

ATTACHMENT A

HÍILANGAAY HYDROELECTRIC PROJECT PERMANENT MARINE ACCESS FACILITY DEPARTMENT OF NATURAL RESOURCES LEASE APPLICATION DEVELOPMENT PLAN

PROJECT DESCRIPTION

The Híilangaay Hydroelectric Project¹ ("Project") is a 5- megawatt commercial hydroelectric resource being constructed at Reynolds' Creek on Prince of Wales Island, Alaska, approximately ten miles east of Hydaburg in Hetta Inlet. The Project will interconnect with the existing transmission grid on the island and will be used by the residents and businesses of Craig, Klawock, Coffman Cove, Hollis, Hydaburg, Thorne Bay, Kasaan and Naukati.

Haida Energy, Inc. (HEI), a joint venture between Haida Corporation, Inc., (Haida) and Alaska Power & Telephone Company (AP&T), the local utility on Prince of Wales Island will construct and operate this Project. HEI will be a independent power producer utility regulated by the Regulatory Commission of Alaska (RCA). Annual energy production during an average water year is estimated to be 19.3 million kilowatt-hours, subject to usability in the area load.

For this project, HEI obtained Certificate of Public Convenience and Necessity No. 760 from the Regulatory Commission of Alaska.

Due to the remoteness of our project, we require permanent marine access features and seek a permanent land lease from Alaska Department of Natural Resources (ADNR). Copper Harbor, Reynolds Creek and the power intertie are inaccessible from the Federal Aid Highway System. Private and USDA Forest Service Logging roads in the project vicinity are not contiguous with the Island Road System. Further the Project does not have agreements to use other Sealaska and Haida Corporation roadways outside of our project land lease. Therefore, project access is generally through small watercraft departing from the road system--either from Deer Bay or Hydaburg.

Copper Harbor Barge Ramp

The barge ramp is necessary for infrequent delivery and unloading of heavy equipment and large oversized and heavy industrial supplies necessary to maintain and repair the project, such as; replacement penstock pipe; structural steel, re-bar, aggregate and Portland cement; civil works maintenance equipment (excavators, boom trucks, dump trucks); replacement turbine, generator, and switchgear components; etc. Supplies and equipment of this nature are too bulky for safe efficient transport and offload via the smaller all-weather floating dock.

We chose the existing barge ramp as our permanent barge ramp feature to avoid more heavily contaminated beaches to the east, eelgrass habitat, to access deeper water, and due to the ramp's proximity to our existing uplands sort yard on lands owned by Haida Corporation, HEI's partner. We now plan to extend the use of this existing ramp structure to service the site throughout the Project's life.

¹ Formerly the Reynolds Creek Hydroelectric Project.

Copper Harbor Floating Dock

The permanent floating dock and gangway will provide all-weather marine access to the project. We plan to use small watercraft to ferry crews and visitors for inspection, repair and maintenance. Although Copper Harbor is relatively protected, Southeast Alaska experiences frequent storms and high wind events posing significant risk to mariners and their vessels absent an all-weather dock feature. It is not our plan to establish a floatplane dock, but due to the remoteness of the project this feature may also be used for floatplane moorage in the event of emergency, unplanned site visits. Due to the isolated location of the project and lack of upland public roadways to the site, the applicant is seeking a lease to construct permanent marine access facilities at Copper Harbor of Hetta Inlet for the operation and maintenance phase of this project. Although the applicant intends for the project to be remotely operated without staff regularly assigned at the project site after construction is completed, the applicant does need intermittent access to visit the site for inspections, maintenance, repairs and upgrades to the project over its life. We anticipate scheduled visits on a weekly basis for inspections, as needed for maintenance and repairs, and project specific visits for project upgrades.

The proposed Project Permanent Marine Access Facility Lease is located within the south side of Section 4, T77S, R85E, Copper River Meridian; Latitude 55.2172°N, Longitude 132.5875°W, on the north shore of Copper Harbor. No survey or legal description exists for the proposed lease location.

1. We are planning to use the existing construction phase barge/LCM8/crew boat ramp (concrete plank ramp) for a permanent operations and maintenance barge landing. This ramp is authorized under Alaska Department of Natural Resources Land Use Permit No. LAS 32292. By using the existing constructed ramp, we eliminate additional adverse impacts to submerged lands at Copper Harbor to decommission the construction phase barge ramp and construct a separate permanent landing.
2. We have redesigned and relocated a permanent all-weather float facility to eliminate the need to construct a gangway approach and bulkhead on State tidelands.



Figure 1: Copper Harbor Permanent Marine Access Sites

TERRAIN/GROUND COVER

The tidelands in the vicinity of the existing construction phase concrete plank ramp consists of un-vegetated cobble beach. There is no ground cover in the tidelands and submerged lands. HEI sited the ramp to avoid nearby eel grass beds.



Figure 2: Beach Cobble at Permanent Barge Ramp Site

The tidelands at the float facility consists of a steeper unvegetated rocky beach. HEI's consultant documented eel grass beds under the gangway profile. However, HEI's design avoids bed disturbance.

ACCESS

HEI accesses the project by crew boat, landing craft, barge, and occasionally by float plane. Deer Harbor and Saltery Point near Hydaburg are used as marine access points from the Island's contiguous road system. Near Copper Harbor, Sealaska Corporation and Haida Corporation have constructed logging roads on their private in-holdings, but these private roads do not connect with the Island's highway system and are maintained only during active logging. Uplands adjacent to the property are remote, relatively undeveloped and under mixed private and public ownership.

During the operation and maintenance phases, HEI anticipates crews visiting the Project site weekly for periodic site inspections, and as needed for maintenance, repairs and special projects.

BUILDINGS AND OTHER STRUCTURES

The existing structure consist of the concrete plank ramp and the proposed structure consists of the float facility. Due to contaminants found² in the intertidal zone of Copper Harbor, we have carefully considered placement and design of the permanent marine access features.

Permanent Barge Ramp

Currently permitted is the existing temporary concrete plank ramp in LAS 32292. We now want to make this ramp a permanent project feature. Rather than construct a new ramp for permanent operations, which could further disturb the contaminated beach sediments and further impact ADNR's tide and submerged lands, we have chosen to repurpose the existing ramp.

No changes will be made to the existing ramp. The existing ramp consists of a rock foundation structure laid down on geotextile fabric over the existing beach gravels, which appeared to be part of an abandoned log transfer facility. The perimeter edges of the ramp and foundation fill are protected and contained by rip-rap creating a two foot wide apron on each side of the ramp. On top of this foundation, HEI placed the concrete planks.

Permanent Floating Dock

We have chosen to relocate the permanent floating dock eastward of a previously considered beach site. The dock now consists of an upland bulkhead on private Haida Corporation lands, a 70 foot gangway, a floating dock and three 24" diameter steel pilings. The new site consists of a steeper beach allowing us to site the gangway bulkhead entirely on the uplands adjacent to the beach, eliminating the need for tideland disturbance.

² The Coppermount copper ore smelter was located here in the early 1900s.

FILL BELOW HTL

Barge Ramp = 63 cu. yds.

Floating dock = 20 cu. yards displaced

Total fill discharge in state tidelands and submerged lands to support the permanent marine access project features in Copper Harbor will be approximately **63 cubic yards**, already placed under DNR's LAS 32292. We estimated that the float's three steel piles will displace 20.0 cubic yards of waters. With relocated float, we will be constructing the gangway bulkhead on above Copper Harbor's Mean high water line. Consequently, this bulkhead feature and its approach, will not impact State tidelands.

POWER SOURCE

If facility lighting is required under the US Corp. of Engineers Section 10 navigable waters permit or for crew safety, then HEI will provide line power from the Project to the permanent marine access facilities. Otherwise, the facilities will be un-powered.

WASTE TYPES, WASTE SOURCES AND DISPOSAL METHODS

As the access facilities are solely transit terminals and not final destinations or ports, no waste will be generated or stored on-site. On-vessel wastes will be back-hauled to the port of origin. As the Project is designed for un-manned operation, the access facilities will see infrequent use for maintenance, repair, inspection and construction.

HAZARDOUS SUBSTANCES

HEI proposes to store no hazardous substance or fuel on the proposed marine access facility leasehold.

WATER SUPPLY

The access facility is designed with no water supply or wastewater disposal system due to its infrequent use and proximity to upland project support facilities. Support vessels will be equipped with USCG certified sanitation devices.

PARKING AREAS AND STORAGE AREAS

The proposed lease hold contains no parking area or storage area. HEI plans to use uplands previously used as a log camp for parking and storage. Attached to this application is a copy of Haida Corporation's authorization for use of their land in support of the Project.

NUMBER OF PEOPLE USING THE SITE

HEI intends not to staff the permanent marine access facilities. During infrequent supply deliveries, HEI may have up to 10 staff assisting with barge loading and unloading activities at the barge landing, including marine vessel crew members, heavy equipment operators, supervisor and laborers.

For inspections and routine maintenance, HEI anticipates two to four staff to use the 20x40 dock. For larger capital projects, such as major repairs and project enhancements, HEI may have work crews of up to 10 staff using the 20x40 dock for transit to the job site(s).

Generally the supervisor/staff ratio will be 1:4 to 1:8.

MAINTENANCE AND OPERATIONS

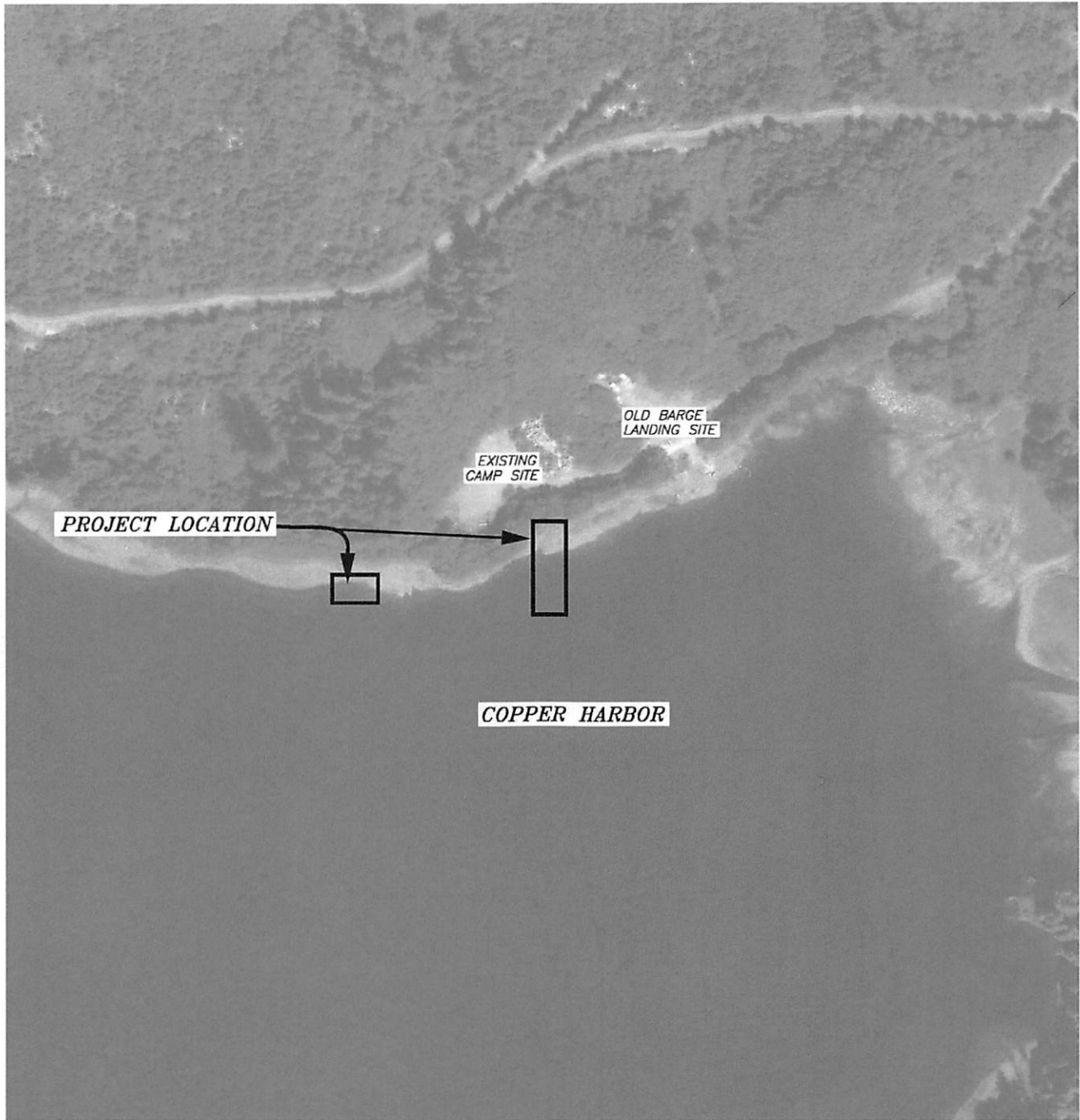
The marine access facilities do not require staff for maintenance and operations and the Project will be unmanned. HEI will dispatch local staff from Hyaburg, Klawock, and/or Craig to conduct repairs and maintenance as needed.

CLOSURE/RECLAMATION PLAN

Before the lease termination date, HEI will salvage the concrete planks, 20'x40' float, gangway, and three pilings. For the barge ramp, HEI would use an excavator to remove the concrete planks. HEI would schedule work to coincide with minus level spring tides to avoid in-water equipment work. HEI would use a work barge to remove the gangway, float and pilings from the Copper Harbor site.

HEI will re-use the salvaged materials at an alternative site, sell the material, or dispose of the material in an uplands disposal site.

To avoid disturbance of pre-existing metal contaminated sediment, HEI will abandon the ramp's armor rock in place.

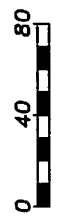
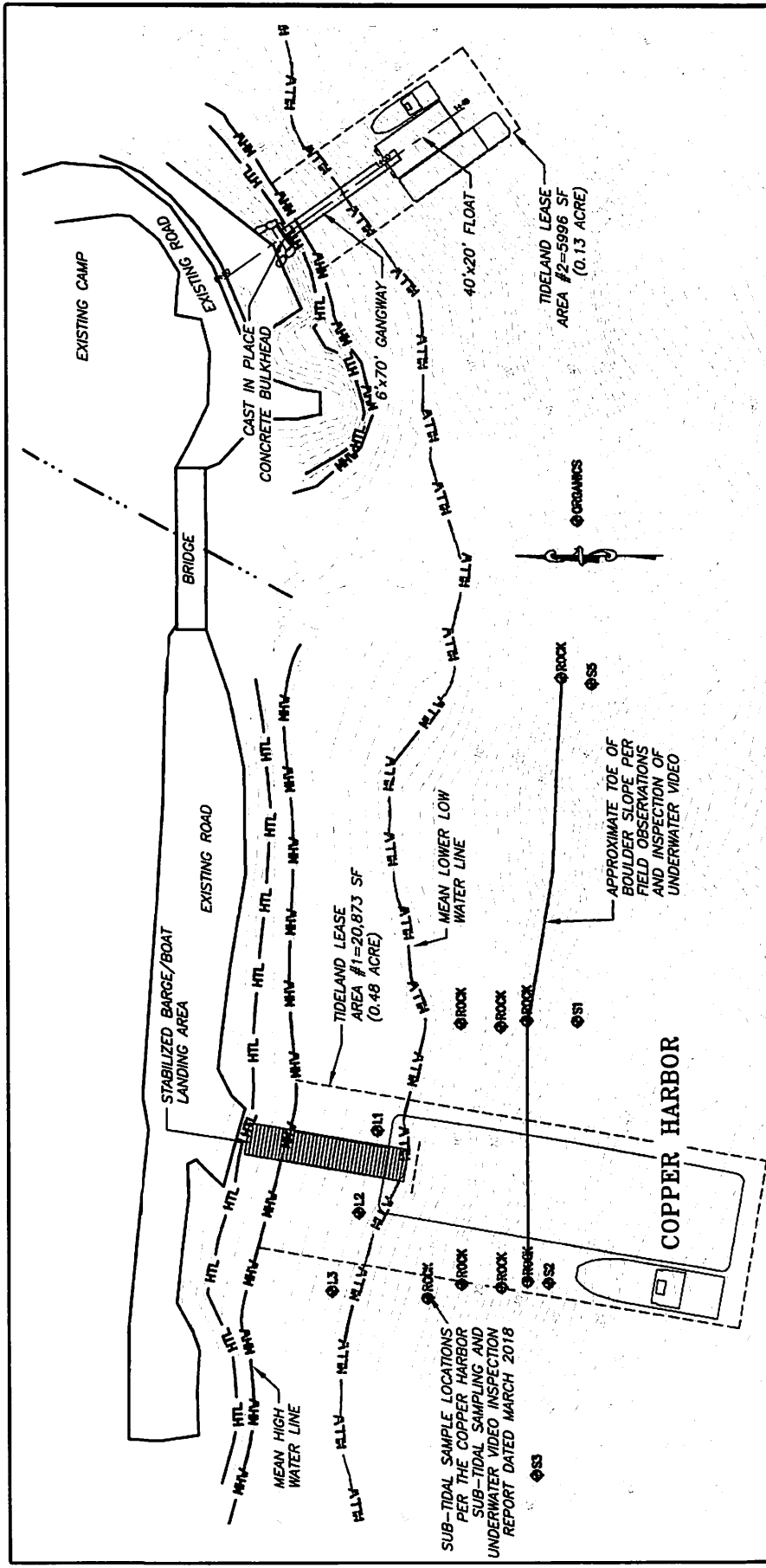


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4	BARGE LANDING PROFILE
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8	CAST IN PLACE CONCRETE BULKHEAD SECTION
	RESERVED

COPPER HARBOR PERMANENT BARGE LANDING AND FLOAT VICINITY MAP / SHEET INDEX

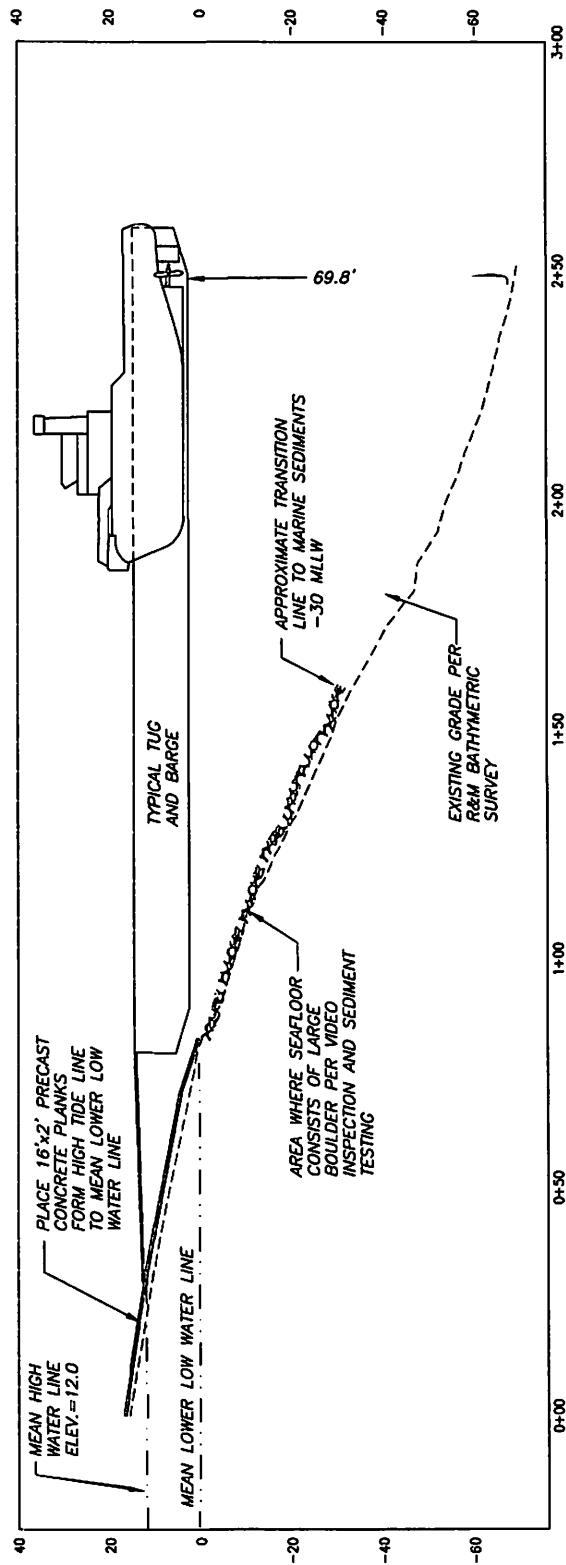
HIILANGAAY HYDRO PROJECT	
TIDELAND LEASE FOR COPPER HARBOR (SEC. 4, T. 77 S., R. 65 E.)	
APPLICANT HATCA ENERGY INC. P.O. BOX 34195 DUNEDU, AK 99803	AGENT AP&I P.O. BOX 3222 PORT TOWNSEND WA 98368
DATE: 07/19/2018 SHEET 1 OF 8	LOCATION: HYDABURG, AK WATER BODY: HILITA INLET



COPPER HARBOR PERMANENT BARGE LANDING AND FLOAT OVERALL SITE PLAN

HILL ANGLAY HYDRO PROJECT	
TIDELAND LEASE FOR COPPER HARBOR (SEC 4, T.77S, R.85E)	
APPLICANT: HAIDA ENERGY INC P.O. BOX 34195 JUNEAU, AK 99803	AGENT: AP&T P.O. BOX 3222 PURI TUNWENEND WA 98368
DATE: 11/27/2018 SHEET 2 OF 8	LOCATION: JUNEAU, AK WATER BODY: HELIX INLET

DATA: MLLW
15.6' HIGH TIDE LINE (HTL)
12.0' MEAN HIGH WATER (MHW)
0.0 MEAN LOWER LOW WATER



COPPER HARBOR PERMANENT BARGE LANDING AND FLOAT BARGE LANDING PROFILE

HILL ANGLAY HYDRO PROJECT

TIDELAND LEASE FOR

COPPER HARBOR (SEC 4, T7S, R85E)

APPLICANT:

HAIDA ENERGY INC
P.O. BOX 34195
JUNEAU AK 99803

AGENT:

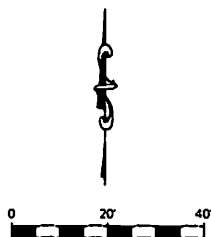
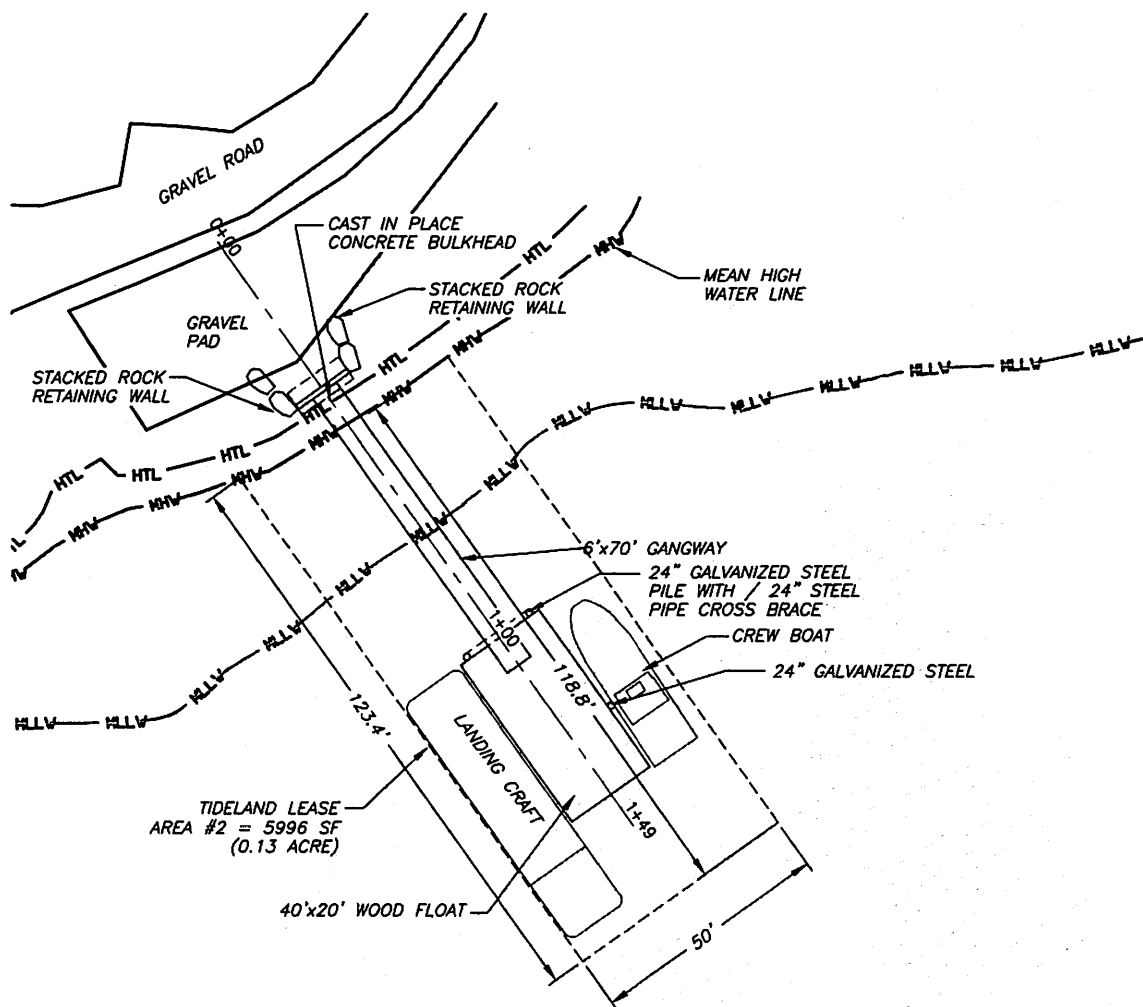
AP&T
P.O. BOX 3222
JUNEAU AK 99808

DATE 11/19/2018

LOCATION HYDABURG, AK

SHEET 4 OF 8

WATER BODY: HILL INLET



COPPER HARBOR PERMANENT BARGE LANDING AND FLOAT GANGWAY AND FLOAT PLAN

-HILLANGAAY HYDRO PROJECT

TIDELAND LEASE FOR
COPPER HARBOR (SEC 4, T.77.S, R.85.E)

APPLICANT:

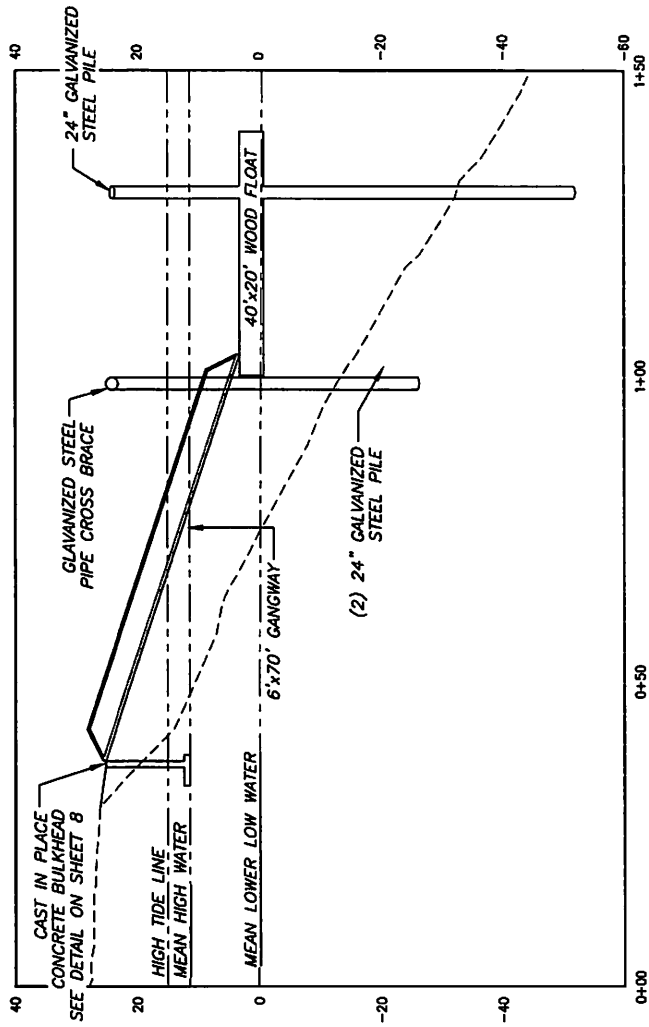
HAIDA ENERGY INC.
P.O. BOX 34195
JUNEAU, AK 99803

AGENT:

AP&I
P.O. BOX 3222
PORT TOWNSEND
WA 98368

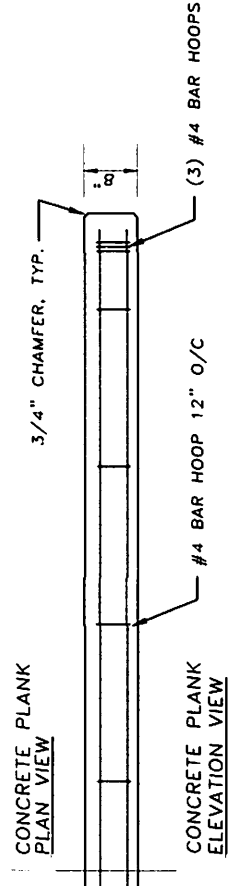
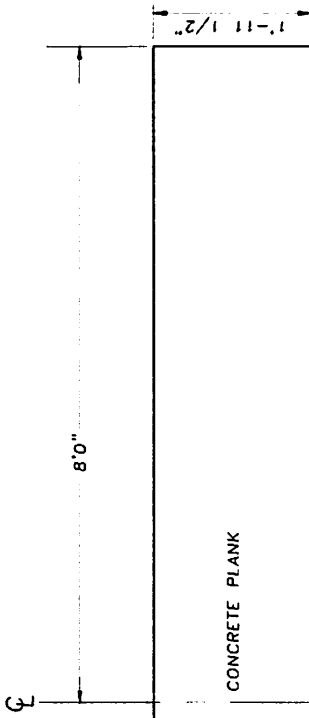
DATE: 11/27/2018
SHEET 5 OF 8

LOCATION: HYDABURG, AK
WATER BODY: HETTA INLET

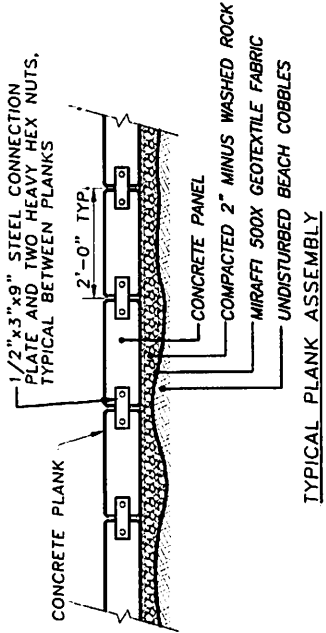
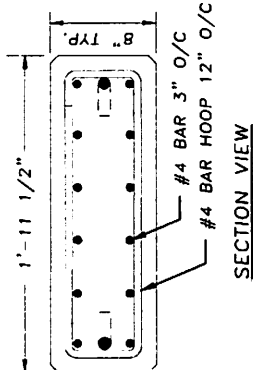
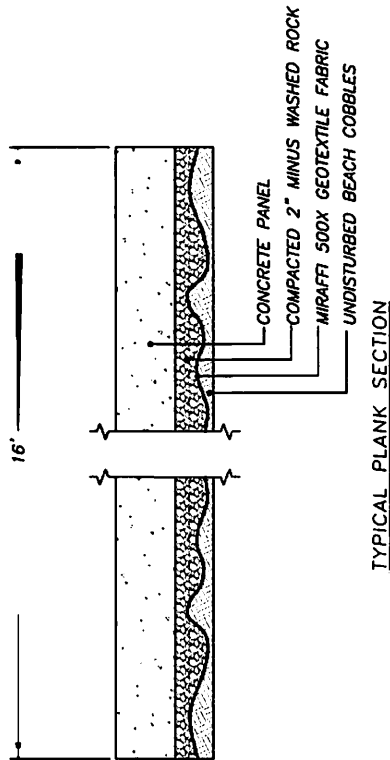


COPPER HARBOR PERMANENT BARGE LANDING AND FLOAT GANGWAY AND FLOAT PROFILE

HILL ANGLAAY HYDRON PROJECT	
TIDE AND LEASE FOR COPPER HARBOR (SEC 4, T.77S, R.85E)	
APPLICANT H-ADAFNFRGY INC P.O. BOX 34195 JUNEAU AK 99803	AGENT: AP&T P.O. BOX 3222 PORT TACWSENED WA 98368
DATE: 11/19/2018 SHEET 6 OF 8	LOCATION: HYDABURG, AK WATER BODY: HELIA INLET



TYPICAL CONCRETE PLANT DETAILS



**COPPER HARBOR PERMANENT
BARGE LANDING AND FLOAT
PRECAST CONCRETE PLAN DETAILS**

HIT ANGLAY HYDRO PROTECT	
TIDE AND LEASE FOR COPPER HARBOR (SEC 4, T.77.S, R.85.E)	
APPLICANT: HAIDA ENERGY INC P.O. BOX 34195 JUNEAU AK 99803	AGENT: AP&T P.O. BOX 3222 JUNEAU AK 99803 WA 98368
DATE: 11/15/2018 SHEET / OF 8	LOCATION: HYDABURG, AK WATER BUDDY: HELIA INLET

