Haines Borough
Planning Commission
Regular Meeting Agenda

COMMISSIONERS:

ROB GOLDBERG, CHAIR
LEE HEINMILLER, VICE-CHAIR
ROBERT VENABLES
HEATHER LENDE
DON TURNER III
BRENDA JOSEPHSON
ROB MILLER

Thursday, April 16, 2015 - 6:30 p.m. **Assembly Chambers, 213 Haines Hwy.**

1. **CALL TO ORDER / PLEDGE TO THE FLAG**
2. **ROLL CALL**
3. **APPROVAL OF AGENDA**
4. **APPROVAL OF MINUTES:** March 12, 2015
5. **PUBLIC COMMENTS** [Items not scheduled for public hearing]
6. **CHAIRMAN'S REPORT**
7. **STAFF REPORT**
   - **A. Planning & Zoning Report**
8. **PUBLIC HEARINGS:**
   - **A. Haines Borough – Vacation of One Portion of Mathias Ave. Right-of-Way (ROW) – Action Item:** Haines Borough requested the Planning Commission recommend the Assembly vacate one portion of the Mathias Ave. ROW, and transfer the vacated ROW to adjoining landowner Louise Smith in exchange for equal amount of Smith property to be made into a 15' public sewer easement. **Possible Motion:** Recommend the Assembly vacate the said ROW.
9. **UNFINISHED BUSINESS:** None
10. **NEW BUSINESS:**
    - **A. Historic District/Building Review:** None
    - **B. Haines Borough Code Amendments:**
      1. **Lot Line Adjustment in HBC 18.100.025 – Action Item:** This item is scheduled as a follow-up item of 03/12 agenda. The draft ordinance is to allow lot line adjustments and lot consolidations resulting in lot(s) non-conforming as to size. **Motion:** Recommend the Assembly adopt the proposed ordinance.
    - **C. Project Updates:** None
    - **D. Other New Business:**
      1. **South Portage Cove Harbor Expansion Project – Discussion Item –** PND has prepared the 65% design review submittal for the South Portage Cove Harbor Expansion project. The commission is invited to review and comment.
11. **COMMISSION COMMENTS**
12. **CORRESPONDENCE**
13. **SCHEDULE MEETING DATE**
    - **A. Regular Meeting – Thursday, May 14, 2015 6:30 p.m.**
14. **ADJOURNMENT**

Haines Borough
Planning Commission Meeting
March 12, 2015
MINUTES

Draft

1. **CALL TO ORDER/PLEDGE TO THE FLAG –** Chairman **Goldberg** called the meeting to order at 6:30 p.m. in Assembly Chambers and led the pledge to the flag.
2. **ROLL CALL – Present:** Chairman Rob **Goldberg**, Commissioners Lee **Heinmiller**, Robert **Venables** (called in), Heather **Lende** (called in)**,** Brenda **Josephson,** and Rob **Miller**. **Absent:** Don **Turner III**.

   Staff Present: David **Sosa**/Manager, Tracy **Cui**/Planning and Zoning Technician III, and Bill **Mandeville**/Community and Economic Development Director.

   Also Present: Mike **Case** (Assembly liaison), Sierra **Jimenez**, Jolanta **Ryan**, Stephen **Henri**, Glenda **Gilbert**, Roger **Schnabel**, Dave **Smith**, and Jon **Hirsh**.
3. **APPROVAL OF AGENDA**

   Goldberg suggested combining Item 8B and 8C.

   Motion: **Miller** moved to "approve the agenda as amended." **Heinmiller** seconded it. The motion carried unanimously.
4. **APPROVAL OF MINUTES** – February 12, 2015 Regular Meeting Minutes

   Motion: **Heinmiller** moved to "approve the February 12, 2015 minutes as amended." **Miller** seconded it. The motion carried unanimously.
5. **PUBLIC COMMENTS** - None
6. **CHAIRMAN'S REPORT** – None
7. **STAFF REPORTS**

   A. Planning & Zoning Staff Report

   Cui reported monthly permits and updates on projects.
8. **PUBLIC COMMENTS**

   A. ADOT&PF – Corner of Union Street and Allen Road – Maintenance Station Variance Proposal

   Goldberg opened the public hearing at 6:50 p.m.

   Henri spoke on behalf of ADOT&PF and requested the commission approve a height variance to allow the construction of a 32-foot-tall maintenance station to be built outside the Borough code requirement of a 30' height restriction. This will be a new 90' by 120' building to replace the existing facility. The size of road maintenance vehicles has tended to increase over time, which has required ADOT&PF to change the design of its maintenance stations to adequately service those vehicles. The additional height is needed to appropriately maintain the road maintenance vehicles.

Gilbert spoke as the representative of the adjacent property owner. She said the proposed station will connect to the existing water and sewer mains off Main Street. However, no documentation demonstrates the existence of a utility easement.

Henri said the drawing is only 35% complete. The state will work out an arrangement with the property owner or re-route the utility lines.

Goldberg closed the public hearing at 6:55 p.m.

Henri said the proposed structure is intended to connect to the public water and sewer systems.

Miller suggested an oil/water separator to be installed to protect Sawmill Creek.

Motion: Miller moved to "approve ADOT&PF's height variance proposal to allow the maintenance station to be built up to 34'." **Josephson** seconded it. The motion carried unanimously.

B. C-208-TL-0400 – Top of 4th Ave. – Amendment to Resource Extraction Conditional Use Permit

C-208-TL-03A0 – Top of 4th Ave. – Resource Extraction and Material Storage Conditional Use Permit

Josephson recused herself.

Goldberg opened the public hearing at 7:08 p.m.

Schnabel said in the past few summers, there were many construction projects taking place in the Skyline area, and trucks were driven up and down Young Road frequently. However, if this conditional use proposal is approved, it will reduce the traffic burden on Young Road. Regarding the material storage, **Schnabel** said the concrete with rebar is very difficult and expensive to recycle. He asked the commission's permission to allow him to move the concrete to the site. The concrete will be effectively recycled and reused in other projects. Additionally, asphalt is very good construction material; he would also like to move asphalt to the site. Storing construction material on the site will significantly save transportation costs. This will make him more competitive to provide services that cost less to the community.

Jimenez, **Ryan**, and others spoke their concerns about traffic safety in residential areas.

Sosa said the Borough code specifies different types of trash, such as garbage, rubble, and rubbish. His recommendation is to eliminate hazard materials, garbage, and rubbish.

Hirsh said the proposed site is within the residential areas. The commission should not encourage industrial activities.

Goldberg closed the public hearing at 7:30 p.m.

Goldberg said he is sympathetic to the residents who do not like having trucks go past their residences. This gravel pit has provided gravel to the community for more than 50 years. One side of the pit has about 20,000 cubic yards of gravel, and the other side of the pit has about 5,000 cubic yards of gravel. The pit has a total of 25,000 cubic yards of gravel with a life span of 20 years. It comes to 1,250 cubic yards/year. One truck hauls about 10 cubic yards of gravel, so it will be about 125

trucks going to or from the pit in one year. If the construction season is four months long, then that will be one truck/day on average.

Schnabel said the amount of material extracted from the pit will be roughly equal to the amount of material imported into the pit. He has no objection to the manager's recommendation.

Motion: Venables moved to "approve the proposed conditional use permit application with the conditions set forth in the manager's recommendation letter." **Miller** seconded it. The motion carried 4-1 with **Lende** opposed.

More discussion ensued.

9. **UNFINISHED BUSINESS** – None

10. **NEW BUSINESS**

A. **Historic District/Building Review** – None

B. **Haines Borough Code Amendments** – None

C. **Project Updates** – None

D. **Other New Business**

1. **Primary School Preliminary Plat Review**

The commission reviewed the plat, and pointed out there was an error in the title block and the chairman's name was misspelled.

Cui said the surveyor re-surveyed the subdivision based on the recommendations from the commission. Additionally, lots within blocks 3 and 4 are owned by the Borough and the school buildings were built on these lots. It was recommended to vacate these lot lines to consolidate them into one single lot. The commissioners spoke in favor of this recommendation.

The commission also suggested keeping the library lot as rectangular. A Memorandum of Understanding (MOU)/easement can be written to allow one portion of the running track to remain on the library lot.

Smith said an additional cost will be needed to complete the project.

Cui said she will report these recommendations to the manager.

2. **Classification of Borough Land for Sale**

The commission suggested staff focus on some topics in more detail: estimated cost of the development; water and sewer infrastructure implementation; public safety concerns; real estate market impact analysis, and the potential partnering opportunity with private-sector developers.

Goldberg suggested Turner and **Lende** conduct a site visit with staff to investigate these Borough-owned properties and take some pictures.

3. **Lot Line Adjustments Involving Lots Nonconforming as to Size**

Goldberg said the downtown area was originally platted in 1917 and the minimum lot size of 10,000 square feet was established in the 1970s. Almost none of the lots within the downtown area comply with this requirement. A lot line adjustment that results in creating non-conforming lots is prohibited by the existing code. The code does not allow downtown property owners to make any

lot line adjustments on their properties. He believes the code needs to be amended to address this issue.

Cui said she will draft the ordinance for commission review at the next regular meeting.

11. COMMISSION COMMENTS

Heinmiller summarized the previous CIA Wetland Committee meeting.

12. CORRESPONDENCE - None

13. SET MEETING DATES

A. Regular Meeting—Thursday, April 16, 2015.

14. ADJOURNMENT– 9:00 p.m.

Staff Report for April 16, 2015

1. Permits Issued Since March, 2015

PERMIT	DATE	OWNER/AGENT	PROPERTY ID	LOT	BLK	SUBDIVISION	DEVELOPMENT	ZONE
15-05	3/315	Paul Nelson	C-SKY-0B-1700	17	B	Skyline Estates	SFR Renewal	SR
15-06	3/13/15	Harry Rietze	4-MBR-05-0100			Letnikof Cove	Short Plat	MB Cannery
15-07	3/16/15	Saint James Place	C-208-TL-03A0	3A		USS 208	Resource Extraction and Material Storage	RMU
14-41(A)	3/16/15	Roger Schnabel	C-208-TL-0400	4		USS 208	Material Storage	RMU
15-08	3/17/15	Dean Olsen	C-PTC-0M-14A0	4A	M	Port Chilkoot	Temporary Residence	SR
15-09	3/17/15	ADOT				Union St & Allen Rd	Maintenance Station	ILC
15-10	3/18/15	ADOF				Union St & Allen Rd	Storage Shed & Carport	ILC
15-11	3/24/15	Lucy Tate	C-HEM-01-0100	1	1	Hemlock Estates	ROW_Repair Driveway	SR
15-12	3/26/15	Port Chilkoot Company	C-PTC-0F-0000		F	Port Chilkook	Interpretive Sculpture Garden	SSA

2. Enforcement Orders

- Off-Premises Sign – In the past few years, the Borough noted community interest to modify the current off-premises sign regulations. Borough staff drafted the ordinance, and several public hearings were held to discuss the current prohibition on off-premises signs; however, the ordinance effort has languished. In light of this, the manager has asked me to proceed with enforcing the provisions of the current off-premises sign regulations.
- Heliskiing Complaints – The Borough received three heliskiing complaints. I processed GPS data and produced graphics to support the investigations.

3. Projects

- AK FEMA Training Opportunity – Mr. Ken Hudson is working for the Alaska Division of Community and Regional Affairs, to visit Haines on 05/04. This will be a training opportunity providing an overview of flood hazard management issues, practical flood risk reduction methods for the community and home owners, and the National Flood Insurance Program guidelines designed to help communities reduce risk to property and public safety. This information is intended to be helpful to community leaders, builders, surveyors, the public and any other entities that should have an understanding living with hazards from flooding.
- The updated KMZ file was generated and published on Borough website for public use.
- Addressing Project – Site visits will be conducted every Tuesday afternoon to verify physical addresses within the Townsite Service Area. I anticipate the project will be accomplished by June.

HAINES BOROUGH
Planning & Zoning
P.O. Box 1209
Haines, AK 99827-1209
907-766-2231 Ext. 23
907-766-2716 (fax)

April 8, 2015

To: Planning Commission

Cc: David Sosa, Manager

Carlos Jimenez, Public Facilities Director

From: Tracy Cui, Planning & Zoning Technician III

Re: Determine that One Portion of Mathias Ave. surpluses to its needs as a Right-of-Way and Recommend that the Assembly Vacate Said Right-of-Way

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Staff Recommendation:

A portion of the Mathias Ave. ROW be vacated and transferred to adjoining landowner Louise Smith in exchange for equal amount of Smith property to be made into a utility easement.

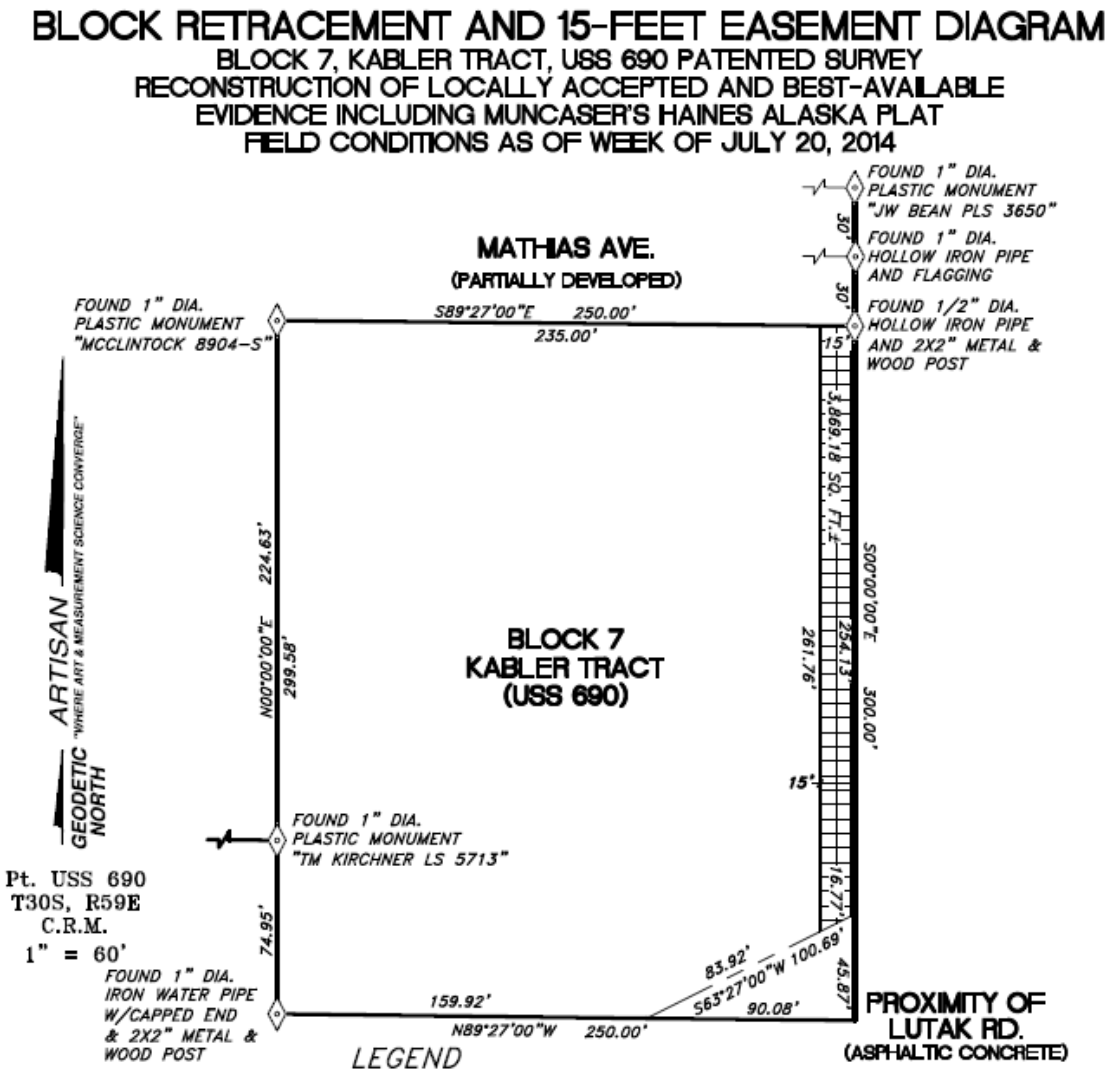
Background and Overview:

Haines Borough Code (HBC) 18.60.010(I) requires "If property on which a use is proposed is within 200 feet of an existing, adequate public water and/or sewer system, the developer shall be required to connect to the public systems". In 2010, property owner Norm Smith submitted water & sewer services application to the Borough since the property is within 200 feet of the public systems. In reviewing the application, staff determined that there is not an adequate sewer main that is serviceable for his property. In addition, the sewer main on Mathias Ave. is not able to be buried to correct depth due to the elevation of the Young Road sewer main that it feeds into. There have been multiple cases in which the Mathias main has backed up into residential property and caused damage for which the Borough has been financially responsible to fix. In this case, while service is within 200 feet it is not feasible to hook up these services without significant expense to Norm Smith and additional stress to an already compromised sewer main.

Staff have been working with Norm Smith and adjacent property owners on trying to find a solution to the sewer service issue on his property. In general, the Borough has re-explored all of the options that have been considered over the last several years and have come up with the following feasible solution:

Acquiring 15' utility easement across Louise Smith property: The sewer main that runs east from Young Rd. along Mathias Ave. was blocked with Debris. The Borough's Public Works Department worked with the Sewer Department to locate the blockage and fix the problem. When the blocked

area of line was located it was determined that it runs on private property underneath a house. The Borough has decided to relocate the sewer main so that it runs the other direction on Mathias Ave., then down a utility easement to the sewer main on Lutak Rd. During the course of construction the utilities will be accessible to Norm Smith property in a much more economical manner than is presently possible. The survey was conducted in July of 2014. Please see the diagram below.



Property owner Louise Smith has agreed to grant the Borough this 15' wide utility easement by gaining the ownership of the same square footage of ROW on Mathias (approximately 3,800 sq.ft) as compensation. The next step in the planning/development process for proposed utility easement is to seek a determination from the Planning Commission that the vacation is consistent with the Borough code and to recommend that the Assembly formally vacate the ROW. Please see the attached plat showing the property in question.

To arrive at this determination, staff spoke with property owners, conducted site visits, reviewed all applicable local and state laws, and performed general research on similar instances. Through this research, the Borough discovered:

- The ROW is currently undeveloped, and is unlikely to be developed in the future;
- The ROW was reserved for street/roadway purposes;

- The ROW has not been used for through traffic for well since Mathias Ave. was originally platted;
- No public money has been expended on this portion of ROW since Mathias Ave. was originally platted;
- If the subject area is vacated, all the adjacent properties will still have legal access.

Alaska Statutes Sec.29.40.120 set forth a procedure whereby the Borough can vacate right-of-way on a petition. The petition shall be filed with the platting authority. Therefore, it must conduct a public hearing before the Planning Commission and accept evidence on whether or not the ROW is unnecessary for present or prospective public use. If it finds that the ROW is not necessary for public use, then the Assembly may formally vacate the ROW.

Discussion:

The subject area is currently zoned Single Residential. The intent of the single residential zone is to provide for and protect areas for low density, individual home sites and quiet residential uses. All new development in this zone should be planned to maintain and enhance the single-unit residential character of the existing neighborhood. New development areas included in this zone should be designed and developed to provide residential areas on low volume streets sheltered from other existing or proposed uses. The area is served by, or intended to have, the necessary level of public utilities and an adequate transportation system as deemed appropriate for the planned use.

Also, the Haines Borough 2025 Comprehensive Plan encourages this area to be designated for residential development on the Future Growth Maps. It states… “Actions to encourage infill, and identify logical utility and road extension areas are a responsibility of this Comprehensive Plan to allow for orderly future growth.” (Haines Borough 2025 Comprehensive Plan, Page 168 & 169).

Obviously, the proposed use is consistent with the Comprehensive Plan and policies. The easement across Louise Smith property will help to support reasoned utility extension and enhance the residential vibrancy through vacating said ROW.

On 04/06, the Borough notified, in writing, all persons who own property within 200 feet of the proposed vacation, giving information on the location of the vacation. Please see the attached mailing list. As of today, the Borough has not received any written comments. The public hearing will be advertised in the local newspaper on 04/09.

Next Steps

- The Planning Commission shall hold a public hearing on the requested vacation. The Planning Commission shall make its recommendation to the Assembly regarding the request.
- If the Assembly grants the vacation request, the Borough will have the vacated land surveyed and replatted by a registered land surveyor in a format suitable for filing with the State Recorder’s Office.
- An Assembly resolution will be adopted to authorize the disposal of any vacated rights-of-way. The resolution shall contain a statement that the Assembly found the property surplus to its needs as a right-of-way.

PS: If the request was to not move forward, the use could remain as is.

Thank you very much for considering this.

OWNERSHIP CERTIFICATE

I HEREBY CERTIFY THAT LOUISE SMITH IS THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I HEREBY ADOPT THIS PLAT OF SUBDIVISION WITH MY FREE CONSENT, DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED:

DATE _____

LOUISE SMITH
P.O. BOX 38
HAINES, AK 99827

DATE: _____

JAN HILL
HAINES BOROUGH MAYOR
P.O. BOX 1209
HAINES, AK. 99827

DATE: _____

DAVID SOSA
HAINES BOROUGH MANAGER
P.O. BOX 1209
HAINES, AK. 99827

NOTARY ACKNOWLEDGEMENT

UNITED STATES OF AMERICA)
) S.S.
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS _____, DAY OF _____ _____, 2015, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED :

LOUISE SMITH

KNOWN TO ME TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENTAND SEALED THE SAME FREELY AND VOLUNTARILY FOR THE USES AND PURPOSES THEREIN MENTIONED.

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

NOTARY PUBLIC FOR THE STATE OF ALASKA

MY COMMISSION EXPIRES: _____

NOTARY ACKNOWLEDGEMENT

UNITED STATES OF AMERICA)
) S.S.
STATE OF ALASKA)

THIS IS TO CERTIFY THAT ON THIS _____, DAY OF _____ _____, 2015, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR THE STATE OF ALASKA, DULY COMMISSIONED AND SWORN, PERSONALLY APPEARED :

JAN HILL AND DAVID SOSA

KNOWN TO ME TO BE THE PERSONS DESCRIBED IN AND WHO EXECUTED THE ABOVE AND FOREGOING INSTRUMENT;AND SEALED THE SAME FREELY AND VOLUNTARILY FOR THE USES AND PURPOSES THEREIN MENTIONED.

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

NOTARY PUBLIC FOR THE STATE OF ALASKA

MY COMMISSION EXPIRES: _____

CERTIFICATE BY THE HAINES BOROUGH

I CERTIFY THAT THIS RE-SUBDIVISION PLAT OF BLOCK 7, KABLER TRACT AND A PORTION OF MATHIAN AVE, HAS BEEN FOUND TO COMPLY WITH THE PROVISION SET FORTH IN HC, 18.100 AND IS APPROVED FOR RECORDING WITH THE HAINES RECORDING OFFICE.

ROB GOLDBERG
HAINES BOROUGH PLANNING COMMISSION CHAIRMAN DATE

JAN HILL
HAINES BOROUGH MAYOR DATE

GENERAL NOTES:

1. THE BASIS OF BEARING FOR THIS SURVEY IS SHOWN ON DRAWING.
2. WHERE RECORD COURSES (BEARINGS AND/OR DISTANCES) DIFFER FROM THAT OF ACTUAL MEASURED OR COMPUTED COURSES, RECORD COURSE ARE SHOWN WITHIN PARENTHESIS WHILE THE ACTUAL MEASURED OR COMPUTED SURVEY COURSES ARE SHOWN WITHOUT PARENTHESIS.
3. ALL BEARINGS SHOWN ARE TRUE BEARINGS AS ORIENTED TO THE BASIS OF BEARINGS AND DISTANCES SHOWN ARE REDUCED TO HORIZONTAL FIELD DISTANCES.
4. THE ACCURACY OF THIS SURVEY IS GREATER THAN 1:5,000
5. RECORD BEARINGS AND DISTANCES ARE FROM PLAT No. 2000-14.
6. SUBJECT OF EASEMENTS AND RESTRICTIONS OF RECORD. LOTS MAY BE AFFECTED BY ENCROACHMENTS NOT DEPICTED.
7. THIS PLAT IS IN THE SINGLE RESIDENTIAL ZONE.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS THE SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THAT ALL DIMENSIONAL AND RELATIVE BEARINGS ARE CORRECT, ALL EASEMENTS AND RIGHTS OF WAY APPEARING ON THE LAND AS SHOWN, AND ALL MONUMENTS ARE SET IN PLACE AS NOTED UPON THIS PLAT AS REPRESENTED.

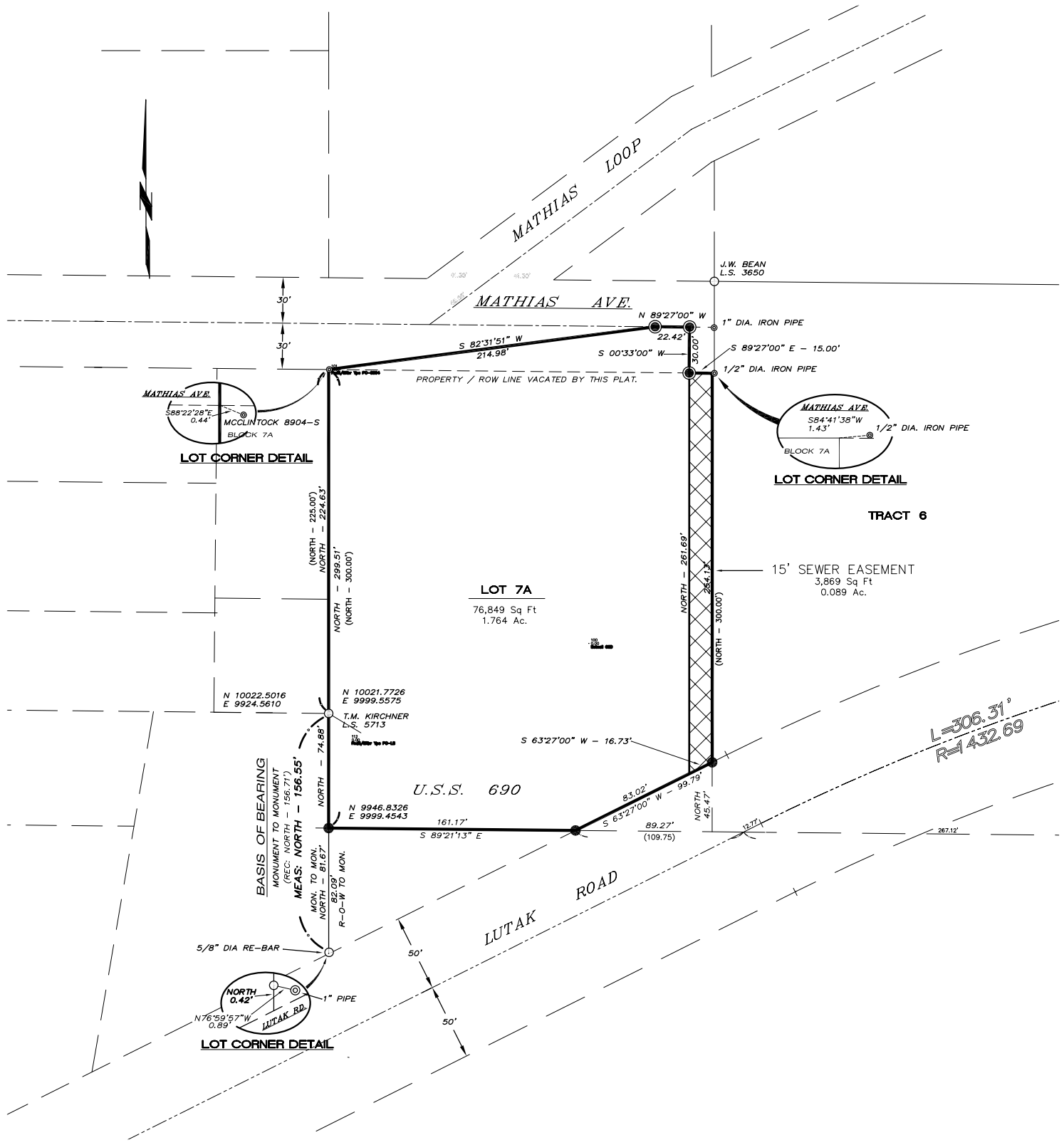
THOMAS M. KIRCHNER, P.L.S. #5713 DATE:

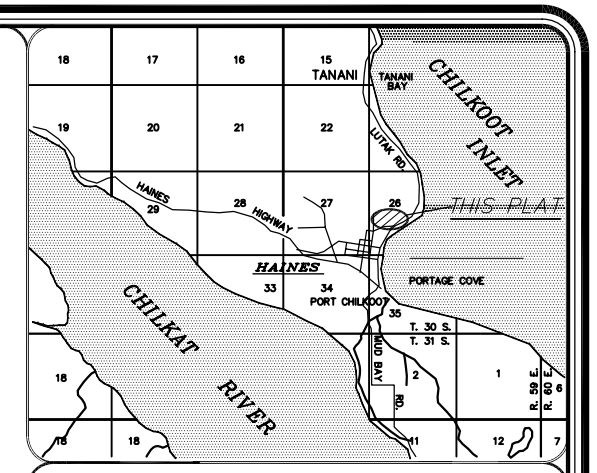
STATE OF ALASKA 49TH Thomas M. Kirchner LS-5713 REGISTERED PROFESSIONAL LAND SURVEYOR

CERTIFICATION OF BOROUGH ASSESSOR

I HEREBY CERTIFY THAT THE APPLICANTS ARE NOT DELINQUENT ON PROPERTY TAXES FOR THE PROPERTY SPECIFIED ON THIS SUBDIVISION PLAT AS SHOWN HEREON.

DATE HAINES BOROUGH ASSESSOR





VICINITY MAP
SCALE 1" = 1 MILE

LEGEND

FOUND SURVEY MONUMENTS:

- ○ 1-1/4" DIA. YELLOW PLASTIC CAP (YPC) ON 5/8" DIA. REBAR. SET BY DENALI NORTH, UNLESS OTHERWISE DESCRIBED.
- ◎ 1" DIA. IRON PIPE

SET SURVEY MONUMENTS:

- ◉ SET SECONDARY MONUMENT THIS SURVEY: 2-1/2" DIA. ALUMINUM CAP ON 5/8" DIA. REBAR 30" LONG .
- ● SET SECONDARY MONUMENT WITH 1-½" DIA.YELLOW PLASTIC CAP (YPC) PLACED ON ½" DIA. REBAR 30" LONG SET AT ALL LOT CORNERS, UNLESS STATED ABOVE OR SHOWN OTHERWISE.

ALASKA LAND SURVEYING CO., L.L.C. ROW L-7A K.T.S. 2015 LS 5713

T. KIRCHNER L.S. 5713

(#00–000) RECORDING OFFICE PLAT NUMBER, OR SERIAL RECORDING NUMBER FROM WHICH RECORD BEARING AND/OR DISTANCE WAS TAKEN.

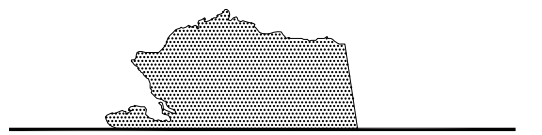
(R1) RECORD VALUES PER PROSPECTOR HILLS SUBDIVISION, PLAT No. 75.29

OWNER:
HAINES BOROUGH
P.O. BOX 1209
HAINES, AK. 99827
LOUISE SMITH
P.O. BOX 38
HAINES, AK. 99827

SURVEYOR:
ALASKA LAND SURVEYING CO., L.L.C.
P.O. BOX 397
5451 N. MAVERICK DRIVE
PALMER, ALASKA 99645
907-745-1491

SUBDIVISION PLAN: 1" = 40"

FEET: 0 40' 80' 120' 160' 200'



A SUBDIVISION PLAT OF
BLOCK 7, KABLER TRACT, USS 690,
INTO
LOTS 7A, BLOCK 7, KABLER TRACT,
AND A PORTION OF MATHIS AVE.
LOCATED WITHIN U.S.S. 690, SEC 26,TOWNSHIP 30 SOUTH, RANGE 59 EAST, C.R.M.
HAINES BOROUGH – HAINES RECORDING DISTRICT

A DEVELOPMENT OF 1.675 ACRES
SHEET: 1 OF 1

DRAWN BY:	SCALE:	DATE:	PROJECT NO.
T.M.K.	1" = 40'	15 FEBRUARY 2015	14542.02A / 4137

ALASKA LAND SURVEYING CO., L.L.C.

PRIMARYOWNER	SECONDARYOWNER	COMPANY	TAXIDNO	ADDRESS	LOTSIZE	CITY	STATE	COUNTRY	ZIPCODE
MARJORIE WARD	N. TAYLOR	Part Sen.Cit.Exempt/ N.TAYLOR	C-690-05-0100	BOX 208	0.49	HAINES	AK	US	99827
ROBERT E. E. PLUCKER	MARGARET M. PLUCKER	MARGARET PLUCKER	C-690-04-0B00	BOX 1394	0.524	HAINES	AK	US	99827
ELZA A. THOMPSON	<Null>	<Null>	C-690-04-0D00	P.O. BOX 773545	0.653	OCALA	FL	US	34477
TIMOTHY B. WARD	<Null>	<Null>	C-690-03-0200	PO BOX 208	0.2841	HAINES	AK	US	99827
KAREN TAUG	OLE TAUG III	c/o Alaska Realty Tax Service	C-690-03-0100	P.O. BOX 34555	0.5677	JUNEAU	AK	US	99803
NORMAN L. SMITH JR.	SUZANNE VUILLET-SMITH	SUZANNE VUILLET SMITH	C-690-05-0200	BOX 5	0.85	HAINES	AK	US	99827
ROBERT E. E. PLUCKER	MARGARET M. PLUCKER	MARGARET PLUCKER	C-690-04-0B00	BOX 1394	0.524	HAINES	AK	US	99827
LEMMIE L. SPRADLIN	<Null>	Senior Citizen Exempt	C-690-08-0A00	P.O. BOX 386	0.3013	HAINES	AK	US	99827
ERWIN N. HERTZ	<Null>	<Null>	C-690-08-0E20	BOX 110	0.1291	HAINES	AK	US	99827
MARVIN SMITH	<Null>	Portion Senior Citizen Exempt	C-690-07-0000	BOX 38	1.8313	HAINES	AK	US	99827
CAROL WALDO	WILLARD WALDO	Portion Senior Citizen Exempt	C-690-06-0000	BOX 274	1.289	HAINES	AK	US	99827
ERWIN N. HERTZ	<Null>	Senior Citizen Exempt	C-690-08-0B00	BOX 110	0.5997	HAINES	AK	US	99827
CARLOS JIMENEZ	SIERRA JIMENEZ	<Null>	C-690-08-0C00	BOX 962	0.482	HAINES	AK	US	99827

10B1

Draft

HAINES BOROUGH, ALASKA

ORDINANCE No. xx-xx-xxx

AN ORDINANCE OF THE HAINES BOROUGH AMENDING HAINES BOROUGH CODE TITLE 18 SECTION 18.100.025 TO ALLOW LOT LINE ADJUSTMENTS AND LOT CONSOLIDATIONS RESULTING IN LOT(S) NON-CONFORMING AS TO SIZE

BE IT ENACTED BY THE HAINES BOROUGH ASSEMBLY:

Section 1. Classification. This ordinance is of a general and permanent nature and the adopted amendment shall become a part of the Haines Borough Code.

Section 2. Severability. If any provision of this ordinance or any application thereof to any person or circumstance is held to be invalid, the remainder of this ordinance and the application to other persons or circumstances shall not be affected thereby.

Section 3. Effective Date. This ordinance shall become effective immediately upon adoption.

Section 4. Purpose. This ordinance amends Title 18 Section 18.100.025 to allow lot line adjustments and lot consolidations resulting in lot(s) non-conforming as to size.

NOTE: **Bolded**/UNDERLINED ITEMS ARE TO BE ADDED
~~STRIKETHROUGH~~ ITEMS ARE DELETED

HBC 18.100.020 Platting of subdivision, lot line adjustment and lot consolidation required.

Any division of land within the borough which results in a subdivision, or any shifting or eliminating of property lines resulting in a lot line adjustment or lot consolidation shall be surveyed and a plat thereof approved and recorded, pursuant to the provisions of this chapter, HBC 18.60.010 through 18.60.020, and AS 29.40 and 40.15, as amended from time to time.

A. Subdivision Defined. “Subdivision” means a division of a tract or parcel of land into two or more lots, sites, or other divisions and includes re-subdivisions and, when appropriate to the context, relates to the process of subdividing or to the land or areas subdivided.

B. Lot Line Adjustment Defined. “Lot line adjustment” is defined as the shifting of a property line that does not result in:

1. The creation of additional lots.

2. The creation of new nonconforming lots, including:

a. A lot of less than 65 feet of width.

b. A lot of less than the minimum size applicable to the zoning district.

c. A lot where development or utility becomes located within the setback as a result of the lot line adjustment.

3. The increase of nonconformity of an existing nonconforming lot.

4. The newly adjusted lot exceeding 200 percent of the area of the original lot, with the exception of lots less than the minimum lot size, in which case the newly adjusted lot shall not exceed 150 percent of the minimum lot size specified for the zone.

C. Lot Consolidation Defined. “Lot consolidation,” also referred to as “lot line vacation,” is the elimination of a lot line or lines that divide multiple lots and results in the consolidation of multiple lots into fewer lots or one lot.

1. The result shall not impair adequate access, access easements or rights-of-way to existing lots.

2. The result shall not create a nonconforming lot or increase the nonconformity of an existing nonconforming lot. (Ord. 09-03-201 § 4; Ord. 06-07-148)

HBC 18.100.025 Exceptions.

A. The provisions of this chapter shall not apply to transfers of interest in land pursuant to court order.

B. The manager shall have the authority to waive the surveying requirement for a lot consolidation if it is determined that the surveyor can prepare plat documents from accurate and current data for the properties being consolidated. (Ord. 09-03-201 § 4)

C. HBC 18.100.020(B) and (C) do not apply to lot line adjustments and lot consolidations between two or more nonconforming lots, as long as no additional nonconforming lots are created, and the proposed lots as adjusted will comply with other requirements, including but not limited to setbacks and parking as prescribed by the applicable use zone.

10D1

P N D
ENGINEERS, INC.

March 13, 2015 PND 102029.10

Shawn Bell
Interim Harbormaster
Haines Borough
P.O. Box 1209
Haines, Alaska 99827

Re: South Portage Cove Harbor Expansion
65% Design Review Submittal

Dear Mr. Bell:

PND has prepared the 65% design review submittal for the South Portage Cove Harbor Expansion project. Enclosed please find 10 sets of review documents for distribution to HB staff and the Port and Harbor Advisory Committee (PHAC). The submittal contains plans, project schedule and an updated cost estimate for the project at approximately 65% design completion.

Scope of Improvements

The scope of improvements under this phase of the project generally includes the following:

- 700 Ft Permeable Wave Barrier
- Entrance, basin expansion and inner harbor dredging along A & B Floats
- Rough graded parking area to allow upland disposal of a portion of the dredge spoils
- Relocation of existing sewer outfall line to allow dredging and wave barrier construction

Scope and Design Issues

PND has updated several design items since the 35% design review submittal. A summary of the most significant items follows.

1. **Dredging:** The dredging limits in the existing harbor basin have been modified to reflect the changes requested by the Borough. Dredging to the west of the existing boat launch ramp has been deleted to allow for continued use of that facility without undermining the toe of the ramp. Dredging below the work floats at the north end of the harbor to -6' MLLW elevation was added. Dredging around the fuel dock, ice chute and inside the transient float has increased. Dredging along the headwalk of the new float system was increased to allow more vessel maneuvering space between the float and shore.
2. **Demolition:** Demolition of the Seaplane Float and partial demolition of the Transient Float were added to the scope of improvements. Please let us know if you wish to salvage these floats for the Borough or whether they are to become the Contractor's responsibilities to dispose. There are some electrical services on the transient float and an electrical demolition plan will need to be developed in the future, but has not been included in the 65% design submittal.
3. **Upland Development**: PND has continued development of the upland parking and staging area. It was determined that significant storm water runoff flows into the existing ditch adjacent to the Memorial Park. We have included additional storm drain features to ensure the future harbor basin is not inundated with freshwater, which can result in surface freezing within the basin. There are four existing outfalls within the upland fill area to be redirected. The northernmost, a 24-inch CMP outfall, originating

at a catch basin on the west side of Front Street has not been located by PND or HB to date - it is possibly buried in the roadway slope. Please take steps to determine the location of this outfall so we may design an extension for it through the new fill area.

The crushed aggregate base course for the upland parking area has been deleted and the parking area surface will now be constructed with 4-inch minus shot rock. This allows the newly placed fill to dewater and settle until such time as the final grading/landscaping commences in a future phase of work.

4. **Memorial Park:** The existing park will be surrounded by the proposed upland parking area. HB has requested PND estimate costs for relocating the park to the southern end of the site. We are currently assessing the impacts and costs of this move and plan to submit a preliminary cost estimate directly.

5. **Wastewater Outfall Pipe:** The wastewater outfall pipe alignment has been located to the south around the dredge basin and wave barrier. After preliminary design of the outfall with an initial alignment through the dredge basin, PND determined that the new route would result in a cost savings as well as less environmental and construction risk to the Borough.

   The existing sewer outfall pipe is buried in a shallow trench below the harbor basin. Dredging activity will develop cuts nearly 25' deep in some locations thus interfering with this line. At 35% design, our plan was to dredge a portion of the basin while keeping the exiting line intact. Under this option, once the initial dredging was completed a new sewer outfall line would be constructed, installed and connected to the existing line in the uplands. Upon proceeding with design development, this plan was abandoned due to excessive costs, risk and schedule concerns. The rationale in this decision is as follows:

   a. It was determined that at the transition between the dredged region and the uplands the depth of the trench excavation would need to be 25 feet or more down to elevations around -17 feet MLLW. The extent of the excavation coupled with the tidal inundation of the trench will result in significant cost to install the new outfall through this region. Either significant trench slope layback or sheet pile shoring would be required, both of which added considerable costs.

   b. Under the initial outfall route, dredging would be completed along the outfall alignment prior to outfall construction. As a result trenching from a barge becomes necessary very early in the installation process. While the preferred route is longer, the majority of the additional length can be installed with conventional excavators without the use of a barge and crane for trenching. The segments of the outfall trench that would be excavated from a barge would likely be similar for both the initial and the preferred routes. The trench excavation and subsequent pipe installation from the barge is the most significant cost item under both options.

   c. Under the initial scenario, dredging would have to be partially completed, stopped for the installation of the new outfall and then resumed once the new outfall was installed. This change in construction sequence and required schedule coordination results in added costs, especially considering the barge(s) that are required for both dredging and the outfall installation. These sequencing costs are not incurred under the new route.

   d. Under the initial scenario, pile driving for the wave barrier would have to be coordinated and completed in a prescribed sequence so that the new outfall is not damaged or disturbed. This again, becomes a significant coordination and cost item, one not involved with the preferred route. Additionally, future pile driving for the new floats would have to be closely monitored to prevent damage to the outfall line if it were to remain in the harbor basin.

   e. We considered a temporary outfall to limit the costs incurred for the coordination in dredging and pile driving described above. However, to be cost effective the temporary outfall would need to be installed along the design alignment to allow it to become part of the permanent outfall. After preliminary discussions with the reviewing agencies, PND considers it unlikely that a temporary outfall of this nature would be permitted, as it would result in sewerage discharge fully exposed on the beach at low tides. A temporary outfall reaching depths that may be agreeable to permitting agencies, while avoiding the dredged regions would result in considerable additional costs. PND

dismissed the temporary outfall plan, as it would likely involve significant permit review and resulting schedule impacts.

f. Finally an outfall pipe routed through the future floats limits the flexibility in the design and layout of future harbor floats.

Project Budget

The attached cost estimate has been updated to reflect the current scope of improvements developed to a 65% design completion level. It incorporates the Borough's review and direction since delivery of the 35% design documents. The total project budget including 8% contingency and all known indirect costs is estimated at $21.12 million. The 65% estimate is approximately $0.53 million less than PND's initial 2014 planning level budget prepared prior to the commencement of the design phase.

State and Federal Permit Applications & Compensatory Mitigation Plan

PND's sub consultant, Hart Crowser (HC), is performing regulatory due diligence studies for the project. HC is nearing completion of the Biological Assessment (BA) and an Ecological Functional Assessment (EFA) both of which have been submitted to the Borough for review. The preferred Compensatory Mitigation Plan, suggested by Takshanuk Watershed Council, involves work in the Mud Bay area for beach restoration at the 7 Echoes site. This plan has been further studied by PND resulting in implementation cost concerns and potential property issues. HC is now evaluating a reduction in the scope of the 7 Echoes mitigation project while concurrently investigating other mitigation options including in lieu fees through SEAL Trust. The mitigation development process has resulted in a delay in the submittal of the federal permit application and an adjustment of the schedule has been made accordingly. We request the Borough's input on its preferred compensatory mitigation efforts for this project.

PND has contacted the Alaska Department of Environmental Conservation and the Environmental Protection agency regarding the wastewater outfall relocation. Both agencies require further review of a developed plan. With HB's approval of the new outfall alignment PND will proceed with the required coordination and plan reviews.

Project Schedule

An updated project schedule is enclosed for your review. While the engineering design elements are on tract, the critical path to project completion remains with environmental permitting and associated compensatory mitigation tasks. We have extended the preparation of these study and application documents out to mid-April with anticipated regulatory review and permit authorizations by mid-July as can be seen at lines 10 and 11 of the attached schedule. With permits in hand the project can be advertised for construction bids due late August followed by execution of a construction contract and NTP by mid-September. It remains speculative whether a contractor would actually mobilize to the site in the fall of 2015 when inclement weather typically begins or wait until spring of 2016 to commence work. We have thus scheduled final project completion for June 30, 2017 to align with the grant stipulations.

The delivery and review of PND's 65% design submittal is shown on lines 12 and 13. The design phase remains on schedule with the 95% design review package due on May 29th. To meet that schedule we request your written review comments to this 65% design submittal by March 27th.

Public Meeting

PND is scheduled to present the design at the upcoming Assembly meeting on March 24th. We plan to address the current project scope, design development issues and the permitting and compensatory mitigation process at this meeting. Please let us know if there are other items you would like addressed.

PND looks forward to receiving your comments to this 65% design review submittal and would like to schedule a review work session at your earliest convenience. Please feel free to contact us if you have any immediate questions or concerns regarding the project. We look forward to continued work with the Borough as we proceed with the 95% final design review submittal.

Sincerely,
PND Engineers, Inc. | Juneau Office

Dick Somerville, P.E.
Vice President

Enclosures

HAINES BOROUGH
SOUTH PORTAGE COVE HARBOR EXPANSION
WAVE BARRIER, DREDGING, GRAVEL PARKING AREA &
SEWER LINE RELOCATION

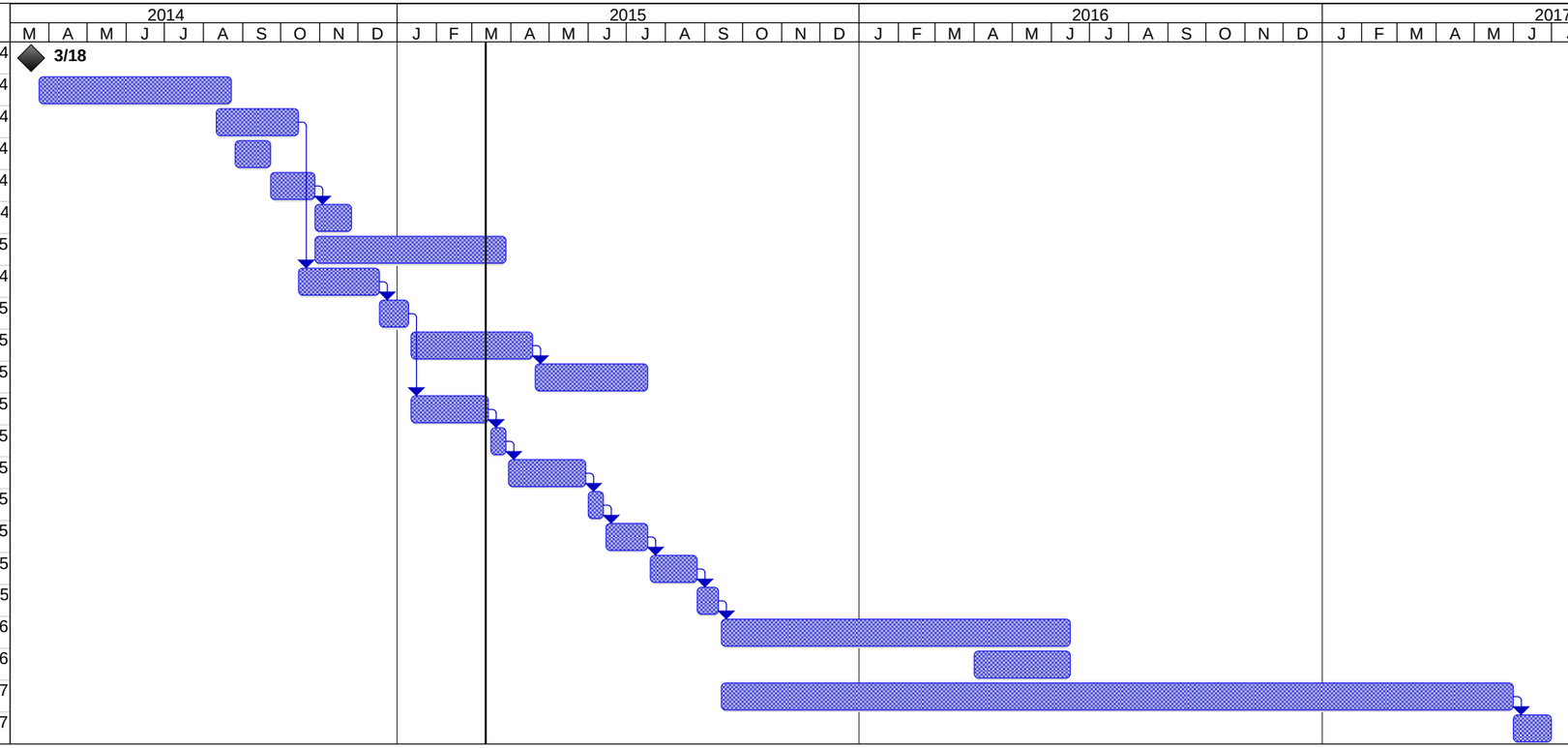
65% DESIGN COMPLETION - COST ESTIMATE
MARCH 13, 2015

Item	Item Description	Units	Quantity	Unit Cost	Amount
1505.1	Mobilization	LS	All Reqd	10%	$1,428,988
1570.1	Erosion and Sediment Control - Upland Measures and Monitoring	LS	All Reqd	$25,000	$25,000
1570.2	Silt Containment Boom with Navigation Lights	LF	1,500	$30	$45,000
2060.1	Demolition, Salvage and Disposal	LS	All Reqd	$150,000	$150,000
2201.1	Clearing & Grubbing	AC	1.5	$10,000	$15,000
2202.1	Useable Excavation	CY	2,500	$12	$30,000
2202.2	Class A Shot Rock Borrow	CY	8,000	$30	$240,000
2202.3	Class B Shot Rock Borrow	CY	9,000	$22	$198,000
2202.4	Re-Grade Existing Parking Area	LS	All Reqd	$3,000	$3,000
2205.1	Class II Armor Rock	CY	6,000	$60	$360,000
2205.2	Class III Armor Rock	CY	3,000	$70	$210,000
2401.1	Furnish 16" Dia. HDPE Wastewater Outfall Pipe	LF	2,500	$40	$100,000
2401.2	Install 16" Dia. HDPE Wastewater Outfall Pipe Sta. 1+50 - 6+50	LF	505	$80	$40,400
2401.3	Install 16" Dia. HDPE Wastewater Outfall Pipe Sta. 6+50 - 7+75	LF	130	$110	$14,300
2401.4	Install 16" Dia. HDPE Wastewater Outfall Pipe Sta. 7+75 - 26+10	LF	1850	$320	$592,000
2401.5	Furnish and Install Wastewater Outfall Diffuser	LS	All Reqd	$15,000	$15,000
2401.6	Connect to Existing 16" Dia. HDPE Outfall Pipe	LS	All Reqd	$8,000	$8,000
2402.1	Furnish and Install Wastewater Outfall Concrete Anchor, Type I	EA	175	$75	$13,125
2402.2	Furnish and Install Wastewater Outfall Concrete Anchor, Type II	EA	20	$100	$2,000
2501.1	8" CPEP Storm Drain Pipe	LF	165	$50	$8,250
2501.2	24" CPEP Storm Drain Pipe	LF	200	$100	$20,000
2501.3	36" CPEP Storm Drain Pipe	LF	540	$130	$70,200
2501.4	Connect to Existing Storm Drain Pipe	EA	4	$500	$2,000
2502.1	Storm Drain Manhole Type I	EA	3	$10,000	$30,000
2502.2	Storm Drain Manhole Type II	EA	1	$5,000	$5,000
2502.3	Storm Drain Oil-Water Separator	EA	1	$40,000	$40,000
2502.4	Storm Drain Outfall Structure	LS	All Reqd	$40,000	$40,000
2702.1	Construction Surveying	LS	All Reqd	$150,000	$150,000
2714.1	Geotextile Fabric	SY	15,000	$5	$75,000
2881.1	Dredging and Offshore Disposal	CY	110,000	$25	$2,750,000
2881.2	Dredging and Onshore Placement at Parking Area	CY	25,000	$35	$875,000
2896.1	Furnish & Install Wave Barrier Pile, 24 Inch Dia. X 0.500 Inch Thick w/Sheetpile Wing	EA	131	$30,000	$3,930,000
2896.2	Furnish Bearing Pile, 30 Inch Dia. X 0.750 Inch Thick	LF	7,920	$230	$1,821,600
2896.3	Install Bearing Pile, 30 Inch Dia. X 0.750 Inch Thick	EA	44	$30,000	$1,320,000
2896.4	Spin Fin®, 30 Inch Dia. Pile	EA	42	$5,000	$210,000
2896.5	Install Salvaged 12 Inch Dia. Steel Pile	EA	4	$4,000	$16,000
2901.1	Furnish & Install Barrier Waler	LF	700	$600	$420,000
2901.2	Furnish & Install Bearing Caps & Connections	EA	22	$23,000	$506,000
2901.3	Wave Barrier Amenities - Fenders, Light, Armor Excavation, Misc.	LS	All Reqd	$160,000	$160,000
	ESTIMATED CONSTRUCTION BID PRICE				**$15,938,863**
	CONTINGENCY & COMPENSATORY MITIGATION (8%)				**$1,275,109**
	PLANNING, ALTERNATIVES ANALYSIS & PUBLIC INVOLVEMENT				**$260,777**
	ENVIRONMENTAL INVESTIGATIONS, HABITAT STUDIES & PERMITTING				**$417,740**
	GEOTECHNICAL INVESTIGATIONS				**$878,946**
	SITE TOPOGRAPHIC & BATHYMETRIC SURVEYS				**$96,893**
	FINAL ENGINEERING DESIGN & BID READY CONTRACT DOCUMENTS				**$1,139,841**
	CONTRACT ADMIN & CONSTRUCTION INSPECTION				**$1,115,720**
	TOTAL RECOMMENDED PROJECT BUDGET				**$21,123,889**

NOTE: Costs for the parking area assume a gravel surface. Future paving, sidewalks, curbs, utilities, landscaping, restrooms and lighting improvements are not included in this estimate. Pile anodes are not included in this estimate.

SOUTH PORTAGE COVE HARBOR EXPANSION
PROJECT SCHEDULE
WAVE BARRIER, DREDGING, SEWER OUTFALL & PARKING AREA ROUGH GRADE

ID	Task Name	Start	Finish
1	HB NTP for Site Investigations & Final Design	Tue 3/18/14	Tue 3/18/14
2	Prepare SAP & Agency Review	Mon 3/24/14	Fri 8/22/14
3	Optimize Wave Barrier Configuration - 15% Design	Mon 8/11/14	Tue 10/14/14
4	Conduct Geotechnical & Environmental Investigations	Tue 8/26/14	Mon 9/22/14
5	Geotechnical & Environmental Sample Analysis	Tue 9/23/14	Mon 10/27/14
6	Prepare Environmental Soil Characterization Report	Tue 10/28/14	Tue 11/25/14
7	Prepare Final Geotechnical Report	Tue 10/28/14	Fri 3/27/15
8	Prepare 35% Preliminary Design Dwgs	Wed 10/15/14	Wed 12/17/14
9	HB Review 35% Design Submittal	Thu 12/18/14	Fri 1/9/15
10	Prepare Permit Applications & Compensatory Mitigation Plan	Mon 1/12/15	Fri 4/17/15
11	Agency Reviews and Permit Authorizations	Mon 4/20/15	Fri 7/17/15
12	Prepare 65% Design Development Submittal	Mon 1/12/15	Fri 3/13/15
13	HB Review 65% Documents	Mon 3/16/15	Fri 3/27/15
14	Prepare 95% Final Design Submittal	Mon 3/30/15	Fri 5/29/15
15	HB Review 95% Documents	Mon 6/1/15	Fri 6/12/15
16	Stamped Bid Ready Contract Documents	Mon 6/15/15	Fri 7/17/15
17	Reproduce Plan Sets, Advertise & Open Construction Bids	Mon 7/20/15	Tue 8/25/15
18	Assembly Award, Contract, NTP for Construction Contract	Wed 8/26/15	Fri 9/11/15
19	Submittals, Steel Fabrication & Delivery	Mon 9/14/15	Wed 6/15/16
20	Anticipated In Water Work Restrictions	Fri 4/1/16	Wed 6/15/16
21	Construction to Substantial Completion	Mon 9/14/15	Wed 5/31/17
22	Punch List and Final Completion	Thu 6/1/17	Fri 6/30/17

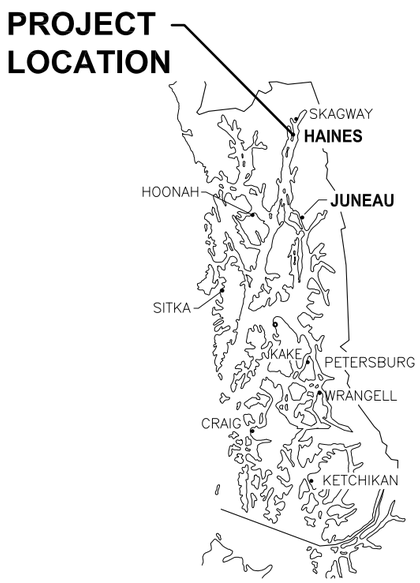


PND No. 102029
March 13, 2015

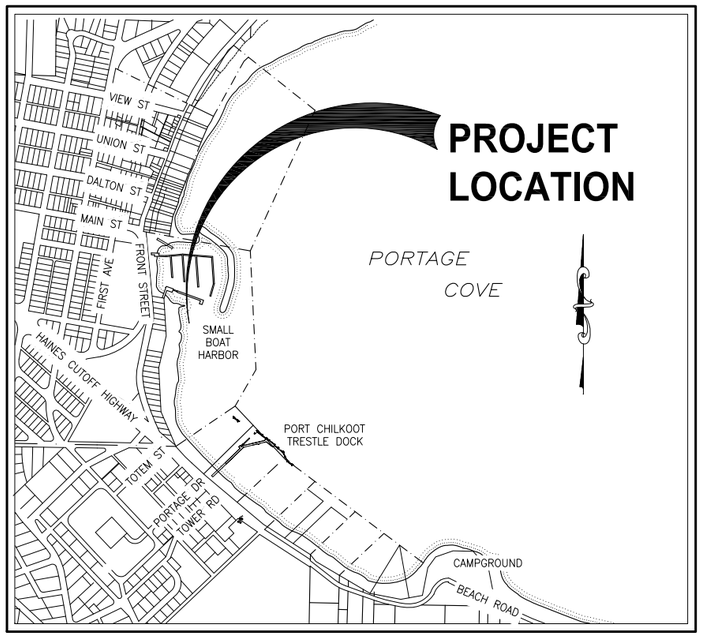
Task	Rolled Up Split	External Milestone	Duration-only	Progress
Split	Rolled Up Milestone	Inactive Task	Manual Summary Rollup	Deadline
Milestone	Rolled Up Progress	Inactive Milestone	Manual Summary	
Summary	External Tasks	Inactive Summary	Start-only	
Rolled Up Task	Project Summary	Manual Task	Finish-only	

HAINES BOROUGH
SOUTH PORTAGE COVE HARBOR EXPANSION

LOCATION MAP



SOUTHEAST ALASKA



MAP MODIFIED FROM: HAINES BOROUGH

VICINITY MAP

SCALE (FEET)
0 750 1500

DRAWING INDEX		
SHEET NO.	DWG. NO.	TITLE
		GENERAL
1 OF 23	1.01	COVER SHEET, VICINITY MAPS AND DRAWING INDEX
2 OF 23	1.02	GENERAL NOTES, LEGEND AND ABBREVIATIONS
3 OF 23	1.03	EXISTING CONDITIONS & SURVEY CONTROL
4 OF 23	1.04	GENERAL SITE PLAN
5 OF 23	1.05	DEMOLITION PLAN
		WASTEWATER OUTFALL
6 OF 23	2.01	WASTEWATER OUTFALL PLAN & PROFILE
7 OF 23	2.02	WASTEWATER OUTFALL DETAILS
		DREDGING
8 OF 23	3.01	DREDGING PLAN
9 OF 23	3.02	DREDGING SECTIONS
10 OF 23	3.03	DREDGING OFFSHORE DISPOSAL PLAN
		UPLANDS
11 OF 23	4.01	UPLAND SITE PLAN & PROFILE
12 OF 23	4.02	STORM DRAIN DETAILS
13 OF 23	4.03	STORM DRAIN DETAILS
		STRUCTURAL
14 OF 23	5.01	WAVE BARRIER SITE PLAN
15 OF 23	5.02	WAVE BARRIER PARTIAL PLAN
16 OF 23	5.03	PARTIAL ELEVATION
17 OF 23	5.04	TYPICAL SECTIONS
18 OF 23	5.05	PILE SCHEDULE
19 OF 23	5.06	PILE SCHEDULE
20 OF 23	5.07	BEARING PILES AND WALERS
21 OF 23	5.08	BEARING PILE DETAILS
22 OF 23	5.09	BOX CAPS DETAILS
23 OF 23	5.10	FENDER AND MARINE SIGNAL LIGHT

PND ENGINEERS, INC. (PND) IS NOT RESPONSIBLE FOR SAFETY PROGRAMS, METHODS OR PROCEDURES OF OPERATION, OR THE CONSTRUCTION OF THE DESIGN SHOWN ON THESE DRAWINGS. DRAWINGS ARE FOR THE USE OF THIS PROJECT ONLY AND ARE NOT INTENDED FOR REUSE WITHOUT WRITTEN APPROVAL FROM PND. DRAWINGS ARE ALSO NOT TO BE USED IN ANY MANNER THAT WOULD CONSTITUTE A DETRIMENT DIRECTLY OR INDIRECTLY TO PND.

TIDAL DATA
HIGHEST OBSERVED WATER LEVEL (APPROX.) = 26.1 FEET
EXTREME HIGH WATER = 22.5 FEET
HIGH TIDE LINE = 21.2 FEET
MEAN HIGH WATER = 15.8 FEET
MEAN LOWER WATER = 1.6 FEET
MEAN LOWER LOW WATER = 0 FEET
MEAN LOWER LOW WATER (MLLW)
LOWEST OBSERVED WATER LEVEL (APPROX.) = -6.7 FEET

FROM: NOAA NOS/CO-OPS STATION ID:9452400 SKAGWAY, ALASKA

PROJECT SCHEDULE	
DESCRIPTION	SCHEDULE
1. SUBSTANTIAL COMPLETION	MAY 31, 2017
2. FINAL COMPLETION OF ALL WORK UNDER THIS CONTRACT.	JUNE 30, 2017

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: TCB CHECKED: CRS
DRAWN: PJD APPROVED:
SCALE: AS SHOWN
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
COVER SHEET, VICINITY MAPS AND DRAWING INDEX

PND PROJECT NO.: 102029

1.01
SHEET 1 OF 23

GENERAL NOTES

1. **EROSION AND POLLUTION CONTROL PLANS**

   THE CONTRACTOR SHALL DEVELOP AND SUBMIT FOR ENGINEER AND AGENCY REVIEW AND APPROVAL A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THIS PLAN SHALL INCLUDE AN EROSION AND SEDIMENT CONTROL PLAN BASED UPON THE CONTRACTOR'S SCHEDULING, EQUIPMENT AND WORK. TO THE GREATEST EXTENT POSSIBLE FOLLOW THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT/PF) ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE (ASWPPPG). THE PLAN SHALL CONSIDER FIRST PREVENTING EROSION, THEN MINIMIZING AND TRAPPING SEDIMENT PRIOR TO ITS ENTERING THE WATERWAYS. THE PLAN MUST ADDRESS THE SITE-SPECIFIC CONTROLS AND MANAGEMENT FOR THE CONSTRUCTION SITE AS WELL AS ALL MATERIAL SITES, WASTE DISPOSAL SITES AND AFFECTED AREAS. THE PLAN MUST INCORPORATE ALL THE REQUIREMENTS OF THE PROJECT PERMITS. BEST MANAGEMENT PRACTICES AS LISTED IN THE ASWPPPG SHALL BE USED.

   THE CONTRACTOR SHALL PREPARE A HAZARDOUS MATERIAL CONTROL PLAN (HMCP) FOR THE HANDLING, STORAGE, CLEAN-UP AND DISPOSAL OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES. THE CONTRACTOR SHALL LIST AND GIVE LOCATIONS OF ALL HAZARDOUS MATERIALS, INCLUDING FIELD OFFICE MATERIALS, TO BE USED AND STORED ON-SITE AND THEIR ESTIMATED QUANTITIES. THE PLAN SHALL PROVIDE DETAILS FOR STORING THESE MATERIALS AS WELL AS DISPOSING WASTE PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS GENERATED BY THE PROJECT.

   IDENTIFY THE LOCATIONS WHERE HAZARDOUS MATERIAL STORAGE, FUELING AND MAINTENANCE ACTIVITIES WILL TAKE PLACE. IF ON-SITE, DESCRIBE THE MAINTENANCE ACTIVITIES AND LIST ALL CONTROLS TO PREVENT THE ACCIDENTAL SPILLAGE OF OIL, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS. DETAIL PROCEDURES FOR CONTAINMENT AND CLEANUP OF HAZARDOUS SUBSTANCES INCLUDING A LIST OF THE TYPES AND QUANTITIES OF EQUIPMENT AND MATERIALS AVAILABLE ON-SITE TO BE USED.

   THE PLAN SHALL PROVIDE DETAILS FOR PREVENTION, CONTAINMENT, CLEAN-UP AND DISPOSAL OF SOIL AND WATER CONTAMINATED BY ACCIDENTAL SPILLS AND FOR UNEXPECTED CONTAMINATED SOIL AND WATER ENCOUNTERED DURING CONSTRUCTION.

2. MATCH EXISTING GRADES AT PROJECT LIMITS AND WHERE REQUIRED TO MATCH ELEVATIONS AT EXISTING ROADS.

3. THE LOCATIONS OF EXISTING FEATURES AND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADDITIONAL UTILITIES MAY BE PRESENT HOWEVER ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS IN THE FIELD AS NECESSARY, PRIOR TO BEGINNING WORK. THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD SHALL BE RECORDED ON THE CONTRACTOR'S RECORD DRAWINGS. CONTACT LOCAL UTILITY COMPANIES PRIOR TO ANY/ ALL EXCAVATIONS AT THE FOLLOWING TELEPHONE NUMBERS:

WATER AND WASTE MATERIAL	(907) 766-2237 OR 766-2200
POWER AND LIGHT (AP&T)	(907) 766-2331
CATV	(907) 766-2137
TELEPHONE (GTE)	(907) 766-2311

4. PROPERTY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION OR BETTER AT NO ADDITIONAL COST.

5. GRADING AND ALIGNMENT OF PIPE, STRUCTURES & FINAL SURFACING ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER TO FIT SITE CONDITIONS. GRADE ALL IMPROVEMENTS WITH POSITIVE DRAINAGE AWAY FROM STRUCTURES.

6. PROPERTY LINE LOCATIONS USED IN THESE PLANS ARE DERIVED FROM RECORD PLATS AND DO NOT REPRESENT A BOUNDARY SURVEY.

LEGEND

EXISTING	THIS PROJECT	
T		TELEPHONE PEDESTAL
V		TELEVISION PEDESTAL
E		ELECTRICAL PEDESTAL
OHE$_x$	OHE	OVERHEAD ELECTRICAL
FU$_x$		BURIED FUEL LINE
EU$_x$	E	ELECTRICAL (UNDERGROUND)
	W	WATER
SS$_x$	SS	SANITARY SEWER
ROW		RIGHT-OF-WAY
CU$_x$		COMMUNICATION (CABLE/TEL)
	SD	STORM DRAIN
FM$_x$	OR 12	FORCE MAIN
	? — ?	ESTIMATION OF LAYER
		PROPERTY LINE
		GRADE BREAK
X X		GEOTEXTILE FABRIC
		GEOTEXTILE REINFORCEMENT
		GUY WIRE ANCHOR
		SURVEY CONTROL
, UP		UTILITY POLE
TMH		TELEPHONE VAULT
		BOLLARD
		CURB & GUTTER
E		ELECTRICAL TRANSFORMER
EMH		ELECTRICAL VAULT
H	H	ELECTRICAL HANDHOLE
		FIRE HYDRANT
	5	LAYOUT POINT
		LIGHT POLE
		TRAFFIC SIGNAL
SSMH		SANITARY SEWER MANHOLE
SDMH		STORM DRAIN MANHOLE
I	S3	STORM DRAIN INLET
		SIGN
		TREE/VEGETATION
		WATER VALVE
	25	LAYOUT RADIUS
	PK	PARKING KIOSK
		SWALE
		GUARDRAIL

ABBREVIATIONS

A	
@	AT
AC	ASBESTOS CEMENT PIPE
ACP	ASPHALT CONCRETE PAVEMENT
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
APF	ASSOCIATED PILE AND FITTING CORP.
APPROX. or APPX.	APPROXIMATE
ATS	ALASKA TIDELANDS SURVEY
AV	AIR RELEASE VALVE
B	
BCC	BEGINNING OF CURB CUT
BFV	BUTTERFLY VALVE
BLDG	BUILDING
BOP/BP	BEGINNING OF PROJECT
BTM, BOT	BOTTOM
C	
C&G	CURB & GUTTER
CB	CATCH BASIN
CBJ	CITY & BOROUGH OF JUNEAU
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
℄	CENTER LINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
C.O.E.	CORPS OF ENGINEERS
COMM	COMMUNICATION
CONC.	CONCRETE
CP	COMPLETE PENETRATION
CPEP/CPP	CORRUGATED POLYETHYLENE PIPE
COR	CORNER
CSC	COUNTERSINK
CTR	CENTER
CY	CUBIC YARD
D	
DCP	DISSIMILAR PIPE COUPLING
D/DIA	DIAMETER
DBL	DOUBLE
DEMO	DEMOLITION
DL	DEAD LOAD
DIP	DUCTILE IRON PIPE
DIM	DIMENSION
DN	DOWN
DTL	DETAIL
E	
E	EAST
EA.	EACH
EC	EDGE OF CONCRETE
ECC	END OF CURB CUT
EG	EXISTING GRADE
EJ	EXPANSION JOINT
EL/ELEV	ELEVATION
ELEL	ELECTRICAL
EP	END OF PAVEMENT
EP	END PROJECT
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
EW	EACH WAY
EXC	EXCAVATE
EXIST	EXISTING
F	
FC	FACE OF CURB
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT, FLAT HEAD
FIN	FINISH (ED)
FM	FORCE MAIN SEWER
FND	FOUNDATION
FOC	FACE OF CURB
FT	FOOT
FTG	FOOTING
FL	FLOWLINE OR FLANGE
G	
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GPM	GALLONS PER MINUTE
GRD	GROUND
GV	GATE VALVE
H	
H&T	HUB & TACK
HD	HEAVY DUTY
HDG	HOT-DIPPED GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HSE	HOUSE
HT	HEIGHT
HWY.	HIGHWAY
I	
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
IP	IRON PIPE
INCL	INCLUDE (D) (ING)
INSUL	INSULATE (D) (ION)
INV	INVERT
J	
JB	JUNCTION BOX
L	
LBS	POUNDS
LF	LINEAR FEET
LL	LIVE LOAD
LOC	LOCATION
LS	LUMP SUM
M	
MAX	MAXIMUM
M.E.	MATCH EXISTING
MECH	MECHANICAL
MFR	MANUFACTURE (R)
MH	MANHOLE
MJ	MECHANICAL JOINT
MI	MALLEABLE IRON
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MSF	1000 SQUARE FEET
MSE	MECHANICALLY STABILIZED EARTH
MTL	MATERIAL (S)
N	
N	NORTH
NFS	NON FROST SUSCEPTIBLE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
O	
OBD	OVERBURDEN
OC	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GOUND
OHE	OVERHEAD ELECTRICAL
OWS	OIL-WATER SEPARATOR
OPP	OPPSITE
P	
P	PIPE
PC	POINT OF CURVATURE, PIECE
PCC	PRECAST CONCRATE
	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PED	PEDESTAL
PER	PERIMETER
PERF	PERFORATE (D)
PI	POINT OF INTERSECTION
PLWD	PLYWOOD
PL	PROPERTY LINE, PLATE
POC	POINT OF CURVE
PP	POLYPROPYLENE
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PRKG	PARKING
PRV	PRESSURE REDUCING VALVE
PSI	POUND PER SQUARE INCH
PT	POINT, PRESSURE TREATED, POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE, POLY-VINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
Q	
QTY	QUANTITY
R	
RAD	RADIUS
RE	RIM ELEVATION
REF	REFERENCE
REINF	REINFORCEMENT
REQD	REQUIRED
RET	RETAINING
RO	ROUGH OPENING
ROW	RIGHT OF WAY
S	
S	SOUTH
SCHED/SCH	SCHEDULE
SD	STORM DRAIN
SDI	STORM DRAIN INLET STRUCTURE
SDO	STORM DRAIN OUTLET STRUCTURE
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FOOT
SHLDR	SHOULDER
SI	STREET INTERSECTION
SPEC	SPECIFICATION (S)
SQ	SQUARE
SRB	SHOT ROCK BORROW
SSC	SANITARY SEWER CONNECTION
SS	STAINLESS STEEL, SANITARY SEWER
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
STL	STEEL
STRG	STRONG
SW	SIDEWALK
SWR	SEWER
SY	SQUARE YARD
SYM	SYMMETRICAL
T	
t	THICK
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TBC	TOP BACK OF CURB
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCH MARK
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
TH	TEST HOLE
THK	THICK
TRANS	TRANSVERSE
TV	TELEVISION
TYP	TYPICAL
U	
UBC	UNIFORM BUILDING CODE
UE	UNDERGROUND ELECTRIC
UMC	UNIFORM MECHANICAL CODE
UHMW	ULTRA HIGH MOLECULAR WEIGHT
UON/UNO	UNLESS OTHERWISE NOTED
UPC	UNIFORM PLUMBING CODE
V	
VB	VALVE BOX
VERT	VERTICAL
VG	VALLEY GUTTER
W	
W	WEST
W/	WITH
WD	WOOD
WELDMT	WELDMENT
WL	WATERLINE
WQU	WATER QUALITY UNIT
WV	WATER VALVE
WW	WATER WATER
WWTP	WASTE WATER TREATMENT PLANT
W/O	WITHOUT
X	
XFMR	TRANSFORMER
<PT	ANGLE POINT

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REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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9360 Glacier Highway, Ste. 100
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Fax: 907-586-2099
www.pndengineers.com

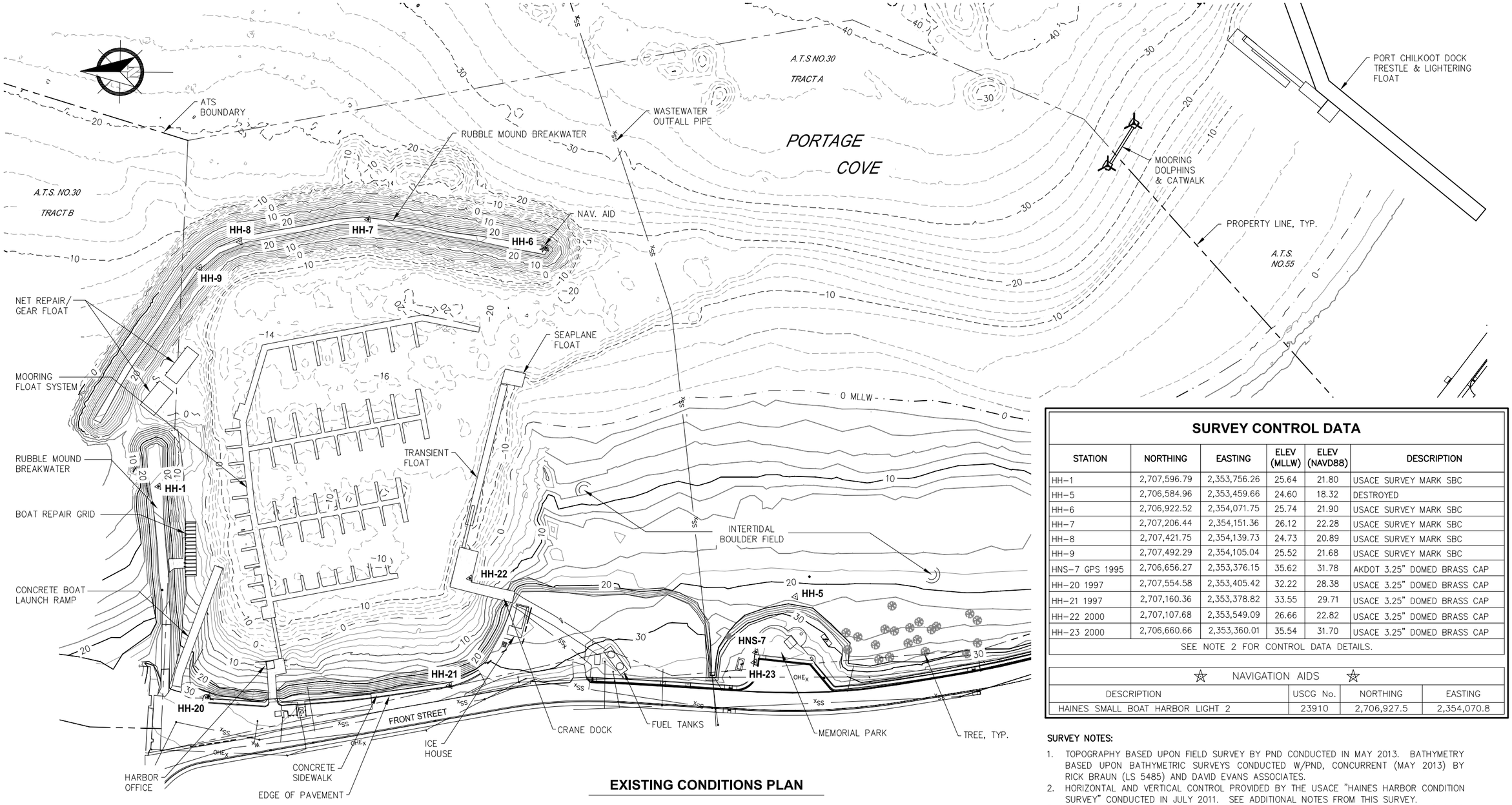
DESIGN: TCB CHECKED: CRS
DRAWN: KLL APPROVED:
SCALE: NTS
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
GENERAL NOTES, LEGEND AND ABBREVIATIONS

PND PROJECT NO.: 102029

1.02
SHEET 2 OF 23



EXISTING CONDITIONS PLAN

SURVEY CONTROL DATA

STATION	NORTHING	EASTING	ELEV (MLLW)	ELEV (NAVD88)	DESCRIPTION
HH-1	2,707,596.79	2,353,756.26	25.64	21.80	USACE SURVEY MARK SBC
HH-5	2,706,584.96	2,353,459.66	24.60	18.32	DESTROYED
HH-6	2,706,922.52	2,354,071.75	25.74	21.90	USACE SURVEY MARK SBC
HH-7	2,707,206.44	2,354,151.36	26.12	22.28	USACE SURVEY MARK SBC
HH-8	2,707,421.75	2,354,139.73	24.73	20.89	USACE SURVEY MARK SBC
HH-9	2,707,492.29	2,354,105.04	25.52	21.68	USACE SURVEY MARK SBC
HNS-7 GPS 1995	2,706,656.27	2,353,376.15	35.62	31.78	AKDOT 3.25" DOMED BRASS CAP
HH-20 1997	2,707,554.58	2,353,405.42	32.22	28.38	USACE 3.25" DOMED BRASS CAP
HH-21 1997	2,707,160.36	2,353,378.82	33.55	29.71	USACE 3.25" DOMED BRASS CAP
HH-22 2000	2,707,107.68	2,353,549.09	26.66	22.82	USACE 3.25" DOMED BRASS CAP
HH-23 2000	2,706,660.66	2,353,360.01	35.54	31.70	USACE 3.25" DOMED BRASS CAP
SEE NOTE 2 FOR CONTROL DATA DETAILS.					

NAVIGATION AIDS

DESCRIPTION	USCG No.	NORTHING	EASTING
HAINES SMALL BOAT HARBOR LIGHT 2	23910	2,706,927.5	2,354,070.8

SURVEY NOTES:

1. TOPOGRAPHY BASED UPON FIELD SURVEY BY PND CONDUCTED IN MAY 2013. BATHYMETRY BASED UPON BATHYMETRIC SURVEYS CONDUCTED W/PND, CONCURRENT (MAY 2013) BY RICK BRAUN (LS 5485) AND DAVID EVANS ASSOCIATES.
2. HORIZONTAL AND VERTICAL CONTROL PROVIDED BY THE USACE "HAINES HARBOR CONDITION SURVEY" CONDUCTED IN JULY 2011. SEE ADDITIONAL NOTES FROM THIS SURVEY.
3. ALL EXISTING UTILITIES ARE SHOWN APPROXIMATE FROM SURVEYED INFORMATION AND ALSO AS-BUILT RECORDS PROVIDED BY THE HAINES BOROUGH.

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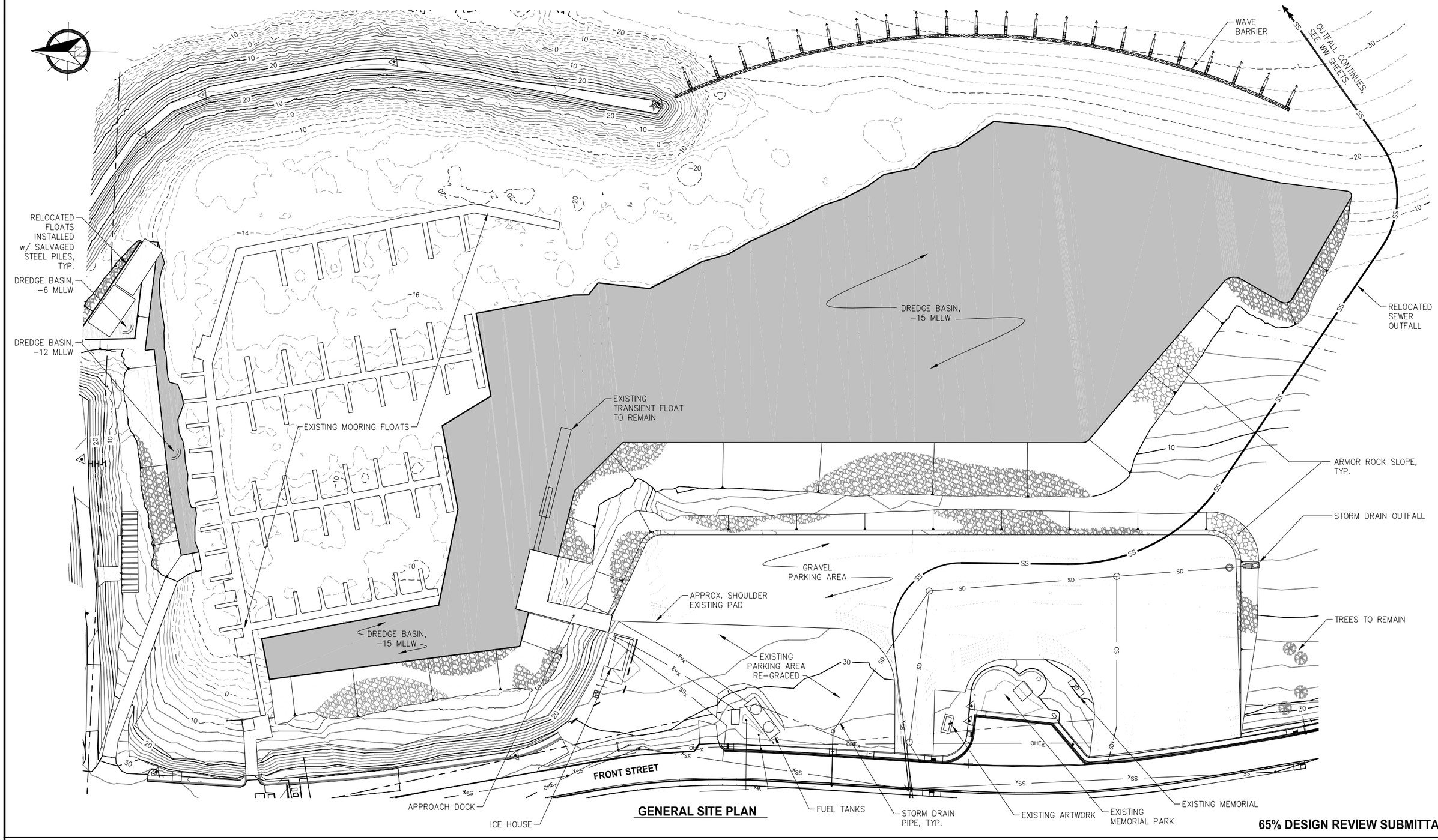
DRAWN: PJD APPROVED:
SCALE: SCALE IN FEET 0 80 160 FT.
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
EXISTING CONDITIONS AND SURVEY CONTROL

PND PROJECT NO.: 102029

1.03
SHEET 3 OF 23



GENERAL SITE PLAN

65% DESIGN REVIEW SUBMITTAL

HAINES BOROUGH ALASKA

REVISIONS

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SCALE: SCALE IN FEET
0 50 100 FT.

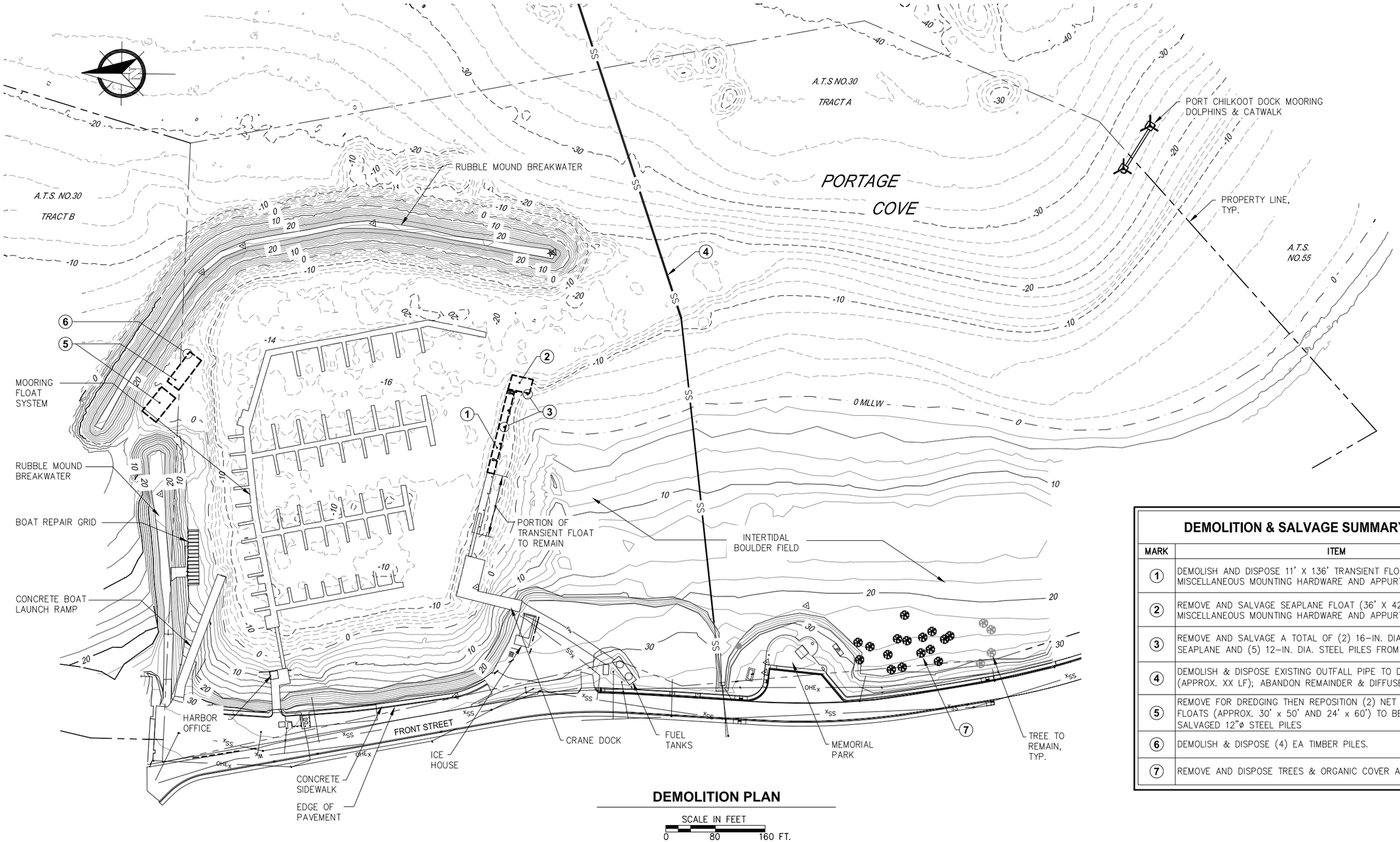
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
GENERAL SITE PLAN

PND PROJECT NO.: 102029

1.04
SHEET 4 OF 23



DEMOLITION PLAN

SCALE IN FEET

0 80 160 FT.

DEMOLITION & SALVAGE SUMMARY TABLE

MARK	ITEM
1	DEMOLISH AND DISPOSE 11' X 136' TRANSIENT FLOAT INCLUDING ALL MISCELLANEOUS MOUNTING HARDWARE AND APPURTENANCES.
2	REMOVE AND SALVAGE SEAPLANE FLOAT (36' X 42') INCLUDING ALL MISCELLANEOUS MOUNTING HARDWARE AND APPURTENANCES.
3	REMOVE AND SALVAGE A TOTAL OF (2) 16–IN. DIA. STEEL PILES FROM SEAPLANE AND (5) 12–IN. DIA. STEEL PILES FROM TRANSIENT FLOATS.
4	DEMOLISH & DISPOSE EXISTING OUTFALL PIPE TO DREDGING LIMITS, (APPROX. XX LF); ABANDON REMAINDER & DIFFUSER IN PLACE.
5	REMOVE FOR DREDGING THEN REPOSITION (2) NET REPAIR/ GEAR FLOATS (APPROX. 30' x 50' AND 24' x 60') TO BE REINSTALLED WITH SALVAGED 12"ø STEEL PILES
6	DEMOLISH & DISPOSE (4) EA TIMBER PILES.
7	REMOVE AND DISPOSE TREES & ORGANIC COVER AS REQUIRED.

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HAINES BOROUGH ALASKA

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DATE: 3/13/15

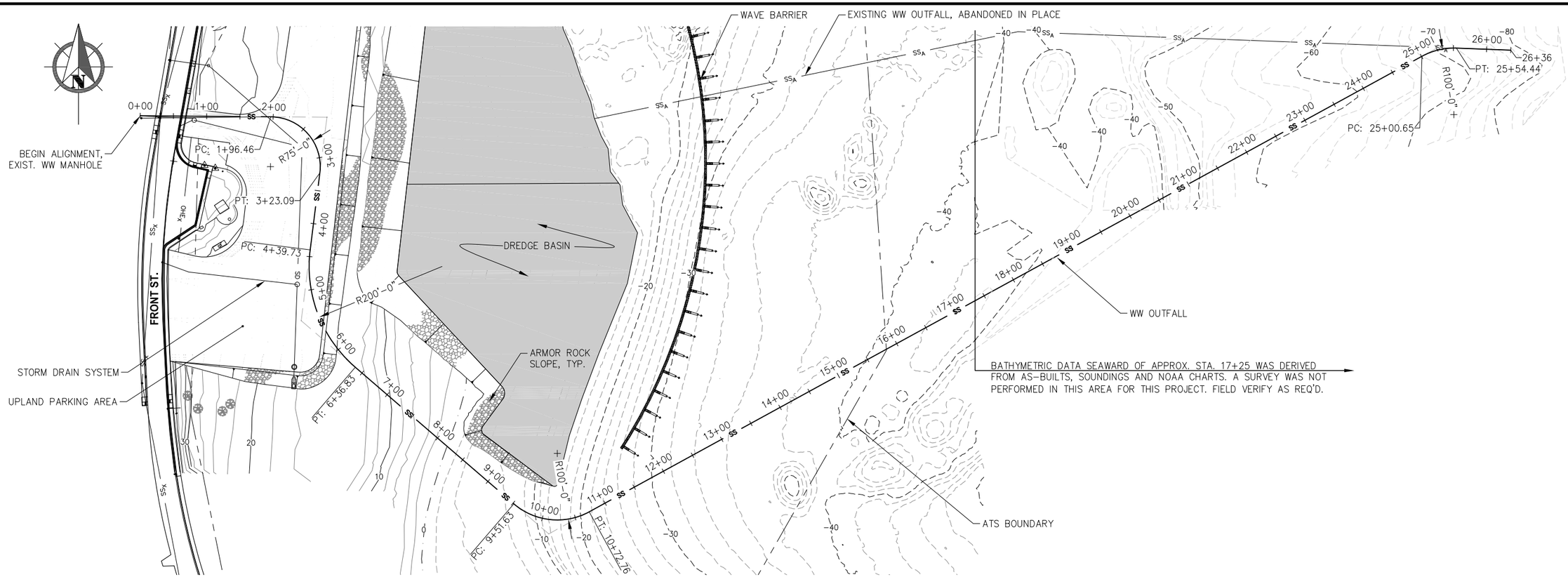
HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **DEMOLITION PLAN**

PND PROJECT NO.: 102029

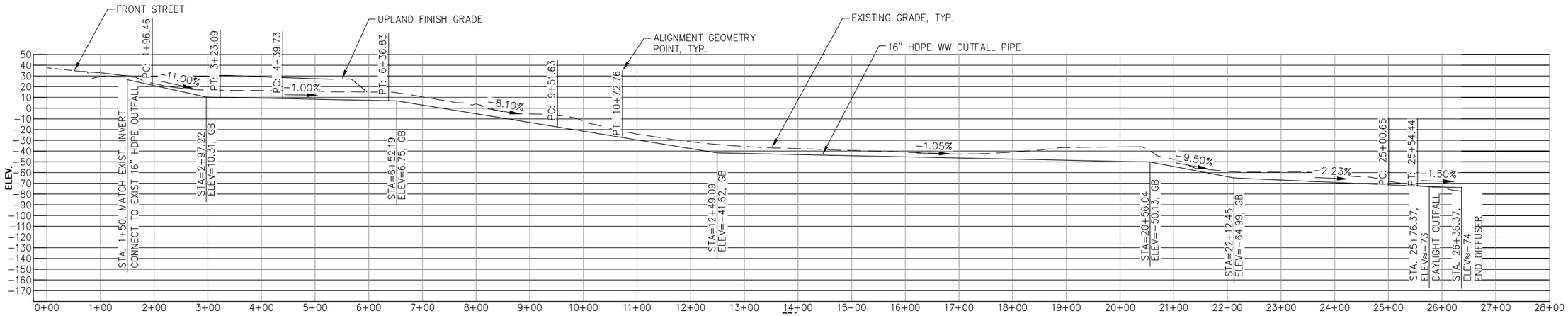
1.05

SHEET 5 OF 23



WASTEWATER OUTFALL PLAN

SCALE IN FEET
0 80 160 FT.



WASTEWATER OUTFALL PROFILE

SCALE IN FEET
0 100 200 FT.

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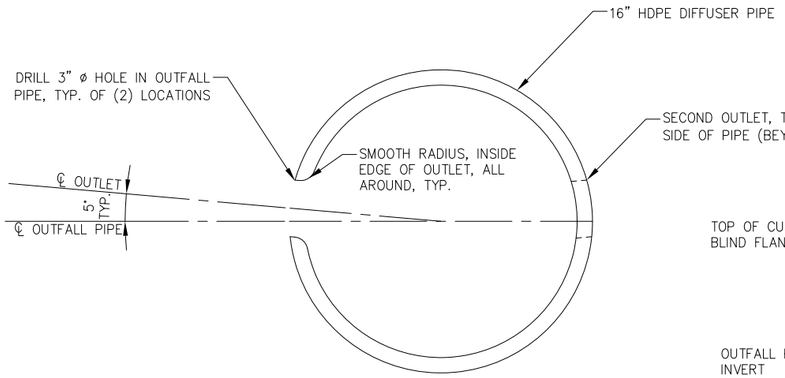
HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

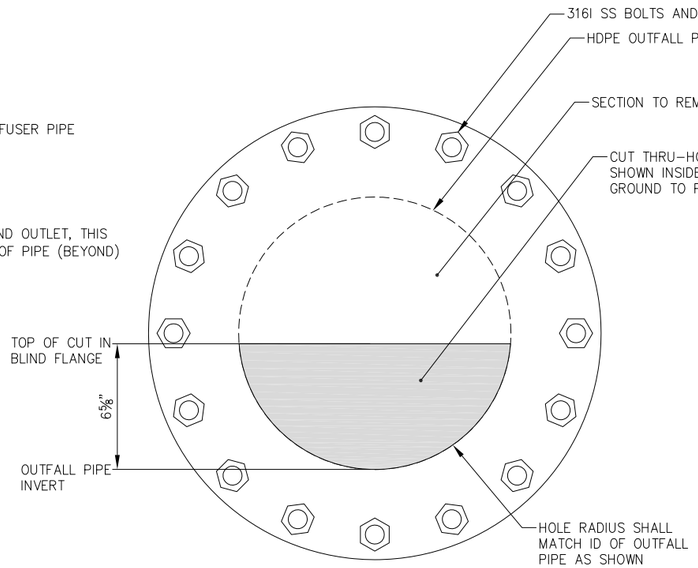
SHEET TITLE:
WASTEWATER OUTFALL PLAN & PROFILE

PND PROJECT NO.: 102029

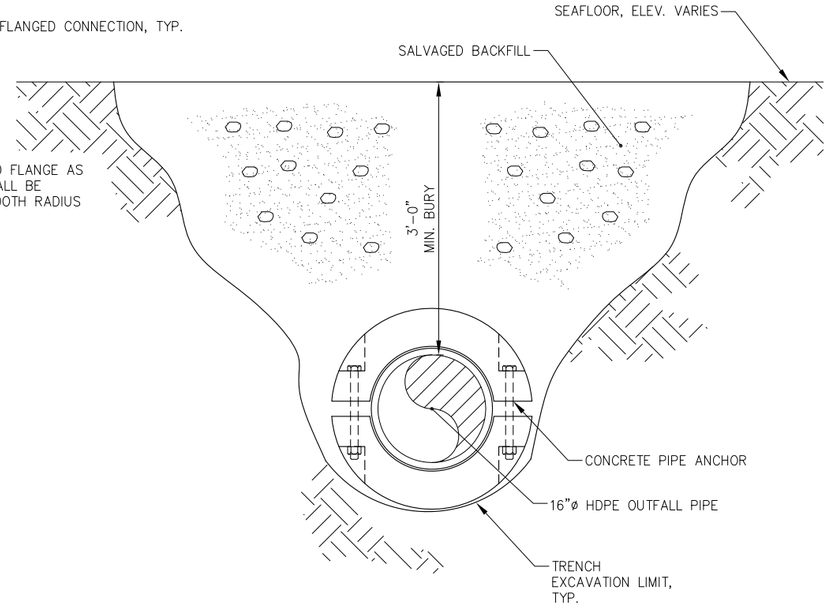
2.01
SHEET 6 OF 23



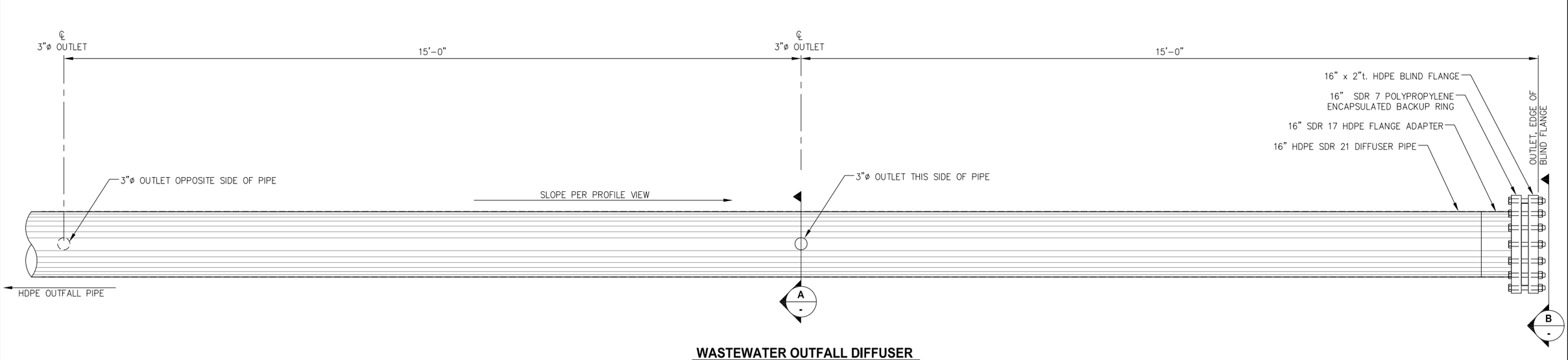
A - DIFFUSER OUTLET TYPICAL SECTION



B - DIFFUSER END ELEVATION



OUTFALL PIPE TRENCH SECTION



WASTEWATER OUTFALL DIFFUSER ELEVATION

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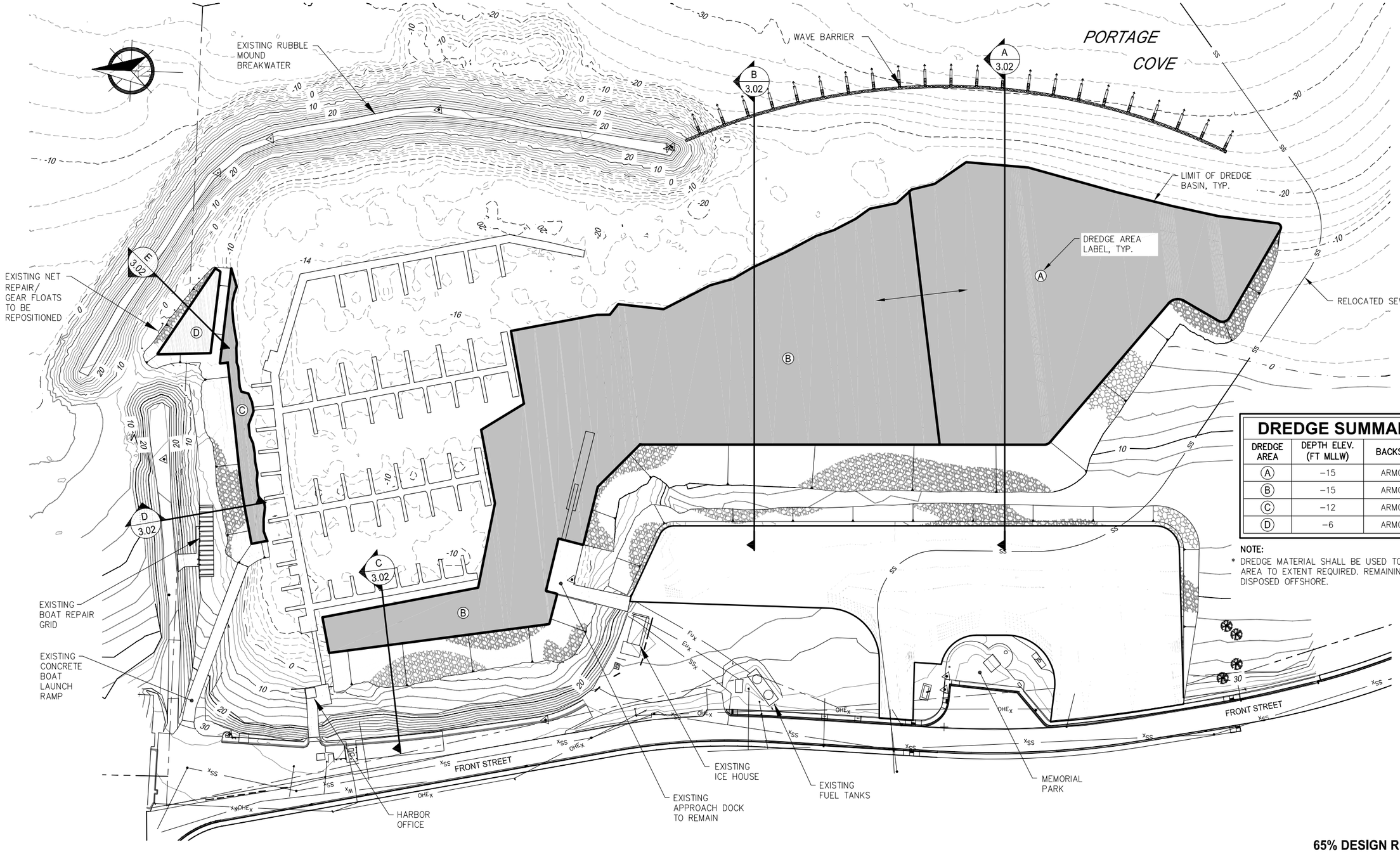
SCALE: NTS
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **WASTEWATER OUTFALL DETAILS**

PND PROJECT NO.: 102029

2.02
SHEET 7 OF 23



DREDGE SUMMARY TABLE

DREDGE AREA	DEPTH ELEV. (FT MLLW)	BACKSLOPE	DISPOSAL
Ⓐ	−15	ARMORED	UPLAND *
Ⓑ	−15	ARMORED	OFFSHORE
Ⓒ	−12	ARMORED	OFFSHORE
Ⓓ	−6	ARMORED	OFFSHORE

NOTE:

* DREDGE MATERIAL SHALL BE USED TO FILL UPLAND PARKING AREA TO EXTENT REQUIRED. REMAINING MATERIAL SHALL BE DISPOSED OFFSHORE.

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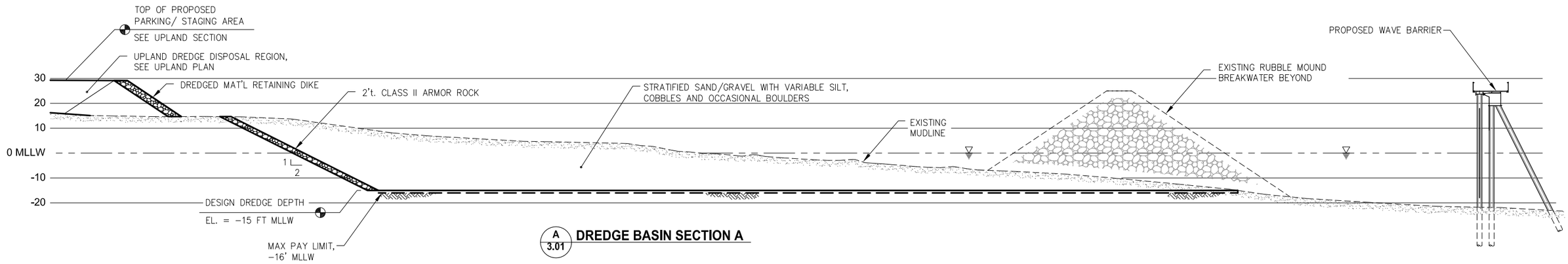
SCALE: SCALE IN FEET 0 60 120 FT.
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **DREDGING PLAN**

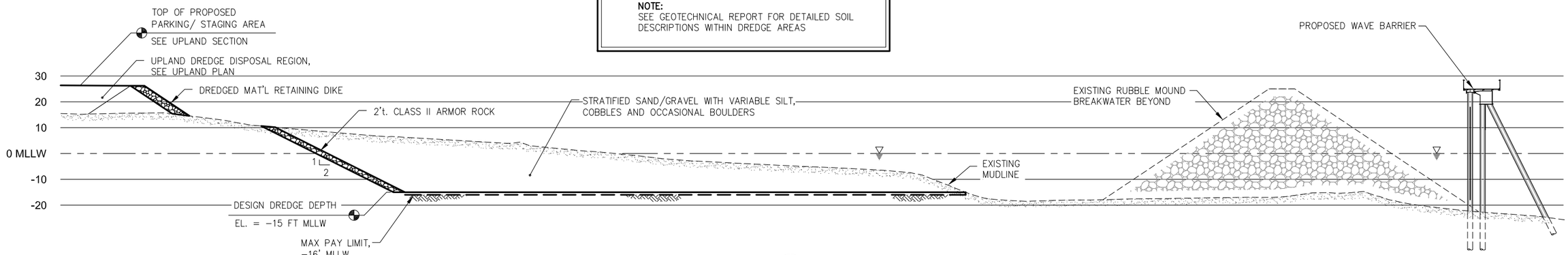
PND PROJECT NO.: 102029

3.01
SHEET 8 OF 23

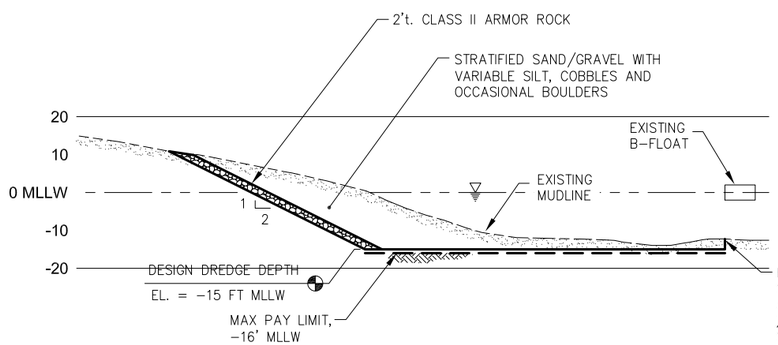


A 3.01 **DREDGE BASIN SECTION A**

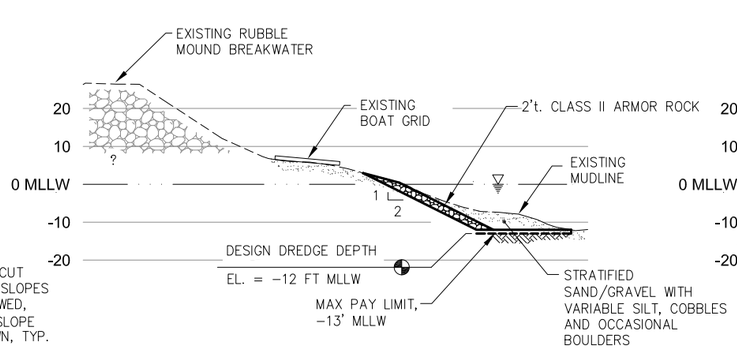
NOTE:
SEE GEOTECHNICAL REPORT FOR DETAILED SOIL DESCRIPTIONS WITHIN DREDGE AREAS



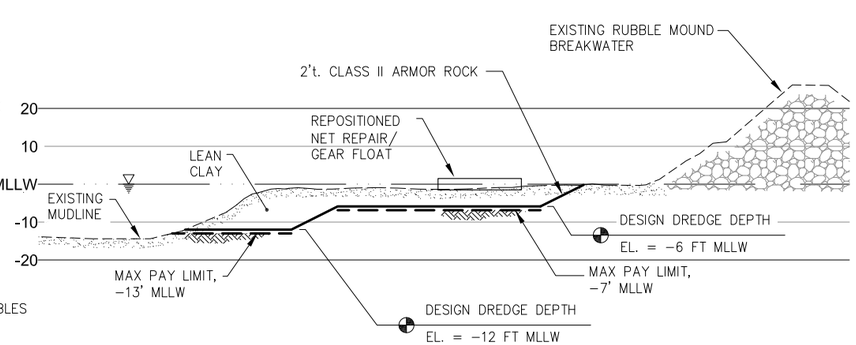
B 3.01 **DREDGE BASIN SECTION B**



C 3.01 **DREDGE BASIN SECTION C**



D 3.01 **DREDGE BASIN SECTION D**



E 3.01 **DREDGE BASIN SECTION E**

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DRAWN: PJD APPROVED:
SCALE: SCALE IN FEET 0 20 40 FT.
DATE: 3/13/15

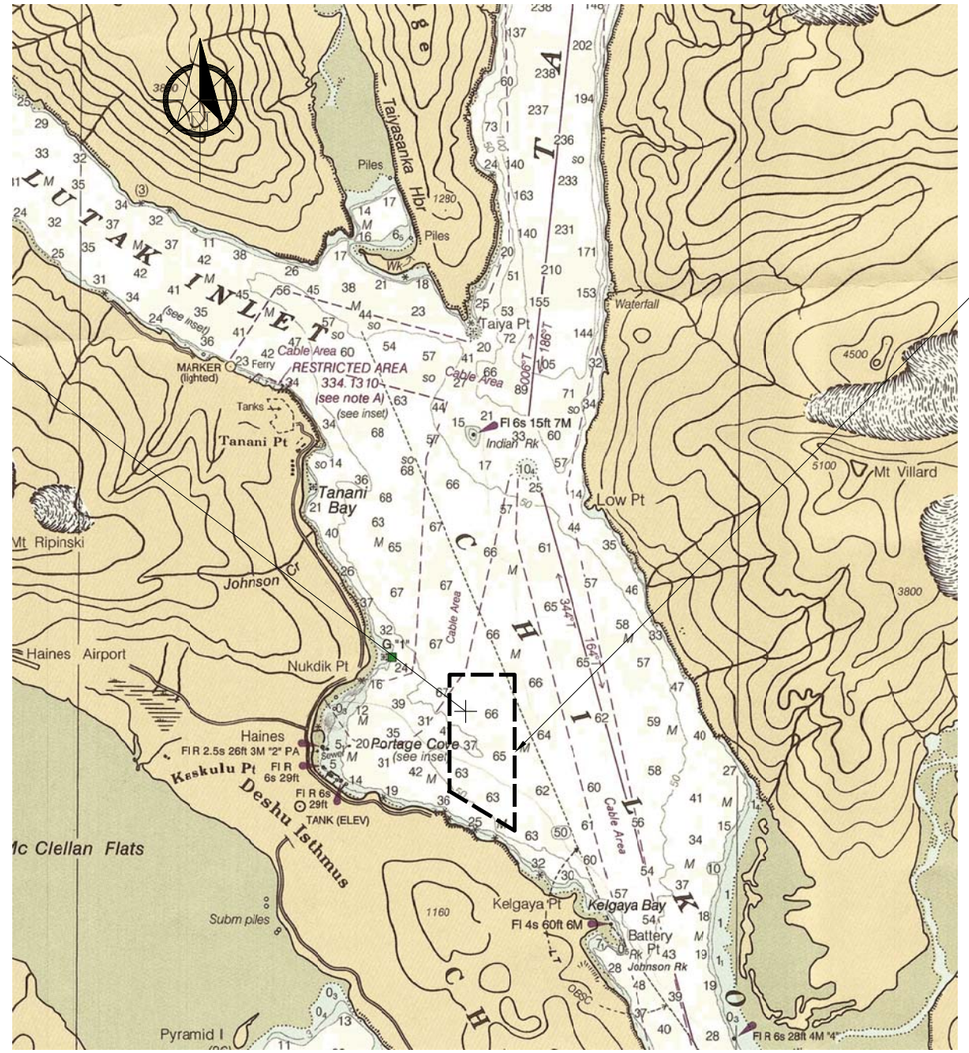
HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **DREDGING SECTIONS**

PND PROJECT NO.: 102029

3.02

SHEET 9 OF 23



OFFSHORE DISPOSAL SITE CENTER:

LAT: N 59°14'18"

LONG: W 135°24'12"

NOTE:
CENTER LOCATION APPROXIMATE

BATHYMETRY FROM: NOAA 17317
LYNN CANAL – SHERMAN POINT TO SKAGWAY

DISPOSAL SITE PLAN

SCALE IN MILES
0 ¼ ½

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

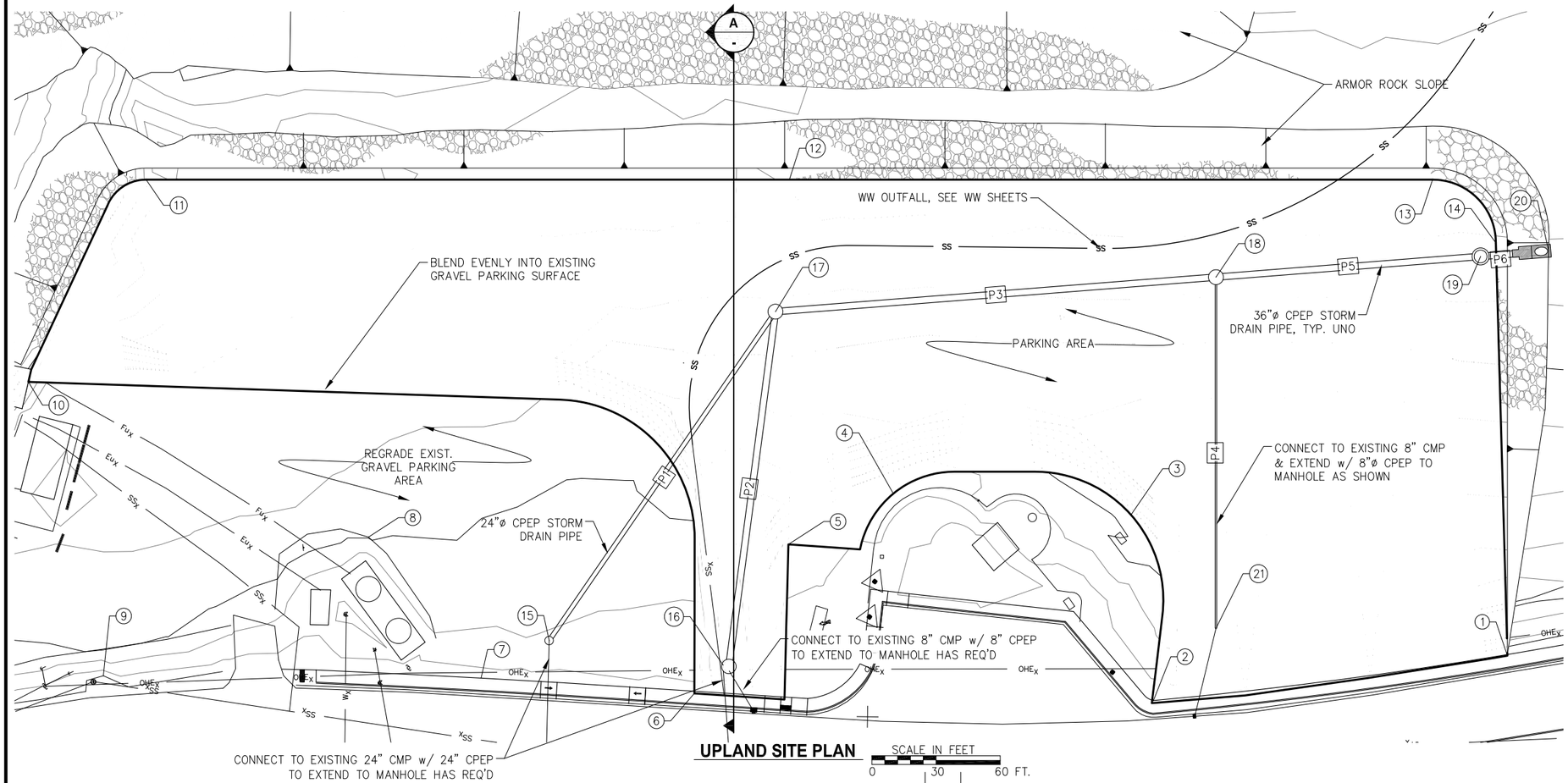
DESIGN: NJS CHECKED: CRS
DRAWN: PJD APPROVED:
SCALE: AS SHOWN
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

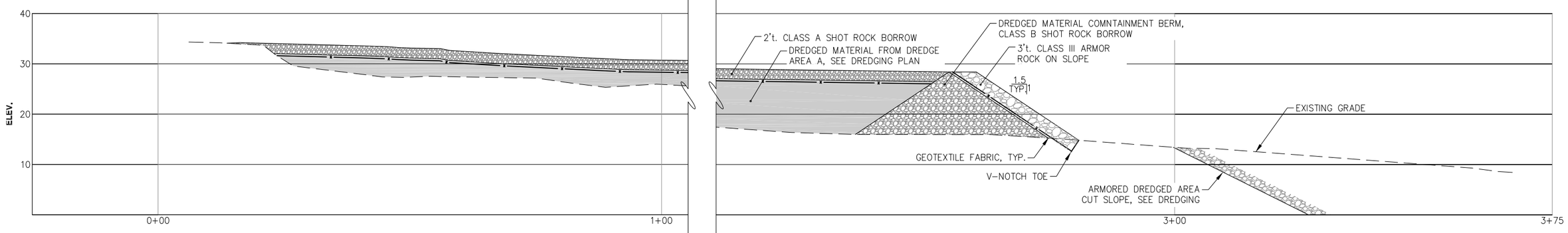
SHEET TITLE: **DREDGING OFFSHORE DISPOSAL SITE PLAN**

PND PROJECT NO.: 102029

3.03
SHEET 10 OF 23



UPLAND SITE PLAN SCALE IN FEET 0 30 60 FT.



A - **UPLAND PROFILE** SCALE IN FEET 0 10 20 FT.

LAYOUT TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2706366.28	2353307.78	35.30	FG
2	2706533.14	2353305.71	35.09	FG
3	2706533.71	2353393.21	29.25	FG
4	2706643.00	2353415.70	33.19	FG
5	2706694.45	2353397.70	32.19	FG
6	2706746.04	2353333.44	34.11	FG
7	2706844.33	2353351.87	33.99	FG
8	2706889.17	2353423.39	29.87	FG
9	2707019.73	2353373.05	35.11	FG
10	2707038.93	2353513.56	27.10	FG
11	2706973.49	2353601.30	25.26	FG
12	2706674.63	2353567.13	29.05	FG
13	2706375.76	2353532.96	27.99	FG
14	2706349.73	2353500.20	28.99	FG
15	2706810.73	2353365.73	32.18	SDMH
16	2706731.20	2353345.06	33.70	SDMH
17	2706688.10	2353506.52	30.05	SDMH
18	2706481.60	2353499.14	27.73	SDMH
19	2706357.55	2353494.70	29.18	SD OWS
20	2706325.63	2353493.81	16.38	SD OUTFALL
21	2706500.25	2353335.96	32.38	CONNECT TO EXIST SD

STORM DRAIN PIPE SUMMARY

DESIGNATION	TYPE	LENGTH (LF)
P1	24" CPEP	190
P2	36" CPEP	170
P3	36" CPEP	210
P4	8" CPEP	165
P5	36" CPEP	125
P6	36" CPEP	15

65% DESIGN REVIEW SUBMITTAL

HAINES BOROUGH ALASKA

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801
Phone: 907-586-2093
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www.pndengineers.com

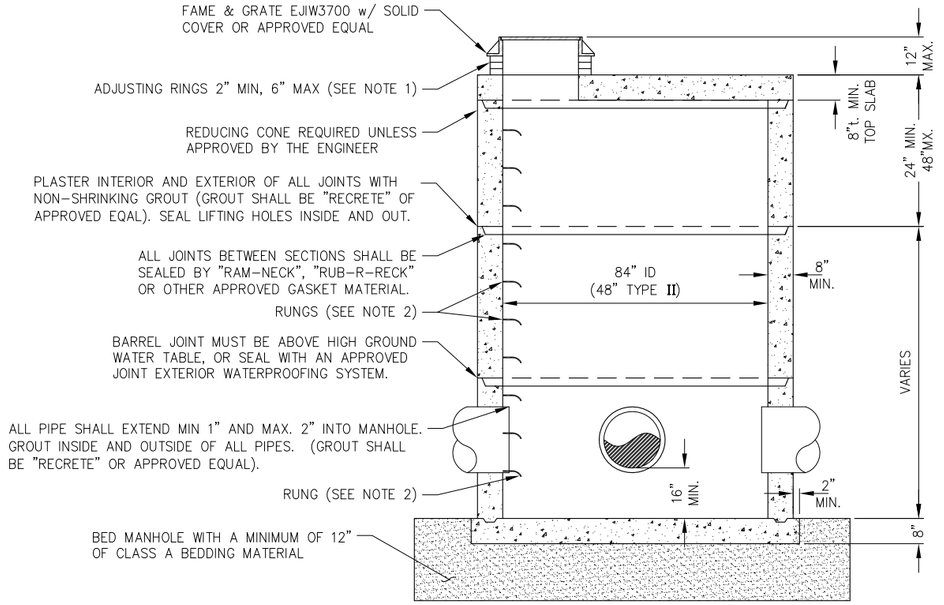
DESIGN: TCB CHECKED: CRS
DRAWN: TCB APPROVED:
SCALE: AS SHOWN
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **UPLAND SITE PLAN AND PROFILE**

PND PROJECT NO.: 102029

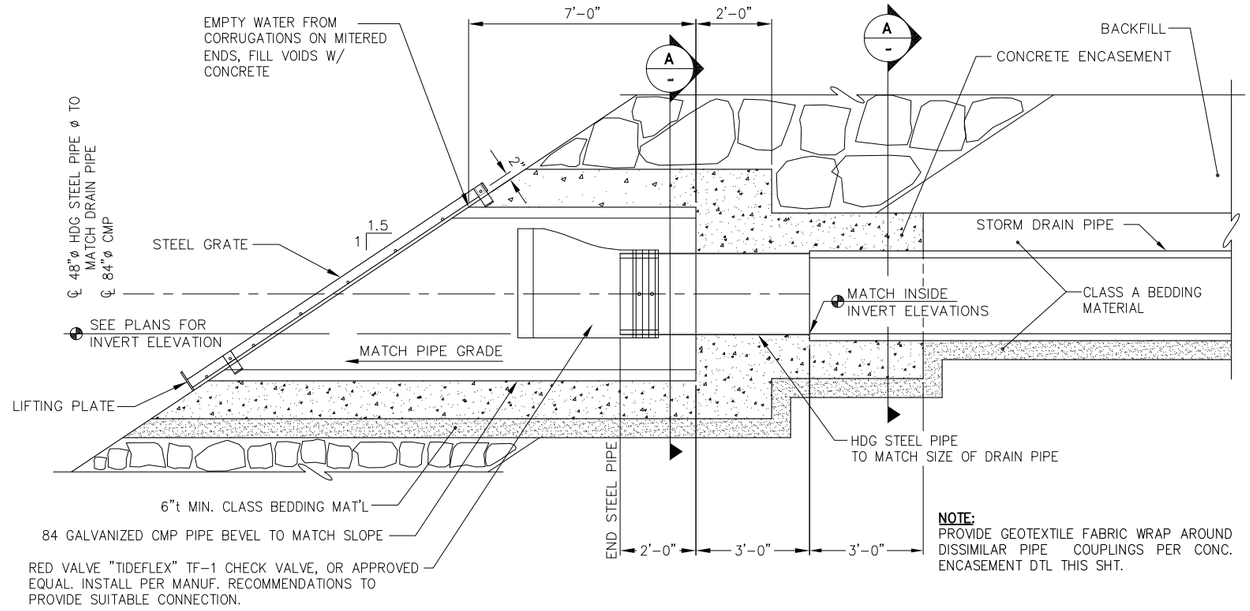
4.01
SHEET 11 OF 23



NOTES:

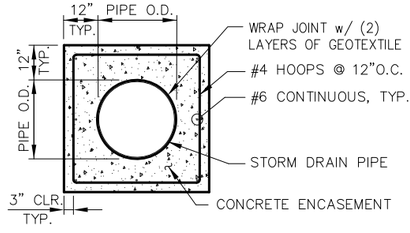
1. ADJUSTING RINGS SHALL BE EJIW INFRA RISER OR APPROVED EQUAL.
2. RUNG TO BE PLACED 12" O.C. ON OBSTRUCTED SIDE OF MANHOLE. LAST RUNG SHALL BE 18" MAX FROM BOTTOM OF MANHOLE, AND TOP RUNG SHALL BE 6" MAX FROM TOP OF CONE. IF UNOBSTRUCTED SIDE NOT AVAILABLE, LAST RUNG SHALL BE PLACED 6" OVER SMALLEST PIPE. REFER TO ASTM C-478.
3. BLOCKOUTS MUST BE FORMED.
4. COVER SHALL BE STENCILED "DRAIN".
5. TYPE II MANHOLES SHALL HAVE INTEGRAL BASE.

STORM DRAIN MANHOLE TYPE I (AS SHOWN)

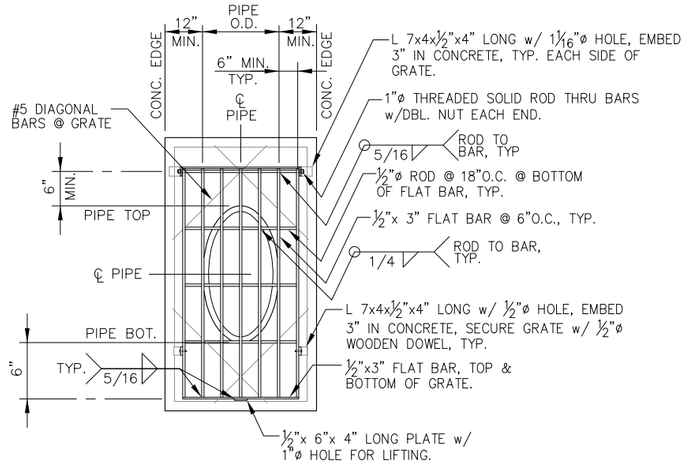


NOTE:
PROVIDE GEOTEXTILE FABRIC WRAP AROUND DISSIMILAR PIPE COUPLINGS PER CONC. ENCASEMENT DTL THIS SHT.

TYPICAL SECITON- STORM DRAIN OUTFALL STURCTURE



A - CONCRETE ENCASEMENT SECTION



STEEL GRATE

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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Fax: 907-586-2099
www.pndengineers.com

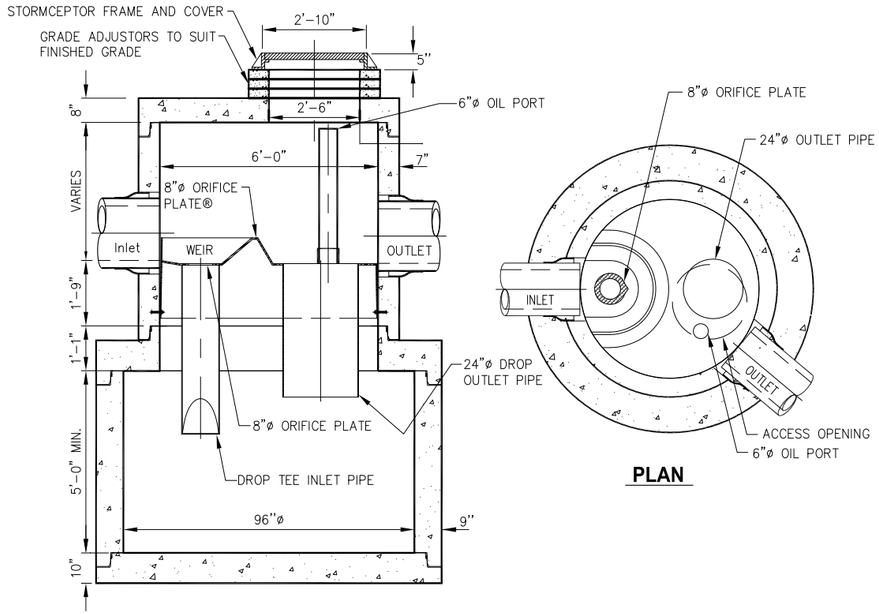
DESIGN: TCB CHECKED: CRS
DRAWN: DRD APPROVED:
SCALE: NTS
DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **STORM DRAIN DETAILS**

PND PROJECT NO.: 102029

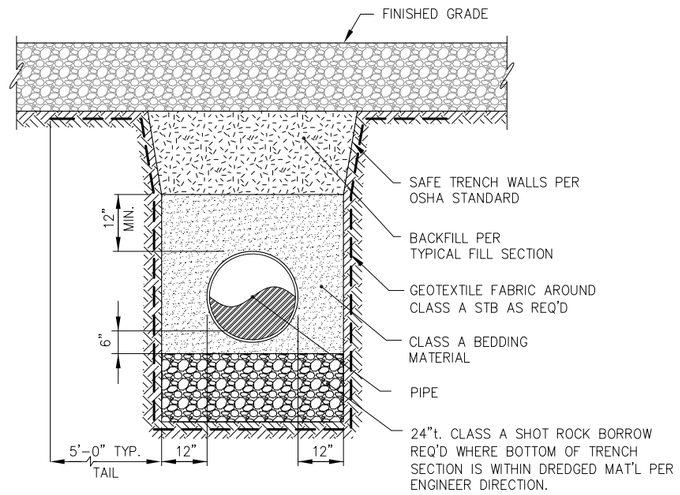
4.02
SHEET 12 OF 23



SECTION THROUGH CHAMBER

PLAN

OIL WATER SEPERATOR



TYPICAL STORM DRAIN PIPE BEDDING SCTION

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P N D ENGINEERS, INC.

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Fax: 907-586-2099
www.pndengineers.com

DESIGN: TCB CHECKED: CRS
DRAWN: DRD APPROVED:

SCALE: NTS

DATE: 3/13/15

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
STORM DRAIN DETAILS

PND PROJECT NO.: 102029

4.03

SHEET 13 OF 23

NOTES:

1. VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW = 0 FEET).
2. ENCOUNTERING COBBLE AND BOULDER-SIZE MATERIAL SHOULD BE ANTICIPATED WITHIN ANY OF THE REPRESENTED SOIL HORIZONS.
3. MAINTAIN VESSEL ACCESS TO EXISTING MOORAGE FLOATS AT ALL TIMES.

PORTAGE COVE

ATS BOUNDARY

EXISTING SEWER OUTFALL TO BE ABANDONED IN PLACE

SEE NORTH PARTIAL PLAN

CONTROL PT. 20'± ℄ #1 BARRIER PILE

REMOVE EXISTING SEWER OUTFALL TO ALLOW INSTALLATION OF WAVE BARRIER PILES

NEW SEWER OUTFALL

WAVE BARRIER

SEE SOUTH PARTIAL PLAN

EXISTING CRUISE SHIP DOCK

EXISTING SEASONAL MOORAGE FLOAT

EXISTING DOLPHINS AND CATWALK

EXISTING MOORAGE FLOATS, TYP.

REMOVE AND REPLACE ARMOR ROCK AS REQUIRED FOR PILE INSTALLATION

R=800' ℄ BARRIER PILES

ESTABLISH WORK POINT
CENTER OF ARC
N: 2706666.85
E: 2353313.39

WAVE BARRIER SITE PLAN

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

PND ENGINEERS, INC.
9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

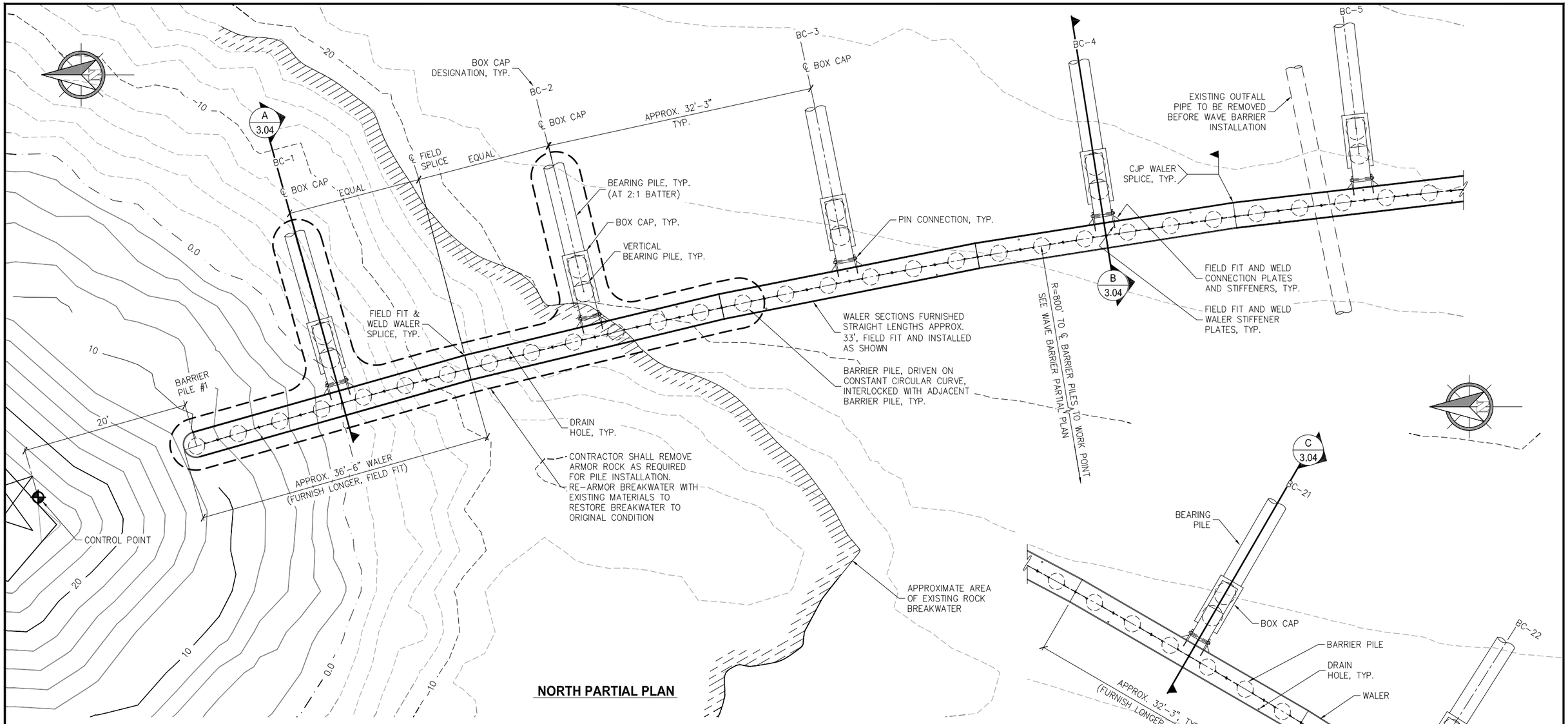
DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED:
SCALE: SCALE IN FEET 0 40 80 160 FT.
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **WAVE BARRIER SITE PLAN**

PN&D PROJECT NO.: 102029.10

5.01
SHEET 14 OF 23



NORTH PARTIAL PLAN

SOUTH PARTIAL PLAN

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801
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Fax: 907-586-2099
www.pndengineers.com

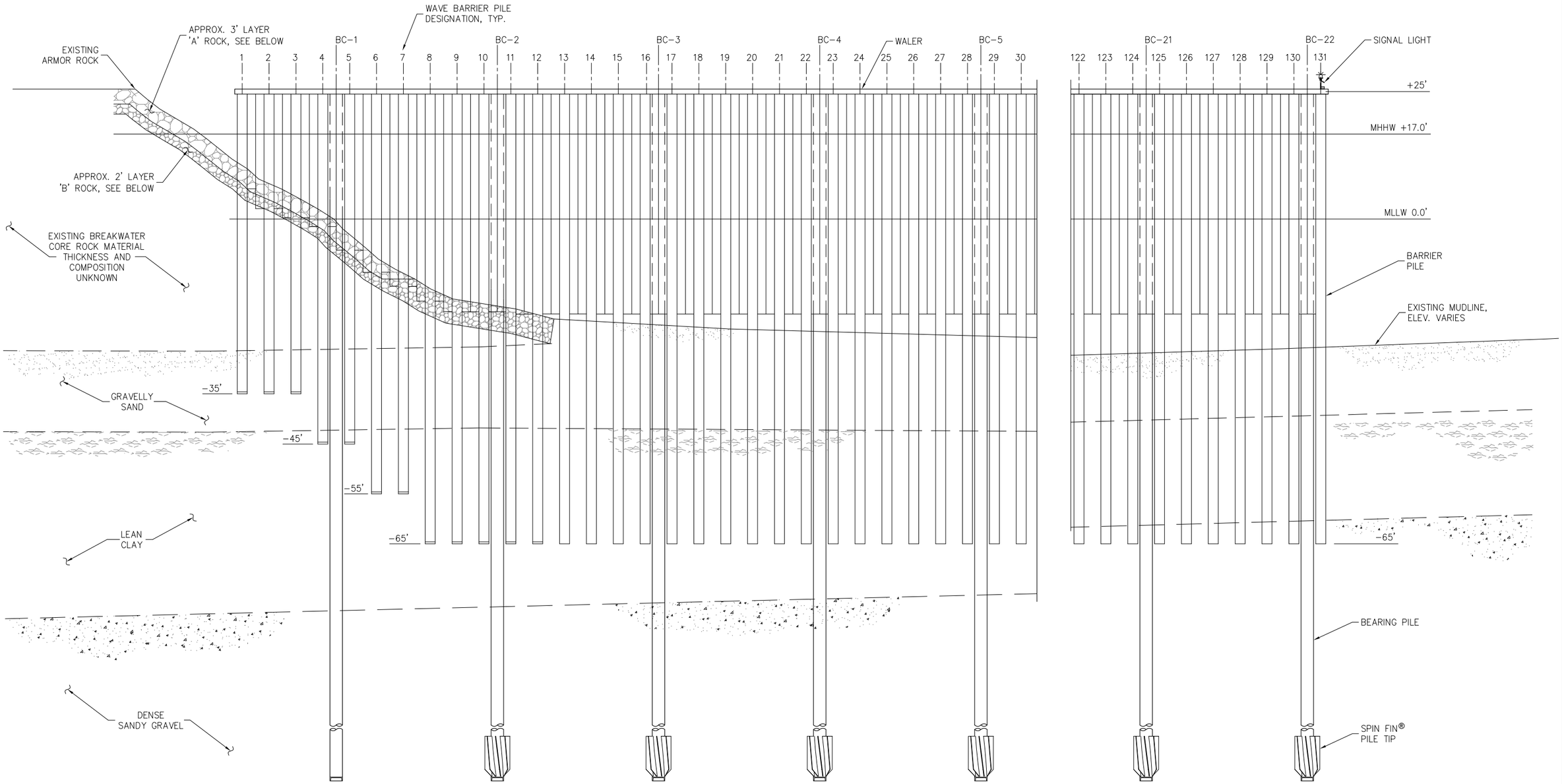
DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED: ____
SCALE: SCALE IN FEET 0 6 12 FT.
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
WAVE BARRIER PARTIAL PLAN

PN&D PROJECT NO.: 102029.10

5.02
SHEET 15 OF 23



ESTIMATED ARMOR ROCK SIZE
'A' ROCK 650lb TO 2,300lb (2' TO 3' DIAMETER)
'B' ROCK 65lb TO 650lb (1' TO 2' DIAMETER

PARTIAL ELEVATION

65% DESIGN REVIEW SUBMITTAL

SPIN FIN® PILE IS A REGISTERED TRADEMARK OF PND ENGINEERS, INC.

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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www.pndengineers.com

DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED:
SCALE: SCALE IN FEET 0 10 20 FT.
DATE: MAR. 2015

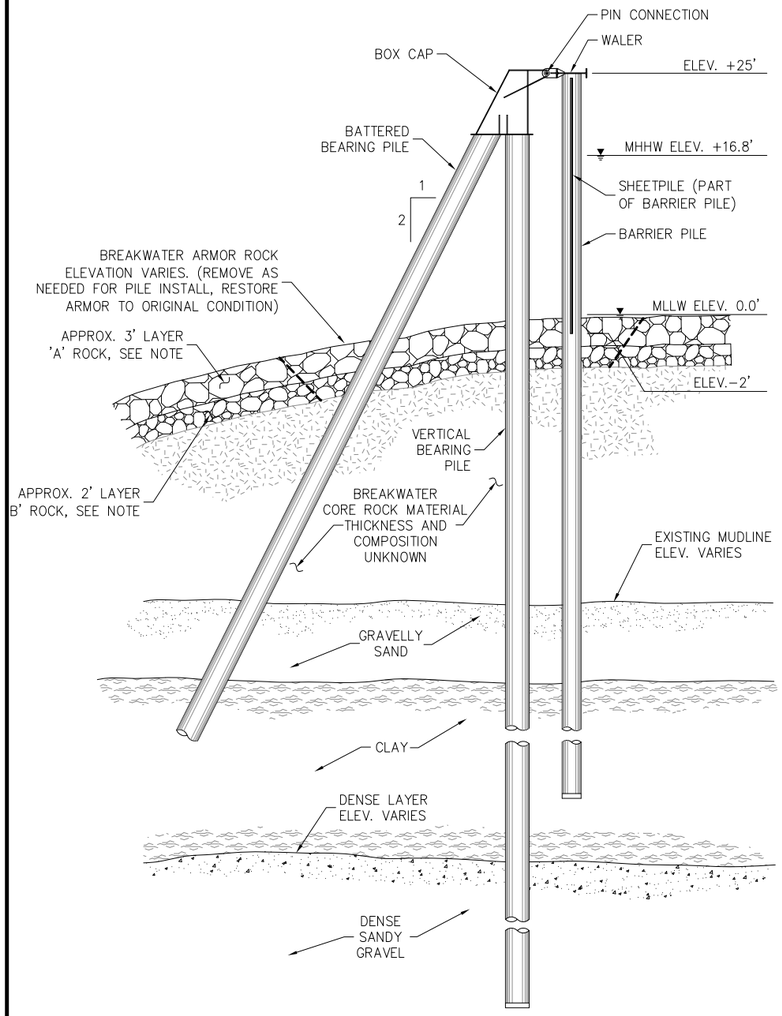
HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **PARTIAL ELEVATION**

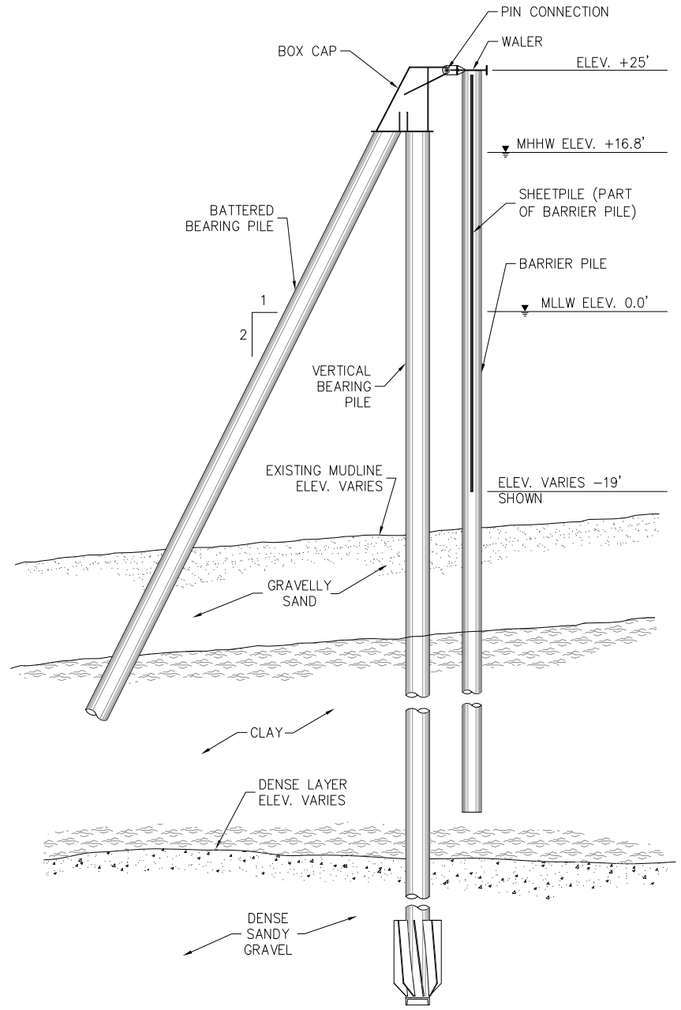
PN&D PROJECT NO.: 102029.10

5.03
SHEET 16 OF 23

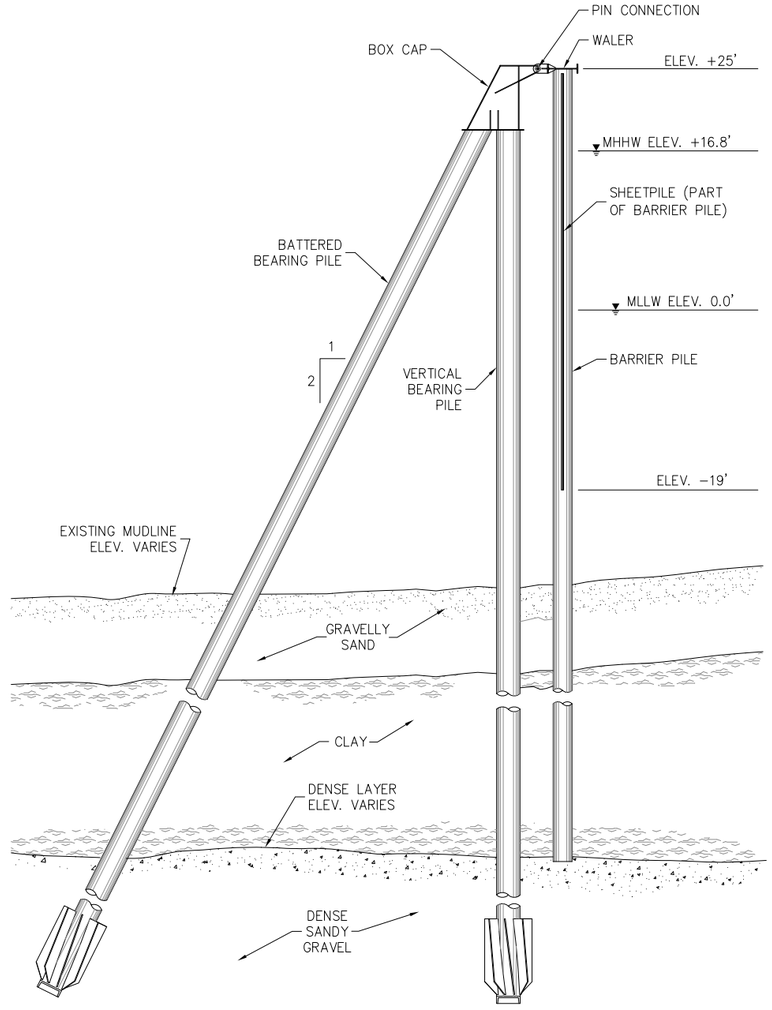
ESTIMATED ARMOR ROCK SIZE
'A' ROCK 650lb TO 2,300lb (2' TO 3' DIAMETER)
'B' ROCK 65lb TO 650lb (1' TO 2' DIAMETER



A 3.02 **TYPICAL SECTION**



B 3.02 **TYPICAL SECTION**



C 3.02 **TYPICAL SECTION**

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED:
SCALE: SCALE IN FEET 0 8 16 FT.
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **TYPICAL SECTIONS**

PN&D PROJECT NO.: 102029.10

5.04
SHEET 17 OF 23

WAVE BARRIER PILE SCHEDULE

Pile Location	Pile Size Diameter x Wall	Approx. Length (ft)	Approx. Length of Bare Pile (ft)	Approx. Length of Sheetpile (ft)	Tip Type	Approx. Tip Elevation (ft)	Design Compression Capacity (Allowable/ Ultimate) (kips)	Comments
1	24"dia x 0.5"t	60	20	20	Cutting Shoe	−35	20/50	PS31 one side of pile only*
2	24"dia x 0.5"t	60	20	23	Cutting Shoe	−35	20/50	PS31 both sides
3	24"dia x 0.5"t	60	20	25	Cutting Shoe	−35	20/50	PS31 both sides
4	24"dia x 0.5"t	70	20	27	Cutting Shoe	−45	20/50	PS31 both sides
5	24"dia x 0.5"t	70	20	32	Cutting Shoe	−45	20/50	PS31 both sides
6	24"dia x 0.5"t	80	40	36	Cutting Shoe	−55	20/50	PS31 both sides
7	24"dia x 0.5"t	80	40	40	Cutting Shoe	−55	20/50	PS31 both sides
8	24"dia x 0.5"t	90	40	42	Cutting Shoe	−65	20/50	PS31 both sides
9	24"dia x 0.5"t	90	40	44	Cutting Shoe	−65	20/50	PS31 both sides
10	24"dia x 0.5"t	90	40	44	Cutting Shoe	−65	20/50	PS31 both sides
11	24"dia x 0.5"t	90	40	44	Cutting Shoe	−65	20/50	PS31 both sides
12	24"dia x 0.5"t	90	40	44	Cutting Shoe	−65	20/50	PS31 both sides
13	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
14	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
15	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
16	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
17	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
18	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
19	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
20	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
21	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
22	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
23	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
24	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
25	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
26	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
27	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
28	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
29	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
30	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
31	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
32	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
33	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
34	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
35	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
36	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
37	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
38	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
39	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
40	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
41	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
42	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
43	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
44	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
45	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
46	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
47	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
48	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
49	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
50	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides

* PAY PARTICULAR ATTENTION TO INTERLOCK ORIENTATION

WAVE BARRIER PILE SCHEDULE (Cont.)

Pile Location	Pile Size Diameter x Wall	Approx. Length (ft)	Approx. Length of Bare Pile (ft)	Approx. Length of Sheetpile (ft)	Tip Type	Approx. Tip Elevation (ft)	Design Compression Capacity (Allowable/ Ultimate) (kips)	Comments
51	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
52	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
53	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
54	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
55	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
56	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
57	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
58	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
59	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
60	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
61	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
62	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
63	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
64	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
65	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
66	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
67	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
68	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
69	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
70	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
71	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
72	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
73	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
74	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
75	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
76	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
77	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
78	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
79	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
80	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
81	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
82	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
83	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
84	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
85	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
86	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
87	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
88	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
89	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
90	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
91	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
92	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
93	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
94	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
95	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
96	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
97	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
98	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
99	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
100	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P N D ENGINEERS, INC.
9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED:
SCALE:
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **PILE SCHEDULE**

PN&D PROJECT NO.: 102029.10

5.05
SHEET 18 OF 23

WAVE BARRIER PILE SCHEDULE (Cont.)								
Pile Location	Pile Size Diameter x Wall	Approx. Length (ft)	Approx. Length of Bare Pile (ft)	Approx. Length of Sheetpile (ft)	Tip Type	Approx. Tip Elevation (ft)	Design Compression Capacity (Allowable/ Ultimate) (kips)	Comments
101	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
102	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
103	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
104	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
105	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
106	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
107	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
108	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
109	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
110	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
111	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
112	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
113	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
114	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
115	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
116	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
117	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
118	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
119	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
120	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
121	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
122	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
123	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
124	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
125	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
126	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
127	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
128	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
129	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
130	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 both sides
131	24"dia x 0.5"t	90	40	44	None	−65	20/50	PS31 one side of pile only*

* PAY PARTICULAR ATTENTION TO INTERLOCK ORIENTATION

BEARING PILE SCHEDULE							
Pile Location	Pile Batter	Pile Size Diameter x Wall	Approx. Length (ft)	Approx. Length of Bare Pile (ft)	Tip Type	Capacity (Allowable/Ultimate) (kips)	
						Compression	Tension
BC−1	Vertical	30"dia x 3/4"t	160	80	Cutting Shoe Only		
	2:1	30"dia x 3/4"t	200	100	Cutting Shoe Only		
BC−2	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−3	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−4	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−5	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−6	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−7	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−8	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−9	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−10	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−11	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−12	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−13	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−14	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−15	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−16	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−17	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−18	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−19	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−20	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−21	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		
BC−22	Vertical	30"dia x 3/4"t	160	80	SPIN FIN® Tip		
	2:1	30"dia x 3/4"t	200	100	SPIN FIN® Tip		

65% DESIGN REVIEW SUBMITTAL

SPIN FIN® PILE IS A REGISTERED TRADEMARK OF PND ENGINEERS, INC.

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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9360 Glacier Highway, Ste. 100
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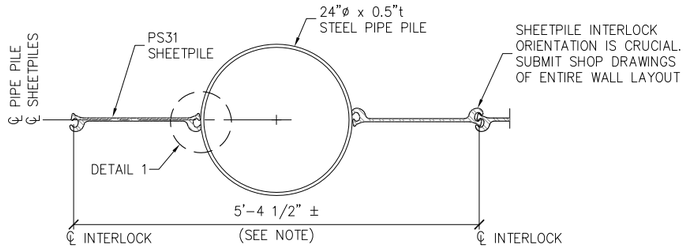
DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED:
SCALE:
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **PILE SCHEDULE**

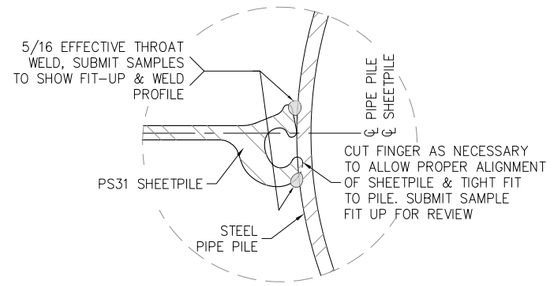
PN&D PROJECT NO.: 102029.10

5.06

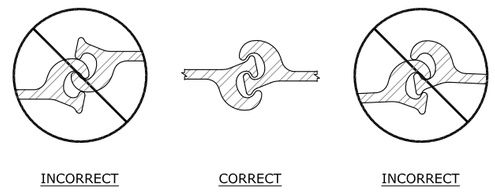


TYPICAL BARRIER PILE

NOTE:
IF DIMENSION VARIES SUBSTANTIALLY FROM THIS ESTIMATE DUE TO FIT-UP OF PROPOSED SHEETPILE, ADDITIONAL BARRIER PILES AND SHEETPILE MAY BE REQUIRED TO OBTAIN OVERALL DESIRED LENGTH OF WAVE BARRIER SHOWN.

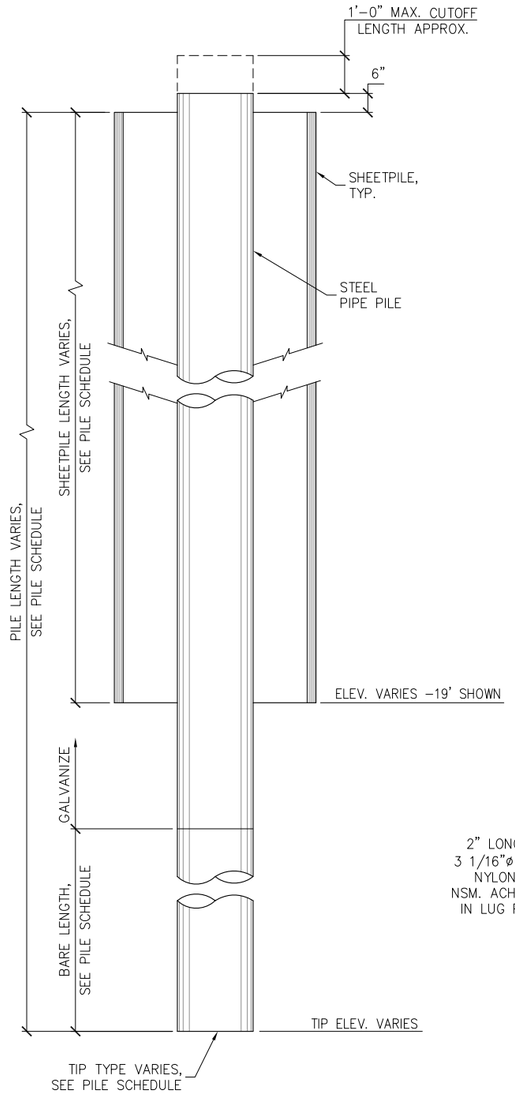


DETAIL 1

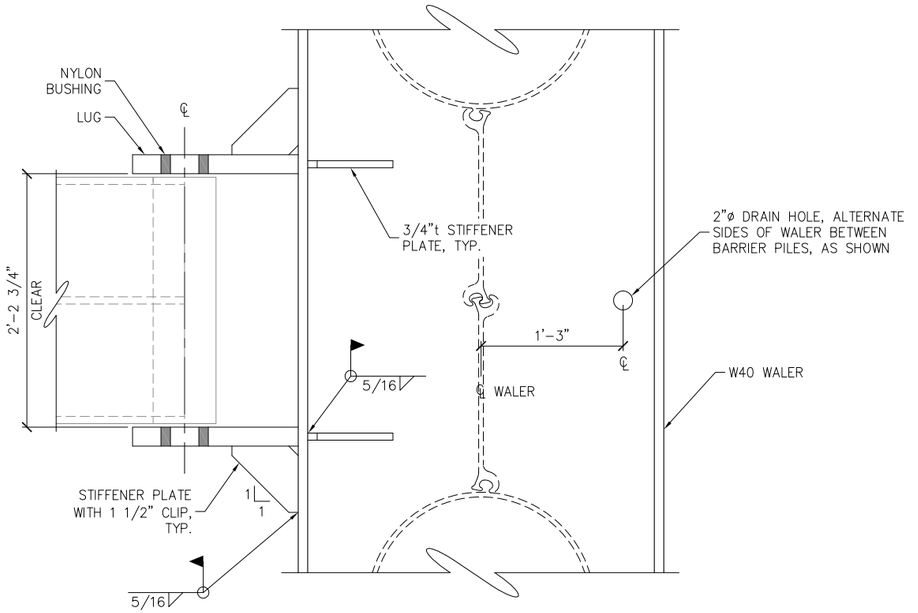


SHEETPILE INTERLOCK DETAILS

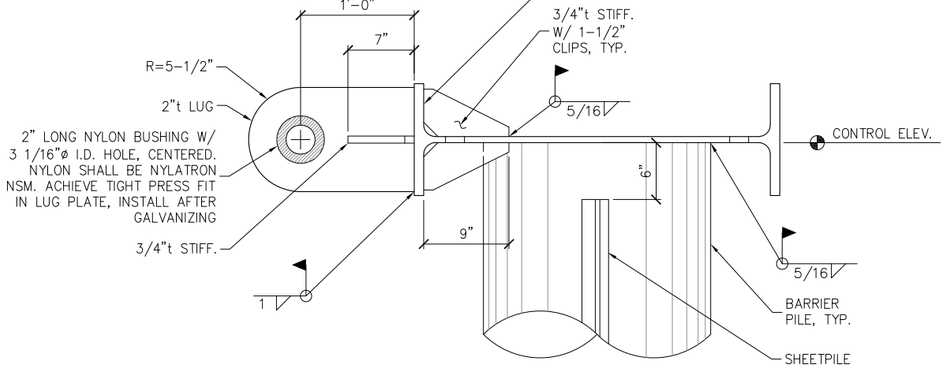
NOTE: ORIENTATION OF INTERLOCKS IS CRITICAL, VIEW SHOWN FROM TOP.



TYPICAL WAVE BARRIER PILE



PLAN



ELEVATION

WALER DETAILS

65% DESIGN REVIEW SUBMITTAL

REVISIONS

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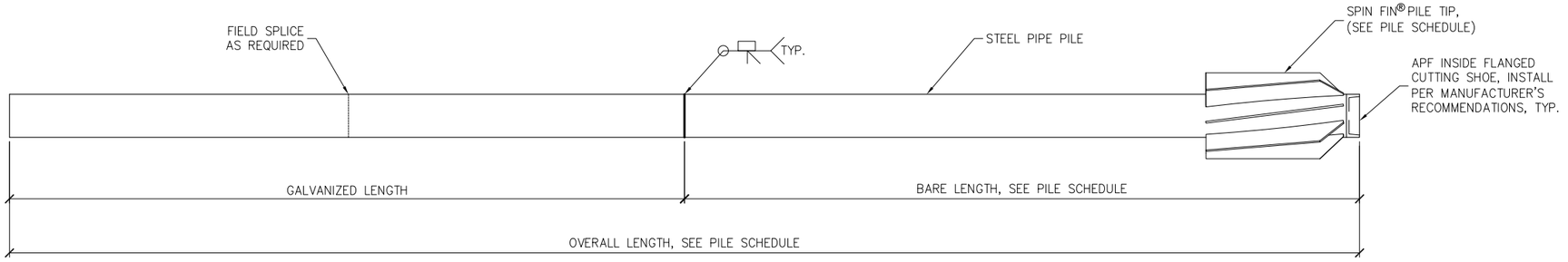
SCALE:
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

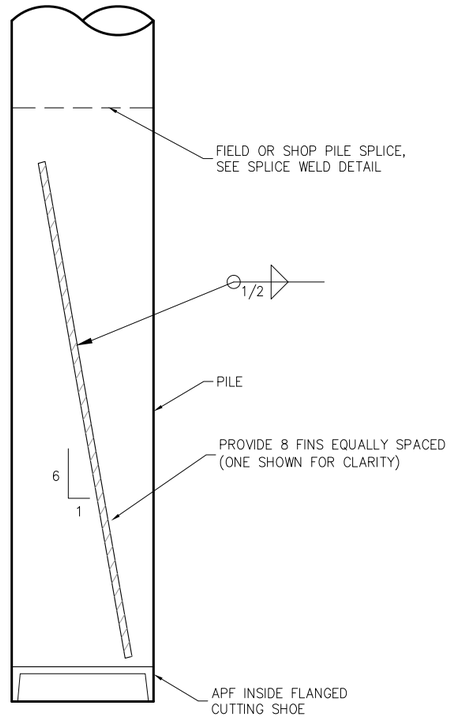
SHEET TITLE:
BARRIER PILES AND WALERS

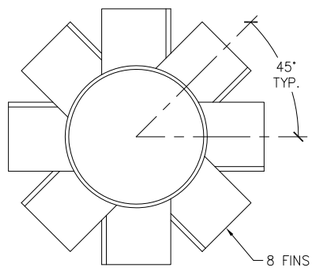
PN&D PROJECT NO.: 102029.10

5.07
SHEET 20 OF 23



BEARING PILE
NTS

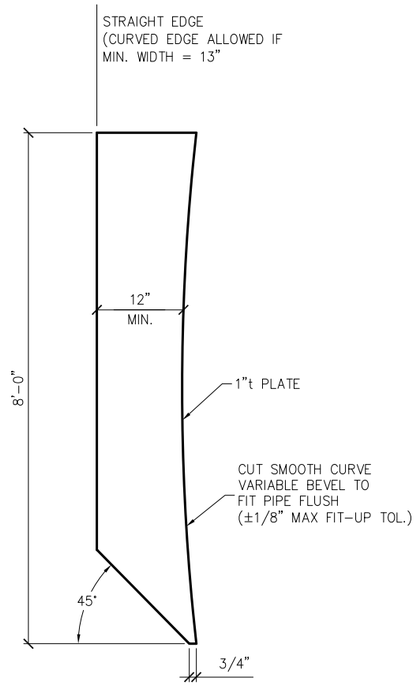




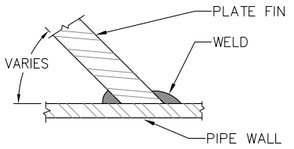
PLAN

ELEVATION

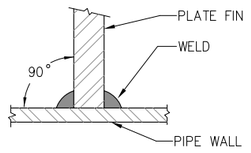
SPIN FIN® PILE
NTS



SPIN FIN®
NTS



PILE/FIN SECTION
NTS



PILE/FIN SECTION AT CENTERLINE OF PLATE
NTS

65% DESIGN REVIEW SUBMITTAL

SPIN FIN® PILE IS A REGISTERED TRADEMARK OF PND ENGINEERS, INC.

REVISIONS

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DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED: ____
SCALE:

DATE: MAR. 2015

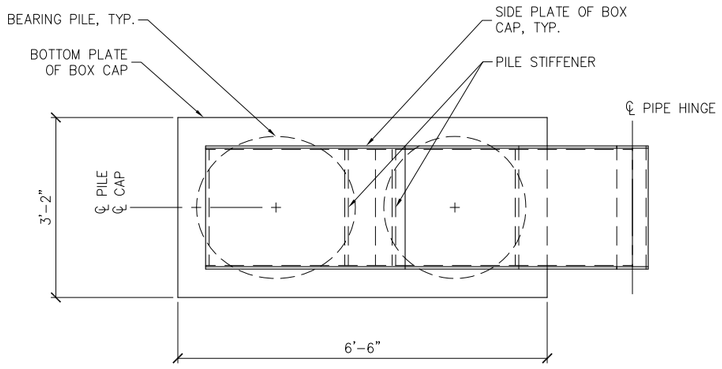
HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE:
BEARING PILE DETAILS

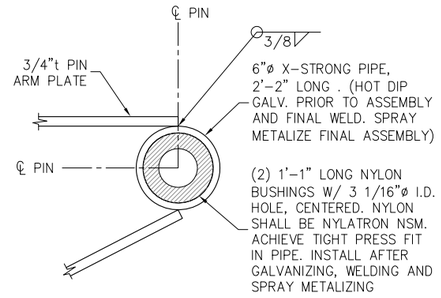
PN&D PROJECT NO.: 102029.10

SHEET 21 OF 23

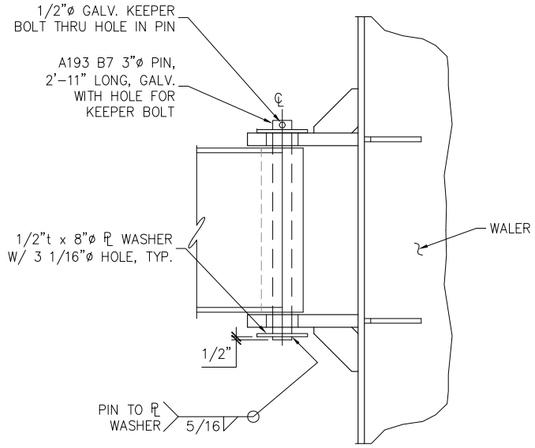
5.08



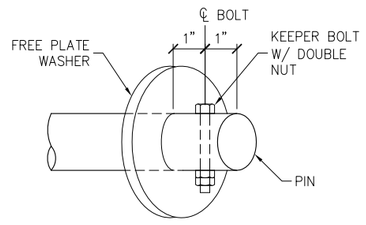
PLAN

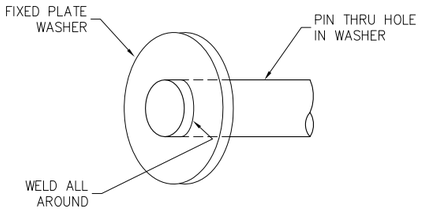


DETAIL

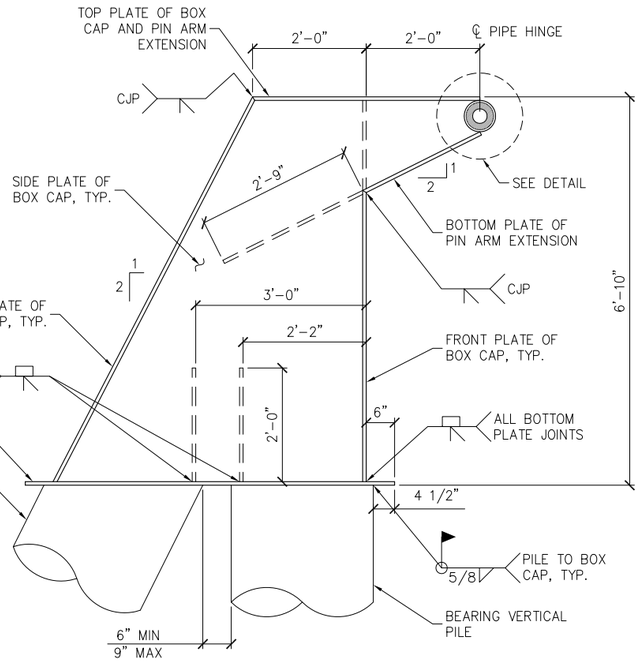


PIN CONNECTION PLAN

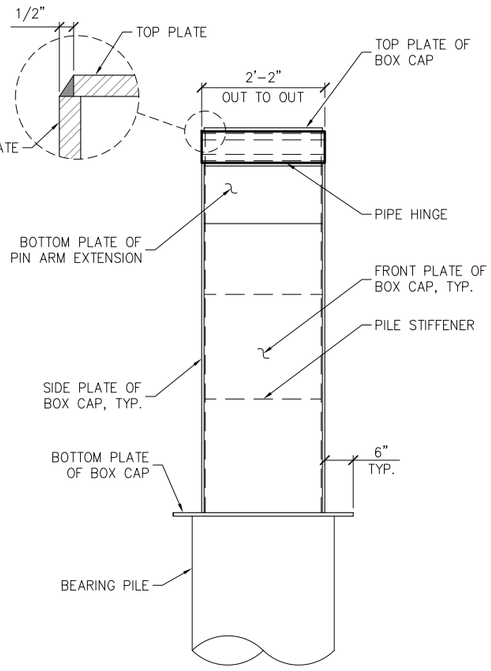




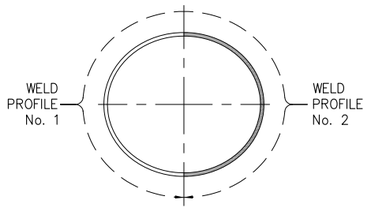
PIN CONNECTION DETAILS



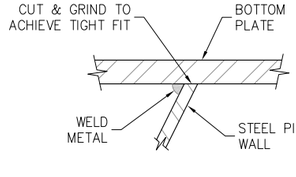
SIDE ELEVATION



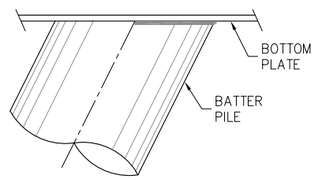
FRONT ELEVATION



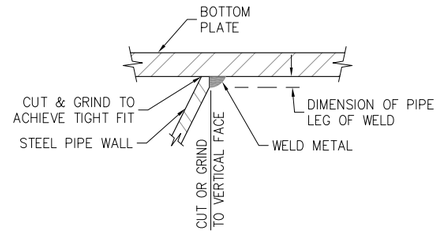
PLAN



No 1 WELD PROFILE



SIDE VIEW



No 2 WELD PROFILE

NOTE:
1. ALL PLATE IS 3/4"t UNLESS OTHERWISE NOTED.
2. ALL OTHER WELDS ON BOX CAP NOT SHOWN SHALL BE 1/2" FILLET OR EQUIVALENT BEVEL, ALL AROUND

BOX CAP

BATTER PILE WELD
(ALL BATTER PILES)

65% DESIGN REVIEW SUBMITTAL

REVISIONS

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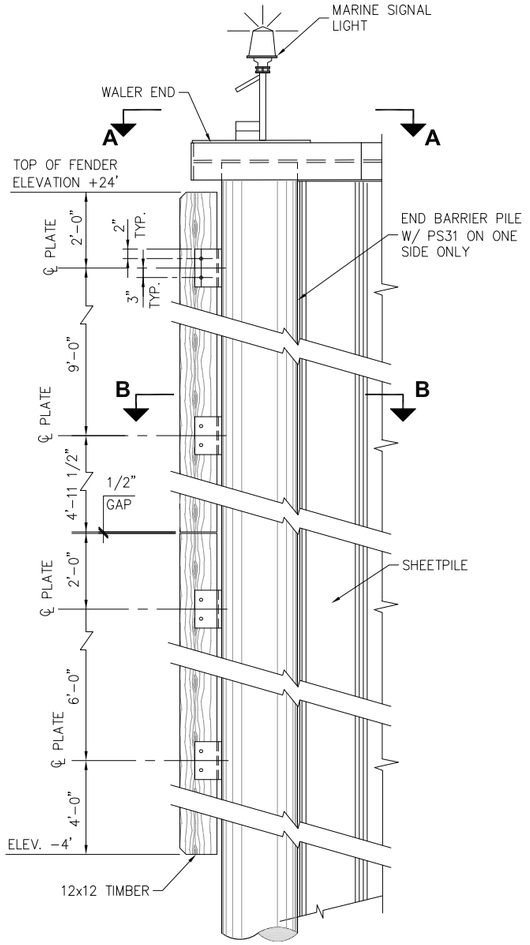
DRAWN: DRH APPROVED:
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

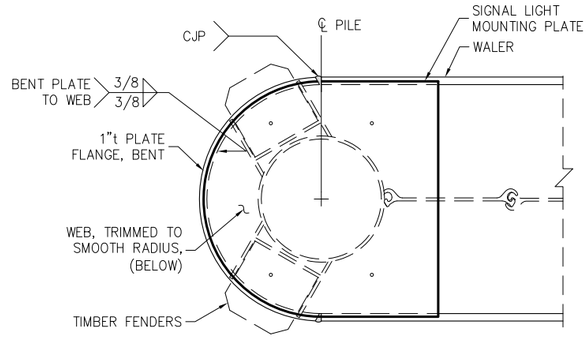
SHEET TITLE: **BOX CAP DETAILS**

PN&D PROJECT NO.: 102029.10

SHEET **5.09**
22 OF 23

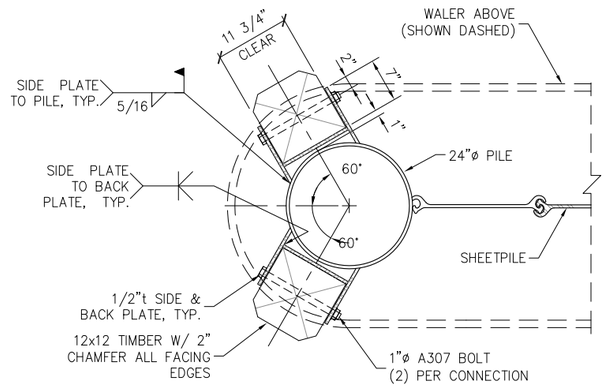


PARTIAL ELEVATION



VIEW A-A

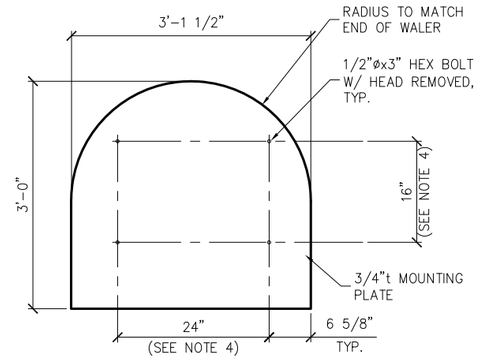
END CAP AT SOUTH
END OF WAVE BARRIER



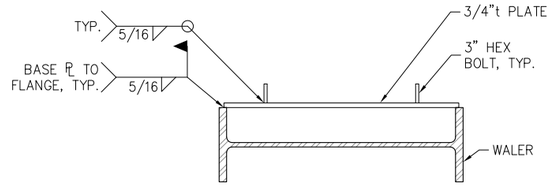
VIEW B-B

END CAP AT SOUTH
END OF WAVE BARRIER

FENDER



PLAN



SECTION

SIGNAL LIGHT MOUNTING PLATE

MARINE SIGNAL LIGHT

SIGNAL LIGHT NOTES:

1) ALL METALS AND HARDWARE SHALL BE HOT DIP GALVANIZED PER ASTM A123 OR A153 AS APPROPRIATE.
2) BOLTS SHALL BE ASTM A325. STEEL PLATE SHALL BE A MINIMUM ASTM A36.
3) TIDELAND SIGNAL CORP. SOLA-CHAN MARINE SIGNAL LIGHT. ML-155 ON 4' PEDESTAL WITH 10W SOLAR MODULE OR APPROVED EQUAL , INCLUDING ON 12V SECONDARY ENERGY CELL AND MAXIFALO-60 LED FLASHER SET AT 0.4 SEC. "ON" AND 3.6 SEC. "OFF" (15 FLASHES/MINUTE) VISIBLE FOR MIN. 2 NM. COLOR AND FLASH PATTERN PER US COAST GUARD PERMIT REQUIREMENTS.
4) CENTER MARINE SIGNAL LIGHT ON BASE PLATE. CONTRACTOR TO VERIFY BOLT PATTERN AND SPACING ON LIGHT BASE.
5) ORIENT SOLAR PANEL FACING SOUTH.

65% DESIGN REVIEW SUBMITTAL

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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DESIGN: JDO CHECKED: CRS
DRAWN: DRH APPROVED:
SCALE:
DATE: MAR. 2015

HAINES BOROUGH
SOUTH PORTAGE COVE
HARBOR EXPANSION

SHEET TITLE: **FENDER AND MARINE SIGNAL LIGHT**

PN&D PROJECT NO.: 102029.10

5.10
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