subsequent draft license application and draft Preliminary Draft Environmental Assessment (PDEA) for the Sweetheart Lake Hydroelectric Project to the Federal Energy Regulatory Commission (FERC). On October 22, 2013, FERC published notice and issued a request for comments and preliminary terms and conditions. The U.S. Department of Agriculture (USDA) Forest Service (Forest Service) reviewed these documents, and in its January 10, 2014, Preliminary 4(e) Terms and Conditions, number 22, requested the following plan: f) Solid Waste and Wastewater Plan (SWWP). JHI concurs that this is a necessary plan and is submitting this preliminary Waste Plan with the Final License Application and PDEA for comment.

2.0 PROJECT DESCRIPTION

The Project consists of: (1) the existing Lower Sweetheart Lake, raised from a surface water elevation of 551 feet (MLLW) and a surface area of 1,414 acres to a new minimum surface water elevation of 576 feet and a new surface area of 1,449 acres and a maximum surface water elevation of 636 feet with a surface area of 1,702 acres; (2) a new, roller-compacted concrete dam 111 feet high (from the downstream toe to the top of the dam), 280 feet long, 100 feet thick at the base, constructed at the outlet of Lower Sweetheart Lake; (3) an independent intake structure with fish screen adjacent to the dam right abutment, which conveys water to a 15 X 15-foot horseshoe-shaped, 9,621-foot-long unlined tunnel; (4) a 9-foot-diameter, approximately 896-foot-long penstock installed within the lower portion of the tunnel, with approximately another 160 feet of buried 7-foot-diameter penstock and manifold connecting to the powerhouse; (5) a powerhouse containing three new Francis generating units (6.6 MW each) with a total installed capacity of 19.8 MW; (6) a 541-foot tailrace discharging flows to Sweetheart Creek, including a salmon smolt reentry pool located adjacent to the powerhouse and tailrace; (7) a fenced switchyard adjacent to the powerhouse; (8) a new, approximately 4,400-foot-long, road from the powerhouse to the dock/landing site; (9) a new dock/landing site for boat, seaplane, barge/landing craft ramp, and/or helicopter access, located on the east shore of Gilbert Bay; (10) a new, 138-kilovolt transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments); (11) a new, 14,800-foot, 12.47-kV service transmission line extending from the dam site to the marine facility, providing operational electricity and communications for operations; (12) a caretaker facility

with shop and maintenance facilities; (13) a shelter facility at the dam site; (14) appurtenant facilities.

To construct and operate the Sweetheart Lake Hydroelectric Project systems, JHI has developed designs and specifications to meet federal, state, and local regulations. In addition, JHI has developed the following plans to implement procedures to construct, monitor, and mitigate the safety, health, and environmental impacts of the Project. These plans are prepared to meet regulatory requirements of various involved agencies and some plans address similar issues. Together these plans form a comprehensive resource to guide Project management through all phases of construction and into operation:

2.1. Appendix Z - JHI Preliminary Plans

The plans included in Appendix Z of the PDEA are as follows:

Access Management Plan (AMP)

Aquatic Habitat Restoration and Monitoring Plan (AHRMP)

- Fish Mitigation and Monitoring Plan (FMMP)

Bear Safety Plan (BSAFE)

Construction Plan (CP)

Environmental Compliance Monitoring Plan (ECMP)

Erosion and Sedimentation Control Plan (ESCP)

- Storm Water and Pollution Prevention Plan (SWPPP)

Fire Prevention Plan (FPP)

Hazardous Substances Plan (HSP)

Heritage Resource Plan (HRP)

Recreational Management Plan (RMP)

Scenery Management and Monitoring Plan (SMMP)

Solid Waste and Wastewater Plan (SWWP)

Spoil Disposal Plan (SDP)

- Acid Rock Disposal Contingency Plan (ARDCP)

Vegetation Management Plan (VMP)

- A. Invasive Species Management Plan (ISMP)

- B. Threatened, Endangered, Proposed for Listing, and Sensitive Plant Species Plan (TEPLSPSP)

Water Management Plan (WMP)

- A. Reservoir Management and Inundation Plan (RMIP)
- B. Stream Flow Management Plan (SFMP)
- C. Stream Flow Measurement Plan (SMP)

Wildlife Mitigation and Monitoring Plan (WMMP)

- Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan (TEPLSSP)

3.0 SOLID WASTE & WASTEWATER PLAN (SWWP)

This Solid Waste and Wastewater Plan (SWWP) addresses the following waste and its disposal at the Project construction site:

- Disposal of solid waste (e.g., construction debris and garbage/trash)
- Disposal of wastewater (including human waste [sewage])
- Disposal of organic waste

The following two items are addressed in other plans as listed below:

- Disposal of excavated materials (soil and rock) is described in the Spoil Disposal Plan (SDP) (in Appendix Z of the PDEA)
- Disposal of hazardous substances is discussed in the Hazardous Substance Plan (HSP) (in Appendix Z of the PDEA)

4.0 SOLID WASTE DISPOSAL

Garbage will be collected daily and stored in bear-proof containers until it can be removed to the Juneau disposal facility or another approved uplands disposal facility. It will be transported by barge or boat.

Construction debris will be collected, contained, and removed from site via barge from the dock staging area.

All solid waste will be sorted and delivered to an approved uplands disposal site (either Juneau, Alaska, or Seattle, Washington).

5.0 WASTEWATER DISPOSAL

An approved wastewater treatment plant will be permitted for the Gilbert Bay construction camp and caretaker's facility and for the Sweetheart Lake camp prior to construction. The Gilbert Bay camp is expected to serve 20 people the first year and up to 60 the second year. The Sweetheart Lake camp is expected to serve 20 people from April to October for 2 years of construction.

With lower water use designs, it is expected the Gilbert Bay camp would use 50 gallons per person and the Sweetheart Lake camp would use 40 gallons per person.

Preliminary design for the Gibert Bay wastewater treatment plant uses 2 Whitewater D150FF with a capacity of 3,000 gallons per day. The Sweetheart Lake camp treatment system will use a single Whitewater D150FF (or approved similar plant) for a capacity of 1,500 gallons per day.

At other construction sites portable toilets will be used on site for human waste and will be maintained on an as-needed basis. They will be transported, serviced, and maintained in a safe and hygienic manor with waste transported for disposal at the City and Borough of Juneau treatment plant or at another approved site. An appropriate effort will be made to prevent raw sewage from reaching streams or other water bodies.

6.0 ORGANIC WASTE

Organic waste consisting of stumps, limbs, moss, and other vegetation will be used to construct the powerhouse visual landform barrier and reclaim the site where the caretaker's facility will be built. The organics will be shaped and stabilized with rock and planted as soon as possible with native plantings. The powerhouse site and other sites with disturbed ground will have the surface covered with chipped limbs and brush to reduce erosion and promote natural vegetation. Limbs, trees, and the roots of trees removed at the dam and lake will be burned.

Rock and soil will be stored and disposed as stated in the SDP and handled in accordance with the Erosion and Sedimentation Control Plan (ESCP) and SWPPP.

7.0 COMPLIANCE

Prior to on-site construction activities, this SWWP will be reviewed by the Environmental Compliance Monitor (ECM) and JHI to ensure all plan features match the current operations plans and that all systems and permits are ready and approved. This will be documented by the ECM. At least monthly, The ECM will document inspection of all components of this plan and direct changes if required through start of commercial operations.

8.0 AGENCY COMMENTS

Agency comments will be listed below by date received and by agency name.

SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



SPOIL DISPOSAL PLAN (SDP) & ACID ROCK DISPOSAL CONTINGENCY PLAN (ARDCP)

PREPARED BY:

**Juneau Hydropower, Inc.
PO Box 22775
Juneau, AK 99802**

MAY 2014

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SWEETHEART LAKE HYDROELECTRIC PROJECT

SPOIL DISPOSAL PLAN (SDP) & ACID ROCK DISPOSAL CONTINGENCY PLAN (ARDCP)

1.0 AGENCY PLAN REQUESTS

In October 2013, Juneau Hydropower, Inc. (JHI) submitted a subsequent draft license application and draft Preliminary Draft Environmental Assessment (PDEA) for the Sweetheart Lake Hydroelectric Project to the Federal Energy Regulatory Commission (FERC). On October 22, 2013, FERC published notice and issued a request for comments and preliminary terms and conditions. The U.S. Department of Agriculture (USDA) Forest Service (Forest Service) reviewed these documents, and in its January 10, 2014, Preliminary 4(e) Terms and Conditions, number 22, requested the following plan: b) Spoil Disposal Plan (SDP). JHI concurs that this is a necessary plan and is submitting this preliminary Spoil Disposal Plan with the Final License Application and PDEA for comment.

2.0 PROJECT DESCRIPTION

The Project consists of: (1) the existing Lower Sweetheart Lake, raised from a surface water elevation of 551 feet (MLLW) and a surface area of 1,414 acres to a new minimum surface water elevation of 576 feet and a new surface area of 1,449 acres and a maximum surface water elevation of 636 feet with a surface area of 1,702 acres; (2) a new, roller-compacted concrete dam 111 feet high (from the downstream toe to the top of the dam), 280 feet long, 100 feet thick at the base, constructed at the outlet of Lower Sweetheart Lake; (3) an independent intake structure with fish screen adjacent to the dam right abutment, which conveys water to a 15 X 15-foot horseshoe-shaped, 9,621-foot-long unlined tunnel; (4) a 9-foot-diameter, approximately 896-foot-long penstock installed within the lower portion of the tunnel, with approximately another 160 feet of buried 7-foot-diameter penstock and manifold connecting to the powerhouse; (5) a powerhouse containing three new Francis generating units (6.6 MW each) with a total installed capacity of 19.8 MW; (6) a 541-foot tailrace discharging flows to Sweetheart Creek, including a salmon smolt reentry pool located adjacent to the powerhouse and tailrace; (7) a fenced switchyard adjacent to the powerhouse; (8) a new, approximately 4,400-foot-long, road from the powerhouse to the dock/landing site; (9) a new dock/landing site for boat, seaplane, barge/landing craft ramp, and/or helicopter access, located on the east shore of Gilbert Bay; (10) a new, 138-kilovolt transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments); (11) a new, 14,800-foot, 12.47-kV service transmission line extending from the dam site to the marine facility, providing

operational electricity and communications for operations; (12) a caretaker facility with shop and maintenance facilities; (13) a shelter facility at the dam site; (14) appurtenant facilities.

To construct and operate the Sweetheart Lake Hydroelectric Project systems, JHI has developed designs and specifications to meet federal, state, and local regulations. In addition, JHI has developed the following plans to implement procedures to construct, monitor, and mitigate the safety, health, and environmental impacts of the Project. These plans are prepared to meet regulatory requirements of various involved agencies and some plans address similar issues. Together these plans form a comprehensive resource to guide Project management through all phases of construction and into operation:

2.1. Appendix Z - JHI Preliminary Plans

The plans included in Appendix Z of the PDEA are as follows:

Access Management Plan (AMP)

Aquatic Habitat Restoration and Monitoring Plan (AHRMP)

- Fish Mitigation and Monitoring Plan (FMMP)

Bear Safety Plan (BSAFE)

Construction Plan (CP)

Environmental Compliance Monitoring Plan (ECMP)

Erosion and Sedimentation Control Plan (ESCP)

- Storm Water and Pollution Prevention Plan (SWPPP)

Fire Prevention Plan (FPP)

Hazardous Substances Plan (HSP)

Heritage Resource Plan (HRP)

Recreational Management Plan (RMP)

Scenery Management and Monitoring Plan (SMMP)

Solid Waste and Wastewater Plan (SWWP)

Spoil Disposal Plan (SDP)

- Acid Rock Disposal Contingency Plan (ARDCP)

Vegetation Management Plan (VMP)

- A. Invasive Species Management Plan (ISMP)

- B. Threatened, Endangered, Proposed for Listing, and Sensitive Plant Species Plan (TEPLSPSP)

Water Management Plan (WMP)

- A. Reservoir Management and Inundation Plan (RMIP)
- B. Stream Flow Management Plan (SFMP)
- C. Stream Flow Measurement Plan (SMP)

Wildlife Mitigation and Monitoring Plan (WMMP)

- Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan (TEPLSSP)

3.0 SPOIL DISPOSAL PLAN (SDP)

This document provides a description of the means and methods that will be used at the Sweetheart Lake Hydroelectric Project (Project) to dispose of excavated materials. This plan is compiled from information provided by Juneau Hydropower, Inc.'s (JHI's) selected contractors and consultants. This plan will be worked in compliance with the above-listed environmental and safety plans developed for the Project (Appendix Z). JHI and its contractors will comply with all permits and federal, state, and local laws.

This SPOIL Disposal Plan (SDP) focuses on the handling and disposal of excavated materials. This SDP will work in conjunction with the Project Erosion and Sedimentation Control Plan (ESCP), which includes the Storm Water and Pollution Prevention Plan (SWPPP).

3.1. SPOIL DISPOSAL SITES

Temporary and permanent spoil disposal sites are at the lower tunnel portal/powerhouse site (major site), coastal road, barge dock, caretaker's facility, and dam construction staging areas.

3.2. MATERIAL COMPOSITION

The vast majority of the material excavated will be rock, by the drill and blast method. No geotechnical drilling has been done to date due to Forest Service special use requirements, so all material type and quantities will necessarily be evaluated when permitted. Total excavation is estimated at 245,000 cubic yards (cy) of that 15,000 is estimated to be organic material and soil with the remaining 230,000 being rock. The road and barge dock site require 201,000 cy of rock, the dam and cofferdams use 22,000 cy of rock, the tailrace and powerhouse use 8,000 cy of rock, and the submarine cable uses 7,000 cy of rock. The visual landform barrier as designed is 28,000 cy of

unclassified material. The Project is very closely balanced for cut and fill; further adjustments are possible if geotechnical information dictates.

3.2.1. SDP Measures

The following details the SDP measures required for the Project:

- Silt containment will be placed down slope of all spoil sites, whether temporary or final.
- Rock sources will be tested before excavation for possible acid rock drainage (ARD) potential.
- Soil spoil that remains unused after construction will be contoured to the existing terrain slope and planted in either the caretaker's facility or the powerhouse visual landform barrier and in small amounts adjacent to the coastal road.
- Rock spoil that remains after construction will be contoured to the existing terrain in the dam construction staging areas or the visual landform barrier adjacent to the powerhouse.

4.0 ACID ROCK DISPOSAL CONTINGENCY PLAN (ARDCP)

4.1. Background

Acid rock drainage (ARD) can occur when sulfide minerals, particularly pyrite (FeS_2), pyrrhotite (FeS), and marcasite (FeS_2), but also chalcopyrite (CuFeS_2) and arsenopyrite (FeAsS), oxidize in the presence of oxygen and water. Most often, the principle cause of ARD is the oxidation of pyrite found in gold, base metal, and coal.

Any exposed rock material that has high-enough concentrations of pyrite and/or other sulfides has the potential to generate and release acid and dissolved metals. The amount of acid released from stored rock material is dependent on the concentration and rate of oxidation of the sulfides, the nature and quantity of acid-consuming minerals in the rock, and the amount of water passing through or over the rock material. Acid generation can occur almost immediately when the rocks are exposed to air and water, or can take decades to fully develop.

Initially, the principal factor controlling the rate of oxidation of pyrite is oxygen in the presence of water. However, as the pH of the water decreases with increasing acidity, ferric ions (Fe^{3+}), produced from the oxidation of iron sulfides, become more dominant in the oxidation process. Commonly, the amount of atmospheric oxygen needed to

generate acid is low, less than a few percent of the oxygen content in air. Generated acid may not migrate if there is a sufficient volume of acid-neutralizing minerals such as calcite and dolomite in the rock material.

4.2. Acid Rock Drainage (ARD) Potential

Additional work is planned to evaluate the ARD potential of the disturbed materials using visual observations, petrographic analysis, and testing using static methods. Additional testing of suspected ARD areas would occur with detailed invasive drilling techniques not available under the conditions of the current amendments of the Forest Service Special Use Permit. This testing would occur prior to construction. The Environmental Compliance monitor (ECM) will ensure that areas to be disturbed are adequately tested, and if an ARD situation is found to be evident, will take measures to institute ARDCP measures.

Total projected excavation is estimated at 245,000 cy for the Project. Specific areas and ARD potential are described below:

- The powerhouse excavation accounts for 155,000 cy or 63% of the total Project excavation. Of the eight sample sites in this area mapped by Schnabel Engineering, only one site adjacent to Lower Sweetheart Creek (Stop B-4) showed small crystals of possible pyrite. There does not appear to be much potential for ARD from rock removed from this site.
- The dam site accounts for 15,000 cy or 6% of the total Project excavation. Of the 10 nearby Schnabel sample sites, none notes pyrite or other acid prone minerals. There does not appear there is much potential for ARD from rock produced at this site.
- The power tunnel excavation accounts for approximately 72,000 cy or 29% of total Project excavation. Neither the upper or lower portal samples noted show ARD probability from rock produced. There is a possibility that in the 9,621 feet of tunneling area, that ARD will be of concern. If on-site geotechnical drilling and sampling indicate a potential for creating ARD from the excavated materials, then an Acid Rock Drainage Plan will be developed in consultation with JHI geotechnical engineers, the Forest Service, and the Alaska DFG, and submitted to FERC within 90 days.

If site work encounters rock that may have a potential to develop ARD in stockpiles the following measures will be taken:

- Separate spoils containing acid-forming materials for immediate disposal.

- Dispose of the acid-forming material in a designated area with a liner and cap sufficient to keep the weathering reaction from occurring.
- Determine if the acid-forming material would need to be treated with a buffering agent such as lime to neutralize it on site

4.3. Rock Predictive Methods and Characterization

The most important aspect for any investigation into the potential of ARD is to document the various rock types, as well as the content and distribution of sulfide minerals in the rock units, in the Project area. After determining the number of rock unit categories (separate geological units with different concentrations of pyrite), an appropriate number of samples that will be representative of each category should be determined. A sufficient number of samples should be collected to effectively characterize the various elements of the Project such as exposed rock in road cuts, overburden material pushed to the downward side of the road being built, and any other surface disturbance associated with road building which would expose potential sulfide mineral-bearing material.

If ARD potential is found to exist, static sample characterization methods will be used to assess potential acidity.

- **Static tests** that determine both the total acid-generating and total acid-consuming potential of a sample and are used to predict the potential of the rock to produce acid. These may include but are not limited to:
 - Paste or slurry pH tests to measure the surface acidity of rocks;
 - Acid-Base accounting tests which determine the Maximum Potential Acidity (MPA) and Acid Neutralizing Capacity (ANC) of samples;
 - Net Acid Producing Potential (NAPP), which is the theoretical balance between a sample's capacity to generate acid and its capacity to neutralize the acid that is generated ($NAPP = MPA - ANC$); and
 - Net Acid Generation (NAG) test using hydrogen peroxide to stimulate oxidation to assess how much acid production may occur.

Results of these tests will place a waste material type into one of five categories, which are:

- Acid Consuming Material, non-sulfidic (ACM);
- Non-Acid Forming - Low Sulfur (NAF-LS);
- Non-Acid Forming - High Sulfur (NAF-HS);

- Potentially Acid Forming - Low Capacity (PAF-LC); and
- Potentially Acid Forming - High Capacity (PAF-HC).

If a site contains PAF-HC, PAF-LC or NAF-HS material, then management of the oxidation and water drainage from this material must be given serious attention.

4.4. Disposal of ARD

Per measures listed above and in consultation with the Forest Service.

4.5. Reporting

To be developed, if needed, in consultation with the Forest Service.

5.0 AGENCY COMMENTS

Comments will be shown by date.

January 10, 2014, Forest Service comments, 3.3.1 Geology and Soils. Requested further testing for Acid Rock Drainage Potential, and if potential is found to exist, a plan to address Acid Rock Drainage must be approved by the Forest Service.



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Fish and Game

DIVISION OF HABITAT
Southeast Region Office

802 3rd Street
Douglas, AK 99824-5412
P.O. Box 110024
Juneau, Alaska 99811-0024
Main: 907.465.4105
Fax: 907.465.4759

FISH HABITAT PERMIT FH16-I-XXXX

ISSUED: DRAFT

Duff Mitchell
Juneau Hydropower, Inc
PO Box 22775
Juneau, AK 99802

RE: Sweetheart Lake Hydro
Sweetheart Creek (Stream No. 111-35-10200)
Sec 29, T 45 S, R 73E, CRM (SUM D-5)
Location: 57.9454 N, 133.6381 W

Dear Mr. Mitchell:

Pursuant to AS 16.05.871 (b) and AS 16.05.841, the Alaska Department of Fish and Game (ADF&G) Division of Habitat has reviewed your proposal to construct the Sweetheart Lake Hydroelectric project. The 19.8-megawatt storage hydropower facility is located in the City and Borough of Juneau, about 33 miles south of Juneau at Sweetheart Lake and Sweetheart Creek, which drain into Gilbert Bay.

Background

Sweetheart Lake's drainage basin is 35 square miles, with annual average outflow of 336 cubic feet per second. ADF&G's Division of Sport Fish stocked Sweetheart Lake with 40,000 rainbow trout eggs in 1954 and 20,000 fry in 1955, and both Dolly Varden char and rainbow trout persist in the lake today. In 1990, Douglas Island Pink and Chum started stocking Sweetheart Lake annually¹ with about 500,000 sockeye salmon fry. Returning sockeye salmon adults not captured in the commercial fishery support a personal use fishery. Those not captured in the personal use fishery die without spawning at a barrier falls.

¹ DIPAC did not stock the lake in 1992, 1995, and 1997.

The anadromous reach of Sweetheart Creek extends about ¼ mile upstream from tidal influence where a barrier waterfall blocks anadromous fish passage. Pink and chum salmon spawning takes place in the intertidal reach. Sweetheart Creek, between Sweetheart Lake and the barrier at the anadromous reach, contains high gradient, primarily bedrock habitat that contains Dolly Varden char and rainbow trout.

Project Description

You will construct a 280 ft wide by 111 ft high roller-compacted concrete dam, with a 125 ft wide ungated overflow spillway at the outlet of Sweetheart Lake about 2 miles upstream of the anadromous reach. The dam and project operation will raise the existing lake elevation from 551 ft to between 576 ft and 636 ft. Lake levels are expected to fluctuate about 60 ft annually. Construction of the dam will block downstream fish passage from the lake to the anadromous reach and Gilbert Bay.

To dewater the dam construction site, you will build a temporary diversion tunnel, 10 ft high by 10 ft wide and 525 ft long, through the right abutment. You will use temporary lined rockfill cofferdams upstream and downstream of the dam to account for storms and provide vehicular access across the stream channel. You will maintain continuous flow through the anadromous reach when diverting water. Following dam construction, you will convert the diversion tunnel into the reservoir outlet which will release flow to the bypass reach. You will install a conduit from the intake structure to the diversion tunnel including a flow meter and release valve to monitor and document discharges.

The intake will consist of a 45 ft long by 25 ft wide by 16 ft high rectangular structure with six 7 ft diameter by 10 ft high cylindrical screens mounted on top. The screens will be manufactured with wedge wire and will have 3/32 in openings designed for an approach velocity of 0.4 ft per second or less to prevent fish entrainment. The screens will be equipped with a water jetting system operated by submersible pumps to flush smaller debris off the screens and improve hydraulic efficiency. You will install a boom to prevent large debris from entering the screens.

The intake structure will lead to a 9,612 ft long, 15 ft wide by 15 ft high horseshoe shaped power tunnel. About 896 ft from the lower portal of the tunnel, the unlined tunnel will transition to a 7-9 ft diameter buried steel penstock before transitioning to a manifold dividing flow between three turbines. Each turbine contains a bypass valve to provide fail-safe return of water in the anadromous reach. Once the power tunnel is excavated prior to the installation of the penstock pipe it will be used to transport equipment and personnel to and from the site for dam construction.

The powerhouse will be located about 600 ft northwest of the anadromous barrier on Sweetheart Creek in a deep excavation. From the powerhouse you will construct a 30-90 ft wide and about 541 ft long rock tailrace channel to return flow near the base of the anadromous barrier falls. A fish exclusion structure about 30 ft downstream of the powerhouse will prevent fish from reaching the powerhouse. You will cover the upstream 94 ft of the tailrace channel with an arch culvert and backfill to provide a wildlife crossing.

Adjacent to the powerhouse, at the head of the tailrace structure, you will construct a 25 ft long by 5 ft wide by 4 ft deep smolt acclimation and evaluation pool. You will collect sockeye salmon smolt from Sweetheart Lake using a fish collection barge comprised of an intake structure, screening module, and outlet pipe. A helicopter will transport the sockeye salmon from the lake to the acclimation and evaluation pool that will temporarily hold the fish before release into the tailrace.

Power generated by the project will be transmitted by a new 8.69 mile long transmission line that will connect into the existing 138-kV Snettisham Transmission Line. The transmission line will consist of buried cable, submarine underwater cable, and overhead transmission lines.

You will schedule maintenance or repair work that may dewater the anadromous reach between June 1 and July 15 when spawning fish and incubating eggs are not present.

Anadromous Fish and Fishways Acts

Sweetheart Creek has been specified as being important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). Stream No. 111-35-10200 provides habitat for chum and pink salmon. Sweetheart Lake supports resident rainbow trout and Dolly Varden char. In the bypass reach, between the lake and the anadromous fish barrier, Sweetheart Creek contains resident rainbow trout and Dolly Varden char.

In accordance with AS 16.05.871(d) and AS 16.05.841, project approval is hereby given subject to the project description above and the terms of this permit.

Terms

Prior to construction of the transmission line you will obtain fish habitat permits for anadromous stream crossings.

You will provide ADF&G Habitat a copy of fish monitoring reports and spawning habitat assessments.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division of Habitat. Therefore, it is recommended you consult the Division of Habitat immediately when any deviation from the approved plan is being considered.

For the purpose of inspecting or monitoring compliance with any condition of this permit, you shall give an authorized representative of the state free and unobstructed access, at safe and

reasonable times, to the permit site. You shall furnish whatever assistance and information as the authorized representative reasonably requires for monitoring and inspection purposes.

This letter constitutes a permit issued under the authority of AS 16.05.871 and AS 16.05.841 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The Division of Habitat reserves the right to require mitigation measures to correct disruption to fish and game created by the project and which was a direct result of the failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

The permit decision relating to AS 16.05.871 may be appealed in accordance with the provisions of AS 44.62.330-630.

Any questions about this permit may be directed to Habitat Biologist Nicole Legere at (907) 465-6979 or emailed to nicole.legere@alaska.gov.

Sincerely,
Sam Cotten
Commissioner

By Jackie Timothy
Southeast Regional Supervisor

Email cc:

Al Ott, ADF&G Habitat, Fairbanks
ADF&G Habitat Staff, Juneau
Dan Teske, ADF&G/SF, Juneau
Dave Harris, ADF&G/CF, Juneau
Stephanie Sell, ADF&G/WC, Juneau
Shawn Johnson, ADF&G/SF, Juneau

Barb Adams, USFS, Juneau
Shelia Cameron, ADF&G/SF, Juneau
Cindy Hartmann Moore, NMFS, Juneau
Carl Reese, ADNRR/MLW, Juneau
Kimberly Bose, FERC, Washington D.C.
Sgt. Matt Dobson, DPS/AWT, Juneau

FH16-I-xxxx / Juneau Hydropower Inc.

- 5 -

Issued: **DRAFT**

Steve Brockmann, USFWS, Juneau

Linda Speerstra, USACE, Sitka

DRAFT

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Evolve™ LED Area Light - Scalable Wall Pack – EWS2

Product ID: EWS2

The GE Evolve™ LED Scalable Wall Pack is optimized for customers looking for an efficient and reliable LED solution for wall mounted, site, area and general lighting applications.

Depending on the application, Evolve LED Scalable Wall Pack can yield up to a 75% reduction in system energy consumption compared with standard HID systems. This reliable system operates well in cold temperatures and offers more than 11 years of service life to reduce maintenance frequency and expense, based on a 50,000 hour rated life and 12 hours of operation per day. Containing no mercury or lead, this environmentally responsible product is RoHS compliant.

Applications

- Wall mounted, site, area and general lighting utilizing an advanced LED optical system providing uniformity, vertical light distribution, reduced offsite visibility, reduced on-site glare and effective security light levels.

Housing

- Die-cast aluminum housing
- Sleek architectural design incorporating a modular heat sink light engine directly into the unit ensuring maximum heat transfer and long LED life
- Meets 1.5 G vibration standards per ANSI C136.31-2001

LED & Optical Assembly

- Structured LED array for optimized area light photometric distribution
- Evolve™ LED light engine utilizes reflective technology to optimize application efficiency and minimize glare
- Utilizes high brightness LEDs, 70 CRI at 4000K & 5000K typical
- LM-79 tests and reports are performed in accordance with IESNA standards

Lumen Maintenance

- System rating is L85 at 50,000 hours. Contact manufacturer for Lxx rating (Lumen Depreciation) beyond 50,000 hours.

Ratings

- UL/cUL listed, suitable for wet locations
- cUL listed with option code "J" SKUs
- IP 65 rated optical enclosure per ANSI C136.25-2009
- Temperature rated at -40° to 50°C. (35°C at high wattage 91W SKU)
- Upward Light Output Ratio (ULOR) = 0

Mounting

- Flush wall mount to "J" Box with inspection hole for IP 65

Finish

- Corrosion resistant polyester powder paint, minimum 2.0 mil. thickness
- Standard colors: Black and Dark Bronze
- RAL & custom colors available

Electrical

- 120-277 volt and 347-480 volt available
- System power factor is >90% and THD <20%*
- Integral surge protection: Exceeds ANSI C136.2-2015 "Basic" (6kV/3Ka) (120 strike)
- EMI: FCC Title 47 CFR Part 15 Class A
- Motion sensor with dimming capability available with "H" option Code



[\(/LightingWeb/na/images/ge-outdoor-area-lighting-fixture-ews1-evolve-led-area-light-scalable-wall-pack-luminaire-angled-855x600_tcm201-54727.jpg\)](#)

Product Downloads

- Data Sheets ▼
- IES Files ▼
- Installation Guides ▼
- Warranties ▼
- Brochures ▼

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Attachment 17

**System THD <26% fir 347-480V supply with A7 power level.*

Outdoor Lighting Design Tool (/LightingWeb/na/FlashTools/FlashOutdo InputOutputMode=XML&InputURL=/Light 97381 Input.xml)

Project: Juneau Hydro - Sweetheart Creek

Observers: Stephen B. Lewis (USFWS) and Stephanie Sell (ADF&G)

Air Service: Coastal Helicopters

Survey Platform: Bell Jet Ranger

Date: 12 May 2016

Objective: Survey Sweetheart Creek area, including proposed road and dock area, for bald eagle nests.

Survey Narrative: On 12 May 2016, we left Juneau International Airport at ~0845 for the Sweetheart Creek area. We had excellent survey conditions with light and variable winds and little overcast. We began survey approximately 2 mi northwest of Sweetheart Creek on the eastern shore of Gilbert Bay and surveyed southeast beyond the mouth of Sweetheart Creek (Figure 1). After the eagle survey, we surveyed for mountain goats in the terrain around Sweetheart Lake (results not included here). We returned to the airport, arriving about ~1115.

Results: We found 2 occupied nests (FWS# 02.12446.103 and 02.12446.064; Figure 1, Table 1). At 02.12446.103, the adult female flushed upon the approach of the helicopter and we observed 2 eggs. She returned to the nest immediately after the helicopter passed and resumed incubating. At 02.12446.064, we observed one adult incubating on the nest and another adult flying in the vicinity of the nest. We documented 3 unoccupied nests with not sign of use. We were unable to locate 5 other nests known to be in the area historically. These nests may be gone or just not found on this survey.

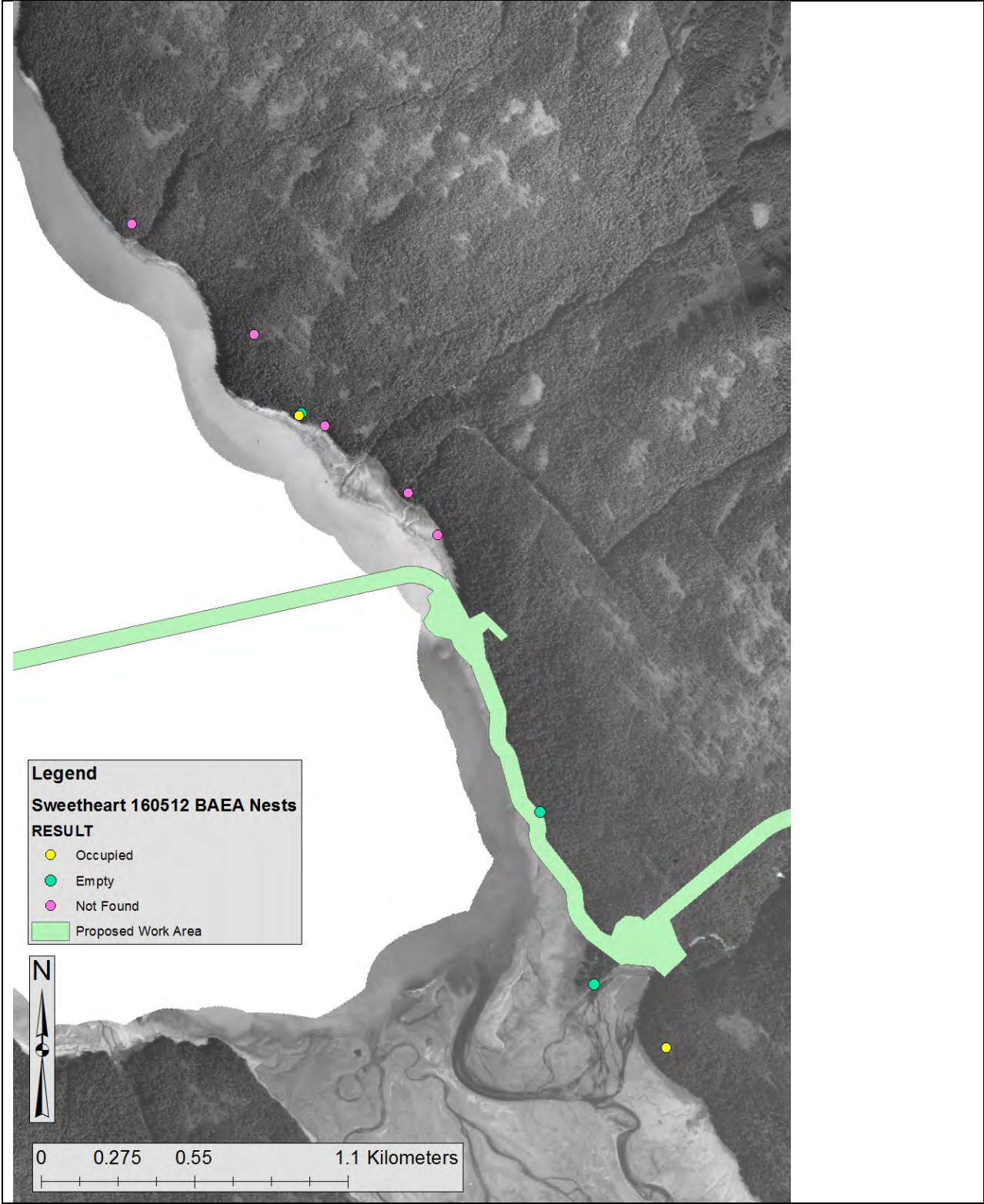


Figure 1. Results of bald eagle nest survey on May 12, 2016.

Table 1. Results of Bald Eagle nest survey in Sweetheart Creek area, Gilbert Bay, 12 May 2016.

Nest ID	Latitude ^a	Longitude	Status ^b	Nest Condition ^c
02.12446.068	57.971850	-133.702650	U	NF
02.12446.067	57.967270	-133.697580	U	NF
02.12446.103	57.964342	-133.696444	O	G
02.12446.105	57.964400	-133.696290	E	F
02.12446.092	57.963785	-133.695171	U	NF
02.12446.066	57.960920	-133.691550	U	NF
02.12446.093	57.959351	-133.690610	U	NF
02.12446.104	57.949861	-133.689763	E	G
02.12446.065	57.944070	-133.689780	E	G
02.12446.064	57.941420	-133.686740	O	G

^a Coordinates are decimal degrees in WGS84.

^b Nest status: O = occupied; E = empty; U = Unknown.

^c Nest Condition: G = good; F = fair; NF = not found.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
 P.O. Box 21668
 Juneau, Alaska 99802-1668

August 5, 2016

David Turner, Chief
 FERC Office of Energy Projects
 Division of Hydropower Licensing
 Northwest Branch
 888 First Street NE
 Washington, D.C. 20426

Re: Letter of Concurrence, Proposed FERC Sweetheart Lake Hydroelectric Project,
 13563-003-Alaska, NMFS# AKR-2016-9572

Dear Mr. Turner:

The National Marine Fisheries Service (NMFS) has completed informal consultation under section 7(a)(2) of the Endangered Species Act of 1973 (ESA), regarding the Federal Energy Regulatory Commission's (FERC) proposed issuance of a license to Juneau Hydropower, Inc. (JHI) for its proposed 19.8 megawatt (MW) Sweetheart Lake Hydroelectric project. JHI is proposing to construct a hydroelectric facility at Sweetheart Lake, with associated dock, submarine transmission lines, and other structures. The purpose of the proposed project is to provide a new source of hydroelectric power that would provide a renewable source of electric energy to meet the current and future energy demands of the Juneau area, and reduce the area's reliance on non-renewable power generation during peak demand periods.

NMFS received your request for written concurrence that the proposed action may affect, but is not likely to adversely affect, endangered humpback whales (*Megaptera novaeangliae*) or Steller sea lions (*Eumetopias jubatus*) in the western Distinct Population Segment (DPS) and their critical habitat. Based on our analysis of the information provided to us by JHI and FERC, and additional literature cited below, NMFS concurs with your determination.

CONSULTATION HISTORY

On October 29, 2015, FERC issued a Draft Environmental Impact Statement (EIS) for the proposed action, including an analysis of potential impacts to marine mammals. NMFS requested additional information regarding sound source levels and other stressors on November 4 and December 30, 2015. FERC and JHI provided information in response to NMFS's requests in November and December 2015.

NMFS received your request for written concurrence on May 31, 2016, along with a copy of the Final EIS for the proposed action. NMFS requested additional information via email and phone in June and July, 2016. JHI and FERC provided responses to these requests in June and July 2016.



DESCRIPTION OF THE PROPOSED ACTION AND ACTION AREA

The project would construct a power generation facility with associated dock, roads, structures, and submarine transmission lines within Port Snettisham and Gilbert Bay, Alaska (Lat. 57 59.644° N, Long. 133 44.654° W), approximately 32 miles south of Juneau (Figure 1). Proposed project activities include construction of:

- (1) a 280-foot-wide, 111-foot-high roller-compacted concrete dam at the existing natural outlet of Lower Sweetheart Lake, with a 125-foot-wide ungated overflow spillway at a crest elevation of 636 feet;
- (2) a 525-foot-long, 10-foot-high, 10-foot-wide arched reservoir outlet tunnel at the right dam abutment;
- (3) a 45-foot-long, 25-foot-wide, 16-foot-high rectangular concrete intake structure with six 7-foot-diameter, 10-foot-high cylindrical fish screens adjacent to the right dam abutment;
- (4) a 9,612-foot-long, 15-foot-wide, 15-foot-high horseshoe-shaped, unlined underground power tunnel;
- (5) an 896-foot-long, 9-foot-diameter saddle-supported steel penstock installed within the lower portion of the power tunnel;
- (6) three 160-foot-long (mean length), 7- to 9-foot-diameter buried steel penstocks connecting the lower portion of the power tunnel to the powerhouse;
- (7) a 160-foot-long, 60-foot-wide, 30-foot-high concrete and steel powerhouse;
- (8) three 7.1-MW Francis turbines with 6.6-MW generators with a total installed capacity of 19.8 MW;
- (9) a 541-foot-long, 30- to 90-foot-wide rock tailrace with a fish exclusion structure, discharging to Sweetheart Creek;
- (10) a 4,400-foot-long coastal road from the powerhouse to a dock/landing site for aerial and marine vehicle access, located on the east shore of Gilbert Bay;
- (11) an 8.69-mile-long, 138-kilovolt (kV) transmission line traversing Gilbert Bay, the Snettisham Peninsula, and Port Snettisham, consisting of:
 - (a) two buried segments, totaling 4,800 feet in length;
 - (b) two submarine cable segments, totaling 25,700 feet in length; and
 - (c) one 15,400-foot-long, overhead segment;
- (12) a 22,000-square-foot fenced switchyard adjacent to the powerhouse;
- (13) a 60-foot by 60-foot switchyard at the end of the transmission line on the north shore of Port Snettisham;
- (14) a 25-foot-long, 5-foot-wide, 4-foot-deep salmon smolt re-entry pool located adjacent to the powerhouse and tailrace;
- (15) a 4,225-square-foot caretaker's facility near the dock;
- (16) a 4,800-foot-long, 12.47-kV service transmission line and communication cable extending from the powerhouse to the dock and the caretaker's facility, providing operational electricity and communications;
- (17) a 10,000-foot-long, 12.47-kV service transmission line and communication cable extending from the powerhouse to the dam site, providing operational electricity and communications;
- (18) a 400-square-foot shelter facility at the dam site for employee use during smolt transport facility operations; and
- (19) associated secondary facilities.

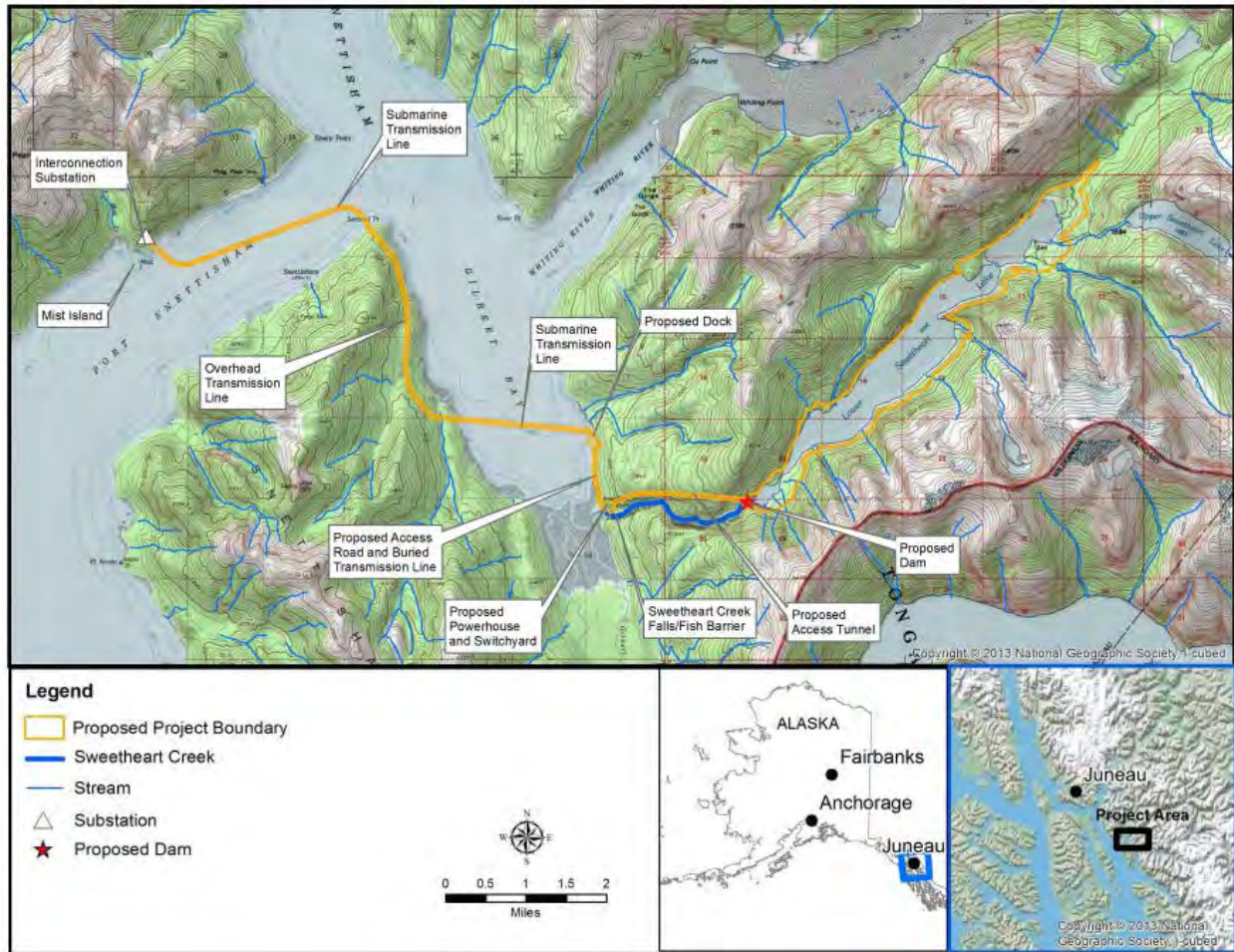


Figure 1. Vicinity map of the project location in Port Snettisham and Gilbert Bay in Southeast Alaska.

The tailrace would enter Sweetheart Creek approximately 1,300 feet upstream from the creek mouth on Gilbert Bay, bypassing an approximately 2-mile-long reach of Sweetheart Creek from the lake outlet to the impassable fish barrier at the falls near the tailrace outlet.

The project would occupy 2,058.24 acres of federal lands located within the Tongass National Forest. The proposed project boundary would also include 131.18 acres of tideland and submerged lands of the State of Alaska.

Construction activities are expected to occur over a 2-year period with a peak of activity during May through October of each year (Figure 2). JHI indicates that the majority of construction activities would occur in the first year between April and June. During this time, noise would be generated for the first three weeks from blasting and excavation at the quarry near the proposed docking facilities at the eastern side of Gilbert Bay, to start construction of the dock and road (Figure 2).

Pile driving for the construction of the dock would occur as soon as the initial blasting and material extraction are complete and is expected to occur for 8 hours a day for 4 to 5 days. The coastal road/trail would be constructed using heavy machinery delivered to the site by barge.

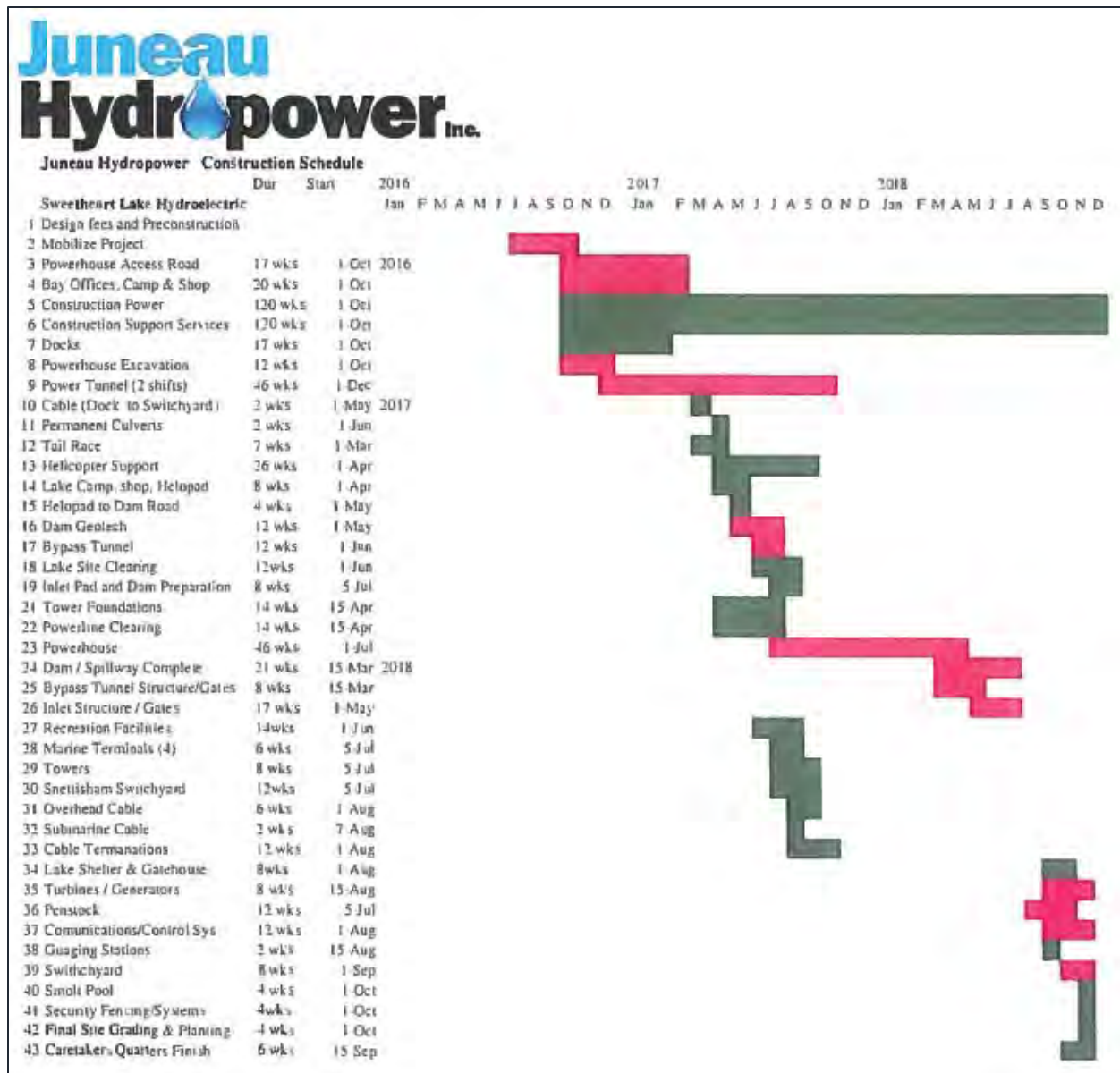


Figure 2. The proposed construction schedule for the proposed Sweetheart Lake Hydroelectric project.

Proposed in-water construction primarily involves driving fourteen 24-inch steel pilings for the project's dock on Gilbert Bay, just north of Sweetheart Creek (Figure 1). A 14-foot by 100-foot gangway will lead from land down to a 24-foot by 100-foot loading float which will extend out to a 60-foot by 30-foot seaplane float (Figure 3). Eight pilings will support the loading float, and two 3-piling dolphins will be constructed adjacent to the gangway (Figure 3). The pilings will be driven with a vibratory hammer to the extent practicable, while final proofing would require the use of an impact hammer with a hammer cushion.

Tunnel excavation near Sweetheart Creek, using the drill blast method, would begin during the first construction season. Blasting operations would be short in duration and largely located away from the shoreline, with blasting at the downstream portal of the power tunnel located approximately 500 feet from the shoreline and the upstream portal located over 9,000 feet from

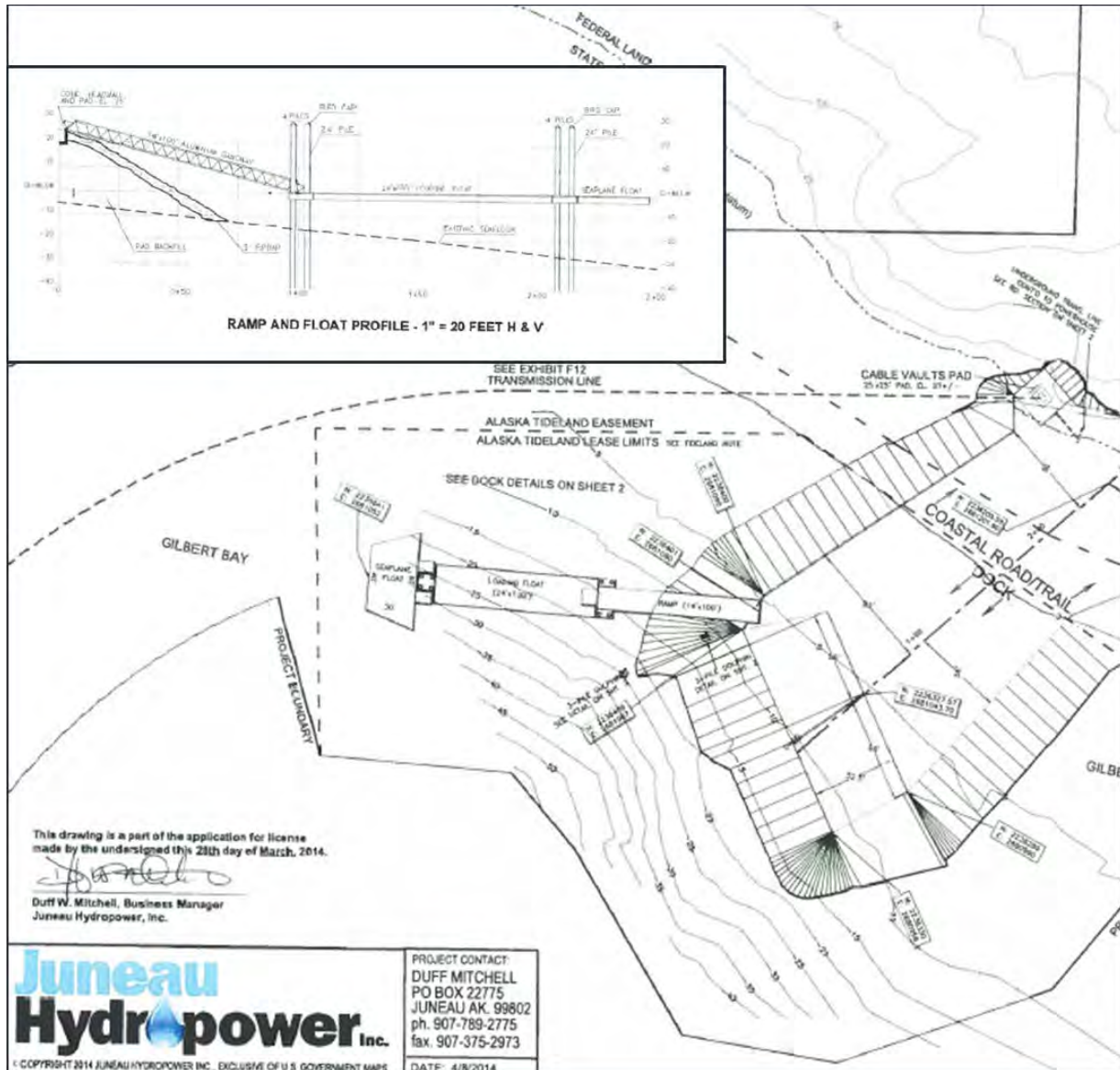


Figure 3. Diagrams of the location of the dock in Gilbert Bay and the profile of the dock and gangway, including relative location of the pilings, loading float, and seaplane float.

the shoreline. Blasting activities are located approximately 5.1 miles from the Mist Steller sea lion haulout. JHI estimates that blasting in-air sound levels will be 94 decibels, 50 feet away (USDOT 2006).

Tug and barge operations would include laying of the submarine transmission line and staging a tug and barge in Gilbert Bay for helicopter sling-loading of the transmission line bases and towers. Tugs, barges, and vessels associated with the transmission line laying operations will be moving very slowly (less than 5 knots most of the time).

Approximately 9,700 feet of submarine transmission line would be placed across Gilbert Bay at a depth of approximately 288 feet and buried to a depth of 2 to 3 feet. An additional 16,000 feet of submarine transmission line would be placed across Port Snettisham at an average depth of

618 feet. Unlike Gilbert Bay, the Port Snettisham line would not be buried; it would be placed on the bottom, and is expected to be buried in bottom sediments over time. Deployment of the cable bundle would occur on flood tides over the course of 4 to 5 days in the two separate locations. While JHI has not fully identified the specifics of the cable, the cable would be 138-kV alternating current with three lines sheathed together and deployed as a single armored cable bundle. Submarine power cables generate both electric and magnetic fields. Because marine mammals are able to detect electric and magnetic fields and they use magnetic fields for behavior, such as migration, those fields produced by the submarine power cable could affect marine mammals.

During project construction, JHI estimates it would make approximately 104 marine vessel trips per year which would account for nearly 10 percent of the total estimated vessel traffic in Port Snettisham during the 2-year construction period.

Construction of the proposed project would require the use and onsite storage of fuel (diesel and gasoline), motor oil, hydraulic fluid, and other lubricants. To prevent or minimize accidental introduction of petroleum or other hazardous substances to project waters during project construction, JHI proposes to implement its Hazardous Substances Plan. The plan addresses storage, spill prevention, and cleanup of hazardous substances and establishes procedures for reporting and responding to accidental releases. JHI's proposed Environmental Compliance Plan includes designating an onsite manager that would oversee and enforce environmental compliance monitoring for the project.

Action Area

The action area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The action area is distinct from, and larger than, the project footprint because some elements of the project may affect listed species some distance from the project footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

The proposed action is located primarily within Port Snettisham and Gilbert Bay, AK, as detailed in Figure 1. Additionally, the action area includes the routes taken by project-associated aircraft or marine vessels that may impact ESA-listed species. The EIS for this project includes an analysis of the marine vessels along shipping routes between Seattle, WA, Juneau, and Port Snettisham (Figure 4).

Since 1997 NMFS has used generic sound exposure thresholds to determine whether an activity produces underwater sounds that might result in impacts to marine mammals (70 FR 1871). NMFS is currently developing comprehensive guidance on sound levels likely to cause injury and behavioral disruption to marine mammals. However, until such guidance is available, NMFS uses the following conservative thresholds of underwater sound pressure levels¹, expressed in

¹ Sound pressure is the sound force per unit micropascals (μPa), where 1 pascal (Pa) is the pressure resulting from a force of one newton exerted over an area of one square meter. Sound pressure level is expressed as the ratio of a measured sound pressure and a reference level. The commonly used reference pressure level in acoustics is 1 μPa , and the units for underwater sound pressure levels are decibels (dB) re 1 μPa .



Figure 4. Chart showing the transit route that will be taken by marine vessels transporting supplies for the proposed action between Seattle, Juneau, and Port Snettisham.

root mean square² (rms), from broadband sounds that cause behavioral disturbance, and referred to as Level B harassment under section 3(18)(A)(ii) of the Marine Mammal Protection Act (MMPA):

- impulsive sound (e.g., impact pile driving): 160 dB re 1 $\mu\text{Pa}_{\text{rms}}$
- continuous sound (e.g., vibratory pile driving or watercraft): 120 dB re 1 $\mu\text{Pa}_{\text{rms}}$

NMFS uses the following conservative thresholds for underwater sound pressure levels from broadband sounds that cause injury, referred to as Level A harassment under section 3(18)(A)(i) of the MMPA:

- 180 dB re 1 $\mu\text{Pa}_{\text{rms}}$ for whales
- 190 dB re 1 $\mu\text{Pa}_{\text{rms}}$ for pinnipeds (seals and sea lions)

In addition, NMFS uses the following thresholds for in-air sound pressure levels from broadband sounds that cause Level B behavioral disturbance under section 3(18)(A)(ii) of the MMPA:

- 100 dB re 20 $\mu\text{Pa}_{\text{rms}}$ for Steller sea lions

² Root mean square (rms) is the square root of the arithmetic average of the squared instantaneous pressure values.

The action area for the proposed project includes the area where underwater project-related sound levels exceed background levels (i.e., above 120 dB re 1 μ Pa_{rms} received sound level for in-water noise, and above 100 dB 20 μ Pa_{rms} for in-air noise). JHI has provided information detailed above supporting its determination that the proposed action is not likely to produce in-air sound levels exceeding the 100 dB threshold.

Based on the 120 dB threshold, the action area for the proposed project includes most of Gilbert Bay, the west arm of Port Snettisham, and the transit routes for marine vessels shipping supplies for this project between the port of Seattle, Juneau, and Port Snettisham (Figure 1) (Figure 4).

Proposed Marine Mammal Mitigation Measures

To avoid causing harm to or harassment of marine mammals during aircraft and marine vessel operations, JHI and FERC will ensure the following mitigation measures are followed:

- No aircraft or marine vessel traffic within 1000 meters of the Mist Steller sea lion haulout in Port Snettisham (Figure 5).
- Vessels will slow their speed or stop in order to avoid approaching within 100 yards of marine mammals [this is consistent with the Regulations Governing the Approach to Humpback Whales in Alaska: 66 FR 29502, as well as the Alaska Code of Conduct regarding approach of all marine mammals (e.g., no closer than 100 yards: <http://www.alaskafisheries.noaa.gov/protectedresources/mmv/guide.htm#fl>)].
- Vessel operators will steer to the rear of any observed marine mammals.

To avoid causing harm or harassment of marine mammals during pile driving operations, JHI and FERC will ensure the following mitigation measures are followed:

- To minimize noise propagation, hard composite reinforced, thermosetting plastic cushions that are compatible with the pile driving equipment will be used during pile driving operations.
- To minimize disturbance and harm to listed and protected species from pile driving noise, JHI and FERC would implement the following ramp-up procedures:
 - for vibratory pile driving, initiate sound for 15 seconds at reduced energy, followed by a one minute waiting period; the procedure will be repeated two additional times before using the hammer continuously
 - for impact pile driving, provide an initial set of three strikes from the hammer at 40 percent energy followed by a 30-second waiting period; this procedure would be repeated two additional times before sustained impact driving is initiated
- To avoid harm to listed and protected marine mammals, a marine mammal monitoring area of 1,000 meters radius centered on the pile driving would be implemented during pile driving and removal (Figure 5). A marine mammal monitor will record observations of marine mammals near or within the area.

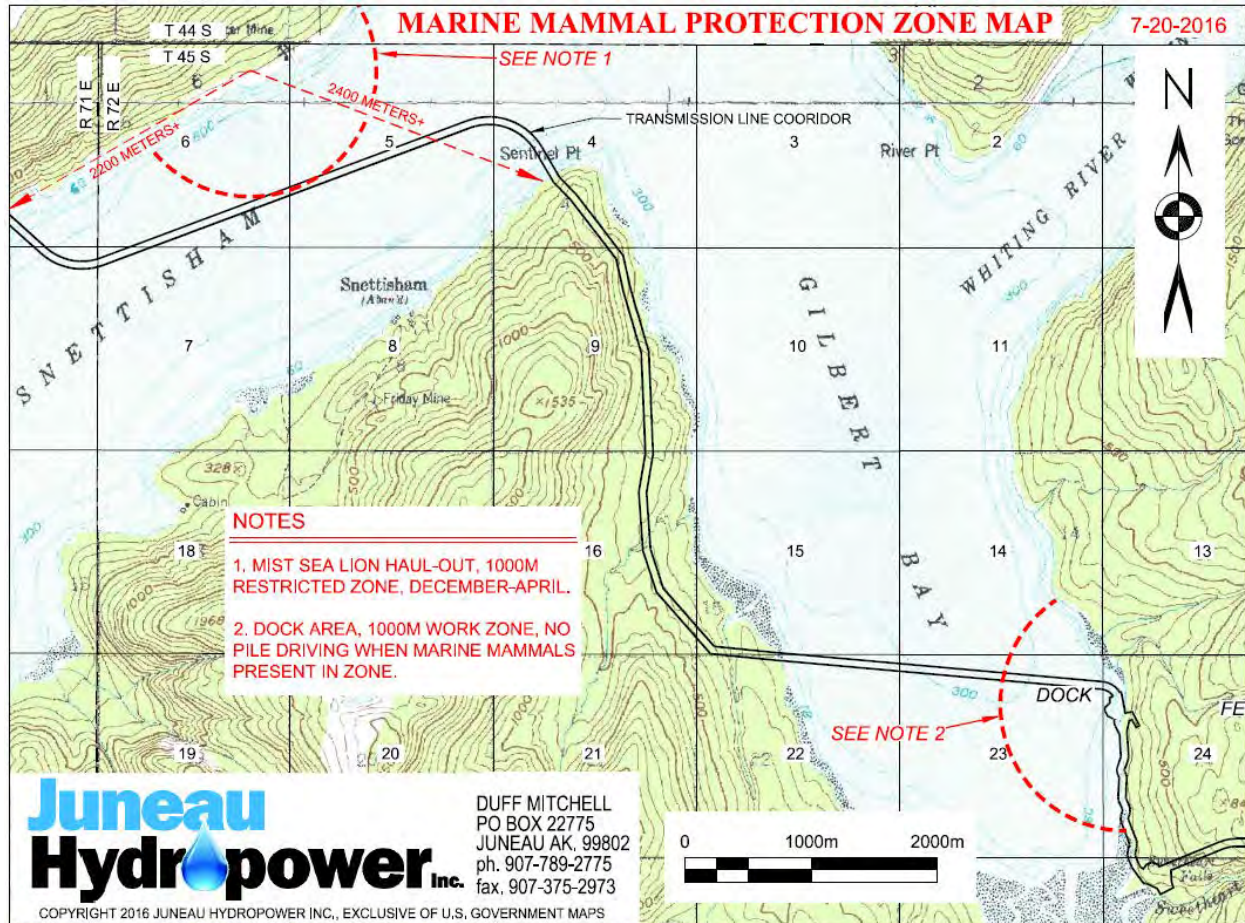


Figure 5. Chart showing the proposed marine mammal monitoring/shut down zones. Note 1 refers to the seasonal Mist Steller sea lion haulout. No project activities are expected within 1000 meters of hauled out Steller sea lions. Note 2 refers to the 120 decibel isopleth for pile driving activities associated with the proposed action. Pile driving will be stopped if marine mammals are observed approaching the 1000-meter zone.

- the marine mammal monitor must be able to identify the designated wildlife and be equipped with binoculars, range finder, two-way radio communication with the equipment operator, and log book
- if a marine mammal approaches the observation area, all in-water work would be halted immediately; work may resume when the animal moves outside the monitoring area on its own accord
- the monitor would have the authority to stop pile driving or removal if a marine mammal is observed approaching the monitoring area
- the monitor would have no other primary duty than to watch for and report on events related to marine mammals

Within 60 days of completion of the project, JHI and FERC will ensure that a report documenting all marine mammal monitor observations is submitted to NMFS for this project. The report will include all marine mammal sightings (or confirmation on absence of sightings),

estimated distance from project operations, and any shutdown during pile driving activities due to marine mammal approach or presence within the shutdown zone. Any observations of harm or harassment to marine mammals shall be reported to NMFS immediately.

LISTED SPECIES AND CRITICAL HABITAT POTENTIALLY AFFECTED BY THE ACTION

The endangered humpback whale and endangered western DPS Steller sea lion may occur in the action area. Critical habitat has not been designated for the humpback whale, and there is no Steller sea lion critical habitat within the action area or nearby which will be affected by this proposed project.

Humpback Whale

Humpback whales are found in all ocean basins worldwide, and typically occur in tropical and subtropical waters during the winter and migrate seasonally to high latitudes during the summer (Allen and Angliss 2015). In the North Pacific, humpback whales are currently found throughout their historic summer feeding range, including coastal and inland waters around the Pacific Rim from Point Conception, California, north to the Gulf of Alaska and the Bering Sea, west through the Aleutian Islands to the Kamchatka Peninsula and the Sea of Okhotsk (Allen and Angliss 2015). NMFS listed the humpback whale as endangered in 1970 (35 FR 18319) following substantial declines due to commercial whaling.

NMFS recently conducted a global status review and proposed changing the status of humpback whales under the ESA. Under this proposal, the Hawaii distinct population segment (DPS: which includes whales found in Southeast Alaska) would no longer be listed (80 FR 22304; April 21, 2015). Critical habitat has not been designated for humpback whales.

Relatively high densities of humpback whales occur throughout much of Southeast Alaska and northern British Columbia, particularly during the summer months. The most recent abundance estimates for this region range from 3,000-5,000 humpback whales (Calambokidis et al. 2008, Allen and Angliss 2015). Although migration timing varies among individuals, most whales depart for Hawaii in fall or winter and begin returning to Southeast Alaska in spring, with continued returns through the summer and a peak occurrence in Southeast Alaska during late summer to early fall. However, there are significant overlaps in departures and returns (Baker et al. 1985, Straley 1990). Humpback whale abundance in the North Pacific has increased by at least an estimated 6.8% annually in the 39 years following the cessation of commercial whaling (Calambokidis et al. 2008). Humpback whales occur in Southeast Alaska year around, and are observed periodically in Port Snettisham.

As is the case for all large baleen whales, direct information about the hearing abilities of humpback whales is not available. Researchers studying *Mysticete* auditory apparatus morphology hypothesized that large *Mysticetes* have acute infrasonic hearing (Ketten 1997). Humpback whales are categorized in the low frequency cetacean functional hearing group (Southall et al. 2007). This group has an estimated auditory bandwidth of 7 Hz to 22 kHz. Direct data on humpback whale hearing sensitivity is not available but has been estimated based on behavioral responses to sounds at various frequencies, favored vocalization frequencies, body size, ambient noise levels at favored frequencies, and cochlear morphometry.

Additional information on humpback whale biology and natural history is available at:
<http://www.nmfs.noaa.gov/pr/species/mammals/whales/humpback-whale.html>
http://www.nmfs.noaa.gov/pr/sars/2013/ak2013_humpback-wnp.pdf

Steller Sea Lion

Steller sea lions range throughout the North Pacific Ocean from Japan, east to Alaska, and south to central California (Loughlin et al. 1984). Steller sea lions, the largest of the eared seals (*Otariidae*), currently have a worldwide population estimated at 142,360-157,498 animals (Allen and Angliss 2015). Historically, Steller sea lion abundance was significantly greater with an estimated worldwide population of 245,000 to 290,000 animals in the late 1970s (Loughlin et al. 1984).

There are two Steller sea lion populations in Alaska: the western DPS is listed as endangered, and generally occurs west of Cape Suckling, and the eastern DPS generally occurs east of Cape Suckling (144°W). Steller sea lions are not known to migrate annually, but individuals may widely disperse outside of the breeding season (late-May to early-July) (Allen and Angliss 2015). We expect some of the Steller sea lions in the action area to be from the western DPS (Jemison et al. 2013, NMFS 2013).

The Steller sea lion was listed as a threatened species under the ESA in 1990 following declines of 63% on certain rookeries since 1985, and declines of 82% since 1960 (NMFS 2012). A number of protective measures were implemented to aid recovery (NMFS 2012), and between the 1970s and 2002 the eastern DPS Steller sea lion population increased on average by 3.1% per year (Pitcher et al. 2007), which is one factor that led to NMFS's decision to delist the eastern DPS (November 4, 2013; 78 FR 66140).

In 1997, NMFS reclassified the Steller sea lion into the two current DPSs and designated the western DPS as endangered (May 5, 1997; 62 FR 24345). The most recent comprehensive estimate (pups and non-pups) for the western DPS abundance in Alaska is 52,209 sea lions based on aerial surveys of non-pups conducted in June and July 2008-2011, and aerial and ground-based pup counts conducted in June and July 2009-2011 (Allen and Angliss 2015). The western DPS declined in abundance by about 70% between the late 1970s and 1990, with evidence that the decline had begun even earlier. Factors that may have contributed to this decline include 1) incidental take in fisheries, 2) legal and illegal shooting, 3) predation, 4) contaminants, 5) disease, and 6) climate change (NMFS 2008). Although Steller sea lion abundance continues to decline in the western Aleutians, numbers are thought to be increasing in the eastern part of the western DPS range (DeMaster 2011), including in the action area.

A non-major haulout for Steller sea lions is located on the northern shore of Port Snettisham, east of Mist Island. It is commonly known as the Mist haulout. Data provided by Alaska Department of Fish and Game (ADF&G) include counts and brand sightings. Sea lions were documented by ADF&G occupying the haulout from January through May, with June through December occupancy being unknown because surveys did not occur during those months. Based on count data and branded sea lion sightings, the number of sea lions observed at the haulout was at least 134 in April 2006, 57 in May 2006, 50 in May 2007, and more than 100 in April 2009. During monthly surveys conducted from March 2001 to May 2004 by a different group of researchers,

Steller sea lions were found at the Mist haulout during all months except July, August, and September (Womble et al. 2009). During the months when they were present, mean monthly counts ranged from 12.0 in June to 206.3 in May.

Steller sea lions are opportunistic predators, feeding primarily on a wide variety of fishes and cephalopods, including Atka mackerel (*Pleurogrammus monopterygius*), walleye pollock (*Theragra chalcogramma*), Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), Pacific cod (*Gadus macrocephalus*), Pacific sand lance (*Ammodytes hexapterus*), and salmon (*Oncorhynchus* spp.) (Pitcher 1981, Merrick et al. 1997). The foraging strategy of Steller sea lions is strongly influenced by seasonality of sea lion reproductive activities on rookeries, and the ephemeral nature of many prey species. Steller sea lions are generalist predators that eat a variety of fishes and cephalopods (Pitcher 1981, Calkins and Goodwin 1988, NMFS 2008), and occasionally other marine mammals and birds (Pitcher and Fay 1982, NMFS 2008).

The ability to detect sound and communicate underwater is important for a variety of Steller sea lion life functions, including reproduction and predator avoidance. Steller sea lions are categorized in the pinniped functional hearing group which has an estimated auditory bandwidth of 75 Hz to 75 kHz in-water, and 75 Hz to 30 kHz on land (Southall et al. 2007). Studies of Steller sea lion auditory sensitivities have found that this species detects sounds underwater between 1 to 25 kHz (Kastelein et al. 2005), and in the air between 0.25 to 30 kHz (Mulsow and Reichmuth 2010).

Critical Habitat

On August 27, 1993 (58 FR 45269) critical habitat was designated for Steller sea lions, which in Alaska includes 1) a 20-nautical mile (23 mile) buffer around all major haulouts and rookeries, 2) associated terrestrial, air, and aquatic zones, and 3) three large offshore foraging areas. The essential features that were used to determine Steller sea lion critical habitat were the physical and biological features that support reproduction, foraging, rest, and refuge (58 FR 45269).

In Southeast Alaska, critical habitat for Steller sea lions includes a terrestrial zone, an aquatic zone, and an air zone that extends 3,000 feet landward, seaward, and upward, respectively, from each major rookery and major haulout in Southeast Alaska (58 FR 45269) (Figure 6). The closest critical habitat to Gilbert Bay is Sunset Island to the south of the project (31.5 miles) and Benjamin Island to the north of the project area (57 miles) (Figure 6).

EFFECTS OF THE ACTION

For purposes of the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is “not likely to adversely affect” listed species or critical habitat is that all of the effects of the action are expected to be insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate, and should never reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur. Beneficial effects are contemporaneous positive effects without any adverse effects to the species.



Figure 6. Designated Steller sea lion critical habitat in Southeast Alaska. Benjamin Island and Sunset Island are the two critical habitat areas closest to the proposed action.

The potential effects of the proposed action on listed species and critical habitat include:

- acoustic disturbance (noise)
- transmission line electromagnetic field
- ship strike
- risk of spills/pollution
- habitat alteration

Acoustic Disturbance

Possible impacts to marine mammals exposed to loud underwater or in-air noise include mortality (directly from the noise, or indirectly from a reaction to the noise), injury, and disturbance ranging from severe (e.g., abandonment of vital habitat) to mild (e.g., startle response). Noise is the primary concern for the species covered in this consultation. Pile driving introduces noise into the underwater environment that has the potential to negatively impact marine mammals (Thompson et al. 2013). See the “Action Area” section above for a description of NMFS sound exposure thresholds.

Impact pile driving is expected to be the loudest sound source in the proposed action. Impact pile driving methods can generate peak pulsed sound pressure levels of 237 decibels (re 1 μ Pa) (Hildebrand 2009). The 160 decibel isopleth for the pile driving associated with the Port MacKenzie project was measured to be approximately 1500 meters from the source (Blackwell 2005). However, that project used 36-inch pilings, whereas this proposed project uses smaller, 24-inch pilings, therefore the sound source levels and resulting 160 decibel isopleth should be smaller. In addition, JHI will use hard composite reinforced, thermosetting plastic cushions with pile driving equipment. This type of pile cap/cushion is expected to be equivalent to Micarta caps, which have demonstrated a 7-8 decibel (4-5%) reduction in sound level for impact pile driving 12-inch steel pilings (Laughlin 2006).

Vibratory pile driving generates lower peak pressure levels than impact pile driving, but the total energy imparted to the pile is comparable because the vibratory hammer operates continuously, and requires more time to install the pile (ICF 2009). Vibratory hammer methods used at the Port MacKenzie project under similar conditions as the proposed action generated peak pulses of 179 decibels (re 1 μ Pa) (Blackwell 2005). The 120 decibel isopleth at the Port MacKenzie project was measured to be approximately 1400 meters (Blackwell 2005). However, as stated above, the Port MacKenzie project used larger, 36-inch pilings, so the sound source level and resulting 120 decibel isopleth are larger than expected for this project, which proposes to use 24-inch pilings.

Noise from aircraft and marine vessels can disturb marine mammals. Pinnipeds at haulouts or rookeries are particularly sensitive to disturbance from these noise sources. The 1000-meter protection zone that JHI has designated around the Mist Steller sea lion haulout (Figure 5) will greatly reduce the risk of disturbance to hauled out animals from aircraft and marine vessels associated with this project.

There will be a number of different sized charges used in the construction of the Sweetheart hydroelectric project. The most by number will be in the tunnel, the largest will be in the power house site and the smallest will be shots for power line trenching. The closest shots to the water will be the last, relatively small trenching shots. As detailed in the "Description of the Proposed Action" section above, blasting noise is not expected to exceed the 100 decibel threshold of concern for in-air noise.

The significance of potential impacts of noise to marine mammals is dependent on a number of factors including the magnitude of sound pressure levels, species receiving the sound, exposure type (e.g., continuous vs. pulse), duration, site characteristics, species' auditory characteristics, and individual marine mammal characteristics (e.g., habituation, season, motivation) (Dazey et al. 2012, Ellison et al. 2012).

The noise created by this proposed project is expected to be within the auditory range of humpback whales and Steller sea lions. If a humpback whale or Steller sea lion approaches the action area while pile driving is underway, the 1000-meter marine mammal observation shut-down area is large enough to prevent behavioral disturbance and injury (decibel levels outside of the 1000-meter shutdown area are expected to be below the NMFS harm exposure threshold for impulsive noise sources). Our extrapolations based on the best available information indicate that the 1000-meter shut-down area is likely large enough to prevent exposure of humpback whales

and Steller sea lions to non-injurious (Level B) impact or continuous levels of noise (above 160 or 120 decibels, respectively). In addition, the substrate in the proposed pile-driving area primarily consists of silts deposited by the Whiting River, and it is expected that this soft substrate will aid in the absorption of noise energy and increase the attenuation of underwater sound. Thus, we do not expect noise to cause any measureable negative responses from humpback whales or Steller sea lions that might occur in the action area. Effects from noise associated with the proposed action are therefore insignificant and discountable.

Electromagnetic Field

The proposed project includes two segments of submarine 138-kV transmission cables. These cables would create magnetic and electric fields that have the potential to affect fish and marine mammals. JHI has stated that it will deploy a three-conductor alternating current (AC) cable. There are basically two types of AC sea cable, the three-conductor cable and the single-conductor cable. The great advantage of the three-conductor cable is that the electromagnetic field of the three conductors is almost neutralized at the surface of the cable, and plastic is used instead of oil as stabilizing material to fill the hollow space, preventing broken cables from emitting oil into the sea water. The single-conductor cable is a cable with just one conductor for a single phase; three single-conductor cables are required for a three-phase system. The advantage of the latter type of cable is its high transmission capacity, even though the absolute losses rise with increasing transmission capacities.

JHI has stated that current studies and best practices and US Department of Interior studies indicated that the electromagnetic field of this type of submarine cable is neutralized at the surface of the cable. In three-phase AC systems, the magnetic field around the cable is also zero, as the sum of the currents in the three phases is zero at all times.

JHI's proposed transmission cable manufacturer provided this description of the product:

"The armoring losses in 3C (3 conductor) cables are significantly lower than in 1C (one conductor) cables because the magnetic fields from the three conductor currents cancel each other to a large extent. Therefore, 3C cables are equipped with armoring of mild steel wires where 1C cables require more sophisticated armoring solutions."

The electromagnetic field from the proposed three-conductor AC transmission cable proposed by JHI is not expected to result in measureable impact to marine mammals or their prey. Therefore, the potential effects will be both insignificant and discountable.

Ship Strike

Vessels transiting the marine environment have the potential to collide with, or strike, marine mammals (Laist et al. 2001, Jensen and Silber 2003). The probability of strike events depends on the frequency, speed, and route of the marine vessels, as well as distribution of marine mammals in the area. Humpback whales are especially susceptible to ship strike injury and mortality in narrow bottleneck passages (Williams and O'Hara 2010).

Although risk of ship strike has not been identified as a significant concern for Steller sea lions (Loughlin and York 2000), the Recovery Plan for this species states that Steller sea lions may be more susceptible to ship strike mortality or injury in harbors or in areas where animals are concentrated (e.g., near rookeries or haulouts) (NMFS 2008).

Vessel operators for the proposed action will be required to follow regulations for approaching humpback whales in Alaska (50 CFR 224.103(b)), as well as the Alaska Code of Conduct regarding approach of all marine mammals (e.g., no closer than 100 yards: <http://www.alaskafisheries.noaa.gov/protectedresources/mmv/guide.htm#fl>). Although vessels will transit some known high-concentration areas for humpback whales (e.g., Frederick Sound), most of the transit will occur in southern Southeast Alaska and British Columbia, areas which have lower concentrations of humpback whales than foraging hotspots located in northern Southeast Alaska. In addition, most of the transit in British Columbia and Southeast Alaska will be relatively slow tug and barge vessels. The proposed vessel routes are at least 1000 meters from any known, consistent Steller sea lions haulouts or rookeries. Therefore, a ship strike as a result of implementing the proposed action is extremely unlikely and thus considered discountable. Any reports of a ship striking a marine mammal should be directed to NMFS's 24-hour stranding hotline as soon as possible: (877) 925-7773.

Habitat Alteration

Submarine cable construction would disturb the seabed and could result in displacement or disturbance of flora and fauna, increased turbidity, and alteration of sediments. These effects would mainly be restricted to the installation phase and would be temporary, with their spatial extent limited to the cable corridor (about 30-feet in width where the cable is ploughed into the seabed, such as across Gilbert Bay). Some mobile benthic organisms (e.g., crabs) would likely be able to avoid disturbance, although sessile species (bivalves, tubeworms, etc.) could be buried or killed. However, it is expected that following installation of the submarine cable, benthic organisms would recolonize the disturbed area. The effects of habitat alteration would be undetectable to Steller sea lions and humpback whales and are therefore insignificant.

Hazardous Substance Spills

As stated in the "Description of the Proposed Action" section above, construction of the proposed project would require the use and onsite storage of fuel (diesel and gasoline), motor oil, hydraulic fluid, and other lubricants. The use and storage of these substances could result in an accidental release resulting in adverse effects on water quality and aquatic resources. JHI's proposed Hazardous Substances Plan, which follows the Alaska Department of Environmental Conservation's best management practices for storage and clean-up, would ensure that fuel and other hydrocarbons would be stored in areas away from waterways, that appropriate primary and secondary containment would be provided for all fuel and hydrocarbons stored onsite, that emergency response and notification procedures are available onsite, and that equipment and clean up materials are readily available onsite. Implementing the measures described in the plan would reduce the likelihood of an accidental release directly or indirectly contaminating drainage ways or streams, and increase the likelihood that any spills are quickly contained, avoiding or minimizing adverse effects on water quality and aquatic resources. Therefore, the potential effects from hazardous material spills are discountable.

Critical Habitat Determination

The proposed pile driving and transmission cable laying would occur over 30 miles from the nearest Steller sea lion critical habitat. Marine vessels associated with this project will use defined commercial transit routes from Seattle to Juneau and will not approach critical habitat. This project is not expected to impact any of the essential features that define critical habitat for Steller sea lions.

Cumulative Effects

JHI and FERC did not identify any known projects that will not require an ESA consultation in the action area in the foreseeable future. The marine vessel transit route associated with the proposed action passes through an extensive area with frequent vessel traffic. Any projects requiring fill or construction in the marine environment require federal permitting and will be subject to future ESA Section 7 consultations if they may affect listed species. No known State or private developments are scheduled in Port Snettisham or Gilbert Bay in the foreseeable future.

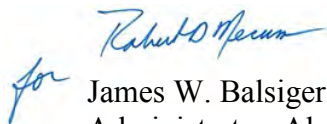
CONCLUSION

Based on this analysis, NMFS concurs with your determination that the proposed action may affect, but is not likely to adversely affect, humpback whales, the western DPS of Steller sea lions, or designated critical habitat.

Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct questions regarding this letter to Sadie Wright at Sadie.Wright@noaa.gov or (907) 586-7630.

Sincerely,



James W. Balsiger, Ph.D.
Administrator, Alaska Region

cc: Duff Mitchell (JHI)
John Matkowski (FERC)

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SWEETHEART LAKE HYDROELECTRIC PROJECT

FERC PROJECT NO. P-13563



BEAR SAFETY PLAN (BSAFE)

PREPARED BY:

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MAY 2014

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SWEETHEART LAKE HYDROELECTRIC PROJECT

BEAR SAFETY PLAN (BSAFE)

1.0 AGENCY PLAN REQUESTS

In October 2013, Juneau Hydropower, Inc. (JHI) submitted a subsequent draft license application and draft Preliminary Draft Environmental Assessment (PDEA) for the Sweetheart Lake Hydroelectric Project to the Federal Energy Regulatory Commission (FERC). On October 22, 2013, FERC published notice and issued a request for comments and preliminary terms and conditions. The Alaska Department of Fish and Game (Alaska DFG) reviewed these documents and issued comments and recommended preliminary terms and conditions. Article 13 of their recommended terms and conditions is for a Bear Safety Plan. The Alaska DFG is responsible for the management, protection, maintenance of Alaska's fish and game resources, including bears. The Project areas are all in Alaska game management Unit 1C. JHI concurs that this is a necessary plan and is submitting this plan for comment.

JHI has had numerous conversations with the Alaska DFG and the U.S. Forest Service (Forest Service) regarding bears and this Project. The area has an active bear population, especially during salmon spawning season (July-September). JHI has cooperated and assisted Alaska DFG in a bear sampling and genetic testing plan in 2013. JHI has consulted with the Forest Service on bear issues regarding the recreational trails accessing the Sweetheart Creek sockeye fishery. JHI has also reviewed other approved local area Bear Safety Plans (Hecla Greens Creek Mine, Allison Creek, and Blue Lake) to develop this specific plan.

1.1. Project Description

The Project consists of: (1) the existing Lower Sweetheart Lake, raised from a surface water elevation of 551 feet mean lower low water (MLLW) and a surface area of 1,414 acres to a new minimum surface water elevation of 576 feet and a new surface area of 1,449 acres and a maximum surface water elevation of 636 feet with a surface area of 1,702 acres; (2) a new, roller-compacted concrete dam 111 feet high (from the downstream toe to the top of the dam), 280 feet long, 100 feet thick at the base, constructed at the outlet of Lower Sweetheart Lake; (3) an independent intake structure with fish screen adjacent to the dam right abutment, which conveys water to a 15 X 15-foot horseshoe-shaped, 9,621-foot-long unlined tunnel; (4) a 9-foot-diameter, approximately 896-foot-long penstock installed within the lower portion of the tunnel, with approximately another 160 feet of buried 7-foot-diameter penstock and manifold connecting to the powerhouse; (5) a powerhouse containing three new Francis generating units (6.6 MW each) with a total installed capacity of 19.8 MW; (6) a 541-

foot tailrace discharging flows to Sweetheart Creek, including a salmon smolt reentry pool located adjacent to the powerhouse and tailrace; (7) a fenced switchyard adjacent to the powerhouse; (8) a new, approximately 4,400-foot-long, road from the powerhouse to the dock/landing site; (9) a new dock/landing site for boat, seaplane, barge/landing craft ramp, and/or helicopter access, located on the east shore of Gilbert Bay; (10) a new, 138-kilovolt transmission line that would be a total of 45,900 feet long (25,700 feet of submarine cable in two segments; 15,400 feet of overhead transmission line on Snettisham Peninsula; and 4,800 feet of buried transmission line in two segments); (11) a new, 14,800-foot, 12.47-kV service transmission line extending from the dam site to the marine facility, providing operational electricity and communications for operations; (12) a caretaker facility with shop and maintenance facilities; (13) a shelter facility at the dam site; (14) appurtenant facilities.

To construct and operate the Sweetheart Lake Hydroelectric Project systems, JHI has developed designs and specifications to meet federal, state, and local regulations. In addition, JHI has developed the following plans to implement procedures to construct, monitor, and mitigate the safety, health, and environmental impacts of the Project. These plans are prepared to meet regulatory requirements of various involved agencies and some plans address similar issues. Together these plans form a comprehensive resource to guide Project management through all phases of construction and into operation:

1.2. Appendix Z – JHI Preliminary Plans

The plans included in Appendix Z of the PDEA are as follows:

Access Management Plan (AMP)

Aquatic Habitat Restoration and Monitoring Plan (AHRMP)

- Fish Mitigation and Monitoring Plan (FMMP)

Bear Safety Plan (BSAFE)

Construction Plan (CP)

Environmental Compliance Monitoring Plan (ECMP)

Erosion and Sedimentation Control Plan (ESCP)

- Storm Water and Pollution Prevention Plan (SWPPP)

Fire Prevention Plan (FPP)

Hazardous Substances Plan (HSP)

Heritage Resource Plan (HRP)

Recreational Management Plan (RMP)

Scenery Management and Monitoring Plan (SMMP)

Solid Waste and Wastewater Plan (SWWP)

Spoil Disposal Plan (SDP)

- Acid Rock Disposal Contingency Plan (ARDCP)

Vegetation Management Plan (VMP)

- A. Invasive Species Management Plan (ISMP)
- B. Threatened, Endangered, Proposed for Listing, and Sensitive Plant Species Plan (TEPLSPSP)

Water Management Plan (WMP)

- A. Reservoir Management and Inundation Plan (RMIP)
- B. Stream Flow Management Plan (SFMP)
- C. Stream Flow Measurement Plan (SMP)

Wildlife Mitigation and Monitoring Plan (WMMP)

- Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan (TEPLSSP)

2.0 BEAR SAFETY PLAN (BSAFE) INTRODUCTION

This Bear Safety Plan (BSAFE) provides Juneau Hydropower, Inc. (JHI) with procedures to construct and operate the Sweetheart Lake hydroelectric facility in a location frequented by both brown and black bears, safely. This plan:

- Outlines JHI's goals for operating the facility with minimum disruption to bear habitat and health.
- Provides a design for construction and operations that minimizes damage and risk from bear encounters.
- Provides information and education for employees, contractors, and visitors in methods to protect themselves, the facilities, and the bears from dangerous and harmful interactions.
- Outlines procedures for JHI management to plan, implement, and enforce a safe environment for construction and operations.

- Requires implementation of this plan in coordination with the Forest Service and the Alaska DFG.
- Provides procedures for documenting and reporting all incidents of damage to property, injury, or death of persons or bears.

This plan implementation and enforcement will be documented by the Environment Compliance Monitor (ECM) during construction and by JHI management upon the start of operations.

JHI is committed to building the Sweetheart Lake hydroelectric facility safely and with minimum disruption to the existing ecosystem. Bears are a large presence in the Lower Sweetheart Creek ecosystem, especially during the salmon spawning season (July-September). The area in the vicinity of the powerhouse and tailrace is heavily populated at the peak spawning season. Bears may be around at any season.

The design team has committed to supporting the strong runs of both native and introduced fish at the site. These represent a popular subsistence fishery for Alaskan residents and a large source of food for the bears. The powerhouse and tailrace have been located to return the water to Lower Sweetheart Creek at the base of the barrier falls in order to protect the spawning and rearing habitat. This facility will be located in an excavated area behind a large berm to shield it from view and reduce impact on the fishing areas. The building will be constructed of durable materials to reduce the chance of bear harm or damage to the structure. The power tunnel is underground and will not affect the bears' normal travel routes. The caretaker's facilities and dock area are located 4,400 feet north of the power plant and away from Sweetheart Creek. The coastal road/trail will minimize disruption to the bears' normal and customary travel routes and provide alternate access to boaters accessing the site to fish. The Sweetheart Lake dam site does not have the same intensity of bear activity and is not in a heavy travel route, but bears will be present.

The Gilbert Bay construction temporary facilities are designed to locate the offices, quarters, dining facilities, repair facilities, and storage away from the bears' most heavily frequented areas, more than 4,400 feet north of the creek on the coastal road/trail in Temporary Staging Area #1 (Exhibit F-2 [4]). The Sweetheart Lake camp is also located at the same site used for Project studies, 2,400 feet northeast of the existing lake outlet/dam site, and shown not to have heavy bear use, Temporary Staging Area "C" (Exhibit F-3 [1]).

This plan borrows many features of the nearby Hecla Greens Creek Mining Co. (Greens Creek) plan that has been implemented and run for many years inside the Admiralty Island National Monument, a place with a very dense brown bear population and a large workforce.

3.0 INITIAL TRAINING SESSION

All JHI employees and contractors will be required to attend a training session prior to coming on site. The training will include education related to:

- bear behavior - methods to reduce risk in an encounter, methods to reduce risk of an encounter.
- operating practices when in bear country that minimize possible conflict
- minimizing encounters and avoiding areas often used by bears, if possible
- keeping construction sites and refuse areas clean
- Use of bear-proof garbage receptacles and other measures to prevent bears from obtaining food or garbage
- Removal of garbage to an approved disposal site as soon as practicable
- Rules, policies, and procedures required on site and documentation of the agreement to abide by the rules, policies, and procedures.

Agreement with the rules/procedures is a requirement of hire. The policies will include:

- No hunting, or trapping will be allowed by employees or contractors while living on site during construction.
- No personal firearms will be allowed on site.
- No bears (or other animals) shall be fed.
- Personnel are to avoid certain areas, particularly the south side of Sweetheart Creek, to allow bears an undisturbed area.
- Waste disposal and storage requirements must be followed to restrict bear access.
- Notification systems and warning systems to alert workers to bear activity inside a safe zone are to be integrated into construction communication systems.
- Policies to deal with bears in defined work safe zones will be discussed. They include work stoppage and, if necessary, hazing (by ECM officer or designee).
- Methods to deal with problem bears will be discussed.

- Documentation methods to record incidents will be discussed.

The training and procedures will be approved by the Forest Service in consultation with Alaska DFG. Copies of plans and training will be in file in JHI's Juneau, Alaska, office. The ECM will document, report, and resolve issues in accordance with the adopted policies and, at least annually through construction, review them with the Forest Service and update the policies and procedures if required.

Additional information updates and information related to bears will be disseminated by:

- Informing workers about bear safety procedures at safety "tailboard" meetings
- Posting signs notifying the public that bears are frequent in the area, suggesting the use of designated pathways, and to be alert.

4.0 OPERATING PRACTICES IN BEAR COUNTRY TO MINIMIZE POSSIBLE CONFLICT

4.1. Bear Conflicts

The primary purpose of this plan is to prevent bear conflicts. Bear conflicts are defined as direct or indirect negative contact with bears caused by the presence of Project workers in the bears' places of usual habitation and use.

In most serious cases of bear conflict, it is the bear that eventually suffers. The policy of the Alaska DFG is to kill problem bears, not to relocate them. If a bear conflict results in the bear having to be killed, however, Alaska DFG will investigate the incident. In the majority of investigations, it has been found that the incident was caused by human factors. In such cases, relative to a Sweetheart Lake Project worker, the Alaska DFG would hold the worker responsible for the incident, potentially resulting in fines and charges.

By far the most prevalent cause of bear-human conflict is improper management of human food and waste. Bears learn from experience, and once they have been successful in obtaining human food, they become conditioned to it. In addition, bears that forage on human food may become habituated to the presence of humans. Once human-food conditioned and habituated to the presence of humans, these bears often end up being killed in defense of human life or property. When the bears do not seek to avoid or are not afraid of humans, there is a corresponding increase in the risk of injury to humans.

THEREFORE, THE CENTRAL THEME OF THIS PLAN IS AVOIDANCE OF BEAR CONFLICT.

Potential conflicts are discussed below.

4.1.1. Property Damage

Bears can be very destructive of property. They are capable of damaging metal and wood structures, frequently chew on plastic and rubber items, and have been known to bite through electrical cable sheathing, tear off substantial wood or metal doors, and destroy large food caches. Measures to prevent property damage are presented in this plan.

4.1.2. Interference with Project-related Work

Presence of bears near the Project construction area may disrupt work progress by requiring that work be temporarily suspended, or simply through worker curiosity and attention to the bear instead of the business at hand. It is extremely important to follow habits that do not needlessly attract bears to the worksite.

4.1.3. Attacks

Bears will and do attack humans; encounters sometimes result in serious injury and occasionally death. Bear attacks are generally avoidable, and measures to avoid them are discussed in this plan.

4.1.4. “Bear Country”

Based on casual observations during field surveys, one may reasonably expect to encounter bears virtually anywhere in the Sweetheart Project area.

Therefore, provisions of this bear safety plan apply to all workers in all areas at all times after arrival on all construction sites. There are, however, certain locations within the Project area where one might be more likely to encounter bears or be at greater risk because of topography and/or vegetative cover characteristics. These areas will be designated in on-site orientation.

5.0 BEAR CONFLICT MINIMIZATION

5.1. Interpretive Display Panels

In order to provide safety, educational, and interpretive information about the Project and Sweetheart Creek fishing areas, JHI would design and build permanent interpretive display panels at the head of the Sweetheart Creek Trail. Exhibits would include Project information, bear safety measures, current ADFG personal use regulations, and trail identification/maps.

Users would be requested to remain on the northern shore side of Sweetheart Creek to allow bears to habituate themselves to the southern shore side of Sweetheart Creek for bear-human interaction management.

The interpretative display exhibits would be completed by year 1 of the Commercial Operations Date (COD) of the Project. Interpretative display design and exhibits are subject to change over the life of the Project based on site conditions, permitting, and cost.

JHI would be responsible for the design, construction, and maintenance of the bear safety and interpretative displays for the term of the license. Forest Service and ADFG would be responsible to provide and approve their agency information that would be displayed at the interpretative display for the term of the license.

5.2. General Guidelines for Project Workers

Project workers will abide by the following guidelines at all times:

- **Keep A Clean Work Area, Particularly Regarding Food and/or Garbage.** Food disposal recommendations are discussed in Section 5.3.1 of this plan), and workers will be required to adhere to food disposal protocols on a daily basis.
- **DO NOT FEED THE BEARS.** This should be self-evident and explanatory, but it is amazing how many visitors to bear country create serious problems by intentionally baiting or feeding bears.
- **When Traveling on Foot in Bear Country, Make as Much Noise as Possible.** Try to avoid surprising bears, particularly in areas where it is very quiet, or when steady background noise (e.g., from nearby construction or the sound of a stream) makes it hard for a bear to hear your approach. Generally, near construction sites, disturbance from human activity, machinery, and vehicles should keep bears away, but bears often tolerate considerable human disturbance, and it should not be assumed that, just because there is a lot of human activity in an area, there will be no bears.
- **Be Alert and on the Lookout for Bears.** Early detection of a bear offers the best avoidance. Surprising a bear is dangerous and can often be avoided by keen observation of the countryside into which you are moving. Look for movement, the horizontal line of a bear's back and belly, and different colors. Other signs of bear use include tracks, fresh scat, beaten down or broken berry bushes, grazed sedges, foul odors, or a gathering of scavenging birds such as ravens, jays, or magpies. Bears that may in the

Project area range in color from pure black to light blond but are generally different than the colors of the surrounding vegetation.

If you are walking along the access road or any trail, watch ahead and approach blind spots slowly and carefully. As you approach a blind corner in an area of limited visibility, make a lot of noise, by yelling or yipping, or clanging metal objects together. Observe the brush near the trail closely; bears often move and feed on berries in brush just off the trail and are easily surprised. Be aware of the wind direction; you can easily startle a bear upwind of you that has not caught your scent.

5.3. If You Encounter a Bear, Follow These Suggestions

- If the bear is more than about 50 yards away, or if it is close but does not appear to have seen you, back slowly away from it, increasing the distance between you and the bear. Do not run, even if the bear is some distance away.
- If a bear is at some distance (over 50 yards) and sees you, wave your arms, stand as tall as possible, and yell at the bear. Try to help the bear identify you as a human. If you are with others, stay together as group. A bear is less likely to attack a group of people.
- If the bear is quite close (less than 20 or 30 yards), and is coming at you rapidly, speak in low soothing tones as you back slowly away. The bear may bluff charge, stopping within 10 yards of you. If you have a firearm, prepare to shoot the bear if it does not stop its charge. If you must shoot the bear, aim for the center of mass, just below the head. If you shoot the bear, continue firing until the bear is dead; a wounded bear is extremely dangerous to all personnel.
- If a bear attacks, fall into the fetal position with your knees pulled over your stomach area and hands clasped behind your neck. Pull your head to your chest, and keep your elbows over your eyes. Try to remain silent and motionless in this position until the attack has stopped and the bear has left the area.

5.4. Instructions for Keeping Construction Sites and Refuse Areas Clean

5.4.1. Food Disposal.

It is expected that the powerhouse site construction workers will have all meals in the construction camp on Gilbert Bay. Tunnel, dam, and transmission line workers will have lunch on the site of the work. Garbage, food-contaminated utensils, paper, etc. will

be collected on a daily basis, placed in bear-proof containers, and removed from the Project site for proper disposal. Food-related items left at the worksite even for short periods may draw bears from great distances. Food items left overnight during high bear population periods will almost ensure a bear encounter the following morning. Bears that are able to get even a small amount of food will return to the area repeatedly to search for food, may show little or no fear of humans, may become aggressive, and will likely have to be destroyed.

The Construction Foreman at each Project construction location will be responsible on a daily basis for policing his/her construction site for food after each meal, and at the end of each construction day. The objective will be to leave no food-related or contaminated items whatever around the Project site. If construction crews leave daily, they will take their food scraps with them daily.

Performance of each Construction Foreman relative to daily food cleanup will be monitored by the Environmental Construction Monitor.

5.4.2. Feeding Bears

Simply and emphatically, **DO NOT FEED THE BEARS.** Bears fed by humans generally have to be destroyed. If a bear incident resulting in human or bear injury or death shows evidence of bear feeding, the Alaska DFG will likely consider the incident human caused.

6.0 RECREATIONAL ACTIVITIES OF PROJECT WORKERS

The Gilbert Bay and Sweetheart Lake areas have recreational opportunities, which might create potential for bear encounters. These are discussed below.

6.1.1. Fishing, Hiking, and Boating

Fishing and hiking in the construction and nearby areas are available recreation activities for Project workers. Food disposal and bear-avoidance measures listed above apply to workers during recreational pursuits, including cleaning of fish (never discard fish viscera in the construction area) and hiking (pack out all leftover food, containers, and utensils).

Note: Anyone intending to fish in the Project area or elsewhere in the state must obtain a valid State of Alaska fishing license and permission from the on site licensee operations personnel.

6.1.2. Firearms

No firearms will be routinely allowed in the construction area, unless permitted in writing by the Construction Manager. It will be the responsibility of the Construction Manager to arrange for, securely store and distribute firearms in the construction area. Such firearms will be permitted only for the purpose of bear protection, and not for control of problem bears or hunting. The Construction Superintendent will have access to nonlethal means of bear protection, such as bear pepper spray, cracker shells, flares, rubber or plastic bullets or baton loads, which will generally be encouraged as the primary means of bear defense. Firearms will be used as a lethal deterrent to stop a bear attack when nonlethal techniques are unsuccessful or impractical.

6.1.3. Hunting/Trapping

Project workers will be prohibited from hunting and trapping within Project lands at any time during Project construction, unless permission by licensee and a permit from Alaska DFG is granted. Hunting or trapping on Forest Service lands must be done no closer than a mile to the construction site.

7.0 PROCEDURES TO DEAL WITH PROBLEM BEARS

If a bear is, or it seems likely to become a problem, the following procedures should be followed.

7.1.1. Report Potentially Problematic Incidents Promptly

If a bear is seen consistently in a work area and shows threatening behavior (false charges, failure to flee) the appropriate Construction Foreman will report the incident immediately to the ECM or designee.

Before calling, try to establish any identifying features of the bear(s), the location of the incident, and time of day. Deciding whether an incident is “potentially problematic” or not is up to the discretion of the workers and Construction Foreman, but it is better to report an incident than not.

7.2. Report Bear Attacks

If there is a bear attack, the nearest person to the victim should contact the ECM or designee.

Decisions on what to do with problem bears will be made by the Alaska DFG, Division of Wildlife Conservation; and the Alaska State Troopers, Fish and Wildlife Protection Division. No independent actions should be taken by Project workers to kill a problem bear unless there is a clear and immediate threat and the action is justifiable

under State of Alaska legal provisions for defense of life and property (5 Alaska Administrative Code [AAC] 92.410).

7.3. State Law Regarding Attractants

Alaska state law (5 AAC 92.230) makes it illegal for any person to feed or intentionally leave food or garbage in a manner that attracts a bear, wolf, fox, or wolverine. Under the state's policy for managing bear-human conflicts, individuals who take a bear under "defense of life or property" provisions **will be warned or cited** if the take is brought about by the improper disposal of garbage or a similar attractive nuisance.

7.4. What to Do if a Bear Is Shot in "Defense of Life or Property"

Any person who takes a bear in "defense of life or property" shall notify his supervisor and the Alaska DFG immediately, and shall submit a written report of the circumstances of the take to his supervisor and the Alaska DFG with 15 days of the take. The bear hide and skull must be salvaged and then "sealed" and an affidavit completed.

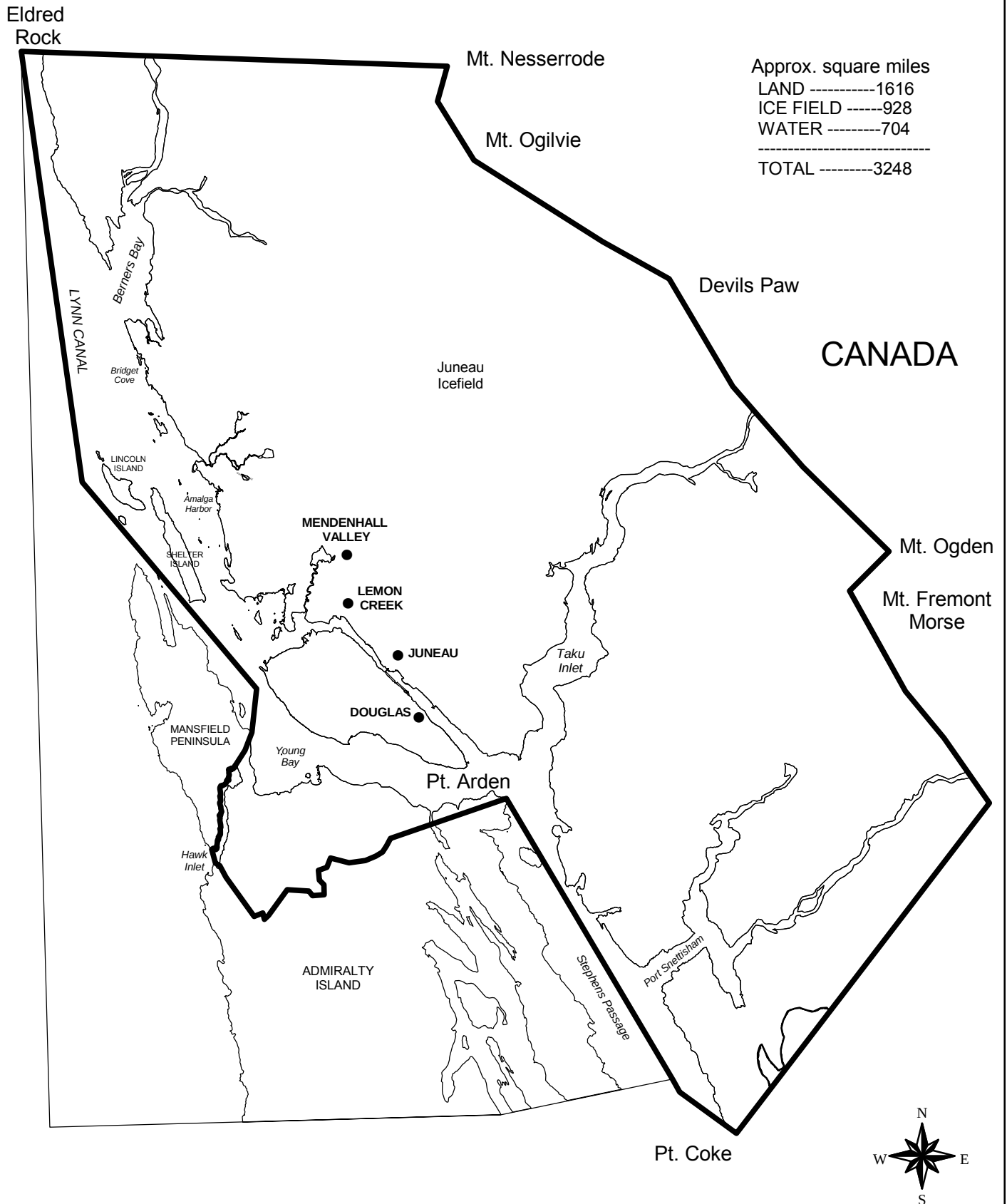
Brown Bear – The hide (including the claws) and the skull must be salvaged and surrendered to the Alaska DFG.

I have read, understood, and hereby agree with and will follow the conditions and restrictions of this Bear Safety Plan.

Signature

Date

City & Borough of Juneau, Alaska

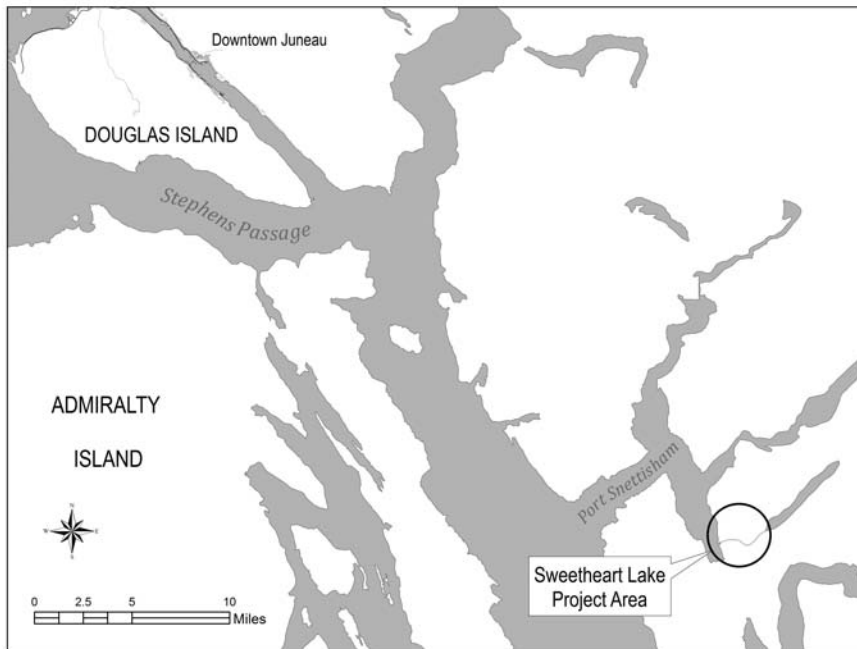


07/02/2002

Approx. Scale: 1"= 10 miles



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



PROPOSAL: A Conditional Use Permit for the Sweetheart Lake Hydroelectric Project.

File No:	USE2016 0021	Applicant:	Juneau Hydropower Inc.
To:	Adjacent Property Owners	Property PCN:	0
Hearing Date:	August 23, 2016	Owner:	U.S. Forest Service & the State of Alaska Department of Natural Resources
Hearing Time:	7:00 PM	Area of Structures:	15,000 Sq. Ft.
Place:	Assembly Chambers Municipal Building 155 South Seward Street Juneau, Alaska 99801	Zoned:	Rural Reserve
		Site Address:	Not Applicable
		Accessed Via:	Marine Waters

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing.

Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.



If you have questions, please contact Teri Camery at Teri.Camery@juneau.org or 586.0755.

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at



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: August 25, 2016

File No.: USE2016 0021

Juneau Hydropower Inc.
Attn: Duff Mitchell
PO Box 22775
Juneau, AK 99802
Email duff.mitchell@juneauhydro.com

Application For: A Conditional Use Permit for the Sweetheart Lake Hydroelectric Project

Legal Description: Not applicable

Property Address: Not applicable

Parcel Code No.: Zero Parcel

Hearing Date: August 23, 2016

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated August 10, 2016, and approved the Conditional Use Permit for the Sweetheart Lake Hydroelectric Project, to be conducted as described in the project description and project drawings submitted with the application and with the following conditions:

1. Prior to issuance of a building permit, the applicant shall submit a lighting plan illustrating the location and type of exterior lighting proposed for the development. Exterior lighting shall be designed and located to minimize offsite glare.

Attachments: August 10, 2016 memorandum from Teri Camery, Community Development, to the CBJ Planning Commission regarding USE2016 0011.

This Notice of Decision does not authorize construction activity. 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 with 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

Juneau Hydropower, Inc.
 File No.: USE2016 0021
 August 25, 2016
 Page 2 of 2

(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).

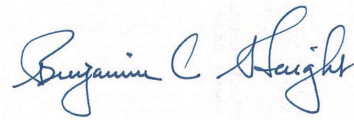
Effective Date: The permit is effective upon approval by the Commission, August 23, 2016.

Expiration Date: The permit will expire 18 months after the effective date, or February 23, 2017, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner:



Teri Camery, Senior Planner
 Community Development Department



Ben Haight, Chair
 Planning Commission



Filed With City Clerk

8/30/2016

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. 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.



Community Development

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

DATE: August 12, 2016

TO: Board of Adjustment

FROM: Tim Felstead, Planner 
Community Development Department

FILE NO.: VAR2016 0004

PROPOSAL: Variance request for a reduction of the front yard setback for an addition to an existing dwelling.

ATTACHMENTS

Attachment A	Staff report for VAR2016 0004
Attachment B	Blue folder memorandum submitted to Planning Commission, June 14, 2016.
Attachment C	Additional material submitted by the applicant

ADDITIONAL MATERIAL

This variance request was first brought to the Board of Adjustment on June 14, 2016. The Director's analysis and findings, as provided in the Staff Report (see Attachment A) and blue folder memorandum presented on the night of the meeting (see Attachment B), found that Criteria 1, 5 and 6 were not met. Therefore it was recommended that the variance be denied. The Board of Adjustment requested more information from the applicant before coming to a decision.

The applicant has worked with their contractor and submitted additional cost information and alternate findings to justify building an addition in the front yard setback rather than outside of the setback, to the east of the dwelling, or at other locations on their property.

The additional material has been reviewed and discussed in the context of the original findings present in the original staff report.

Criterion 1 - That the relaxation applied for or a lesser relaxation specified by the Board of Adjustment would give substantial relief to the owner of the property involved and be more consistent with justice to other property owners.

Original findings - The subject parcel is large although the location and orientation of the existing dwelling unit constrains the size of any addition to the front of the building. The applicant has stated placing the addition in the setback will reduce construction costs. They have indicated that placing the addition elsewhere, outside of the required setbacks, would require relocating plumbing and an oil tank, or provide an inconvenient floorplan. The deck, which the addition would replace, is accessed from a wide sliding door, reducing the need to remove walls. No construction quotes have been provided to support these assertions.

Relevant additional staff discussion in blue folder information - Additional materials were received from the applicant and submitted as a blue folder item prior to the hearing. The applicant's contractor stated that locating the desired addition within the setbacks to the east would bring it too close to the existing embankment and would therefore require a retaining wall. As mentioned in the staff report, there are locations adjacent to the house (not just the alternative location to the east of the existing kitchen) where an addition could be added without encroaching into the setbacks. However, as noted in the staff report, this may restrict access around the exterior of the house and lead to an inconvenient floor plan, considering the location of the existing kitchen.

No. The criterion is not met.

As demonstrated by the applicant, there is additional cost associated with locating the complete 14 foot by 14 foot addition within the setbacks due to necessary construction of a retaining wall. The applicants have stated that this size of the addition is necessary to accommodate a dining area. A lesser addition on more than one side of the existing dwelling that stayed within the setbacks and was far enough from the embankment to not need a retaining wall is possible. However, this may require relocating plumbing and an oil tank, or might produce an inconvenient floorplan that would need an internal remodel to provide the desired dining space. **Staff finds that this criterion is still not met since the relief being sought is for a hardship of the applicant's making; it is based on a choice to construct the addition and do so in a manner that would encroach into the setbacks.**

Criterion 5. That compliance with the existing standards would:

- (C) Be unnecessarily burdensome because unique physical features of the property render compliance with the standards unreasonably expensive;***

Original findings - While the existing lot is higher than Right of Way, up a steep embankment of approximately 20-25 feet, there is flat land immediately adjacent to the existing dwelling that could be used for the addition.

No. The sub-criterion is not met.

The findings for this criterion relate to those discussed for Criterion 1. The applicant's alternative findings argue that the existing embankment is a unique physical feature that impacts their desire for a 14 foot by 14 foot addition outside of the setbacks. Specifically, placing an addition of this size to the east of the existing kitchen would require

additional expense due to the need for a retaining wall and would restrict access around the property. However as described above, other options exist to expand the existing home, albeit in a manner that may require relocating plumbing and an oil tank, or provide an inconvenient floorplan to provide the desired dining space. Additional costs related to these others do not relate to a unique physical feature of the property; they relate to existing construction of the house. These latter justifications for the variance relate more to Sub-criterion 5b.

Criterion 5. That compliance with the existing standards would:

(B) ‘Does compliance with the standard unreasonably prevent the owner from using the property in a manner which is consistent as to scale, amenities, appearance or features, with existing development in the neighborhood of the subject property’.

Original findings - While the current situation is consistent with the surrounding neighborhood, the addition of the dining room would also be consistent. However, there is space around the existing dwelling upon which an addition could be located that would not encroach into the setbacks.

In addition to the original findings it is important to note that if approved, the dwelling would be the only property in the vicinity encroaching into their front yard setback. However, as mentioned in the original staff report under Criterion 2, the property is raised above the Right of Way by ~25 feet, on a cul-de-sac street, over 250 feet from the nearest residence, and has wooded CBJ park land on the opposite side of the right of way. This means there would be no negative impacts on the local neighborhood. However, Staff does not find that preventing construction of an addition in the setback meets the threshold of ‘unreasonable’ in this instance.

The additional material submitted by the applicant is not relevant to sub-criterion 5a and 5d.

Criterion 6. That a grant of the Variance would result in more benefits than detriments to the neighborhood.

Original findings - There is no evidence that there would be any detriment or benefits to the neighborhood resulting from granting of this variance.

No. The criterion is not met.

Increased personal property values may contribute to increased neighborhood property values, but this is speculative and would only be realized when properties are sold. The location of an addition closer to the shared driveway does not necessarily impact the users of the shared driveway. The existing embankment already provides for vertical separation from the driveway.

The construction of the addition at a location that would require a retaining wall could be considered a detriment to the neighborhood since the wall’s construction could inconvenience users of the driveway. The wall may also be less visually attractive and provide less privacy than the existing situation. However, this is only relevant if it is found that a retaining wall for an addition is necessary.

RECOMMENDATION

Despite the additional material, the Director’s analysis and findings remain unchanged and it is recommended that the application be **denied**.

If approved, the variance would allow for a reduction in the front yard setback from 25 feet to 17 feet for construction of a 14 foot by 14 foot addition to an existing dwelling unit, as per the applicant’s site plan.



Community Development

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

DATE: May 31, 2016

TO: Board of Adjustment

FROM: Tim Felstead, Planner 
Community Development Department

FILE NO.: VAR2016 0004

PROPOSAL: Variance request for a reduction of the front yard setback for an addition to an existing dwelling.

GENERAL INFORMATION

Applicant: Hollis Handler and Tyson Fick

Property Owner: Hollis Handler and Tyson Fick

Property Address: 9831 Nine Mile Creek Road

Legal Description: USS 3546 Lot 218B

Parcel Code Number: 6-D11-0-103-007-1

Site Size: 36,065 square feet (0.8300 acres)

Comprehensive Plan Future Land Use Designation: RDR (Rural Dispersed Residential)

Zoning: D1

Utilities: Public water, Private sewer

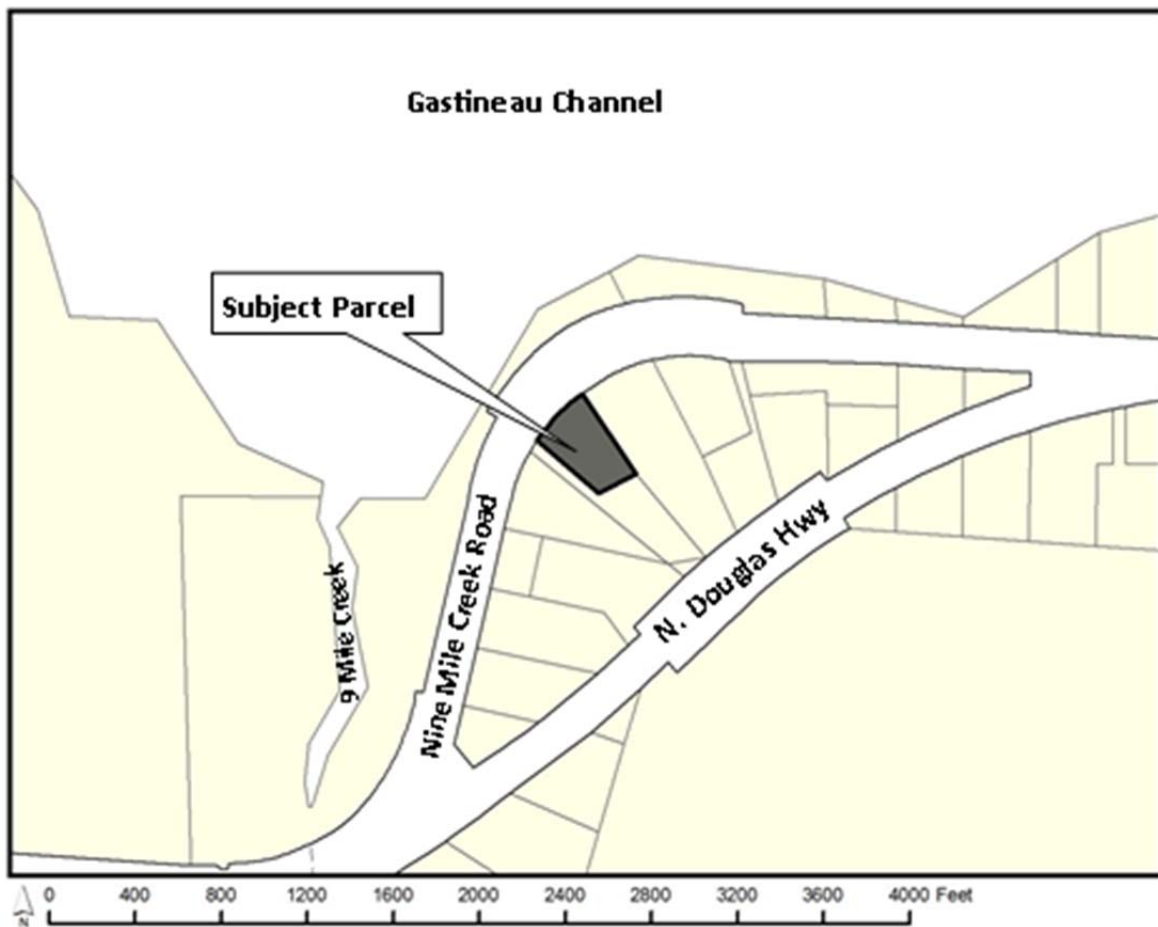
Access: Nine Mile Creek Road via shared driveway on adjacent lot

Existing Land Use: Single Family dwelling

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Surrounding Land Use:	North	State Right or Way (Nine Mile Creek Road), D1 (CBJ Public Space (managed by Parks & Recreation))
	South	D1 (Single Family Dwelling)
	East	D1 (Single Family Dwelling)
	West	State Right or Way (Nine Mile Creek Road), D1 (CBJ Public Space (managed by Parks & Recreation))

Vicinity Map



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ATTACHMENTS

Attachment A – Application including site plan and narrative
Attachment B – Photographs of property
Attachment C – Contour map of area surrounding existing dwelling
Attachment D – Notice of Decision for de minimis variance to original single story structure
(VAR2000-00005)
Attachment E – Notice of Decision for second story additional to existing single story structure
(USE2008-00003)
Attachment F – Public Notice

PROJECT DESCRIPTION

The applicant is seeking a reduction of the required 25 foot front yard setback to 17 feet. The applicant wishes to add a 14 foot by 14 foot (196 square feet) addition to their existing house. The addition would be used as a dining area adjacent to the existing kitchen and would require removal of an existing deck. The foot print would encroach further into the setback than an existing deck

The current kitchen is located in a single story portion of the home to the west of the 'L' shaped dwelling. The applicant has indicated that building within the setback to the west of the existing kitchen would require relocation of plumbing and of an oil tank. It would also constrain access around this side of the dwelling due to a steep embankment. Placing the addition in a different location will not provide a convenient design in terms of dining room location. The applicant has indicated the proposed location would be the least expensive option for them.

BACKGROUND

The existing single family dwelling was constructed in 1999 (BLD99-00477) and is located in the northern corner of a 72,130 square foot lot. In 2000, the property owner was granted a de minimis variance to account for a minor encroachment of 5.8 feet into the 25 foot front yard setback (VAR2000-00005). The existing lot was created in 2002 as part of a panhandle subdivision (SUB2002-00019). In 2008, a second story was approved on top of the existing building that was subject to the previous de minimis variance. This approval was via an 'upfill' Conditional Use permit (USE2008-00003) and building permit (BLD2008-00005). In 2014, a building permit was issued for a 29 foot x 39 foot garage to the south of the existing house which is still to be given Certificate of Occupancy – this garage was built within the setbacks.

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ANALYSIS

The property is zoned D1 which has setback requirements of 25 feet for front and rear yard setbacks, and 15 feet for the side yard setbacks. All structures including decks on the property meet the setback requirements outright or have been granted Variances or Conditional Use permits.

While the existing deck and terrace encroach into the front yard setback, they are allowed to do so because of exceptions to setback requirements for such structures. CBJ 49.25.430(4)(D) allows uncovered porches, terraces or patios, less than 30 inches above grade, to be no closer than 10 feet to the front property line. CBJ 49.25.430(4)(E) allows unenclosed porches or decks no more than six feet into any yard setback provide they are no closer than 5 feet to a lot line.

The use is one single family dwelling and associated accessory structures which are permitted in this zoning district. All parking requirements are met.

Variance Requirements

Under CBJ §49.20.250 where hardship and practical difficulties result from an extraordinary situation or unique physical feature affecting only a specific parcel of property or structures lawfully existing thereon and render it difficult to carry out the provisions of Title 49, the Board of Adjustment may grant a Variance in harmony with the general purpose and intent of Title 49. A Variance may vary any requirement or regulation of Title 49 concerning dimensional and other design standards, but not those concerning the use of land or structures, housing density, lot coverage, or those establishing construction standards. A Variance may be granted after the prescribed hearing and after the Board of Adjustment has determined:

- 1. That the relaxation applied for or a lesser relaxation specified by the Board of Adjustment would give substantial relief to the owner of the property involved and be more consistent with justice to other property owners.***

The subject parcel is large although the location and orientation of the existing dwelling unit constrains the size of any addition to the front of the building. The applicant has stated placing the addition in the setback will reduce construction costs. They have indicated that placing the addition elsewhere, outside of the required setbacks, would require relocating plumbing and an oil tank, or provide an inconvenient floorplan. The deck, which the addition would replace, is accessed from a wide sliding door, reducing the need to remove walls. No construction quotes have been provided to support these assertions.

No. The criterion is not met.

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2. *That relief can be granted in such a fashion that the intent of this title will be observed and the public safety and welfare be preserved.*

The purpose and intent of Title 49 is defined in CBJ 49.05.100:

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

No evidence has been presented indicating that the requested variance will have a negative impact on public safety and welfare. The proposed addition would be approximately 55 feet from the edge of the travel way on Nine Mile Creek Road. The proposed addition would provide no impediment to motorist's vision (see **Attachment B**). Alaska Department of Transportation and Public Facilities, who own the Nine Mile Creek Road Right of Way, do not have any issues with the application.

The location of the proposed addition is approximately 250 feet from the nearest neighboring dwelling. Land on the opposite side of Nine Mile Creek Road is CBJ open space.

CBJ Building division, CBJ General Engineering division and Capital City Fire and Rescue have no issues with the proposal.

Yes. The criterion is met.

3. *That the authorization of the Variance will not injure nearby property.*

There is no evidence that the authorization of the variance will injure nearby property. There have been no concerns raised by neighbors. The addition would be located approximately 250 feet from the nearest dwelling and will not create any obstructions to Nine Mile Creek Road.

Yes. The criterion is met.

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4. *That the Variance does not authorize uses not allowed in the district involved.*

The current use is single-family residential. The use is allowed within the D1 district, per CBJ 49.25.300 Table of Permissible Uses, section 1.110.

Yes. The criterion is met.

5. *That compliance with the existing standards would:*

(A) *Unreasonably prevent the owner from using the property for a permissible principal use;*

Compliance with the existing standards would not prevent the owner from using the property for a permissible principle use as a single-family residence.

No. The sub-criterion is not met.

(B) *Unreasonably prevent the owner from using the property in a manner which is consistent as to scale, amenities, appearance or features, with existing development in the neighborhood of the subject property;*

Whilst the current situation is consistent with the surrounding neighborhood, the addition of the dining room would also be would also be consistent. However, there is space around the existing dwelling on which an addition could be located that would not encroach into the setbacks.

No. The sub-criterion is not met.

(C) *Be unnecessarily burdensome because unique physical features of the property render compliance with the standards unreasonably expensive;*

While the existing lot is higher than Right of Way, up a steep embankment of approximately 20-25 feet, there is flat land immediately adjacent to the existing dwelling that could be used for the addition (see **Attachment C**).

No. The sub-criterion is not met.

or

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May 31, 2016
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(D) *Because of preexisting nonconforming conditions on the subject parcel the grant of the Variance would not result in a net decrease in overall compliance with the Land Use Code, CBJ Title 49, or the building code, CBJ Title 19, or both.*

There are no pre-existing nonconforming situations on the subject parcel.

This sub-criterion is not applicable.

No. Staff finds that criterion 5 is not met because sub-criterion A, B and C are not met.

6. *That a grant of the Variance would result in more benefits than detriments to the neighborhood.*

There is no evidence that there would be any detriment or benefits to the neighborhood resulting from granting of this variance.

No. The criterion is not met.

FINDINGS

1. *Is the application for the requested Variance complete?*

Yes. Staff finds the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

2. *Will the proposed development comply with the Juneau Coastal Management Programs?*

Not applicable.

3. *Does the variance as requested, meet the criteria of Section 49.20.250, Grounds for Variances?*

No. Based on the analysis above, staff has determined that the applicant has not presented an argument that justifies the grounds for this Variance.

Criterion 1, 5 and 6 are not met. Criterion 2, 3 and 4 are met.

Board of Adjustment
File No.: VAR2016 0004
May 31, 2016
Page 8 of 8

RECOMMENDATION

Staff recommends that the Board of Adjustment adopt the Director's analysis and findings and **DENY** on the requested Variance, VAR2016 0004.

If approved the variance would allow a reduction in the front yard setback to 17 feet for construction of a 14 foot by 14 foot addition to an existing dwelling unit as per the applicant's site plan.

DEVELOPMENT PERMIT APPLICATION

Project Number VAR20160004	CITY and BOROUGH of JUNEAU	Date Received: 4-8-16
Project Name (City Staff to Assign Name)		

INFORMATION	Project Description One room addition to residential home		
	PROPERTY LOCATION		
	Street Address 9831 Nine Mile Creek Rd	City/Zip Juneau AK 99801	
	Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) Lot 218 B, USS 3546		
	Assessor's Parcel Number(s) 6D1101030071		
	LANDOWNER/ LESSEE		
	Property Owner's Name Hollis Handler + Tyson Fick	Contact Person: Tyson Fick	Work Phone: 321-9848
	Mailing Address 9831 Nine Mile Creek Rd	Home Phone: 321-9848	Fax Number: N/A
	E-mail Address tysonfick@gmail.com	Other Contact Phone Number(s): 321-9433	
	PROJECT / APPLICANT	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			Date 4/4/16
		Landowner/Lessee Signature	Date
X			Date
		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" and sign and date at X below			
Applicant's Name SAME			
Contact Person:			
Work Phone:			
Mailing Address			
Home Phone:			
Fax Number:			
E-mail Address			
Other Contact Phone Number(s):			
X		Date 4/4/16	
	Applicant's Signature	Date of Application	

OFFICE USE ONLY BELOW THIS LINE					
STAFF APPROVALS	☒	Permit Type	***SIGN	Date Received	Application Number(s)
		Building/Grading Permit			
		City/State Project Review and City Land Action			
		Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)			
		Mining Case (Small, Large, Rural, Extraction, Exploration)			
		Sign Approval (If more than one, fill in all applicable permit #'s)			
		Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
		Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)			
	☒	Variance Case (De Minimis and all other Variance case types)		4/8/16	VAR20160004
		Wetlands Permits			
		Zone Change Application			
		Other (Describe)			
	***Public Notice Sign Form filled out and in the file.				
	Comments:				Permit Intake Initials ANE

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

I:\FORMS\2010 Applications

Revised November 2009

Attachment A - Application including site plan and narrative

Attachment A - 5/31/16 Staff Report

VARIANCE APPLICATION

Project Number	Project Name (15 characters)	Case Number <u>VAR20160004</u>	Date Received <u>4-8-16</u>																				
TYPE OF VARIANCE REQUESTED: ☐ Variance to the Sign Standard (VSG) ☐ Variance to Dimensional Standards (VDS) ☒ Variance to Setback Requirements (VSB)																							
DESCRIPTION OF ACTIVITY WHICH REQUIRES A VARIANCE: <u>Proposed one-room addition, of 14x14 ft., that would encroach slightly on setback</u>																							
Previous Variance Applications? ☒ YES ☐ NO Date of Filing: <u>2008</u> Previous Case Number(s): _____ Was the Variance Granted? ☒ YES ☐ NO																							
UNIQUE CHARACTERISTICS OF LAND OR BUILDING(S): <u>The edge of the setback is at the top of a steep slope. The slope separates the land the building is on from the road. There is no sidewalk, and in any case the encroachment would not affect the road or the slope between the road and building.</u>																							
UTILITIES AVAILABLE: WATER: ☒ Public ☐ On Site SEWER: ☐ Public ☒ On Site																							
WHY WOULD A VARIANCE BE NEEDED FOR THIS PROPERTY REGARDLESS OF THE OWNER? <u>The existing building that we purchased was built at the very edge of the setback. There is insufficient room on the other 3 sides to expand this modest sized home, so it would cause a hardship to block a minor expansion on the front side.</u>																							
WHAT HARDSHIP WOULD RESULT IF THE VARIANCE WERE NOT GRANTED? <u>Denial of the variance would effectively block any addition to the home.</u>																							
For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side. If you need any assistance filling out this form, please contact the Permit Center at 586-0770.	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">VARIANCE FEES</th> <th style="text-align: center;">Fees</th> <th style="text-align: center;">Check No.</th> <th style="text-align: center;">Receipt</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td>Application Fees</td> <td style="text-align: right;">\$ <u>400⁰⁰</u></td> <td>_____</td> <td>_____</td> <td style="text-align: right;"><u>4/8/16</u></td> </tr> <tr> <td>Adjustment</td> <td style="text-align: right;">\$ _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Total Fee</td> <td style="text-align: right;">\$ <u>400⁰⁰</u></td> <td style="text-align: right;"><u>644</u></td> <td style="text-align: right;"><u>7907</u></td> <td style="text-align: right;"><u>4/8/16</u></td> </tr> </tbody> </table>			VARIANCE FEES	Fees	Check No.	Receipt	Date	Application Fees	\$ <u>400⁰⁰</u>	_____	_____	<u>4/8/16</u>	Adjustment	\$ _____	_____	_____	_____	Total Fee	\$ <u>400⁰⁰</u>	<u>644</u>	<u>7907</u>	<u>4/8/16</u>
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Adjustment	\$ _____	_____	_____	_____																			
Total Fee	\$ <u>400⁰⁰</u>	<u>644</u>	<u>7907</u>	<u>4/8/16</u>																			

NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM

Variance Approval Criteria

A variance may be granted after the prescribed hearing and after the Board of Adjustment has determined the following criteria are met. Include in your project narrative a detailed description about how your proposal meets each of the criteria listed below:

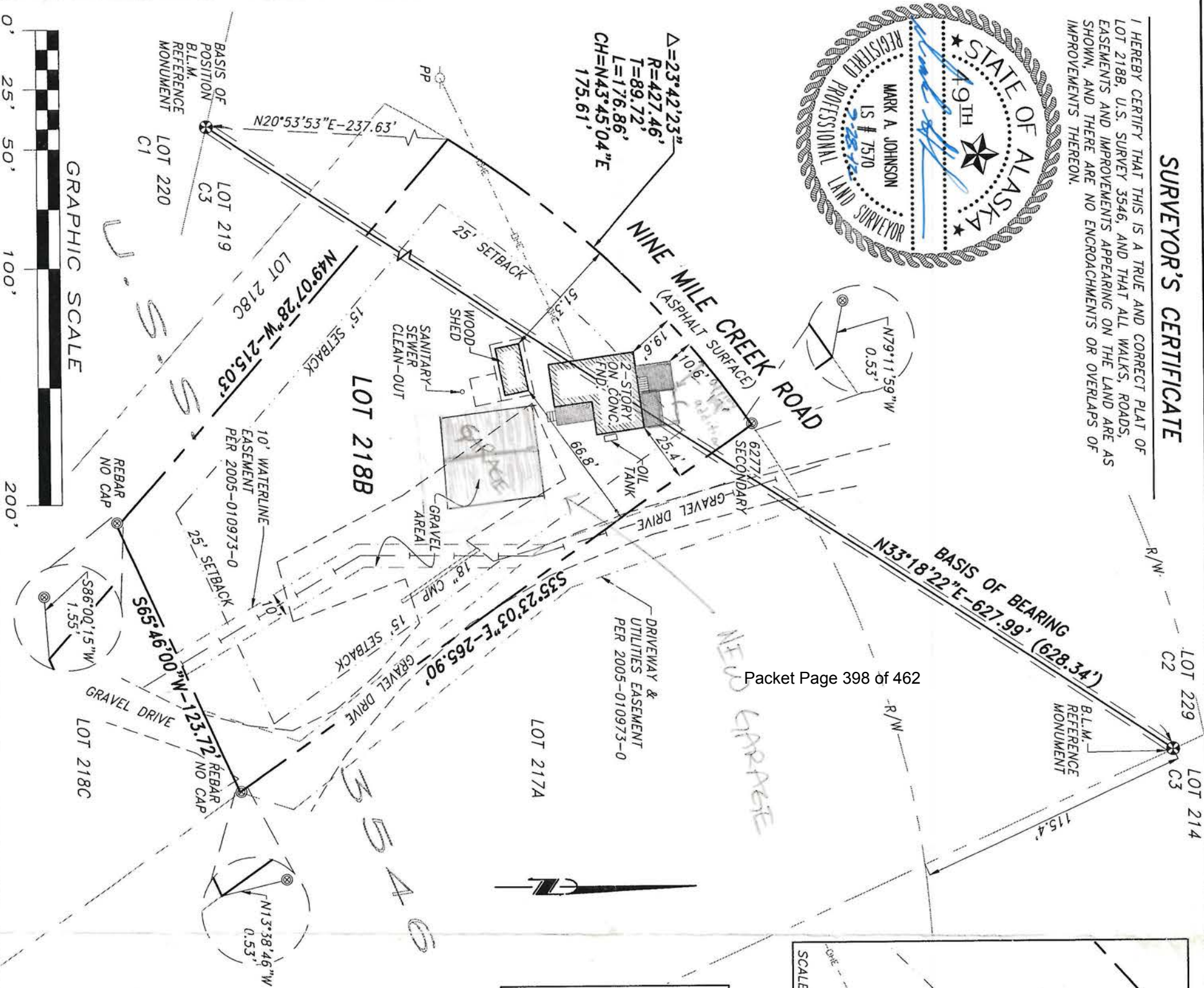
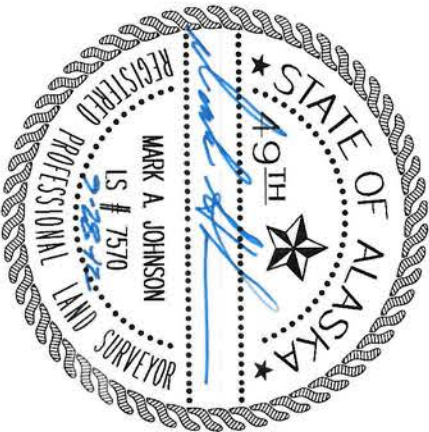
- (1) *The relaxation applied for or a lesser relaxation specified by the board of adjustment would give substantial relief to the owner of the property involved and be more consistent with justice to other property owners;*
- (2) *Relief can be granted in such a fashion that the intent of this title will be observed and the public safety and welfare preserved;*
- (3) *The authorization of the variance will not injure nearby property;*
- (4) *The variance does not authorize uses not allowed in the district involved;*
- (5) *Compliance with the existing standards would:*
 - (A) *Unreasonably prevent the owner from using the property for a permissible principal use;*
 - (B) *Unreasonably prevent the owner from using the property in a manner which is consistent as to scale, amenities, appearance or features, with existing development in the neighborhood of the subject property;*
 - (C) *Be unnecessarily burdensome because unique physical features of the property render compliance with the standards unreasonably expensive; or*
 - (D) *Because of preexisting nonconforming conditions on the subject parcel, the grant of the variance would not result in a net decrease in overall compliance with the land use code, title 49, or the building code, title 19, or both; and*
- (6) *A grant of the variance would result in more benefits than detriments to the neighborhood.*

PLEASE NOTE: As provided by CBJ Land Use code section on Variances (CBJ§49.20.200), a Variance may vary any requirement or regulation of this title concerning dimensional and other design standards, but **NOT** those concerning the use of land or structures, housing density, lot coverage, or those establishing construction standards.

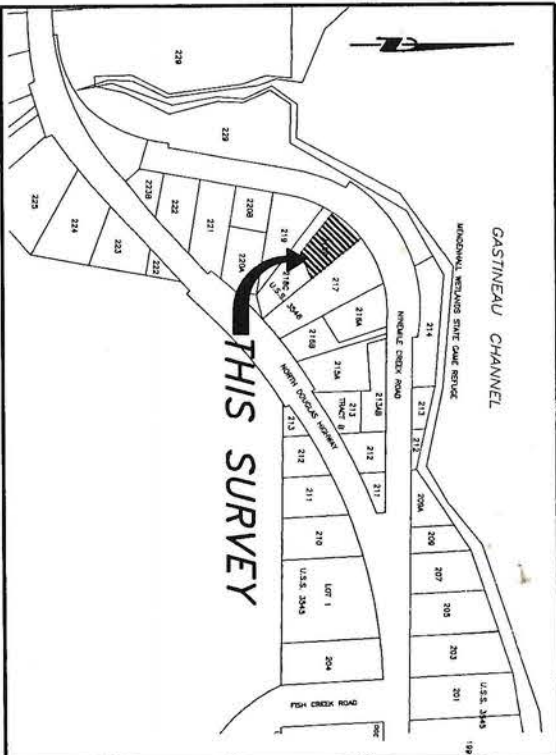
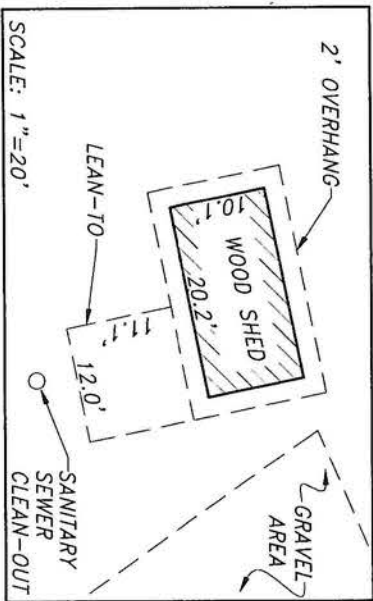
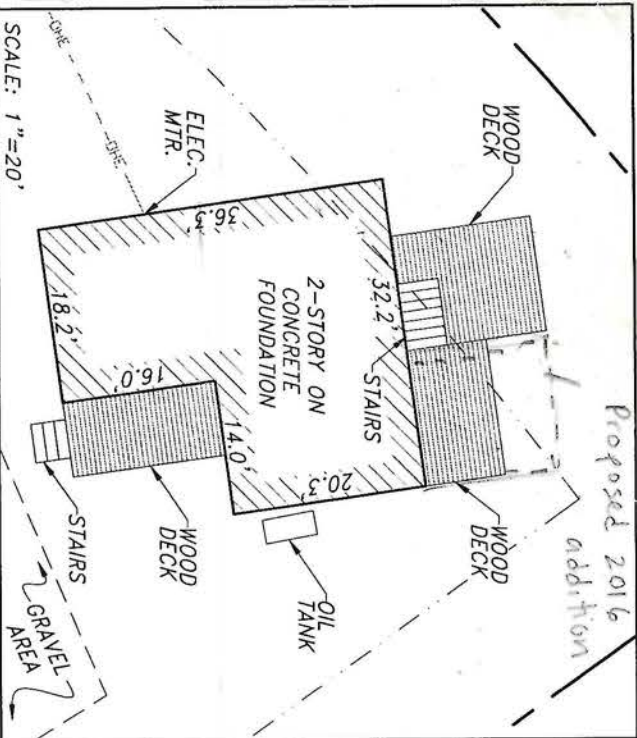
INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT PLAT OF LOT 218B, U.S. SURVEY 3546, AND THAT ALL WALKS, ROADS, EASEMENTS AND IMPROVEMENTS APPEARING ON THE LAND ARE AS SHOWN, AND THERE ARE NO ENCROACHMENTS OR OVERLAPS OF IMPROVEMENTS THEREON.



Packet Page 398 of 462



SOURCE: C.B.J. BOROUGH ATLAS
NOT TO SCALE

GENERAL NOTES

1. THE BASIS OF BEARING FOR THIS SURVEY WAS BETWEEN A RECOVERED B.L.M. REFERENCE MONUMENT FOR LOT 220 C-1 / LOT 219 C-3 AND A RECOVERED B.L.M. REFERENCE MONUMENT FOR LOT 229 C-2 / LOT 214 C-3, AS DELINEATED ON PLAT 2003-7, HAVING A RECORD BEARING OF N33°18'22"E.
2. RECORD INFORMATION DENOTED BY THIS PLAT WAS DERIVED FROM PLAT 2003-7, A SUBDIVISION PLAT OF LOTS 218B & 218C, ON FILE IN THE JUNEAU RECORDING DISTRICT OFFICE. THE ORIGINAL PLAT FOR U.S. SURVEY 3546.
3. WHERE RECORD SURVEY COURSES (BEARINGS AND/OR DISTANCES) DIFFER FROM THAT OF ACTUAL MEASURED AND/OR COMPUTED SURVEY COURSES THE RECORD SURVEY COURSE IS SHOWN WITHIN PARENTHESES WHILE THE ACTUAL MEASURED AND/OR COMPUTED SURVEY COURSE IS SHOWN WITHOUT PARENTHESES.
4. WATER SERVICES PROVIDED BY THE CITY & BOROUGH OF JUNEAU PUBLIC UTILITIES. SANITARY SEWER SERVICES PROVIDED BY ON-SITE SEPTIC SYSTEM.
5. PROPERTY SUBJECT TO EASEMENTS OF RECORD DENOTED BY THIS SURVEY OR NOT.
6. SETBACKS ARE BASED ON D-1 ZONING, PER CITY AND BOROUGH OF JUNEAU ZONING MAPS DATED 6-05-06

AS-BUILT SURVEY
OF
LOT 218B,
U.S. SURVEY 3546
CITY AND BOROUGH OF JUNEAU, ALASKA
JUNEAU RECORDING DISTRICT

OWNER:
TYSON C. FICK
9831 NINE MILE CREEK RD.
JUNEAU, ALASKA 99801

DATE: SEPTEMBER 28, 2012 SHEET 1 OF 1

SURVEYOR:
MARK A. JOHNSON, L.S.
R&M ENGINEERING, INC.
6205 GLACIER HIGHWAY
JUNEAU, ALASKA 99801
R&M PROJ. NO. 121786

NOTE:
UNDER NO CIRCUMSTANCES SHOULD ANY DATA HEREON BE USED FOR CONSTRUCTION OR FOR ESTABLISHING BOUNDARY OR FENCE LINES.

Project Description for 9831 Nine Mile Creek Road Setback Variance Request

We are proposing a 14 foot x 14 foot addition at the front of the house facing the street. The encroachment over the setback, because of the angle, would be between one and approximately six feet.

The spot where the addition would go is now mostly covered by a raised wood deck. The space not covered by deck is now a patch of lawn, adjacent to a larger patch of lawn that will remain the same. There is wood decking at ground level next to the existing raised wood deck that extends over the setback and does not cause any inconvenience.

Initially, when we purchased the property in 2006 we were a couple without children and the 650 square foot cabin met our needs. However, with the discovery in 2008 that we were going to have twins, and live-in grandparents to help take care of the kids, we geared up for an expansion to about 1,500 square feet in a hurry. We did not have the time or the money then to consider any work on the small kitchen, or create a separate dining area. We are now looking to add a small square addition to accommodate that, and there is no other part of the building we can add that size room to, even at great expense.

The property is uniquely situated, and the unique physical features of the property render compliance with the setback standards unreasonably expensive. Additionally, the preexisting nonconforming setback encroachment would make this current variance consistent with overall compliance with the land use code.

To explain, the original builder built the home at the front edge of the lot. The top left corner of the house had a 5.4 foot encroachment over the setback. Behind the house is

the sewer and a shed on a concrete foundation. We have added a garage in that area over the past two years. Therefore, the front of the home is the only place to locate an addition.

The house is also unique because it is built on a small bluff adjacent to the road, which is about 20 feet below. Pictures are attached. A steep slope separates the front of the house facing the road from the road itself. That bluff is covered with vegetation so the front of the house is not very visible from the road. Encroaching slightly over the setback will have no effect on the road or on the steep slope. There is no possibility of the addition interfering with any road work including sidewalks, pipes or road-widening.

Because only a portion of the addition would exceed the setback, this may qualify as a *de minimis* variance. However, even if the addition went slightly over 25% of the setback, the addition would meet the factors for a variance under the code:

(1) The relaxation of the setback would give substantial relief to us and not have any negative effect on our neighbors. Instead, the increase in value to our property would positively affect overall property values in the neighborhood and the local property tax base.

(2) Relief can be granted in a way that will have no negative effect on public safety or on the overall purposes of the zoning rules.

(3) The authorization of the variance will not injure nearby property, as the conversion of what is now mostly a raised deck to an enclosed room will have no negative effect.

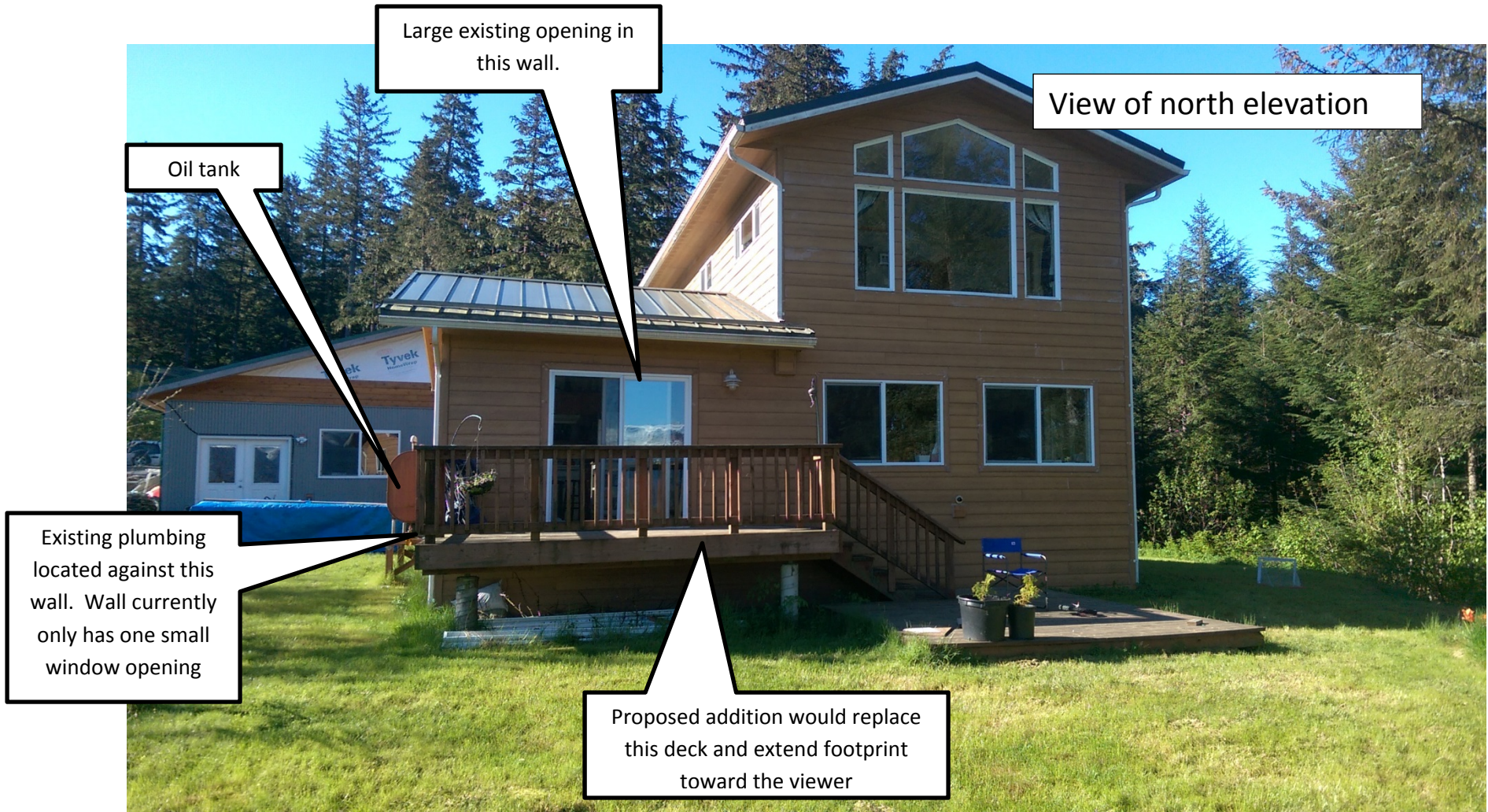
(4) The variance does not authorize any different use of the property; and

(5) Rigid enforcement of the setback to block the addition would unreasonably prevent us from making our home more livable, through addition of storage space, kitchen space, and a dining area. The addition would not affect how our home conforms to the existing development in the neighborhood.

We appreciate your consideration of this application. Please let us know if there is any additional information we can provide to assist in your decision. Thank you.







Large existing opening in this wall.

View of north elevation

Oil tank

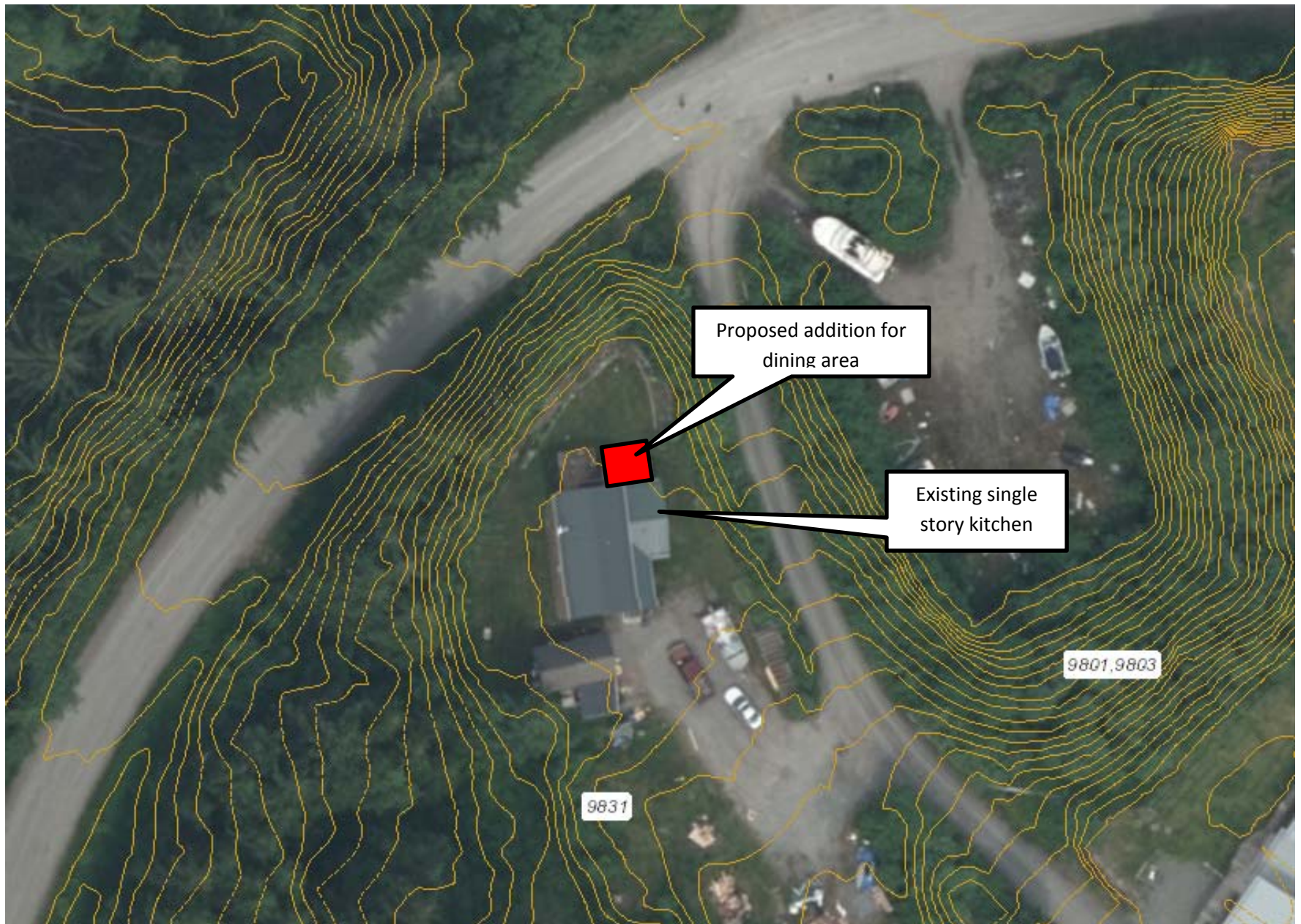
Existing plumbing located against this wall. Wall currently only has one small window opening

Proposed addition would replace this deck and extend footprint toward the viewer











CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

COMMUNITY DEVELOPMENT DEPT.
NOTICE OF DECISION

DATE: January 28, 2000

FILE NO.: VAR2000-00005

Mike Bellevue
P.O. Box 0947
Douglas, Alaska 99824

Application For: De Minimis Variance

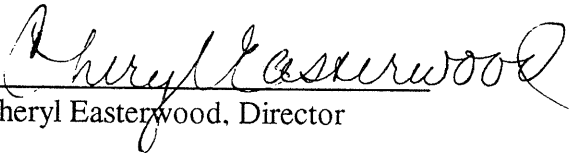
Legal Description: USS 3546, Lot 218

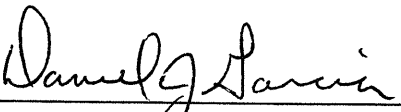
Parcel Code No.: 6-D11-0-103-007-0

The Director of Community Development, based on the analysis and findings in the attached memorandum of January 24, 2000, has granted your request for a de minimis variance to reduce the required front yard setback from 25 feet to 19.2 feet.

Effective Date: The date of the Director's signature below.

If you have any questions regarding your project or anticipate any changes to your plans, please call the Community Development Department at 586-5230.

Director: 
Cheryl Easterwood, Director

Project Planner: 
Daniel J. Garcia, Planner

Date Signed: 1/28/00

cc: Plan Review
Bldg. File

Attachment D – Notice of Decision for de minimis variance to original
single story structure

Attachment A - 5/31/16 Staff Report

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

PLANNING COMMISSION
NOTICE OF DECISION

Date: February 13, 2008

File No.: USE2008-00003

Tyson Fick
9831 Nine Mile Creek Road
Juneau, AK 99801

Application For: Conditional use permit for a second story above an existing enclosed structure that projects into a required yard setback.

Legal Description: USS3546 Lot 218B

Parcel Code No.: 6-D11-0-103-007-1

Hearing Date: February 12, 2008

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated February 5, 2008 and approve the second-story addition to be conducted as described in the project description and project drawing submitted with the application and with the following conditions:

- The roof eaves may not extend more than two feet beyond the exterior wall into the front yard setback.

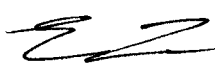
Attachments: February 5, 2008 memorandum from Eric S. Feldt, Community Development to the CBJ Planning Commission regarding USE2008-00003.

This Notice of Decision does not authorize construction activity. Prior to starting any project, it is the applicant's responsibility to obtain a building permit for any and all improvements requiring such.

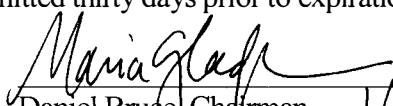
This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ §01.50.030 (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 Sec. 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, February 12, 2008.

Expiration Date: The permit will expire 18 months after the effective date, or July 12th, 2009, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to expiration date.

Project Planner: 

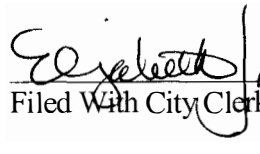
Eric Feldt, Planner
Community Development Department
155 So. Seward Street, Juneau, Alaska 99801-1397


Daniel Bruce, Chairman
Planning Commission


Vice Chairman

Attachment E – Notice of Decision for second story additional to existing single story structure

Tyson Fick
File No.: USE2008-00003
February 13, 2008
Page 2 of 2

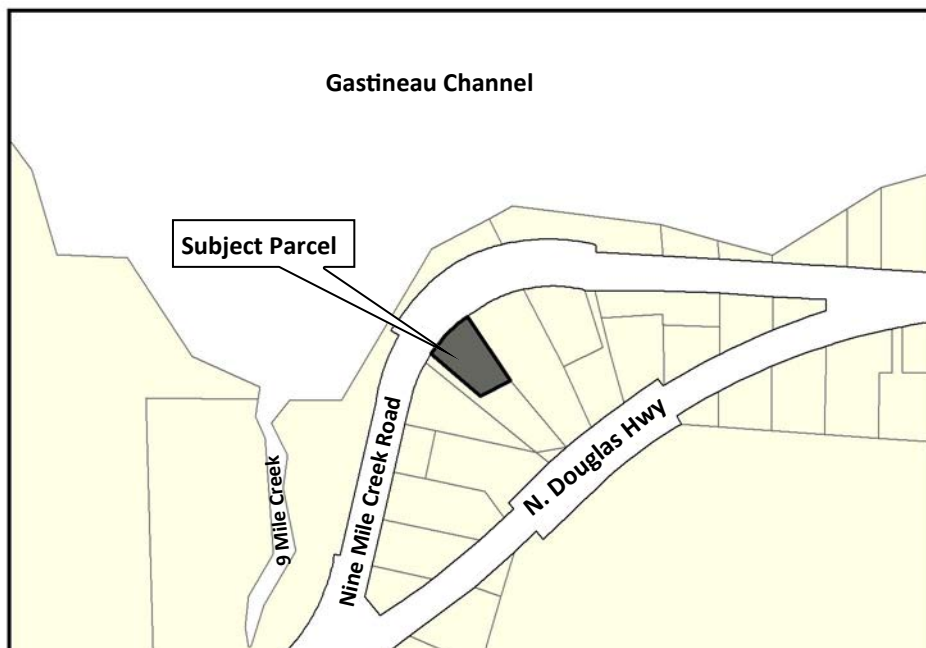
  2/13/08
Filed With City Clerk Deputy Clerk Date

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. 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 I (800) 949-4232, or fax (360) 438-3208.



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



PROPOSAL: Variance request for a reduction of the frontyard setback for an addition to an existing dwelling.

File No:	VAR2016 0004	Applicant:	Hollis Handler
To:	Adjacent Property Owners	Property PCN:	6-D11-0-103-007-1
Hearing Date:	June 14, 2016	Owner:	Hollis L. Handler
Hearing Time:	7:00 PM	Size:	36,065 Square Feet
Place:	Assembly Chambers	Zoned:	D-1
	Municipal Building	Site Address:	9831 Nine Mile Creek Road
	155 South Seward Street	Accessed Via:	Nine Mile Creek Road
	Juneau, Alaska 99801		

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Tim Felstead at tim.felstead@juneau.org or at 586-0466



CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at
<http://www.juneau.org/assembly/novus.php>

Attachment A - 5/31/16 Staff Report

Attachment F - Public notice

notice was printed: May 10, 2016



Community Development

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

DATE: June 14, 2016

TO: Planning Commission

FROM: Tim Felstead, Planner
Community Development Department

SUBJECT: Additional information for VAR2016-0004: Variance request for a reduction of the front yard setback for an addition to an existing dwelling.

Attachments

- Attachment A: As-built survey/site plan for applicants' proposal (taken from the original application)
- Attachment B: Letter from applicants' contractor regarding costs of difference between alternative location and proposed location for addition
- Attachment C: Email from CBJ General Engineering Division regarding the need for retaining wall if built at alternative location

Background

For background, the existing buildings, lot lines and setbacks are shown in the attached as-built survey/site plan which was provided in the original application (see **Attachment A**).

The staff report for this case notes that the applicants' stated they had been given information by their contractor indicating that the cost to place the addition in the front yard setback would be less than if it were placed outside of the setbacks elsewhere on the lot. At that time, the applicants understood that this was because the existing plumbing and oil tank would need to be relocated. The applicants had not received any cost information at the time the staff report was finalized.

The contractor has now provided information to the applicants that describes how constructing the addition to the east of the existing kitchen would place the foundation too close to the embankment adjacent to the driveway (see **Attachment B**). The contractor has stated that if the foundation were placed too close to the

embankment, then a retaining wall would be required to ensure the embankment remained stable. They estimate that this would double the cost of construction.

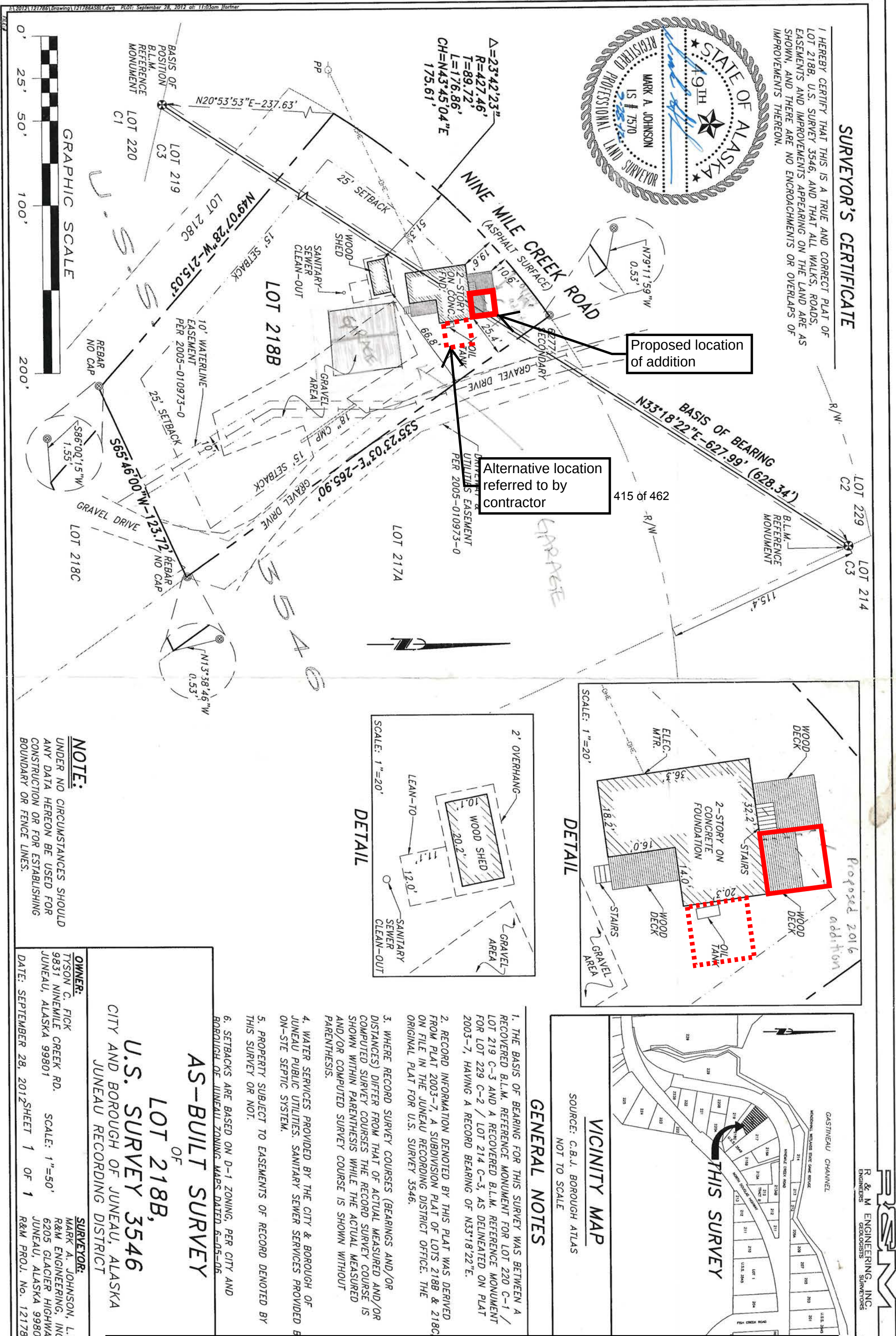
CBJ General Engineering have reviewed the existing contours and are unable to determine if a retaining wall would be required for an addition built within the side yard setback for the lot (see **Attachment C**). They have stated that any addition that placed part of the footprint on the embankment would require special construction. Construction on the embankment may require a variance to the side yard setback.

Staff would need the applicant to submit engineered plans to be able to verify the need for a retaining wall.

As mentioned in the staff report, there are locations adjacent to the house (not just the alternative location to the east of the existing kitchen) where an addition could be added without encroaching into the setbacks. However, as noted in the staff report, this may restrict access around the exterior of the house and lead to an inconvenient floor plan, considering the location of the existing kitchen.

Recommendation

Despite the additional information, the findings of the staff report remain unchanged.



Attachment A - Asbuilt survey/site plan showing proposed addition

Corban Construction

Box 33052 Juneau, AK 99803
907.723.9049; Jeff@corbancc.com

June 13, 2016

To whom it may concern,

My name is Jeff Boman with Corban Construction. I originally gave an estimate for an addition to Tyson and Holly a few months back. Recently, I was told that the City may not permit the project on account of it encroaching on the Northern setback and that we should look to do the addition on the East of the house. While I fully understand and agree that from a setback standpoint, extending the house to the East makes the most sense, from the construction side of the project, it definitely complicates things.

On the North side of Tyson and Holly's lot, there is ample room for an addition. On the East side of the lot, there is a steep hillside that borders a shared driveway. My concern was, and is, that if we extend the house to the East, the result will be an insufficient amount of soil remaining to allow it to be stable. If we were to build a retaining wall down below to prevent erosion, the cost of the project would easily double.

For that reason, I would recommend adding any future structure to the North side of the house.

Warm regards,

Corban Construction

Attachment B - Letter from applicant's contractor
regarding costs of difference between alternative location
and proposed location for addition

From: Ron King

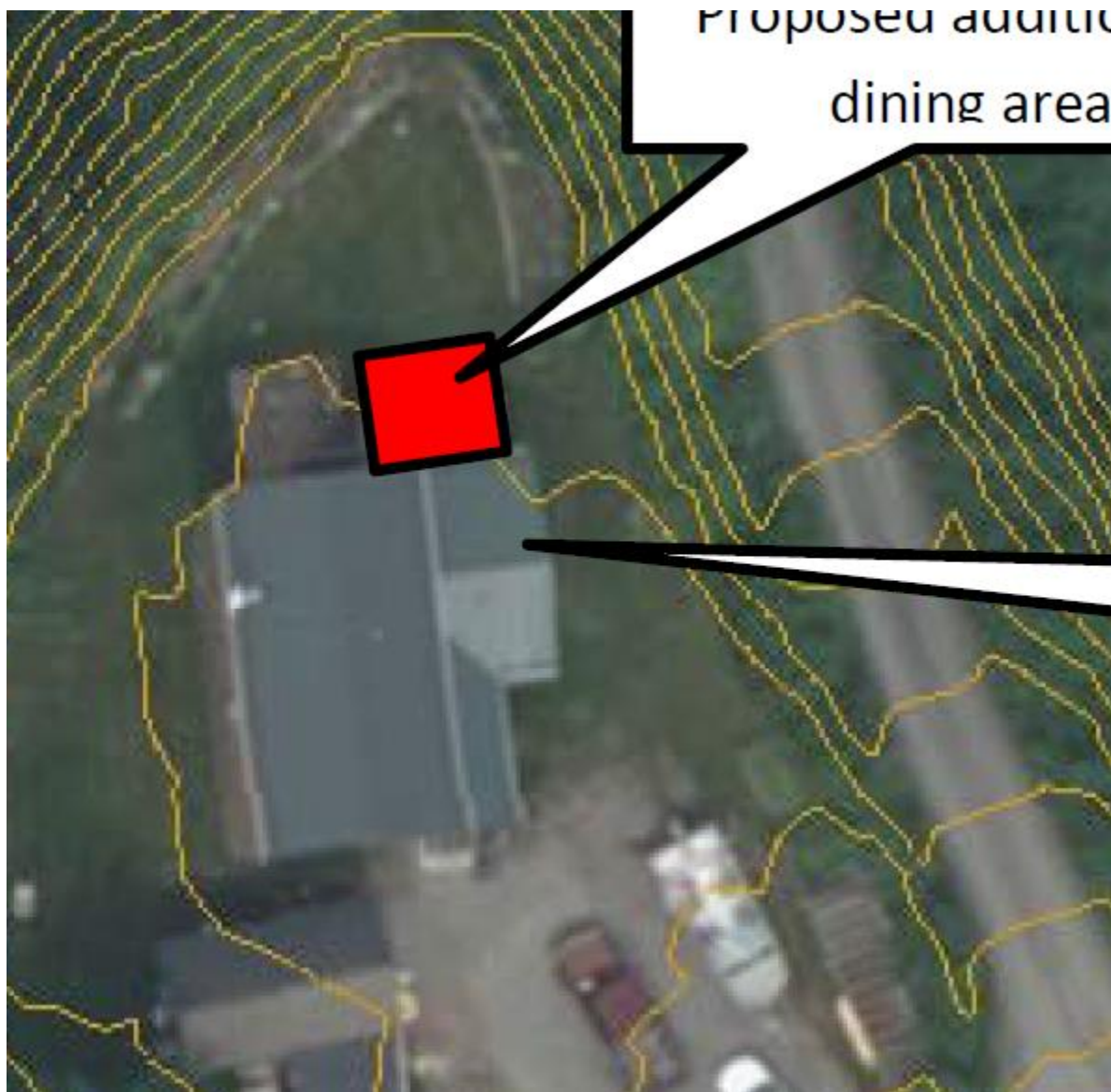
Sent: Monday, June 13, 2016 3:27 PM

To: Tim Felstead

Subject: RE: VAR20160004: A variance request for a reduction of the frontyard setback for an addition to an existing dwelling

Tim, the GIS contours do not allow for an accurate assessment of the design/construction for an addition on the driveway side of the existing structure. However to add access beyond a dining area on the driveway side would require special construction.

In reference to the requested variance Engineering has no issues.



Ron King PLS

General Engineering
907-586-0881

Attachment B - Blue Folder Memo

Attachment C –Email from CBJ General Engineering division regarding the need for retaining wall if addition built at alternative location

VARIANCE REQUEST: 9831 NINE MILE CREEK ROAD, HOMEOWNERS REPORT

To: Board of Adjustment

From: Tyson Fick and Holly Handler

August 9, 2016

At our initial variance hearing in June, the Board indicated it would like more information before making a decision on our variance request. We appreciate the Board's patience as we have worked to provide more details about our proposal.

To address the staff's concerns, we can follow up on the negative portions of the staff report:

Criterion 1. That the relaxation applied for or a lesser relaxation specified by the Board of Adjustment would give substantial relief to the owner of the property involved and be more consistent with justice to other property owners.

Staff report: The subject parcel is large although the location and orientation of the existing dwelling unit constrains the size of any addition to the front of the building. The applicant has stated placing the addition in the setback will reduce construction costs. They have indicated that placing the addition elsewhere, outside of the required setbacks, would require relocating plumbing and an oil tank, or provide an inconvenient floorplan. The deck, which the addition would replace, is accessed from a wide sliding door, reducing the need to remove walls. No construction quotes have been provided to support these assertions.

- Attached is a construction quote to support the statement that placing the addition on the East side of the house would substantially increase construction costs.
- The quote includes two figures: one figure is just for the retaining wall, which would be necessary in order to build on the East side. Although the staff did not agree that this would be necessary, the builder who has spent time on site evaluating potential building plans has determined that a retaining wall would be necessary, as described below under Criterion 5.
- The second figure itemizes the cost of the project as proposed without moving electrical, plumbing, the oil tank, and demolition of the existing wall.
- While we do not have an itemized estimate to move the east wall, it stands to reason that moving utilities and demolishing the existing wall would add considerable expense to the project and combined with a retaining wall would at least double the cost.
- Building a kitchen addition/dining area on the West side of the building, as the staff report suggests is an option, would defeat the purpose of the project. It would not make sense to add a kitchen addition to the end of the living room, on the opposite end of the house from the kitchen.

- Building towards the entry way between the garage and house would require either having a bathroom in the middle of the kitchen, which would not be feasible, or moving a bathroom and reorienting the entrance into the house, which would add significant cost to the project.

Criterion 5 can be met through evidence of either factor a, b, c, or d. In our case, factor C is applicable:

Compliance with the existing standards would be unnecessarily burdensome because unique physical features of the property render compliance with the standards unreasonably expensive;

Staff Report: While the existing lot is higher than Right of Way, up a steep embankment of approximately 20-25 feet, there is flat land immediately adjacent to the existing dwelling that could be used for the addition (see Attachment C).

- The reasons that the flat land adjacent to the house on the east would be unnecessarily burdensome are as follows:
 - o Attachment C shows the physical contours of the land on which the house is built. As you can see on the map, moving the proposed red block, representing the addition, to the east side of the house would bring the edge of the house considerably closer to the steep embankment between the house and the driveway than the proposed site would. This would cause a dangerous situation because of the potential for erosion and encroachment into the shared driveway. The counter map shows a much larger area of flat land on the north side to build on. This area is much safer to build on.
 - o Because this is a residence with young children, there is an additional danger besides the erosion. If the addition were built on the east side, there would be a much narrower egress between the front and back yards, creating an increased risk of injury for children running and playing at the edge of the embankment.
 - o The only realistic way of addressing these dangers would be to construct a retaining wall on the east side of the house, which would be unreasonably expensive. The reasons for these high costs are the dirt work and material necessary to build an appropriate retaining wall.
 - o In addition to this major expense, construction of the wall would cause a serious inconvenience to the three neighboring households who use the shared driveway, where construction equipment and materials to build the wall would be located on or very near the shared driveway throughout the building process.
- Despite the staff opinion, we would not proceed with an east side addition without a retaining wall as recommended by our builder, although the cost of a wall would make the addition financially impossible.
- It should also be noted that building an addition within the variance requirements would defeat the purpose of the addition: adding sufficient square footage to locate a dining table and storage cabinets. The costs of an addition would not make financial sense as proposed by city staff.

Criterion 6. That a grant of the Variance would result in more benefits than detriments to the neighborhood.

Staff report: There is no evidence that there would be any detriment or benefits to the neighborhood resulting from granting of this variance.

- The staff report overlooks the fact that the addition would add an additional 196 square feet to the house, and improve and modernize the kitchen, thereby increasing the property value. An increase in property value would be of benefit to the immediate surrounding neighborhood.
- In addition, the neighboring households would enjoy a larger buffer between our shared driveway and the house if the addition is located on the north side of the house instead of the east.
- Finally, construction would be less intrusive to the neighbors if we could avoid building a retaining wall next to the driveway, which would impact their use of the driveway during construction.
- Given the fact that this variance would cause no actual detriment to our neighbors, given the location of the property, and the invisibility of the proposed addition to the road, these benefits outweigh any detriment.

We respectfully ask the Board to find that in addition to the staff's finding that Criteria 2,3, and 4 are met to approve this variance, Criteria 1, 5 and 6 are also met, as described above.

Holly Handler and Tyson Fick Addition – Provided to CDD 08/09/16

Materials	10150
Labor	28080
Allowances	16100
Excavation	3000
Electrical	3000
Plumbing	2000

Drywall 3000

65330

Materials:

Foam Block Concrete Forms	32 lineal ft.	350
#4 Rebar	10	100
#4 uprights	15	100
Anchor Bolts	10	35
2x8x12 common	6	90
Concrete	4	1500
Sill Seal	1	15
2x12x14 common	8	160
1-1/4 plywood	5	250
2x6x12 pt	3	45
2x6x12 common	10	120
2x6x10 common	40	400
1/2" cdx	16	400
Housewrap	1	200
Vycor Window Flashing	2	125
Trusses	1	1200
Ice and water shield	2	500
Underlayment	1	150
Skyline roofing	3 sq. + flashing	1000
Prefinished Cement Siding	500 sq. ft.	1500
5/4x8x14 cedar fascia	4	160
R-38 insulation	2 bags	150
R-21 insulation	5 bags	300
5/8 4x12 drywall	12	300
Fasteners		1000

10150

Allowances:

Windows	1600
Flooring	750
Counters	5000
Cabinets	8000
Sink	500
Faucet	250

16100

Labor:

Assuming 2 people on site 8 hours a day @ \$65 per hour

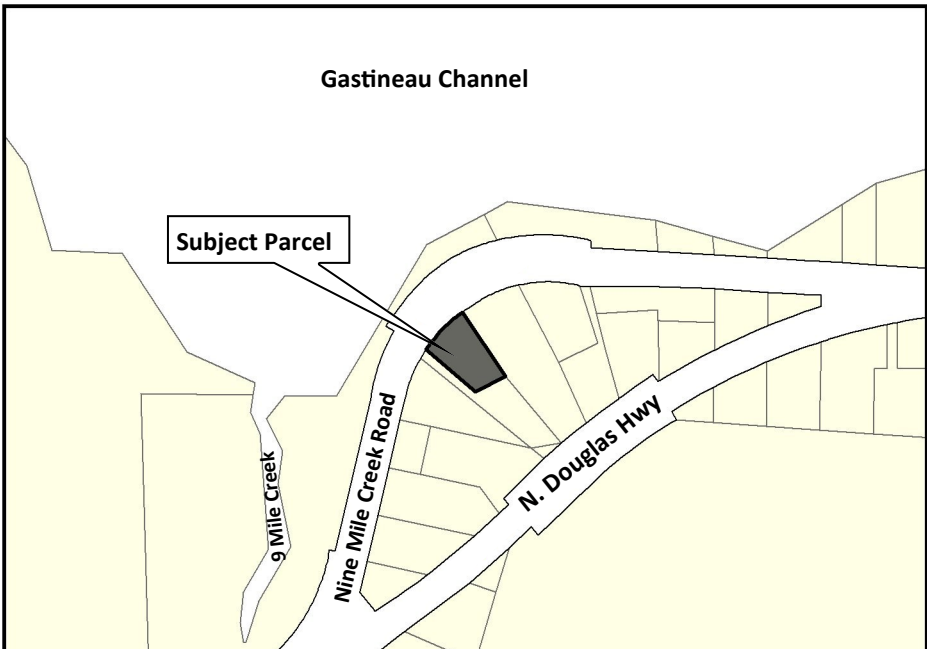
Concrete	4	
Framing	5	
Roofing	2	
Windows/siding	5	
Demo existing wall/install beam	2	
Insulation/drywall hanging	2	
Remove existing cabinets	1	
Install new cabinets	2	
Flooring	2	
Trim/shelving	2	
	27	28080



Attachment C - Additional Materials from Applicant



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



PROPOSAL: Variance request for a reduction of the frontyard setback for an addition to an existing dwelling.

File No:	VAR2016 0004	Applicant:	Hollis Handler
To:	Adjacent Property Owners	Property PCN:	6-D11-0-103-007-1
Hearing Date:	June 14, 2016	Owner:	Hollis L. Handler
Hearing Time:	7:00 PM	Size:	36,065 Square Feet
Place:	Assembly Chambers	Zoned:	D-1
	Municipal Building	Site Address:	9831 Nine Mile Creek Road
	155 South Seward Street	Accessed Via:	Nine Mile Creek Road
	Juneau, Alaska 99801		

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

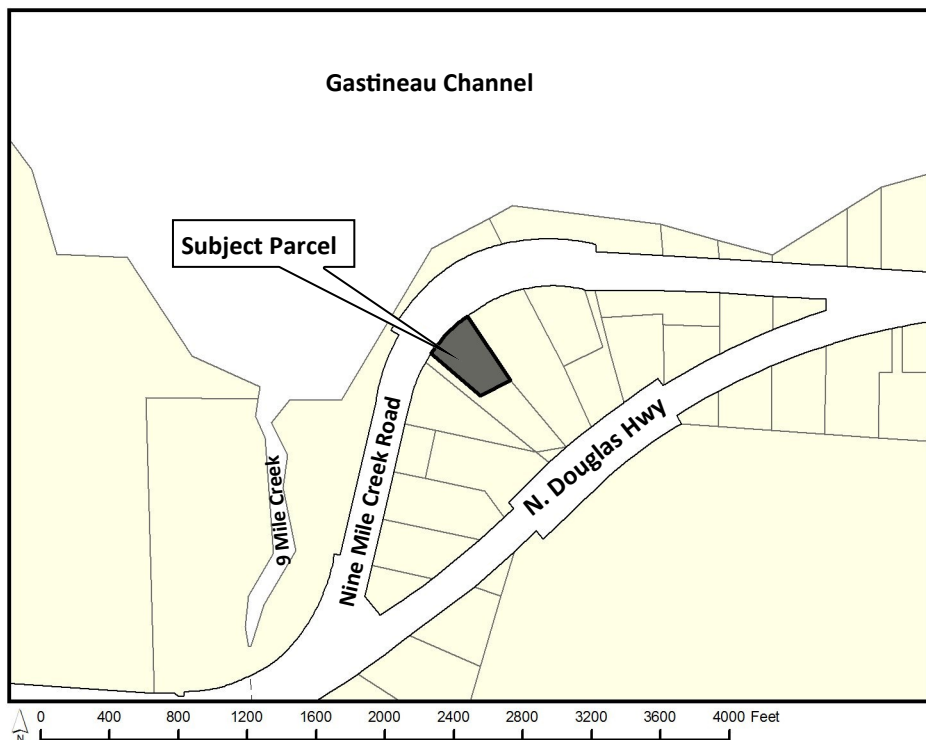
If you have questions, please contact Tim Felstead at tim.felstead@juneau.org or at 586-0466



Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at <http://www.juneau.org/assembly/novus.php>



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO: «Mailing Label»



PROPOSAL: Variance request for a reduction of the frontyard setback for an addition to an existing dwelling.

****This hearing is a continuance from the June 14, 2016 Planning Commission meeting.****

File No:	VAR2016 0004	Applicant:	Hollis Handler
To:	Adjacent Property Owners	Property PCN:	6-D11-0-103-007-1
Hearing Date:	August 23, 2016 (continued from 6/14/16)	Owner:	Hollis L. Handler
Hearing Time:	7:00 PM	Size:	36,065 Square Feet
Place:	Assembly Chambers	Zoned:	D-1
	Municipal Building	Site Address:	9831 Nine Mile Creek Road
	155 South Seward Street	Accessed Via:	Nine Mile Creek Road
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Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at <http://www.juneau.org/assembly/novus.php>

Date notice was printed: July 19, 2016



Community Development

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

BOARD OF ADJUSTMENT NOTICE OF DECISION

Date: August 25, 2016
File No.: VAR2016 0004

Hollis Handler and Tyson Fick
9831 Nine Mile Creek Road
Juneau, AK 99801

Application For: Variance request for a reduction of the front yard setback for an addition to an existing dwelling

Legal Description: USS 3546 Lot 218B

Property Address: 9831 Nine Mile Creek Road

Parcel Code No.: 6-D11-0-103-007-1

Hearing Date: June 14, 2016 and August 23, 2016.

The Board of Adjustment, at its regular public meeting, adopted the analysis and findings listed in the attached memorandums, and **DENIED** the Variance request.

Attachments:

1. May 31, 2016, memorandum from Tim Felstead, Community Development, to the CBJ Board of Adjustment regarding VAR2016 0008.
2. June 14, 2016, memorandum from Tim Felstead, Community Development, to the CBJ Board of Adjustment regarding VAR2016 0008.
3. August 12, 2016, memorandum from Tim Felstead, Community Development, to the CBJ Board of Adjustment regarding VAR2016 0008.
4. August 23, 2016, memorandum from Tim Felstead, Community Development, to the CBJ Board of Adjustment regarding VAR2016 0008.

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

This Notice of Decision constitutes a final decision of the CBJ Board of Adjustment. Appeals must be brought to the CBJ Assembly in accordance with 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

Hollis Handler and Tyson Fick

File No: VAR2016 0004

August 25, 2016

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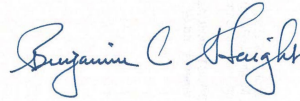
(c). Any action by the applicant in reliance on the decision of the Board of Adjustment shall be at the risk that the decision may be reversed on appeal (CBJ §49.20.120).

Effective Date: This is effective upon decision by the Board, August 23, 2016

Project Planner:



Tim Felstead, Planner
Community Development Department



Ben Haight, Chair
Planning Commission



Filed With City Clerk

8/30/2016

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. 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.



Community Development

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

DATE: August 12, 2016

TO: Board of Adjustment

FROM: Jonathan Lange, Planner
Community Development Department

FILE NO.: VAR2016 0009

PROPOSAL: A Variance Request to the front yard setback for a garage with an accessory apartment.

GENERAL INFORMATION

Applicant: Kerry Kirkpatrick & Mike Piling

Property Owner: Kerry Kirkpatrick & Mike Piling

Property Address: 14329 Otter Way

Legal Description: USS 3050 Lot 11

Parcel Code No.: 4-B31-0-103-011-0

Site Size: 20,037 Square Feet or 0.46 Acres

Comprehensive Plan Future Land Use Designation: RLDR – Rural Low Density Residential

Zoning: D-3

Utilities: City Water and On-Site Sewer

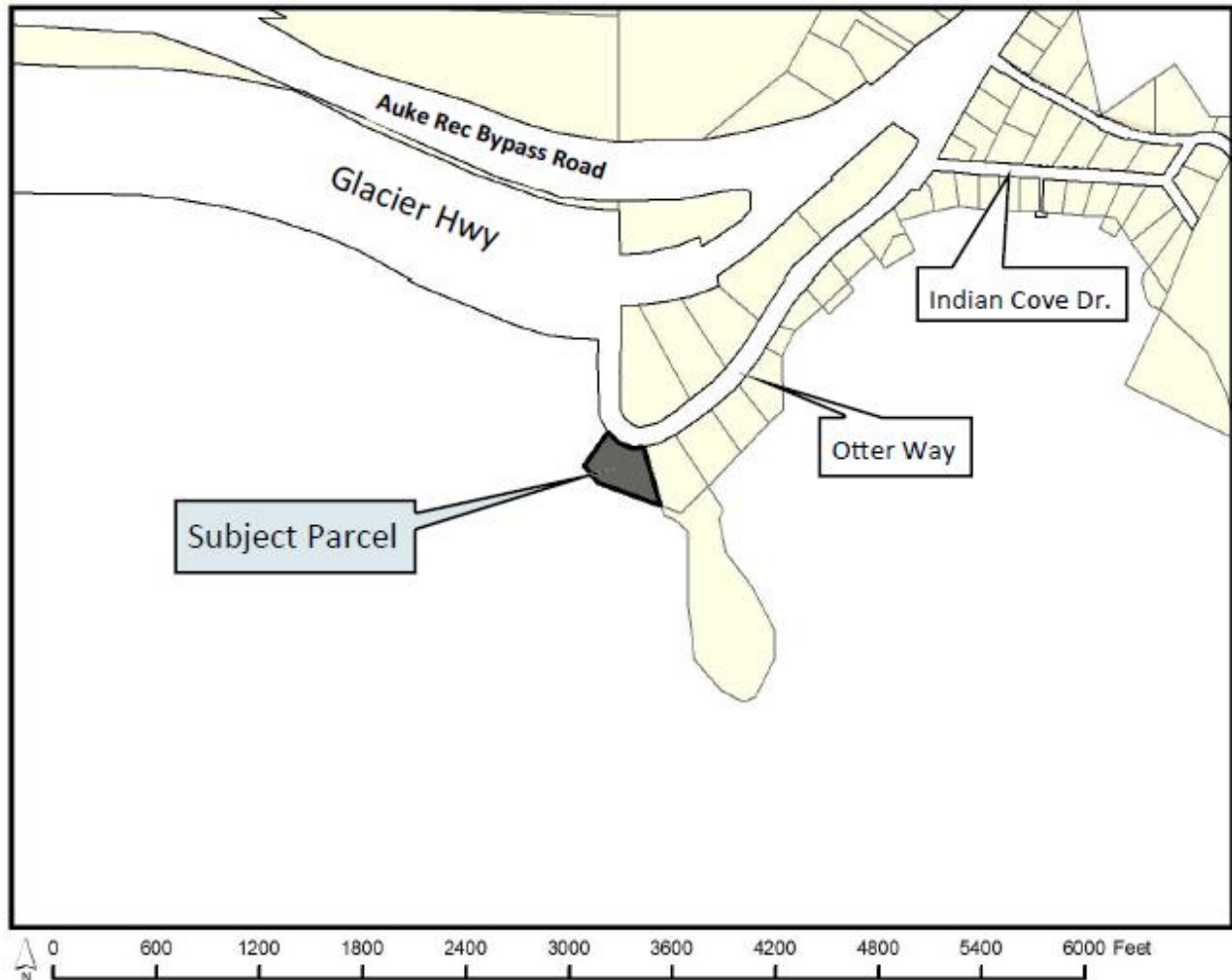
Access: Otter Way

Existing Land Use: Single-Family Residence

Surrounding Land Use:
North - D-3, Single-Family Residence
South - Favorite Channel
East - D-3, Vacant Lot then Single-Family Residences
West - RR, Vacant - Auke Rec

Board of Adjustment
 File No.: VAR2016 0009
 August 12, 2016
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VICINITY MAP



ATTACHMENTS

- Attachment A – Development Permit and Variance Applications
- Attachment B – Project Narrative/Letter to Planning Commission
- Attachment C – Building Plan
- Attachment D – Proposed Site Plan
- Attachment E – Aerial Photo with Lot Lines
- Attachment F – As-Built Survey
- Attachment G – Aerial Photo with Topographic Contour Lines
- Attachment H – USS 3050 Plat and 1995 Otter Way Subdivision; 14275 As-Built Survey
- Attachment I – Public Notice
- Attachment J – Agency and Public Comments

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CBJ 49.20.250(b) Grounds for Variances other than de minimis

Under CBJ 49.20.250 where hardship and practical difficulties result from an extraordinary situation or unique physical feature affecting only a specific parcel of property or structures lawfully existing thereon and render it difficult to carry out the provisions of Title 49, the Board of Adjustment may grant a Variance in harmony with the general purpose and intent of Title 49. A Variance may vary any requirement or regulation of Title 49 concerning dimensional and other design standards, but not those concerning the use of land or structures, housing density, lot coverage, or those establishing construction standards. A Variance may be granted after the prescribed hearing and after the Board of Adjustment has determined that the proposal meets the six Variance criteria.

PROJECT DESCRIPTION

The applicants are requesting a variance to the front yard setback to build a garage with an accessory apartment above (see Attachment A and B for applicant's application and narrative). The request is to reduce the 25 foot front yard setback, required in the D-3 zoning district, to allow for the garage and accessory apartment to be built at the front property line (a zero foot setback). Due to the steepness of the lot, the applicant is requesting to build the garage and apartment in the location specified in their site plan (see Attachment D). The garage would allow for off-street parking, and the location proposed would not block the view of the water for the neighbor living across the street. The applicant also states in their application narrative that building at the front property line would reduce the cost of construction of the garage.

BACKGROUND

The dwelling at 14329 Otter Way was built in 1928. Lot 11 of U.S. Survey 3050 was created in 1951. Lot 11 contained the current home and a garage (now demolished), which was built at the front property line (see Attachment H for plat of USS 3050). At that time, the road now known as Otter Way was a section of Glacier Highway. In 1995, the Alaska Department of Transportation and Public Facilities (DOT&PF) re-routed Glacier Highway and created the Otter Way subdivision (see Attachment H), renaming that section of the old road Otter Way. When this occurred, the right-of-way lines came very close to existing homes on what is now Otter Way and bisected two homes at 14275 and 14255 Otter Way, creating a non-conforming situation (see Attachment H for 14275 Otter Way As-Built Survey) with the homes extending into the right-of-way.

The subject lot is located between the Auke Bay Ferry Terminal and Auke Recreational Area, on the water side below Glacier Highway. The lot is zoned D-3 and meets the 12,000 square foot

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minimum lot size of the zoning district, as the lot is 20,037 square feet in size. The lot is large enough for a single-family home and an accessory apartment. The lot meets the minimum lot requirement of 100 foot width and 100 foot depth for the zoning district, as the lot is approximately 150 feet wide and approximately 110 feet deep. Currently, there is no on-site parking, and the applicant parks in the DOT&PF right-of-way on Otter Way.

ANALYSIS

The City and Borough of Juneau (CBJ) Land Use Code Title 49.25.430(4)(H) allows for the reduction of a setback to five feet from any property line for garages and carports, if they meet four criteria:

(H) Carports and garages. A minimum setback of five feet from any property line shall apply to carports and garages in any residential zoning district if:

- (i) The topography of the lot makes construction a hardship;*
- (ii) The carport or garage has a maximum height of 17 feet measured from the finished garage floor level, instead of from the datum established in 49.25.420(b), and a maximum gross floor area of 600 square feet;*
- (iii) Sight distance is approved by the director; and*
- (iv) Enclosed space directly under the garage shall be subject to the above setback exception, and no additional stories are allowed on top of the garage.*

The applicants are requesting the proposed variance so that they can build closer to the front property line than the five feet allowed above. Their proposal is also for a garage that is 800 square feet with an 800 square foot accessory apartment above. Therefore, the proposal does not meet the requirements of H(ii) and (iv) mentioned above.

CBJ 49.25.430(K) allows for new structures to have a reduced front yard setback equal to the average front yard setback of the three closest adjacent buildings. The closest adjacent buildings have a larger front yard setback than that required in the D-3 zoning district, thus this section of code does not apply.

The subject lot slopes down toward the water. Staff reviewed the site on the CBJ GIS aerial photography and looked at topographical contour lines (see Attachment G). There is an approximately 10 foot drop in elevation from Otter Way to the current single-family residence. From the residence, there is an approximately 40 foot drop to the shoreline.

The subject lot is greater than 125% of the minimum lot size for the zoning district. CBJ 49.25.510(k)(2)(E)(b) allows for an accessory apartment to be approved on a lot that is 125% of the minimum lot size for the pertinent zoning district. The accessory apartment is allowed to

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be one or two bedrooms or an efficiency unit, up to 50% of the size of the primary dwelling unit, but not to exceed 1,000 square feet. According to the CBJ Assessor's Office, the primary dwelling unit is approximately 1,663 square feet, which would allow for an 831.5 square foot accessory apartment. The proposed accessory apartment foot print is 800 square feet (see Attachment C for applicant's building plan), and that complies with CBJ 49.25.510(k)(2)(E)(b).

As mentioned above, currently the lot does not have any on-site parking. Parking at the site is located in the DOT&PF right-of-way on Otter Way. The proposed garage would allow for two parking spaces, and the applicants have stated that they would like to have a third on-site parking space to the east of the garage. The CBJ 49.40.210 parking standard table requires a single-family home to have 2 off-street (on-site) parking spaces and one for an accessory apartment. The proposal, if approved, would meet the minimum on-site parking requirement for the development.

A portion of the subject lot is located in the VE Flood Zone with a base flood elevation (BFE) of 28 feet. The applicant is proposing to build the garage and accessory apartment near Otter Way. The proposed location of the garage and accessory apartment and the existing location of the current home are located outside of the flood zone.

Agency Comments

Staff received the following comments from CBJ and State agencies at the time of preparation of the staff report. Agency Comments are Attachment J to the staff report.

The CBJ Building and Streets Departments did not have any comments on the proposal. The General Engineering and Streets Departments reminded staff that Otter Way is a DOT&PF right-of-way. General Engineering staff stated that the slope of the lot is most likely steeper than a 2:1 slope and would suggest decking on piling for the additional on-site parking space.

DOT&PF stated that there are right-of-way issues on Otter Way and that encroachments exist. They also stated that they do not believe a driveway permit would be required with the proposal, but an encroachment permit may be needed for any improvements or structures in the right-of-way. The applicant is not proposing any structures to be placed within the right-of-way of Otter Way. DOT&PF noted that any cars parked outside of the garage may be in the right-of-way however, "given the nature of the road (local, slow speeds), this shouldn't be an issue."

Variance Requirements

CBJ 49.20.250 states, *"Where hardship and practical difficulties result from an extraordinary situation or unique physical feature affecting only a specific parcel of property or structures*

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 File No.: VAR2015 0009
 August 12, 2016
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lawfully existing thereon and render it difficult to carry out the provisions of this title,” the Board of Adjustment may grant a Variance in harmony with the general purpose and intent of Title 49. A Variance may vary any requirement or regulation of Title 49 concerning dimensional and other design standards but not those concerning the use of land or structures, housing density, lot coverage, or those establishing construction standards. A Variance may be granted after the prescribed hearing and after the Board of Adjustment has determined:

- 1. *That the relaxation applied for or a lesser relaxation specified by the Board of Adjustment would give substantial relief to the owner of the property involved and be more consistent with justice to other property owners.***

The requested relaxation to reduce the front yard setback would give substantial relief to the applicants. If granted, they could build to the property line, thereby reducing the cost for fill that would be needed to elevate the garage to the level of Otter Way. The applicant has stated that the cost difference between constructing a garage that complies with the setback requirements and the current proposal could be \$5,000 - \$7,000 or more.

Due to the realignment of Glacier Highway and the creation of Otter Way, two structures on Otter Way are near to or crossing the property line, into the right-of-way. Of the eleven waterside properties along Otter Way, three properties have received variances to their front yard setback. In 2014, 14195 Otter Way received a variance (VAR2014 0015) for a single-family home to be 5 feet from the front property line. The home at 14275 Otter Way, four properties to the east of the subject parcel, encroaches into the right-of-way and received a variance in 1996 (VAR-VR96-25) for a garage to be built 1 foot from the front property line. In 1978, 14225 Otter Way also received a variance (VAR-VR78-20) for a front yard setback reduction.

At a five foot setback, this proposal would be more consistent with the variance that was granted to a neighboring property in 2014. Even though there are two homes that cross the property line and are in the right-of-way, these situations were not granted via a variance but rather were created at the time of right-of-way realignment and acquisition. The relaxation applied for - a zero foot setback for the proposed garage with an accessory apartment - would be less consistent with justice to other property owners that were granted variances on Otter Way for a five foot or one foot setback.

No, the criterion is not met.

- 2. *That relief can be granted in such a fashion that the intent of this title will be observed and the public safety and welfare be preserved.***

The intent of Title 49 is established in CBJ 49.05.100, Purpose and Intent. Those sections, which are applicable to the requested variance, are as follows:

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August 12, 2016
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- 1) To achieve the goals and objectives and implement the policies of the Juneau Comprehensive Plan and the coastal management program;
- 2) To ensure that future growth and development in the city and borough is in accord with the values of its residents;
- 3) To identify and secure, for present and future residences, the beneficial impacts of growth while minimizing the negative impacts;
- 4) To ensure that future growth is of the appropriate type, design, and location, and is served by a proper range of public services and facilities such as water, sewage, and electrical distribution systems, transportation, schools, parks and other public requirements, and in general to promote public health, safety and general welfare;
- 5) To provide adequate open space for light and air; and
- 6) To recognize the economic value of land and encourage its proper and beneficial use.

No evidence has been presented that indicates that the proposed variance would negatively impact the public safety and welfare. However, the approval of the requested variance would violate the front yard setback requirement of Title 49 and be inconsistent with the specific exemption of CBJ 49.25.430(4)(H), to allow garages and carports to be within 5 feet of the front property line when topography makes construction a hardship. Thus, the proposal would not meet the intent of the title.

No, the criterion is not met.

3. *That the authorization of the Variance will not injure nearby property.*

No evidence indicates that the proposed variance, if approved, would injure nearby property. The proposed placement of the garage and accessory apartment, as stated in the applicant's narrative, would be located in a way as to not block the neighbor's view of the water from across the street. The proposal would also allow for on-site parking, which would eliminate the need for the owners to park in the DOT&PF right-of-way.

Yes, the criterion is met.

4. *That the Variance does not authorize uses not allowed in the district involved.*

The current allowed use of the lot as a single-family home is an allowed use within the D-3 zoning district as well as the proposed accessory apartment.

Yes, the criterion is met.

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August 12, 2016
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5. That compliance with the existing standards would:

(A) Unreasonably prevent the owner from using the property for a permissible principal use;

The property is currently developed with a single-family home. The home meets the front yard setback required in the D-3 zoning district. The home is located 38.75 feet from the front yard property line, which far exceeds the minimum 25 foot front yard setback.

No, the sub-criterion is not met.

(B) Unreasonably prevent the owner from using the property in a manner which is consistent as to scale, amenities, appearance or features, with existing development in the neighborhood of the subject property;

Due to the realignment of Glacier Highway and the creation of Otter Way, two homes on Otter Way cross the front property line. The proposed garage and accessory apartment would be consistent to scale and appearance of other development in the neighborhood, as there are two homes on Otter Way that cross the property line and three others that have received variances to the front yard setback. However, as mentioned above in Criteria 1, at a five foot setback the proposal would be more consistent with the variance that was granted in 2014. Even though there are two homes that cross the property line and are in the right-of-way, these were pre-existing development at the time of right-of-way realignment and acquisition and were not granted via variance. The relaxation applied for - a zero foot setback for the proposed garage with an accessory apartment - would be less consistent with justice to other property owners that were granted variances on Otter Way for a five foot or one foot setback.

No, the sub-criterion is not met.

(C) Be unnecessarily burdensome because unique physical features of the property render compliance with the standards unreasonably expensive;

The steepness of the lot is a unique physical feature. The applicant has stated that the cost difference between constructing a garage that complies with the setback requirements and the current proposal could be \$5,000 - \$7,000 or more in cost. Locating the proposed garage closer to the elevation of Otter Way would be less expensive than meeting the required setback.

Board of Adjustment
File No.: VAR2015 0009
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Yes, the sub-criterion is met.

or

(D) *Because of preexisting nonconforming conditions on the subject parcel the grant of the Variance would not result in a net decrease in overall compliance with the Land Use Code, CBJ Title 49, or the building code, CBJ Title 19, or both.*

The pre-existing nonconformity of the lot is the lack of on-site parking. Currently there are no on-site parking spaces. However, this pre-existing nonconformity does not prohibit conformity with the front yard setback requirement. It should be noted that a parking deck would allow the applicant to meet the parking requirements and would not be required to meet the front yard setback.

No, the criterion is not met.

Yes, because sub-criterion 5(C) is met, criterion 5 is met.

6. *That a grant of the Variance would result in more benefits than detriments to the neighborhood.*

The proposed variance could help with providing an additional accessory apartment for the community, would provide for on-site parking for the subject lot, and would be placed in a portion of the lot that would not obstruct the neighbor's view of the water. Providing an additional housing unit to the neighborhood may not result in more benefits for the immediate neighborhood; however, as a community, the need for housing is critical and therefore results in a community benefit. No evidence has been presented that indicates the proposed development would have any detrimental effects to the neighborhood.

Yes, the criterion is met.

FINDINGS

1. *Is the application for the requested Variance complete?*

Yes. Staff finds the application contains the information necessary to conduct full review of the proposal. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

Per CBJ 49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal

Board of Adjustment
File No.: VAR2015 0009
August 12, 2016
Page 10 of 10

Management Program consistency determination:

- 2. *Will the proposed development comply with the Juneau Coastal Management Programs?***

Not applicable.

- 3. *Does the variance as requested, meet the criteria of Section 49.20.250, Grounds for Variances?***

No. Based on the analysis above, the proposed variance, as requested, does not meet the criteria of Section 49.25.250, Grounds for Variances, specifically Criterion 1 and 2 are not met.

RECOMMENDATION

Staff recommends that the Board of Adjustment adopt the Director's analysis and findings and deny the requested Variance, VAR2016 0009.

Project Number Var 20160009	CITY and BOROUGH of JUNEAU	Date Received: 7/11/16
Project Name (City Staff to Assign Name)		

PROJECT / APPLICANT INFORMATION

Project Description <i>Would like to build a garage.</i>		
PROPERTY LOCATION		
Street Address <i>14329 Otter Way</i>	City/Zip <i>99801</i>	
Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) <i>USS 3050 LT 11</i>		
Assessor's Parcel Number(s) <i>4-B31-0-103-011-0</i>		
LANDOWNER/ LESSEE		
Property Owner's Name <i>Mike Pilling / Kerry Kirkpatrick</i>	Contact Person: <i>Mike / Kerry</i>	Work Phone:
Mailing Address <i>14245 Otter Way</i>	Home Phone: <i>321 8812</i>	Fax Number:
E-mail Address <i>k-kpilling@gmail.com</i>	Other Contact Phone Number(s): <i>321 5026</i>	
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 <i>Mike Pilling</i> Landowner/Lessee Signature	<i>7/7/16</i> Date	
X <i>Kerry Kirkpatrick</i> Landowner/Lessee Signature	<i>7-7-16</i> 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" and sign and date at X below		
Applicant's Name <i>SAME</i>	Contact Person:	Work Phone:
Mailing Address	Home Phone:	Fax Number:
E-mail Address	Other Contact Phone Number(s):	
X Applicant's Signature	Date of Application	

OFFICE USE ONLY BELOW THIS LINE					
STAFF APPROVALS	☒	Permit Type	***SIGN	Date Received	Application Number(s)
		Building/Grading Permit			
		City/State Project Review and City Land Action			
		Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)			
		Mining Case (Small, Large, Rural, Extraction, Exploration)			
		Sign Approval (If more than one, fill in all applicable permit #'s)			
		Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
		Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)			
	X	Variance Case (De Minimis and all other Variance case types)		7/11/16	Var 20160009
		Wetlands Permits			
	Zone Change Application				
	Other (Describe)				
***Public Notice Sign Form filled out and in the file.					
Comments: 					Permit Intake Initials ANE

VARIANCE APPLICATION

Project Number	Project Name (15 characters)	Case Number <u>VAR2011-0009</u>	Date Received <u>7/11/16</u>																				
TYPE OF VARIANCE REQUESTED: ☐ Variance to the Sign Standard (VSG) ☐ Variance to Dimensional Standards (VDS) ☒ Variance to Setback Requirements (VSB)																							
DESCRIPTION OF ACTIVITY WHICH REQUIRES A VARIANCE: <u>Would like to build the garage closer or up to the road ROW</u>																							
Previous Variance Applications? ☐ YES ☒ NO Date of Filing: _____ Previous Case Number(s): _____ Was the Variance Granted? ☐ YES ☐ NO																							
UNIQUE CHARACTERISTICS OF LAND OR BUILDING(S): <u>The lot has a very steep drop off distance from the road right of way.</u> <u>It would require a 14' tall retaining wall vs maybe half if it could be closer.</u>																							
UTILITIES AVAILABLE: WATER: ☒ Public ☐ On Site SEWER: ☐ Public ☒ On Site																							
WHY WOULD A VARIANCE BE NEEDED FOR THIS PROPERTY REGARDLESS OF THE OWNER? _____ _____ _____																							
WHAT HARDSHIP WOULD RESULT IF THE VARIANCE WERE NOT GRANTED? <u>The foundation and retaining wall would cost substantially more as it would be a minimum 14' tall vs a lot less.</u>																							
For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side. If you need any assistance filling out this form, please contact the Permit Center at 586-0770.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">VARIANCE FEES</th> <th>Check No.</th> <th>Receipt</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Application Fees</td> <td style="text-align: right;">Fees \$ <u>400⁰⁰</u></td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Adjustment</td> <td style="text-align: right;">\$ _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Total Fee</td> <td style="text-align: right;">\$ <u>400⁰⁰</u></td> <td><u>VISA</u></td> <td><u>8308</u></td> <td><u>7/11/16</u></td> </tr> </tbody> </table>			VARIANCE FEES		Check No.	Receipt	Date	Application Fees	Fees \$ <u>400⁰⁰</u>	_____	_____	_____	Adjustment	\$ _____	_____	_____	_____	Total Fee	\$ <u>400⁰⁰</u>	<u>VISA</u>	<u>8308</u>	<u>7/11/16</u>
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Adjustment	\$ _____	_____	_____	_____																			
Total Fee	\$ <u>400⁰⁰</u>	<u>VISA</u>	<u>8308</u>	<u>7/11/16</u>																			

NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM

CBJ Planning and Zoning Committee

Dear Committee Members,

We would like CBJ to grant us a right-of-way variance in order to build a garage and apartment closer to the line. The property is located 14329 Otter Way, at the dead end of Otter way, and abuts Forest Service land. It has a very steep drop off from the road bed. We would like to build up to the R.O.W. line. If we could build next to the line our concrete retaining wall and footing would only have to be 3 ft tall vs 14ft, and much thicker. We would also like to build a studio apartment above the garage, making it approximately 22 ft high to the roof peak. If we built it on the other west side of our property it would be less expensive but block our neighbors view shed, which does not seem necessary.

Our proposed location should not affect their visibility. If the variance were granted, it would not affect the road traffic or visibility as it is on the outside of the bend. When we bought the house the above ground 500 gallon fuel tank was completely over the line and has been for 40 years. (which was at least 15 ft away from traffic or plows) The geography of the lot lends itself well to this variance. Otter Way is unique, in that it is a low traffic ,dead end road. It was the original out-the-road highway, but since has been by-passed with the Auke Rec highway and more recently by-passed again with the new highway section.

There are 7 houses on Otter Way , 5 of which are either over the line, or a couple of inches or feet from the line. Three doors up the road from us, the Right-of-way line was actually moved and given up years ago around their house and garage as the line used to bisect their home. Four doors up the road the line was not moved and completely cuts through the middle of their home; almost exactly half their home square footage is completely over the line by ten feet or so and has been for over 50 years. Our home at 14245 (which we are selling) is very close to the line, maybe 18 to 24 inches.

Otter Way, a state road, will probably never need to be widened. Nothing could ever happen to the downhill side as there are homes on or over the line and the water line is on the other side of the 7 homes. If this variance request is granted, It will save us a considerable amount of money, allow our neighbor's water view to not be obstructed , and have zero impact on traffic, and current plowing etc.. We look forward to your consideration,

Kerry Kirkpatrick and Mike Pilling
14245 Otter Way (current mailing address)
Juneau, AK 99801

Mike 907 321 8812
Kerry 907 321 5026



Kerry Kirkpatrick <kirkpilling@gmail.com>
Draft To: kerry kirkpatrick <kirkpilling@gmail.com>

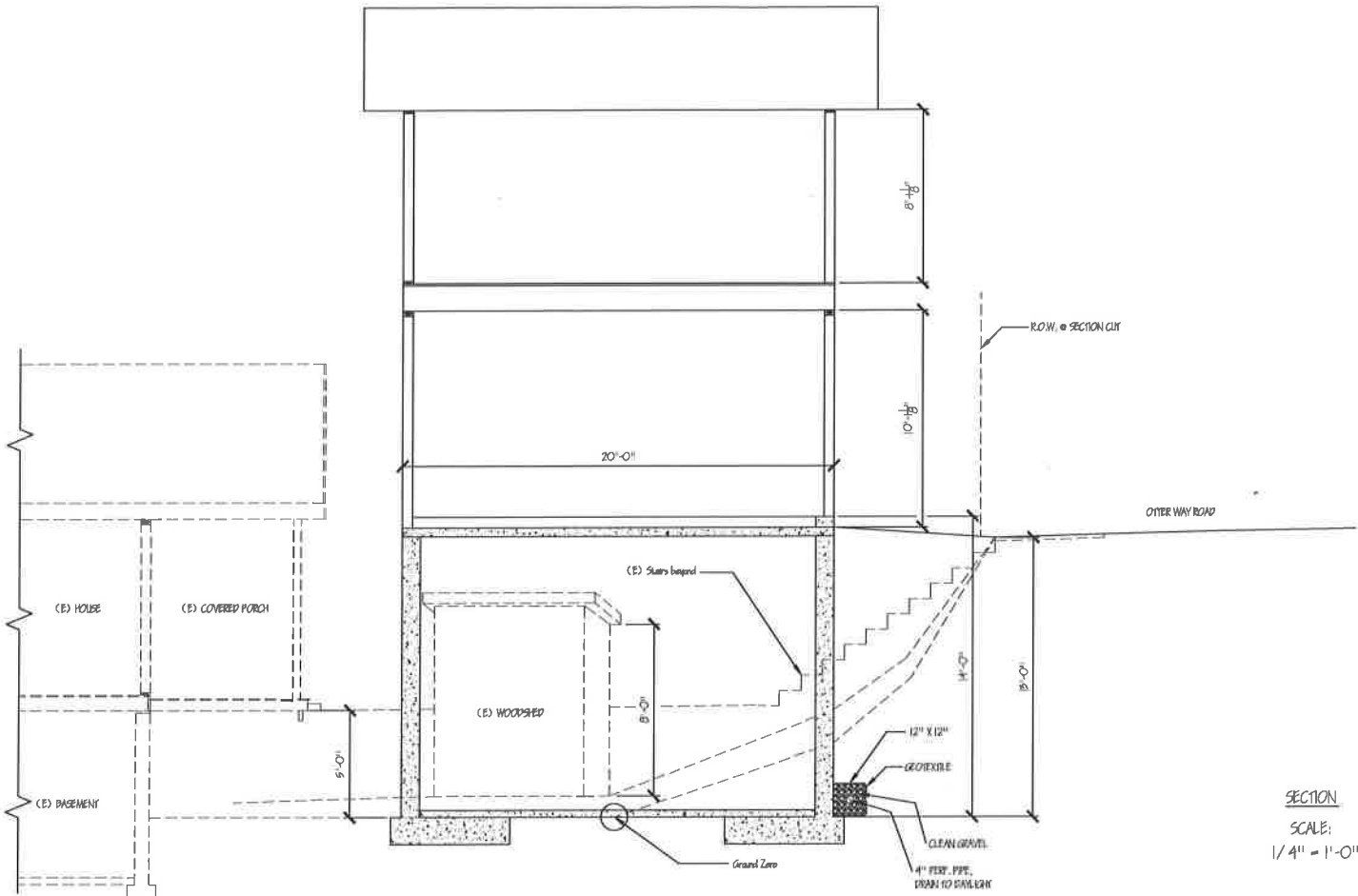
We would like to ask CBJ for a for a right of way variance to build a garage and apartment. The property at the dead end of Otter way and abuts Forest Service land and has has a very steep drop off from the road bed. We would like to build up to the R.O.W. line. If we could build next to the line our concrete retaining wall and footing would only have to be 3 ft tall vs 14ft and much thicker. We would also like to build a studio apartment above the garage which would be approx 22 ft high to the roof peak.

If the variance were granted it would not effect the road traffic or visibility as it is on the outside of the bend. When we bought the house the above ground 500 gallon fuel tank was completely over the line and has been for 40 years. (which was at least 15 ft away from traffic or plows) The geography of the lot lends itself well to this variance.

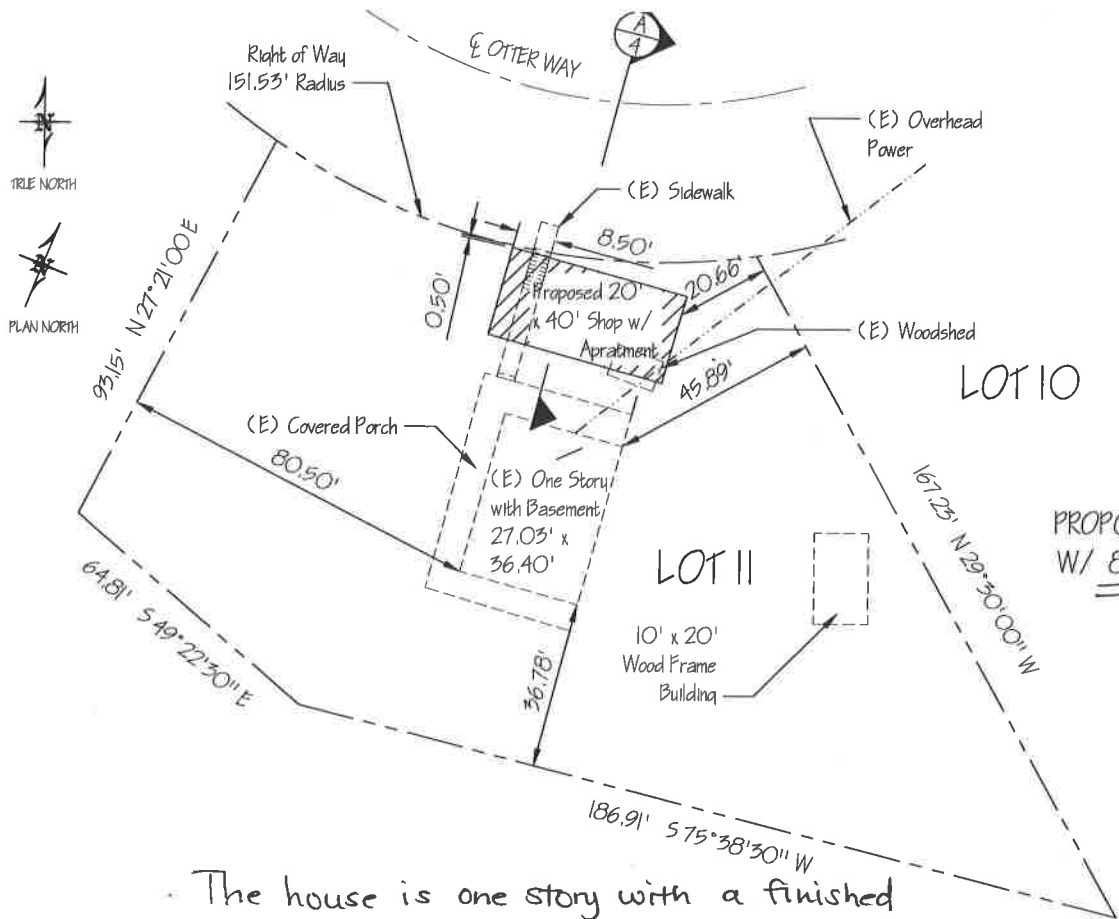
Other Way, a state road, will probably never need to be widened. Nothing could ever happen to the downhill side as there are homes on or over the line and the water line is on the other side of the road of the 7 homes.

We look forward to your consideration,
Kerry Kirkpatrick and Mike Pilling

1 of 1



ATTACHMENT C - Building Plan



Kerry Kirpatrick
Mike Pilling
14529 Otter Way
Juneau, Alaska 99801
907-586-9876
kirkpilling@gmail.com

Engineer Information

PROPOSED 800 SQ. FT. SHOP
W/ 800 SQ. FT. APARTMENT

INDEX

LOT DRAWING	1
CONSTRUCTION NOTES	2
FOUNDATION PLAN	3
FOUNDATION SECTION DRAWING	4

JUNE 2016

LOT DRAWING SCALE:
1" = 30'-0"

- The house is one story with a finished basement.
- Including the basement, the home is appx. 1,900 sq. ft.

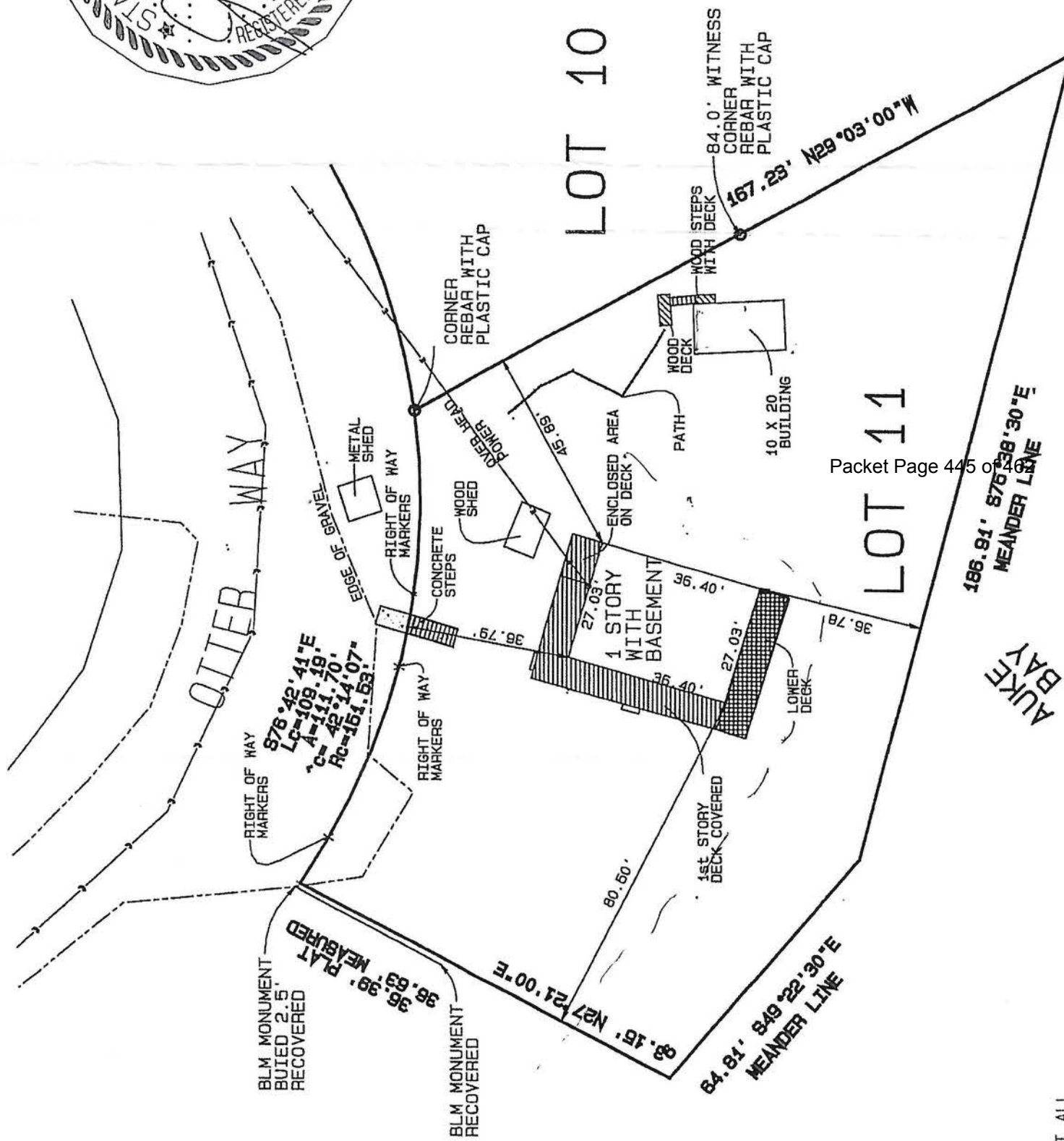


STATE OF ALASKA
DEPARTMENT OF
TRANSPORTATION
AND PUBLIC FACILITIES

DISPLAY

AREA: _____ DATE: 8/2008
DRAWN BY: GUY SCALE: 1"=100'

ATTACHMENT E - Aerial Photo with Lot Lines

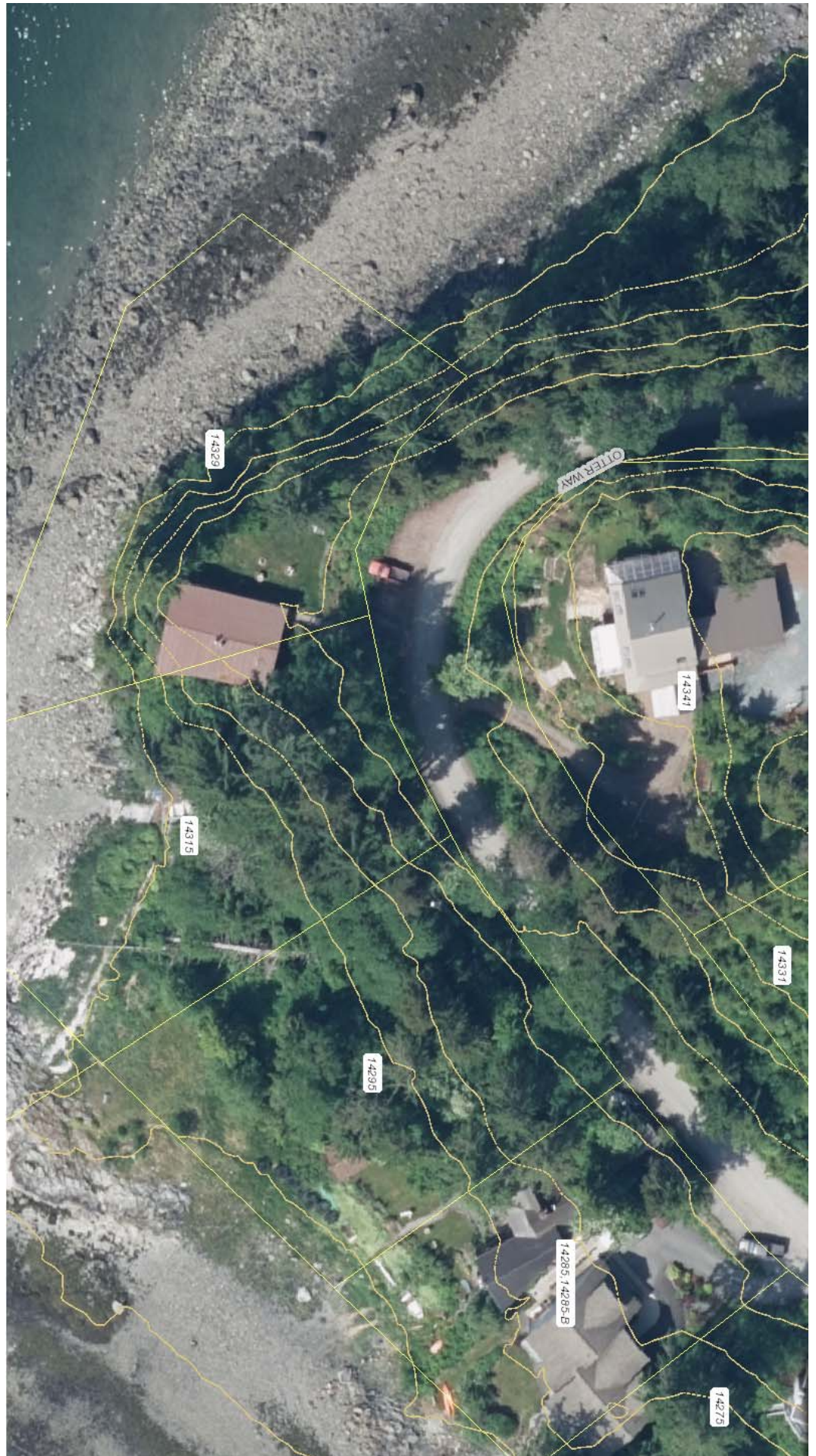


RECEIVED
DEC 10 2015
PERMIT CENTER/CDD

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT PLAT; THAT ALL WALKS, ROADS, EASEMENTS AND IMPROVEMENTS THEREON ARE AS SHOWN AND THAT ALL OVERLAPS AND ENCROACHMENTS ARE AS SHOWN TO THE BEST OF MY KNOWLEDGE.

J.W. BEAN
PROFESSIONAL SURVEYOR
10255tds
F.B.
JOB No 13371
SCALE AS-SHOWN
DATE 10-16-2015

AS-BUILT SURVEY
OF
LOT 11
WITHIN USS 3050



ATTACHMENT G - Aerial Photo with Contour Lines

U. S. SURVEY
No. 3050, ALASKA

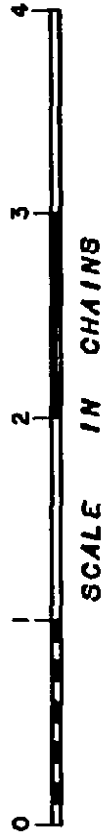
AUKE BAY SMALL TRACT GROUP
embracing
LOTS 1 TO 11 INCLUSIVE

SITUATED

ON THE SOUTHEASTERLY SIDE OF GLACIER
HIGHWAY, APPROXIMATELY 15 MILES
NORTHWEST OF JUNEAU, ALASKA FRONTING
ON AUKE BAY

AREA: 3.14 ACRES

LATITUDE $58^{\circ}22'47''$ N., LONGITUDE $134^{\circ}41'54''$ W.
AT CORNER NO. 1



SURVEYED BY

JACK C. MEANS, CADASTRAL ENGINEER
NOVEMBER 15, TO NOVEMBER 18, 1950

UNDER SPECIAL INSTRUCTIONS
DATED SEPTEMBER 12, 1950 AND
APPROVED SEPTEMBER 26, 1950

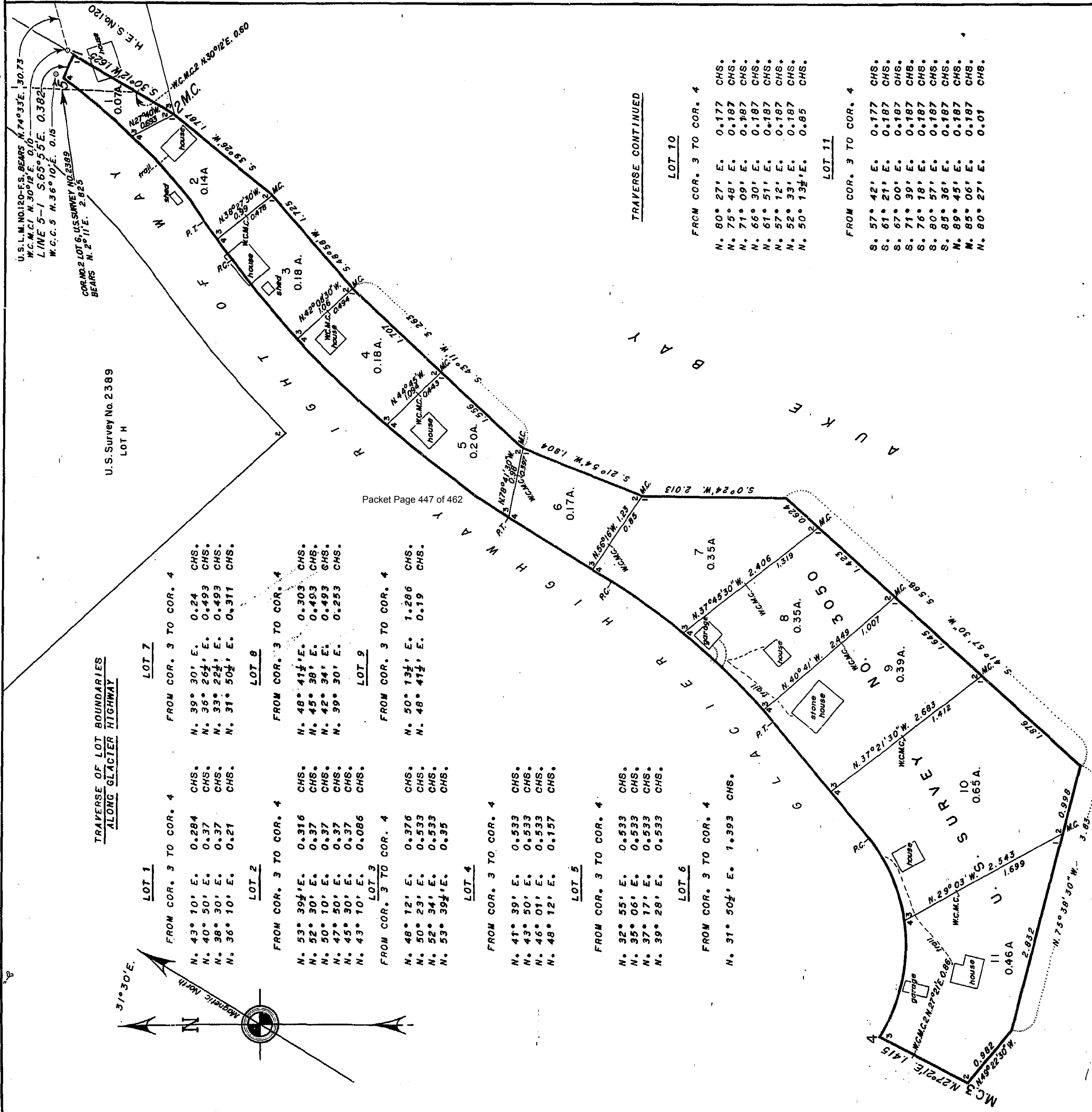
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

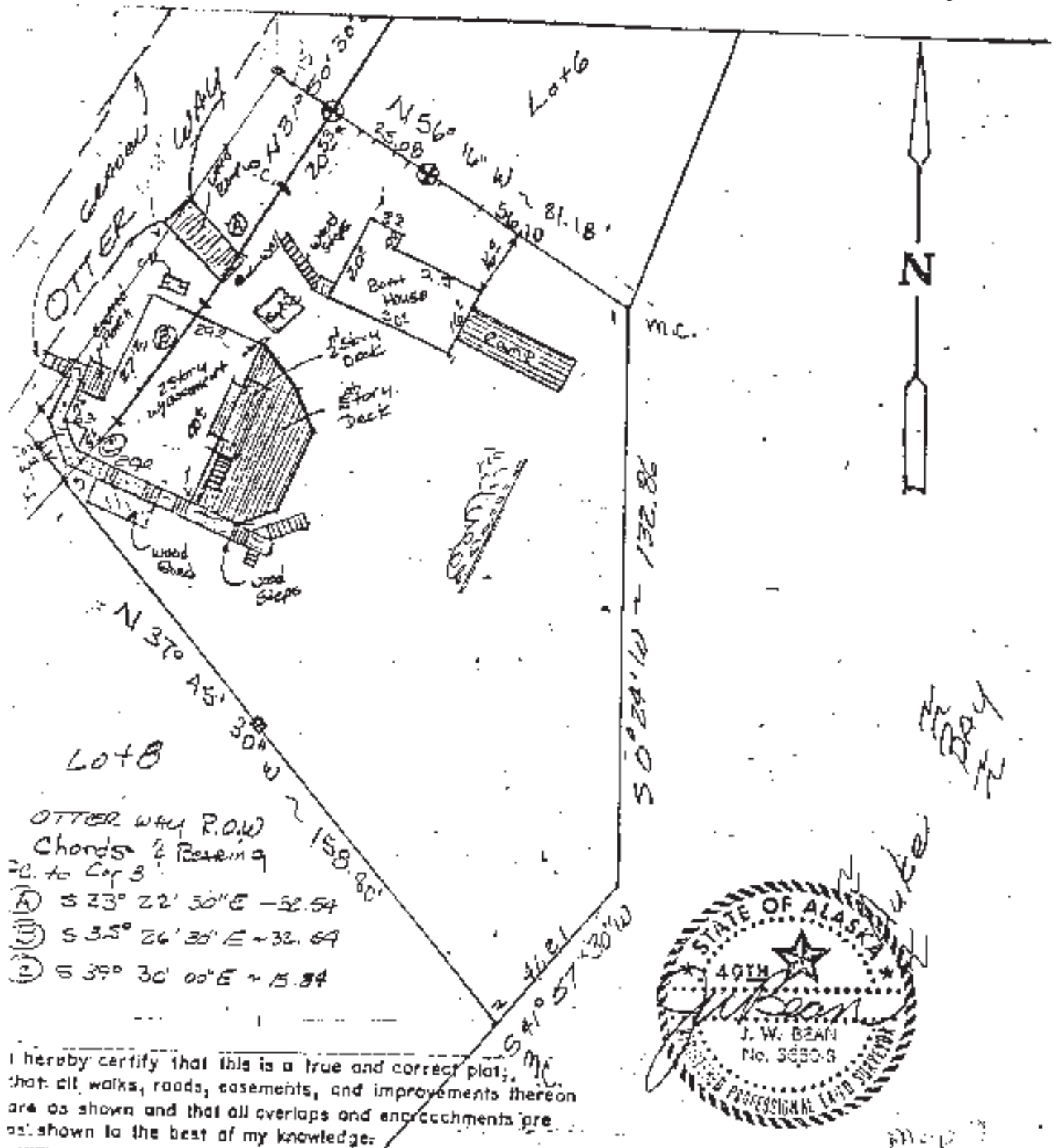
WASHINGTON D. C. AUGUST 3, 1951

THIS PLAT IS STRICTLY CONFORMABLE TO
THE APPROVED FIELD NOTES, AND THE SURVEY, HAVING
BEEN CORRECTLY EXECUTED IN ACCORDANCE WITH THE
REQUIREMENTS OF LAW AND THE REGULATIONS OF THIS
BUREAU, IS HEREBY ACCEPTED.

FOR THE DIRECTOR

William F. Rickard
CHIEF, BRANCH OF SURVEYS





I hereby certify that this is a true and correct plat; that all walks, roads, easements, and improvements thereon are as shown and that all overlaps and encroachments are as shown to the best of my knowledge.



J.W. BEAN

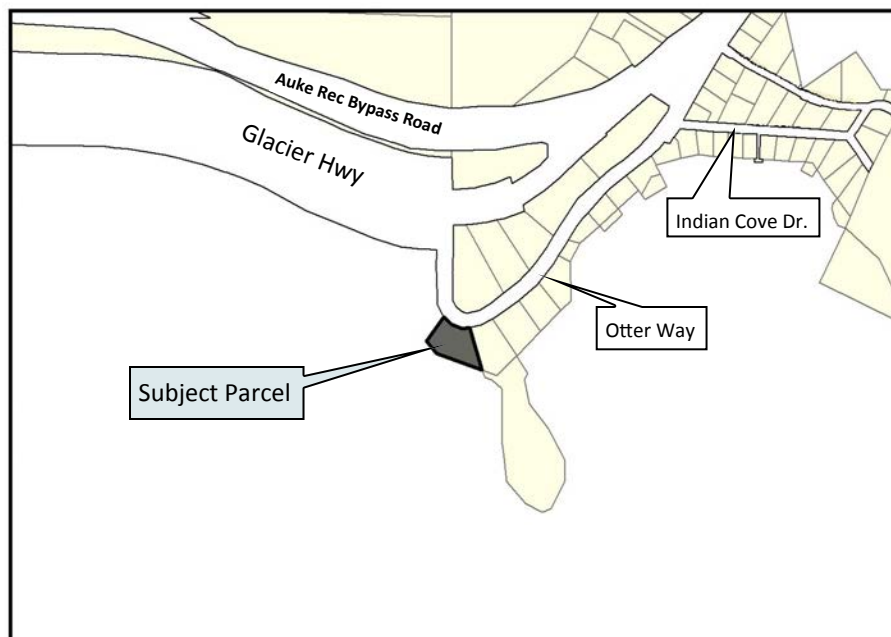
PROFESSIONAL SURVEYOR
3803 KIWIA DRIVE
JUNEAU, ALASKA
907-789-0590

AS-Built of
Lot 7, U.S.S. 3050

DATE	FILE NO.	SCALE
10/14/60	10146	1"=30'



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



PROPOSAL: A Variance Request to the front yard setback, for a garage with an accessory apartment.

File No:	VAR2016 0009	Applicant:	Mike Pilling
To:	Adjacent Property Owners	Property PCN:	4-B31-0-103-011-0
Hearing Date:	August 23, 2016	Owner:	Kerry L. Kirkpatrick, Mike Piling
Hearing Time:	7:00 PM	Lot Size:	20,037 Square Feet
Place:	Assembly Chambers	Zoned:	D3
	Municipal Building	Site Address:	14329 Otter Way
	155 South Seward Street	Accessed Via:	Otter Way
	Juneau, Alaska 99801		

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Jonathan Lange at Jonathan.Lange@juneau.org or 586.0218.

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at <http://www.juneau.org/assembly/novus.php>

Date notice was printed: July 20, 2016



ATTACHMENT I - Public Notice

Jonathan Lange

From: Ed Foster
Sent: Tuesday, July 19, 2016 3:26 PM
To: Jonathan Lange; Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Mercer; marie.heidemann@alaska.gov
Subject: RE: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Jonathan,
Otter Way is an AKDOT ROW. CBJ Streets has no responsibility on the road way.
Ed

From: Jonathan Lange
Sent: Tuesday, July 19, 2016 2:57 PM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Foster; Ed Mercer; marie.heidemann@alaska.gov
Subject: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Subject: Please review attached documents related to a Variance Request for a variance to the front yard setback for a garage and apartment.
File: VAR2016 0009
Location: 14329 Otter Way



Please see the attached application and proposed plan narrative.

The application is for a variance to the 20 foot front yard setback, to allow for a garage with an accessory apartment on top to be built at the front property line because of the topography of the lot.

I look forward to receiving your comments. Please comment by July 29, 2016 or as soon as possible.
Let me know if you require any additional information for this project or have any questions.
Thank you and have a great day.

Jonathan Lange, CFM
Planner II, Community Development Dept.
City & Borough of Juneau, Alaska
155 S. Seward St. Juneau, AK 99801
Ph (907)586-0218
Jonathan.Lange@juneau.org



Jonathan Lange

From: Charlie Ford
Sent: Wednesday, July 20, 2016 7:27 AM
To: Jonathan Lange
Subject: RE: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Jonathan,
The Building Department has no issues with this variance.
Thanks,

Charlie Ford, Building Official
Community Development Dept.
City and Borough of Juneau
Tel (907)586-0767 Fax(907)586-4529
email Charlie.Ford@juneau.org
Web page www.juneau.org/permits

From: Jonathan Lange
Sent: Tuesday, July 19, 2016 2:57 PM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Foster; Ed Mercer; marie.heidemann@alaska.gov
Subject: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Subject: Please review attached documents related to a Variance Request for a variance to the front yard setback for a garage and apartment.
File: VAR2016 0009
Location: 14329 Otter Way

Jonathan Lange

From: Ron King
Sent: Wednesday, July 20, 2016 9:38 AM
To: Jonathan Lange
Subject: RE: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Fill may be a problem as the slope will most likely be steeper than 2:1. I would strongly suggest the applicant thoroughly investigate decking on pilings rather than fill. Based on a basic familiarity of the site the fill will have to be engineered (steeper than 2:1) and most likely retaining walls will be required.

Minimum setback from Property line 2ft.

19.12.100 - Setbacks.

19.12.100.1 General. Cut and fill slopes shall be set back from site boundaries in accordance with this section. See Figure 19.12.100.1 Setback dimensions. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. Setback dimensions for structures shall be as shown in IBC Figure 1805.3.1 or IRC Figure R403.1.7.1 as appropriate.

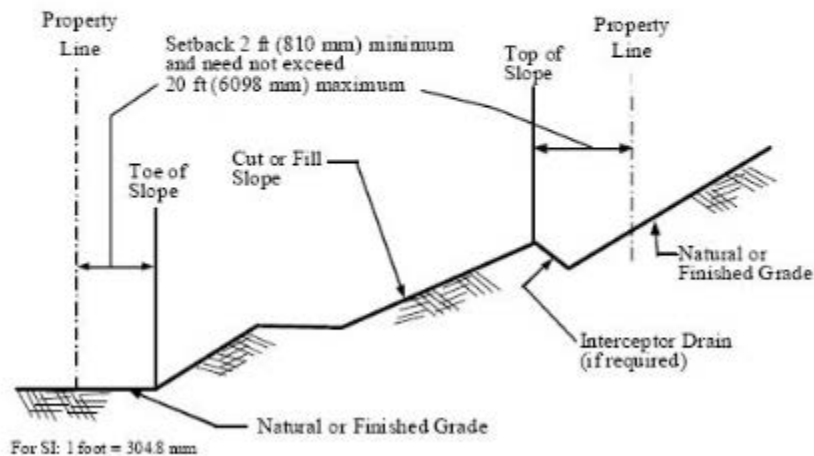


Figure 19.12.100.1 Setback Dimensions

Ron King PLS

General Engineering
 907-586-0881

From: Jonathan Lange
Sent: Wednesday, July 20, 2016 9:16 AM
To: Ron King
Subject: RE: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Ron,

Thank you for your comments.

I just confirmed with the applicant, the garage will be for two cars and he said he wants to do a parking deck or fill on the east side of the proposed garage for a third spot. This will meet his 3 off-street parking spaces required for a single-family home with an accessory apartment.

How close or far does fill have to be from a side property line for drainage?

Jonathan Lange, CFM
Planner II, Community Development Dept.
City & Borough of Juneau, Alaska
155 S. Seward St. Juneau, AK 99801
Ph (907)586-0218
Jonathan.Lange@juneau.org



From: Ron King
Sent: Wednesday, July 20, 2016 8:02 AM
To: Jonathan Lange; Charlie Ford; Dan Jager; Sven Pearson; Ed Foster; Ed Mercer; marie.heidemann@alaska.gov
Subject: RE: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

20ft setback will still allow for a vehicle to be parked outside the garage, beyond the ROW. Also note that Otter Way is a State right of way.

Ron King PLS

General Engineering
907-586-0881

From: Jonathan Lange
Sent: Tuesday, July 19, 2016 2:57 PM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Foster; Ed Mercer; marie.heidemann@alaska.gov
Subject: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Subject: Please review attached documents related to a Variance Request for a variance to the front yard setback for a garage and apartment.

File: VAR2016 0009

Location: 14329 Otter Way

Jonathan Lange

From: Dan Jager
Sent: Monday, August 08, 2016 4:51 PM
To: Jonathan Lange
Cc: Sven Pearson
Subject: Re: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

I don't see any fire code issues for this variance at this time. Sorry for the delay in getting back to you.
 Dan

Sent from my iPhone

On Aug 8, 2016, at 4:47 PM, Jonathan Lange <Jonathan.Lange@juneau.org> wrote:

Hello,
 Do you have any comments on the proposed variance?
 I am trying to get my staff report done this week and wanted to know if you have any comments or questions.
 Let me know, thanks.

Jonathan Lange, CFM
 Planner II, Community Development Dept.
 City & Borough of Juneau, Alaska
 155 S. Seward St. Juneau, AK 99801
 Ph (907)586-0218
Jonathan.Lange@juneau.org



From: Jonathan Lange
Sent: Tuesday, July 19, 2016 2:57 PM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Foster; Ed Mercer; marie.heidemann@alaska.gov
Subject: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Subject: Please review attached documents related to a Variance Request for a variance to the front yard setback for a garage and apartment.
File: VAR2016 0009
Location: 14329 Otter Way

Jonathan Lange

From: Heidemann, Marie E (DOT) <marie.heidemann@alaska.gov>
Sent: Tuesday, August 09, 2016 1:34 PM
To: Jonathan Lange
Cc: Haynes, Emily R (DOT)
Subject: RE: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Jonathan,

I've been wading through emails today. I saw that Emily sent this out and there did not appear to be any substantive comments other than the one I've pasted below. I think there are right of way issues on this road – encroachments along the route, I think. However, Emily indicated that this particular structure will be outside the ROW, though any cars that park outside the structure may be in the ROW. But, given the nature of the road (local, slow speeds), this shouldn't be an issue.

From Emily - I do not believe a driveway permit would be required but they may need an encroachment permit for any structures/improvements in the right of way.

~Marie

From: Jonathan Lange [<mailto:Jonathan.Lange@juneau.org>]
Sent: Monday, August 08, 2016 9:40 AM
To: Heidemann, Marie E (DOT)
Cc: Haynes, Emily R (DOT)
Subject: FW: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Good Morning,
 Marie, I know you just got back in the office, but I am looking for any comments DOT&PF may have on the proposed project?
 I am working on my staff report to be sent to the Planning Commission this week and would like to include any comments you might have.
 Let me know if you have any questions.
 I look forward to your comments.
 Have a good day.

Jonathan Lange, CFM
 Planner II, Community Development Dept.
 City & Borough of Juneau, Alaska
 155 S. Seward St. Juneau, AK 99801
 Ph (907)586-0218
Jonathan.Lange@juneau.org



From: Jonathan Lange
Sent: Tuesday, July 19, 2016 2:59 PM
To: Haynes, Emily R (DOT) (emily.haynes@alaska.gov)
Subject: FW: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Hello Emily,
Please see the below email request for review comments.
Thank you for your assistance while Marie is out.

Jonathan Lange, CFM
Planner II, Community Development Dept.
City & Borough of Juneau, Alaska
155 S. Seward St. Juneau, AK 99801
Ph (907)586-0218
Jonathan.Lange@juneau.org

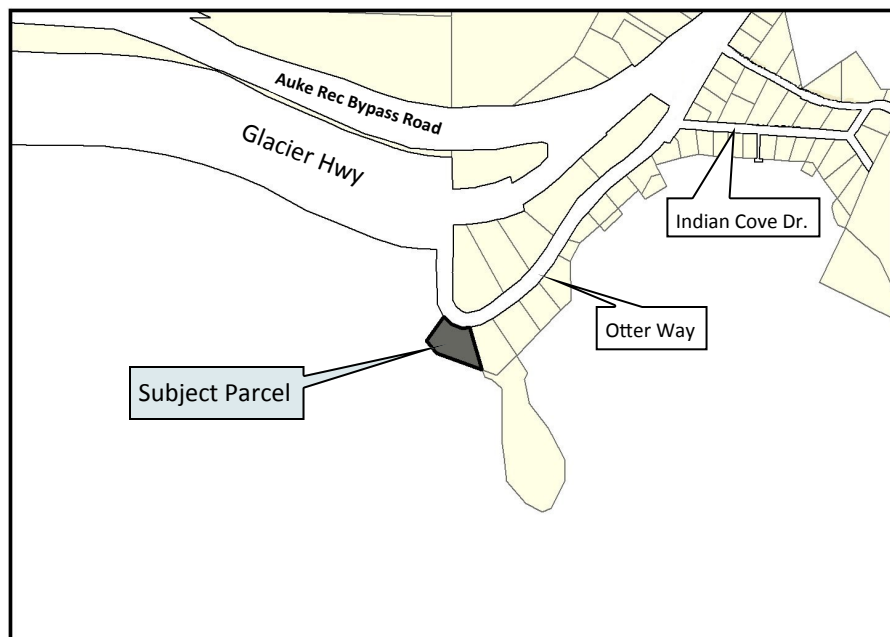


From: Jonathan Lange
Sent: Tuesday, July 19, 2016 2:57 PM
To: Charlie Ford; Ron King; Dan Jager; Sven Pearson; Ed Foster; Ed Mercer; marie.heidemann@alaska.gov
Subject: Request for Review Comments - Variance to Front Yard Setback 14329 Otter Way - VAR2016 0009

Subject: Please review attached documents related to a Variance Request for a variance to the front yard setback for a garage and apartment.
File: VAR2016 0009
Location: 14329 Otter Way



NOTICE OF PUBLIC HEARING



City & Borough of Juneau
Community Development Department
155 S Seward Street • Juneau, Alaska 99801

SHIP TO:



PROPOSAL: A Variance Request to the front yard setback, for a garage with an accessory apartment.

File No:	VAR2016 0009	Applicant:	Mike Pilling
To:	Adjacent Property Owners	Property PCN:	4-B31-0-103-011-0
Hearing Date:	August 23, 2016	Owner:	Kerry L. Kirkpatrick, Mike Piling
Hearing Time:	7:00 PM	Lot Size:	20,037 Square Feet
Place:	Assembly Chambers	Zoned:	D3
	Municipal Building	Site Address:	14329 Otter Way
	155 South Seward Street	Accessed Via:	Otter Way
	Juneau, Alaska 99801		

PROPERTY OWNERS PLEASE NOTE:

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Jonathan Lange at Jonathan.Lange@juneau.org or 586.0218.

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at <http://www.juneau.org/assembly/novus.php>

Date notice was printed: July 20, 2016





Community Development

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

BOARD OF ADJUSTMENT NOTICE OF DECISION

Date: August 25, 2016
File No.: VAR2016 0009

Kerry Kirkpatrick
Mike Piling
14329 Otter Way
Juneau, AK 99801

Proposal: A Variance Request to the front yard setback for a garage with an accessory apartment.

Property Address: 14329 Otter Way

Legal Description: USS 3050 Lot 11

Parcel Code No.: 4-B31-0-103-011-0

Hearing Date: August 23, 2016

The Board of Adjustment, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated August 12, 2016, and denied the Variance. The Commission modified sub-criterion 5(c) as described below.

5(C) The unique physical features of the property do not render this accommodation unreasonably expensive.

Sub-criterion 5(C) is not met; therefore criterion 5 is not met.

Attachment: August 12, 2016, memorandum from Jonathan Lange, Community Development, to the CBJ Board of Adjustment regarding VAR2016 0009.

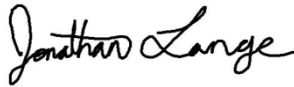
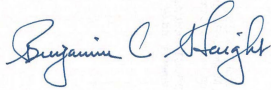
This Notice of Decision does not authorize construction activity. Prior to starting any development project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Board of Adjustment. Appeals must be brought to the CBJ Assembly in accordance with CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on

Kerry Kirkpatrick
Mike Piling
File No: VAR2016 0009
August 25, 2016
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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 Board of Adjustment shall be at the risk that the decision may be reversed on appeal (CBJ §49.20.120).

Effective Date: This is effective upon decision by the Board, August 23, 2016

Project Planner:	 _____ Jonathan Lange, Planner Community Development Department	 _____ Ben Haight, Chair Planning Commission
	 _____ Filed With City Clerk	8/30/2016 _____ 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. 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.