

BAKER DESIGN CONSULTANTS
Civil, Marine, & Structural Engineering

5/5/2020

Hannah Brazier
MaineDEP Bureau Land Resources
17 State House Station
Augusta, ME 04333-0017

Nicole Briand
Town of Bowdoinham
13 School Street
Bowdoinham, Maine 04008

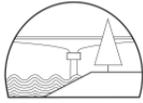
LeeAnn Neal
US Army Corps of Engineers
Maine Project Office
442 Civic Center Drive, Suite 350
Augusta, ME 04330

Subject: Town of Bowdoinham Waterfront Plan – Phase I; **NRPA Individual Permit Application and NRPA Permit-By Rule Application**
8 River Road; Bowdoinham, Maine

Dear Regulatory Permit Representative,

Please find enclosed a copy of the NRPA applications for a **PBR** under **Section 15 – Public Boat Ramps** and for an **Individual Permit** for the **Shoreline Stabilization** project, located at 8 River Road (Route 24) on the Cathance River in Bowdoinham, Maine.

1. MaineDEP has already received the appropriate application fees from the Town under check #18922. This included fees for the NRPA Individual Permit, a NRPA PBR for Public Boat Ramps and a Stormwater PBR. Since the Town's submission of the application fees, MaineDEP has determined that the Stormwater PBR is not required for these projects.
2. MaineDEP is being provided with electronic (PDF) copies of the NRPA Individual Permit, and NRPA PBR applications via email to DEP.LandApplication@maine.gov and to DEP.PBRNotification@maine.gov respectively. Permitting drawings for both projects are being included as developed under one design effort supported by the Maine Coastal Program. Please reference the work related to the shoreline stabilization effort and the public boat ramp effort with their respective permit applications and don't hesitate to contact us if you need clarification.
3. Separate correspondence has been submitted to Maine Historic Preservation Commission with request that they respond identifying impacts. Their response is also included.
4. The Army Corps of Engineers has been provided with a complete copy of the applications and one copy of the complete drawing set, NOAA and USF&W Threatened & Endangered Species lists, and notices to the Maine Tribal Nations and MaineHPC. Responses received to-date are also included.
5. The Town of Bowdoinham has been provided with a complete copy of the applications to have on file for public review and to support the submitted Shoreland Zoning Permit and Site Plan Review permit applications currently under review by the Town's Planning Board.
6. A Public Notice has been placed in The Times Record and abutting property owners have been notified by certified mail.
7. A Submerged Lands Lease is required for the Public Boat Ramp with portions of the ramp and seasonal float system extending below MLW. A Submerged Lands Lease is not required for the



shoreline stabilization project as it does not extend beyond MLW. A copy of the NRPA PBR application has been sent to the Submerged Lands Bureau.

On behalf of the client, we appreciate early permit consideration on the applications. Please do not hesitate to call us with any questions or comments.

Sincerely,

BAKER DESIGN CONSULTANTS, Inc.

A handwritten signature in black ink, appearing to read 'TP' or similar initials, written in a cursive style.

Travis Pryor, LEED-AP
Project Manager

JN: 18-20

CC: Barney Baker, PE – BDC

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM
 (For use with DEP Regulation, Natural Resources Protection Act- Permit by Rule Standards, Chapter 305)
 PLEASE TYPE OR PRINT IN **BLACK INK ONLY**

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Town of Bowdoinham	Name:	Baker Design Consultants (Travis Pryor)
Mailing Address:	13 School Street	Mailing Address:	7 Spruce Road
Town:	Bowdoinham	Town:	Freeport
State and Zip Code:	Maine 04008	State and Zip Code:	Maine 04032
Daytime Phone #:	(207) 666-5531	Daytime Phone #:	(207) 846-9724
Email Address:	(See Agent Information)	Email Address:	t.pryor@bakerdesignconsultants.com

PROJECT INFORMATION							
Part of a larger project? (check one):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	After the Fact? (check one):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Project involves work below mean low water? (check one):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name of waterbody:	Cathance River
Project Town:	Bowdoinham	Project Location (Address):	8 River Road	Map & Lot Number:	U01-01		
Brief Project Description:	Construct hand carry boat launch including riprap slope stabilization, and install guide piles and floats. Clear debris from riverbed in front of boat launch and floats. Construct paved parking area for hand carry boat launch.						
Brief Directions to Site:	From I-295, take Exit 37 east onto ME-125 N/ME-138 N. Turn right onto Back Hill Rd. Merge onto River Road (Rte 24) and the destination is on the right.						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. **I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.**

- | | | |
|---|---|--|
| <input type="checkbox"/> Sec. (2) Act. Adj. to Protected Natural Res. | <input type="checkbox"/> Sec. (10) Stream Crossing | <input type="checkbox"/> Sec. (17) Transfers/Permit Extension |
| <input type="checkbox"/> Sec. (3) Intake Pipes | <input type="checkbox"/> Sec. (11) State Transportation Facil. | <input type="checkbox"/> Sec. (18) Maintenance Dredging |
| <input type="checkbox"/> Sec. (4) Replacement of Structures | <input type="checkbox"/> Sec. (12) Restoration of Natural Areas | <input type="checkbox"/> Sec. (19) Activities in/on/over significant vernal pool habitat |
| <input type="checkbox"/> Sec. (5) REPEALED | <input type="checkbox"/> Sec. (13) F&W Creation/Enhance/Water Quality Improvement | <input type="checkbox"/> Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas |
| <input type="checkbox"/> Sec. (6) Movement of Rocks or Vegetation | <input type="checkbox"/> Sec. (14) REPEALED | |
| <input type="checkbox"/> Sec. (7) Outfall Pipes | <input checked="" type="checkbox"/> Sec. (15) Public Boat Ramps | |
| <input type="checkbox"/> Sec. (8) Shoreline stabilization | <input type="checkbox"/> Sec. (16) Coastal Sand Dune Projects | |
| <input type="checkbox"/> Sec. (9) Utility Crossing | | |

NOTE: Municipal permits may also be required. Contact your local code enforcement office for more information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for more information.

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS

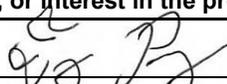
- Attach** all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.
- Attach** a check for the correct fee made payable to: "Treasurer, State of Maine". The current fee for NRPA PBR Notifications can be found at the Department's website: <http://www.maine.gov/dep/feesched.pdf>
- Attach** a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).

N/A **Attach Proof of Legal Name** if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's registration information (available at <http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x>) Individuals and municipalities are **not** required to provide any proof of identity.

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.

I also understand that this PBR becomes effective 14 calendar days after receipt by the Department *unless the*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:		Date:	May 5, 2020
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Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection at the appropriate regional office listed below. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-7688

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207)822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

OFFICE USE ONLY	Ck.#	Date	Staff	Staff	After Photos
PBR #	FP		Acc.Date	Def. Date	

AGENT AUTHORIZATION

Town of Bowdoinham
13 School Street
Bowdoinham, ME 04008

By signing below, I authorize Baker Design Consultants to act as agent for the purpose of permit communication on applications filed for proposed shoreline stabilization and hand carry boat launch as part of the Waterfront Plan – Phase I project, located at the Town's former Public Works Facility (Tax Map U01 / Lot 01), 8 River Road (Route 24), Cathance River, Bowdoinham, Maine.

Signed: Michael Brand

Date: 1/23/2020

DEPARTMENT OF MARINE RESOURCES – TIMING OF ACTIVITIES

**REQUEST FOR APPROVAL
OF TIMING OF ACTIVITY
(DMR)**

This form is for use in obtaining approval from the **Department of Marine Resources (DMR)** for the timing of certain projects in accordance with Chapter 305 Permit by Rule Standards.

To be filled out by applicant: (Instructions are on the back of this form)

1. Applicant's name: Baker Design Consultants (Authorized Agent)
Address: 7 Spruce Road
Freeport, ME 04032
telephone: (207) 846-9724

2. I plan to perform the following activity (please check the appropriate box):
 Sec. 3 Intake pipes (tidal waters only)
 Sec. 4 Replacement of structures (tidal waters only)
 Sec. 7 Outfall pipes (tidal waters only)
 Sec. 9 Utility crossings (any location if performed between Oct. 2 and July 14)
 Sec. 12 Restoration of natural areas (tidal waters only)
 Sec. 15 Public boat ramps (tidal waters only)
 Sec. 18 Maintenance dredging (tidal waters only)

3. Brief description of project: [please include the name of the stream or waterbody, if known]
The project is located on the Cathance River in Bowdoinham. The project involves construction of a new public hand carry boat launch including pre-cast concrete planks, riprap stabilization immediately abutting the launch, a concrete float abutment, timber guide piles, timber floats, a paved parking area, regrading of lawn areas, and temporary riverbed cleanup area.
(See location map, authorized agent letter, existing site photos and proposed design plans)

4. I plan to perform this activity between the dates of Summer 2020 **and** Fall 2021
(start date) (end date)

5. I have included a map showing the location of my project.
*[Please note that if no location map is provided, no approval will be granted by DMR]

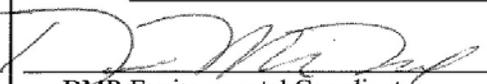
6. Send completed form to: DMR Environmental Coordinator
P. O. Box 8, West Boothbay Harbor, ME 04575-008

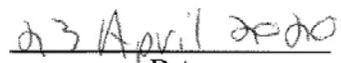
For agency use only:

The Department has reviewed the proposed timing of the activity identified above and:

approves of the project's timing as proposed.
 requires that the project's timing be changed to occur between _____ and _____
(end date) (start date)

Other comments: _____


DMR Environmental Coordinator


Date

DEPARTMENT OF INLAND FISHERIES & WILDLIFE – APPROVAL OF ACTIVITIES

**REQUEST FOR APPROVAL
OF ACTIVITY
(DIF&W)**

This form is for use in obtaining approval from the **Department of Inland Fisheries and Wildlife (DIF&W)** for the timing/location of certain projects in accordance with Chapter 305 Permit by Rule Standards.

To be filled out by applicant: (Instructions are on the back of this form)

1. **Applicant's name:** Baker Design Consultants (Authorized Agent)
Address: 7 Spruce Road
Freeport, ME 04032
telephone: (207) 846-9724

2. I plan to perform the following activity (please check the appropriate box):
 Sec. 9 Utility crossings (if performed between Oct. 2 and July 14)
 Sec. 10 Stream crossings (if performed between Oct. 2 and July 14)
 Sec. 15 Public boat ramps (any location)
 Sec. 16 Activities in coastal sand dunes (moving sand between April 1 and September 1)
 Sec. 20 Activities in existing developed areas located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding and staging areas if:
 cutting or removing vegetation in a shorebird roosting area
 an activity in any shorebird area is performed between July 15 and September 15
 a new activity in a moderate value inland waterfowl and wading bird habitat is performed between April 15 and July 31

3. **Brief description of project:** [please include the name of the stream or waterbody, if known]
The project is located on the Cathance River in Bowdoinham. The project involves construction of a new public hand carry boat launch including pre-cast concrete planks, riprap stabilization immediately abutting the launch, a concrete float abutment, timber guide piles, timber floats, a paved parking area, regrading of lawn areas, and temporary riverbed cleanup area. (See location map, authorized agent letter, existing site photos and proposed design plans)

4. I plan to perform this activity between the dates of Summer 2020 and Fall 2021.
(start date) (end date)

5. I have included a map showing the location of my project.
***[Please note that if no location map is provided, no approval will be granted by DIF&W]**

6. Send completed form to the appropriate regional office of the Department of Inland Fisheries and Wildlife. A map of the regions and the regional office addresses has been attached to this form.

For agency use only:

The Department has reviewed the proposed timing of the activity identified above and:
 approves of the project's timing/location as proposed.
 requires that the project's timing be changed to occur between _____ and _____
(end date) (start date)
 requires that the project's location be changed as shown on the plan (Section 20 Activity Only)

[Signature] Regional Wildlife Biologist April 16, 2020
DIF&W representative Position Date

DEPLW0115-B2008

LOCATION MAP

Section of USGS Topo Map – 2018 Bowdoinham Quadrangle



SITE PHOTOS



Looking east from proposed boat launch approach to Cathance River. Public works garage has been removed by the Town. Low Tide 7:17pm [Photo Time – Date: 4:35pm – 4/2/19; Ebb Tide]



Looking east at proposed boat ramp along Cathance River. Shed has been removed by the Town. Low Tide 7:17pm [Photo Time – Date: 4:45pm – 4/2/19; Ebb Tide]

PROJECT PLANS

The following plans are provided:

- G-1 COVER SHEET
- G-2 NOTES, SCHEDULES & EROSION CONTROL DETAILS
- TOPOGRAPHIC SURVEY (By Little River Land Surveying, Inc.)
- C-1 OVERVIEW PLAN
- C-2 BOAT LAUNCH – EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN
- C-3 BOAT LAUNCH – LAYOUT PLAN
- C-4 BOAT LAUNCH – GRADING PLAN & LAUNCH PROFILE
- C-5 BOAT LAUNCH - DETAILS
- C-6 SHORELINE STABILIZATION – EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN
- C-7 SHORELINE STABILIZATION – SITE PLAN
- C-8 SHORELINE STABILIZATION – TYPICAL SECTIONS I
- C-9 SHORELINE STABILIZATION – TYPICAL SECTIONS II
- C-10 SHORELINE STABILIZATION – DETAILS
- L-1 LANDSCAPE NOTES & SCHEDULES
- L-2 LANDSCAPE & SITE AMENITIES PLAN
- L-3 LANDSCAPE SITE DETAILS

TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I

BOWDOINHAM, MAINE PROJECT NO. 18-20



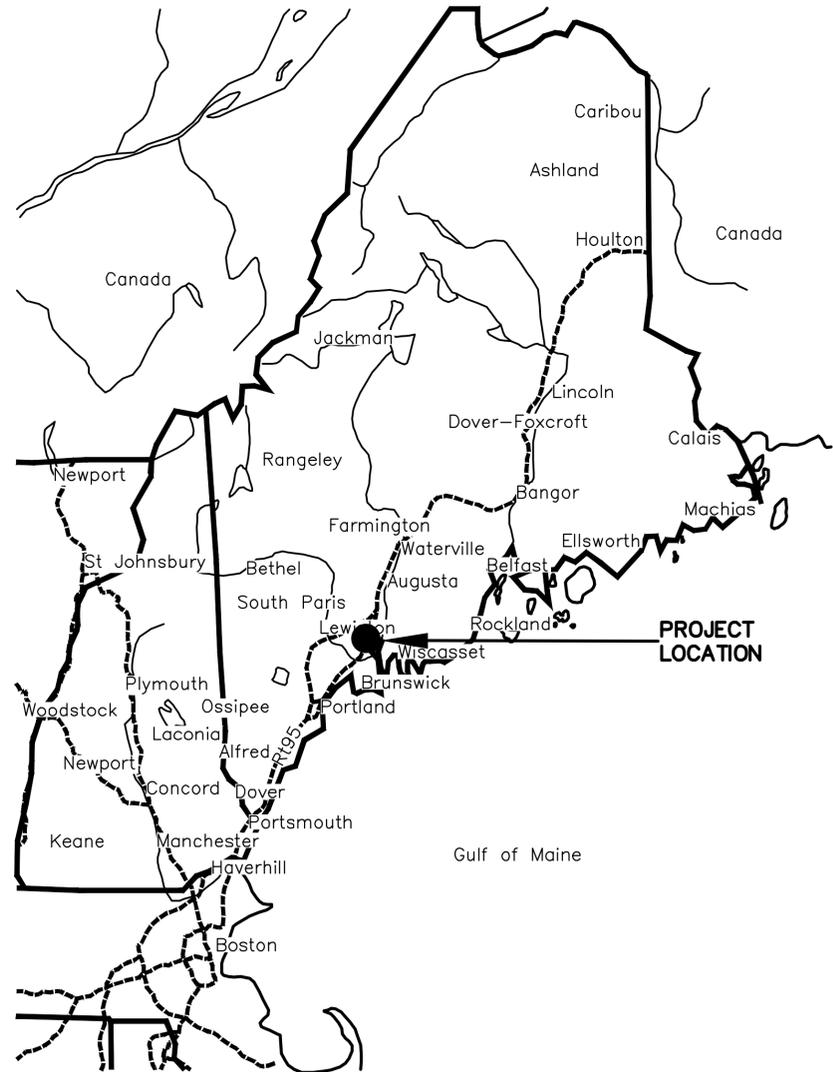
RICHARDSON & ASSOCIATES

11 Middle Street
Saco, Maine 04072
Richardsonassociates.com
P: 207-868-0291
F: 207-868-0850



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7 Spruce Road • Freeport • Maine • 04032 • 207-866-9724 • info@bakerdesignconsultants.com



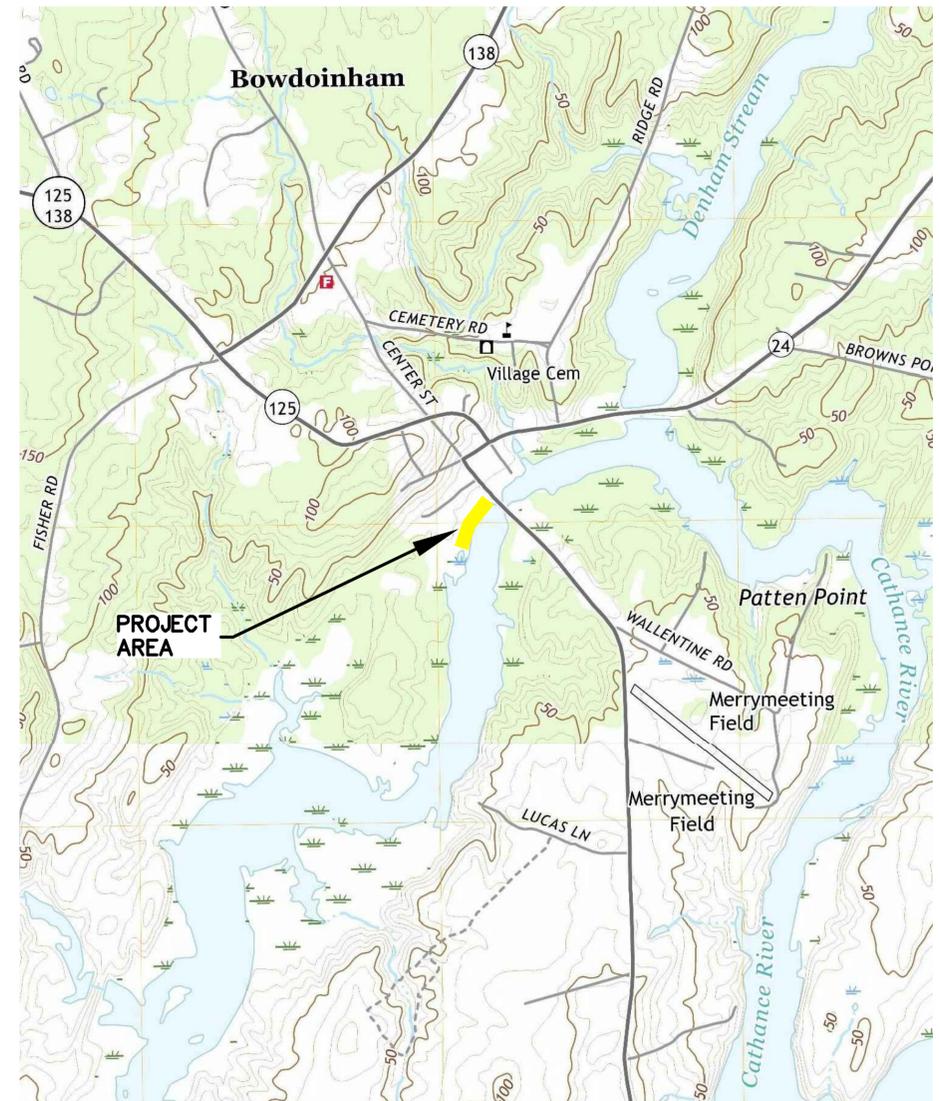
LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
G-1	COVER SHEET
G-2	NOTES, SCHEDULES & EROSION CONTROL DETAILS
-	TOPOGRAPHIC SURVEY (BY LITTLE RIVER LAND SURVEYING, INC.)
C-1	OVERVIEW PLAN
C-2	BOAT LAUNCH - EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN
C-3	BOAT LAUNCH - LAYOUT PLAN
C-4	BOAT LAUNCH - GRADING PLAN & LAUNCH PROFILE
C-5	BOAT LAUNCH - DETAILS
C-6	SHORELINE STABILIZATION - EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN
C-7	SHORELINE STABILIZATION - SITE PLAN
C-8	SHORELINE STABILIZATION - TYPICAL SECTIONS I
C-9	SHORELINE STABILIZATION - TYPICAL SECTIONS II
C-10	SHORELINE STABILIZATION - DETAILS
L-1	LANDSCAPE NOTES & SCHEDULES
L-2	LANDSCAPE & SITE AMENITIES PLAN
L-3	LANDSCAPE SITE DETAILS

**PRELIMINARY
FOR REVIEW ONLY**

NOT FOR CONSTRUCTION



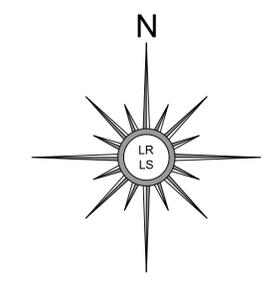
USGS TOPO MAP - BOWDOINHAM/BRUNSWICK 2018 QUADRANGLES
SCALE: 1"=1,000'

x:\18\18-20 bowdoinhawaterfront\phaseb-livingshorelines\cad\18-20-bowdoinhawaterfront-gen.dwg 4/21/2020

TYP	DATE	INT.
A	04.08.20	TJP
		INT.

PERMITTING SUBMISSION	NO.

DESIGNED BY: TJP	DRAWN BY: MMC	CHECKED BY: BUB	SCALE: AS SHOWN
COVER SHEET TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I BOWDOINHAM, MAINE			
SHEET TITLE:	DATE:	CONTRACT NO.:	SHEET NO.:
	APRIL 2020	18-20	G-1
			REV.:
			A



SOURCE
SPCS - 1983 MAINE WEST

NOTES

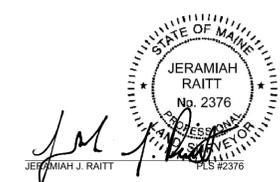
- 1) RECORD OWNERS: INHABITANTS OF THE TOWN OF BOWDOINHAM
REFERENCE DOCUMENTS: DEED BOOK 1615, PAGE 321 DATED SEPTEMBER 2, 1998
DEED BOOK 1649, PAGE 157 DATED DECEMBER 14, 1998
SEE ALSO: "STANDARD BOUNDARY SURVEY & TOPOGRAPHIC PLAN" FOR CENTRAL CHEMICAL CORPORATION DATED APRIL 24, 1998 BY HARTY LAND SURVEYING RECORDED IN PLAN BOOK 34, PAGE 25.
- 2) PROPERTY LINES AND A SIGNIFICANT PORTION OF THE AREA OUTSIDE OF THE DEFINED SCOPE OF WORK OF THIS PROJECT ARE DEPICTED ON THE HARTY PLAN CITED ABOVE. VARIOUS STORM WATER DRAINAGE STRUCTURES NOT OBSERVED BY THIS SURVEYOR DURING THE COURSE OF THE FIELD WORK CONDUCTED IN 2019 HAVE BEEN SHOWN AS DEPICTED ON THE HARTY PLAN. THE CURRENT STATUS OF SAID STRUCTURES IS UNKNOWN.
- 3) BEARINGS ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM OF 1983, MAINE WEST ZONE, AS DETERMINED BY REAL TIME KINEMATIC GNSS TECHNIQUES WITH CORRECTIONS APPLIED BY THE MAINE DOT VRS NETWORK.
- 4) ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS DETERMINED BY REAL TIME KINEMATIC GNSS TECHNIQUES WITH CORRECTIONS APPLIED BY THE MAINE DOT VRS NETWORK.
- 5) THE HIGHEST ANNUAL TIDE (HAT) ELEVATION OF 2.9 FEET (NAVD88) IS LISTED IN A TABLE PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AVAILABLE ONLINE. THE DATA FOR THE "BOWDOINHAM, CATHANCE RIVER" LOCATION IS DEPICTED HEREON.
- 6) A PORTION OF THE PROJECT AREA IS SHOWN IN A SPECIAL FLOOD HAZARD AREA, ZONE AE (AREAS OF 100 YEAR FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED) AS DEPICTED ON THE FLOOD INSURANCE RATE MAP FOR SAGadahoc COUNTY WITH MAP NUMBER 23023C0094F AND AN EFFECTIVE DATE OF JULY 16, 2015. THE BASE FLOOD ELEVATION OF 8 FEET (NAVD88) IS DEPICTED HEREON.

LEGEND

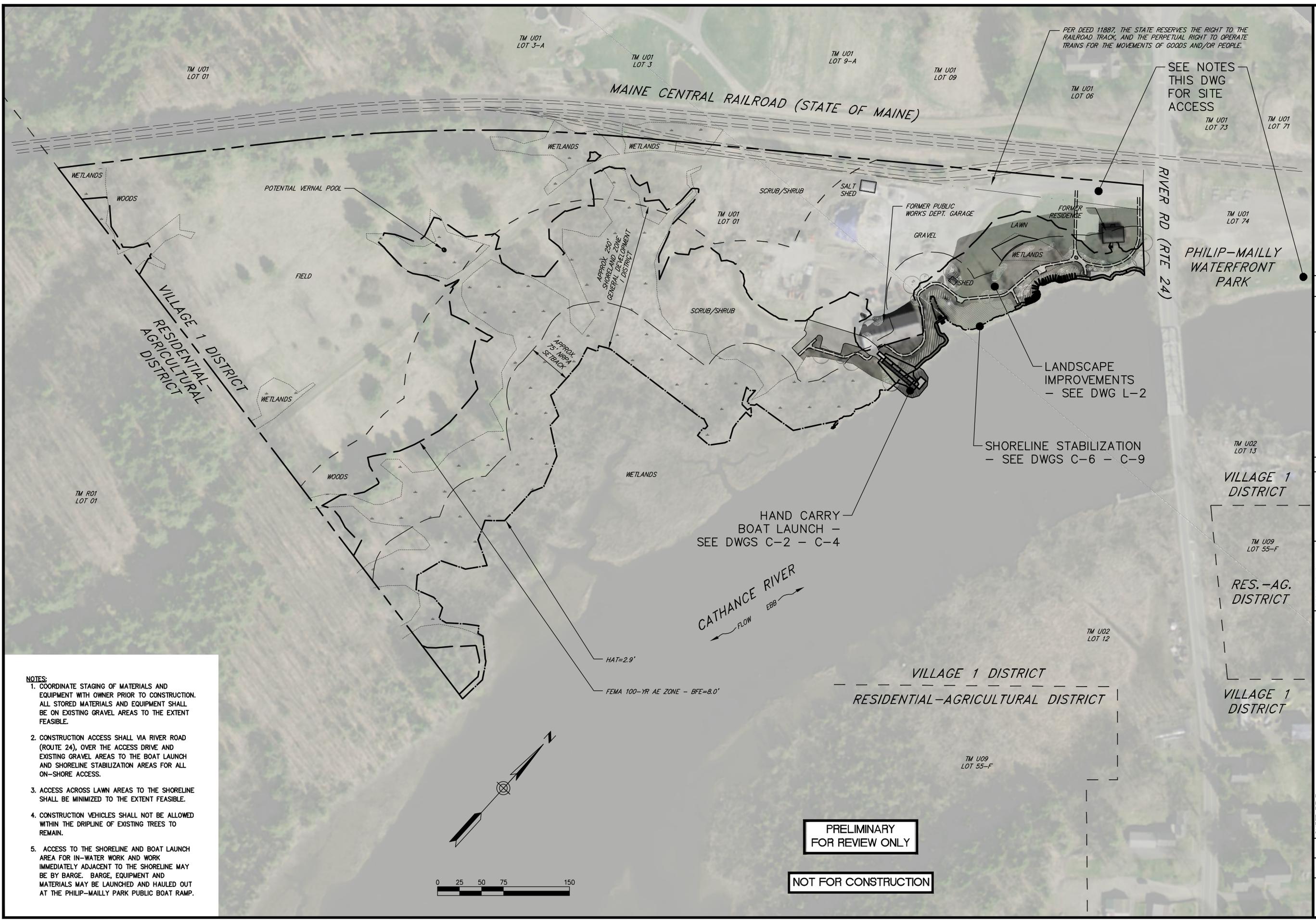
- PIPE OR ROD FOUND
- RIGHT OF WAY
- PROPERTY LINE
- ▨ BUILDING
- ▨ PAVEMENT
- ▨ CONCRETE
- ▨ GRANITE CURB
- ▨ GRAVEL
- ▨ TRAIL
- ⊠ CATCH BASIN
- ⊙ ELECTRIC OUTLET
- ⊙ UTILITY POLE AND ANCHOR
- - - CONTOURS - MAJOR
- - - CONTOURS - MINOR



TOPOGRAPHIC SURVEY	
FOR TOWN OF BOWDOINHAM 8 RIVER ROAD, BOWDOINHAM, MAINE	
SITE 8 RIVER ROAD BOWDOINHAM, MAINE	
<p>LITTLE RIVER LAND SURVEYING, INC. ME PLS #2376 NH LLS #957 PO BOX 332, LISBON FALLS MAINE 04252 (207) 841-0056</p>	<p>DATE: JUNE 28, 2019</p> <p>SCALE: 1" = 80'</p> <p>PROJECT #19-025 DRAWING #19-025</p> <p>DRAWN BY: TJC CHECKED BY: JUR</p>



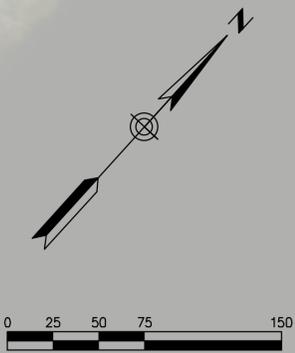
xi:\18-20 bowdoinham waterfront\phaseb-livingshorelines\cad\18-20-bowdoinham-civ.dwg 4/22/2020



PER DEED 11887, THE STATE RESERVES THE RIGHT TO THE RAILROAD TRACK, AND THE PERPETUAL RIGHT TO OPERATE TRAINS FOR THE MOVEMENTS OF GOODS AND/OR PEOPLE.

SEE NOTES THIS DWG FOR SITE ACCESS

- NOTES:**
- COORDINATE STAGING OF MATERIALS AND EQUIPMENT WITH OWNER PRIOR TO CONSTRUCTION. ALL STORED MATERIALS AND EQUIPMENT SHALL BE ON EXISTING GRAVEL AREAS TO THE EXTENT FEASIBLE.
 - CONSTRUCTION ACCESS SHALL VIA RIVER ROAD (ROUTE 24), OVER THE ACCESS DRIVE AND EXISTING GRAVEL AREAS TO THE BOAT LAUNCH AND SHORELINE STABILIZATION AREAS FOR ALL ON-SHORE ACCESS.
 - ACCESS ACROSS LAWN AREAS TO THE SHORELINE SHALL BE MINIMIZED TO THE EXTENT FEASIBLE.
 - CONSTRUCTION VEHICLES SHALL NOT BE ALLOWED WITHIN THE DRIPLINE OF EXISTING TREES TO REMAIN.
 - ACCESS TO THE SHORELINE AND BOAT LAUNCH AREA FOR IN-WATER WORK AND WORK IMMEDIATELY ADJACENT TO THE SHORELINE MAY BE BY BARGE. BARGE, EQUIPMENT AND MATERIALS MAY BE LAUNCHED AND HAULED OUT AT THE PHILIP-MAILLY PARK PUBLIC BOAT RAMP.



PRELIMINARY FOR REVIEW ONLY

NOT FOR CONSTRUCTION

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7 Spruce Road • Freeport • Maine • 04032 • 207-866-9724 • info@bakerdcs.com

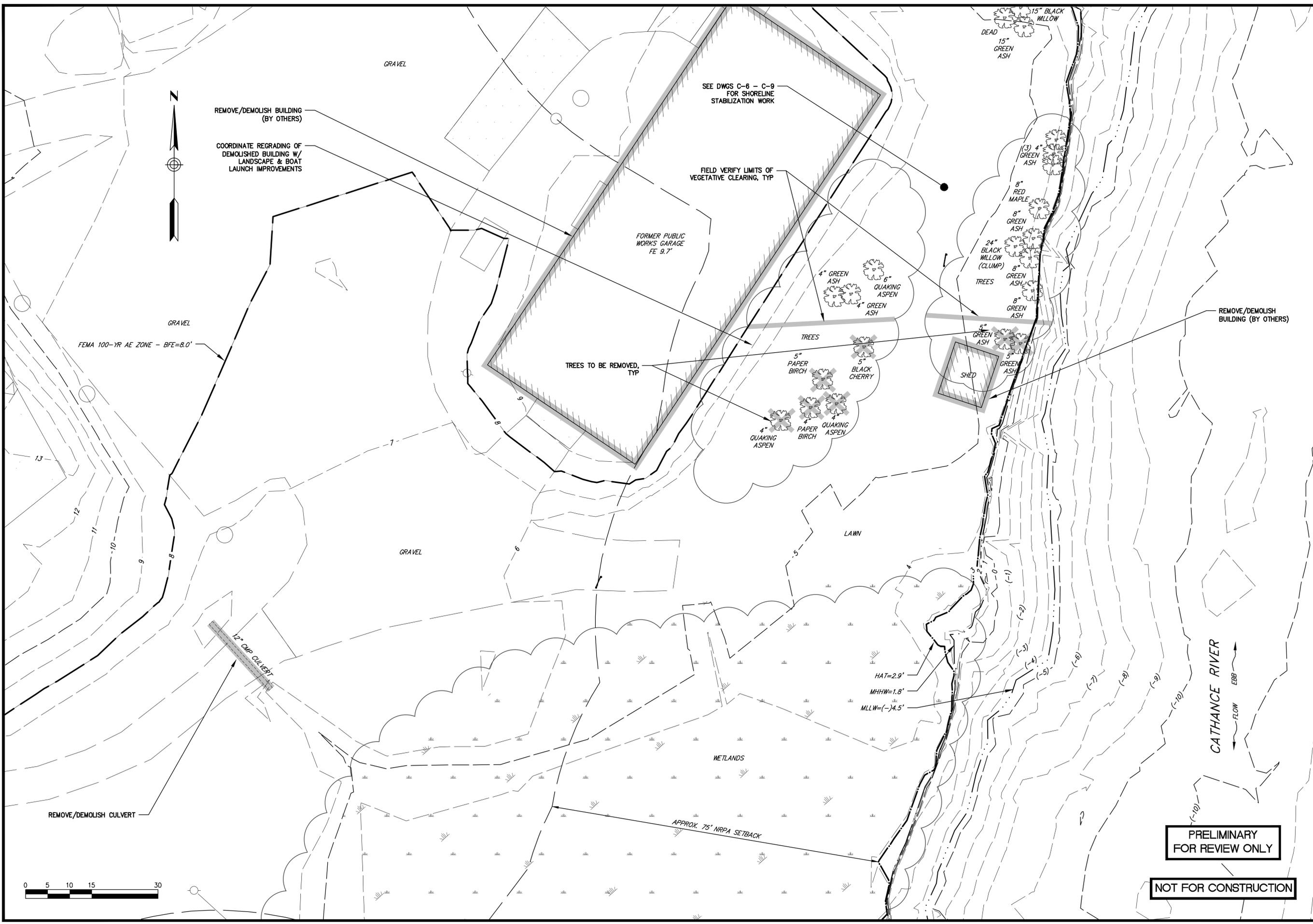
NO.	DATE	TYP	INT.
A	04.08.20	TYP	INT.
PERMITTING SUBMISSION			

DESIGNED BY: TJP
DRAWN BY: MMC
CHECKED BY: BJB
SCALE: AS SHOWN

SHEET TITLE: OVERVIEW PLAN
PROJECT: TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I BOWDOINHAM, MAINE

DATE: APRIL 2020
CONTRACT NO.: 18-20
SHEET NO.: C-1
REV.: A

x:\18-20 bowdoinham waterfront\phaseb-livingshorelines\cad\18-20-bowdoinham-civ.dwg 4/22/2020



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BAKER DESIGN CONSULTANTS Civil, Marine, and Structural Engineering 7 Spruce Road • Freeport • Maine • 04032 • 207-866-9724 • info@bakerdesignconsultants.com	
DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BUB
SCALE:	AS SHOWN
SHEET TITLE: BOAT LAUNCH - EX CONDITIONS DEMOLITION & ESC PLAN	
PROJECT: TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I	
DATE:	APRIL 2020
CONTRACT NO.:	18-20
SHEET NO.:	C-2
REV.:	A
PERMITTING SUBMISSION NO.:	A
DATE:	04.08.20
TJP INT.:	

x:\18-20 bowdoinham waterfront\phaseb-livingshorelines\cad\18-20-bowdoinham-civ.dwg 5/1/2020

**PRELIMINARY
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FEMA 100-YR AE ZONE - BFE=8.0'

PROPOSED
LANDSCAPE
IMPROVEMENTS -
SEE DWG L-2,
TYP

(2) 11'x20' ADA
PARKING SPACES
W/ SIGNS

(1) 10'x20'
PARKING SPACE

MAINTAIN EXISTING
GRAVEL FOR ACCESS
DRIVE, THIS AREA

LOAM & SEED ALL
DISTURBED AREAS UNLESS
OTHERWISE NOTED

15'x40' ADA BOAT
TRAILER PARKING SPACE
W/ "HC PARKING" SIGN
(FUTURE PHASE)



4' WIDE
PEDESTRIAN
PATH - SEE
DWG L-2, TYP

INSTALL (2) "NO
MOTOR BOATS" SIGNS

INSTALL (3) BOLLARDS TO
DELINEATE VEHICLE/PEDESTRIAN
TRAFFIC AREAS

PAVED PEDESTRIAN
APPROACH (5% MAX SLOPE)

CONSTRUCT
CONCRETE FLOAT
ABUTMENT

SEE DWGS C-6 - C-9 FOR
SHORELINE STABILIZATION
WORK

PLACE HEAVY RIPRAP
(D50=30") SHORELINE
STABILIZATION, TYP

INSTALL (2) TIMBER
GUIDE PILES

INSTALL (4) 6'x16' FLOATS

INSTALL (1) 12'x18' ADA
FLOAT W/ BOAT LAUNCH
RAMP

INSTALL (2) MOORING CHAINS
TO HELICAL ANCHORS

EXTEND HEAVY RIPRAP 10'-0"
BEYOND END OF RAMP

RIVERBED CLEANUP AREA

INSTALL 18"x12" PRECAST
CONCRETE PLANKS

INSTALL VERTICAL CURB
ENTIRE LENGTH OF EACH SIDE
OF RAMP (APPROX. 127 LF)

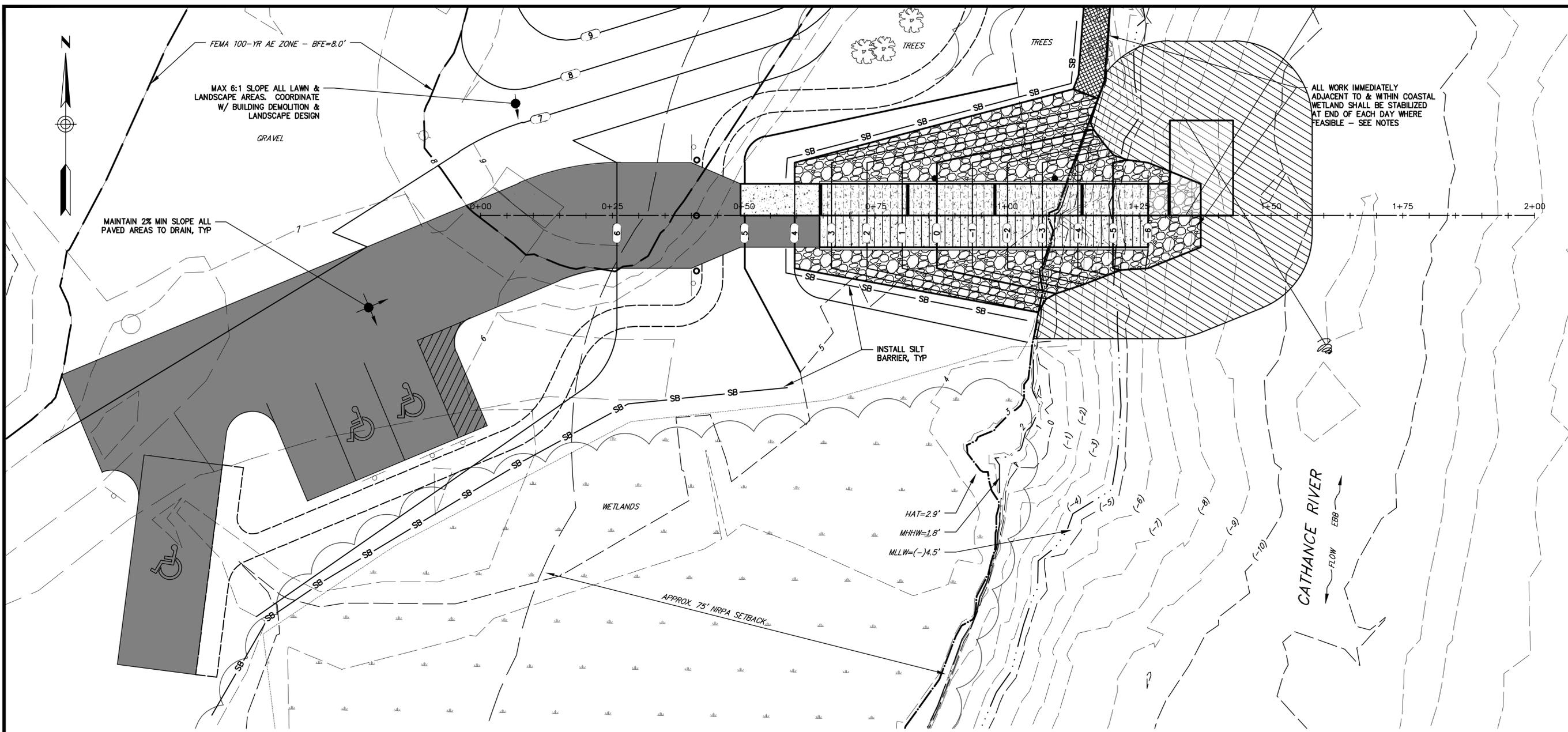
PLACE (3) 8-KAYAK
TEMPORARY STORAGE RACKS.
FINAL LOCATION TO BE
APPROVED BY OWNER

NOTES:

1. LANDSCAPING (OTHER THAN RESTORATION OF DISTURBED LAWN AREAS), PEDESTRIAN PATHS, SITE AMENITIES AND SHORELINE STABILIZATION WORK ADJACENT TO THE BOAT LAUNCH ARE PART OF A SEPARATE CONSTRUCTION PROJECT.
2. ALL FLOATS ARE SEASONAL AND WILL BE STORED IN UPLAND AREAS OUTSIDE OF THE FEMA FLOOD ZONE.
3. PERMANENT COASTAL WETLANDS IMPACTS (HEAVY RIPRAP & BOAT RAMP) = 590 SF
4. TEMPORARY COASTAL WETLANDS IMPACTS (RIVERBED CLEANUP AREA) = 1,815 SF

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		PERMITTING SUBMISSION	DATE 04.08.20
DESIGNED BY:	TJP	CHECKED BY:	BUB
DRAWN BY:	MWC	SCALE:	AS SHOWN
SHEET TITLE: BOAT LAUNCH - LAYOUT PLAN PROJECT: TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I BOWDOINHAM, MAINE			
DATE:	APRIL 2020	CONTRACT NO.:	18-20
SHEET NO.:	C-3	REV.:	A

x:\18-20 bowdoinham waterfront\phaseb-livingshores\cadd\18-20-bowdoinham-civ.dwg 5/1/2020



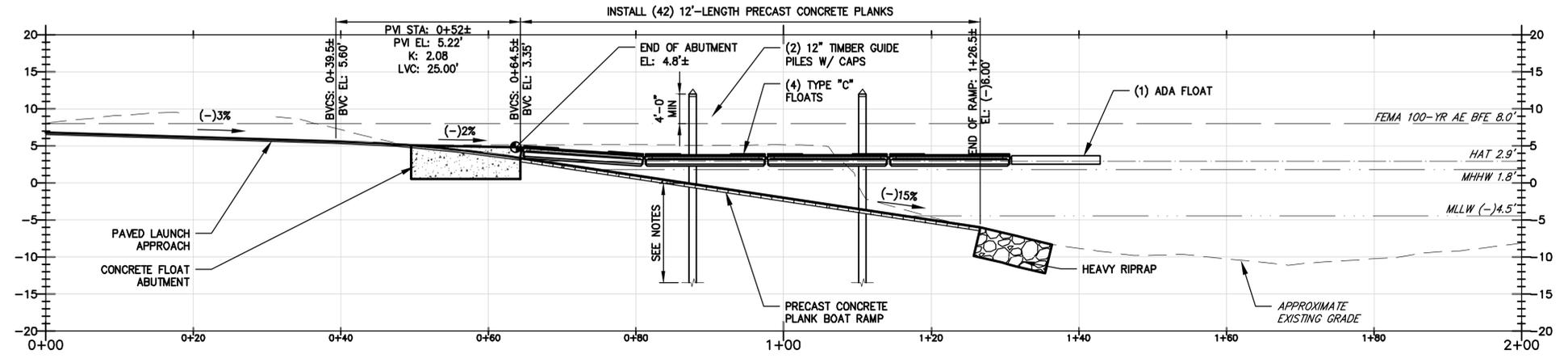
PLAN

SCALE: AS NOTED

**PRELIMINARY
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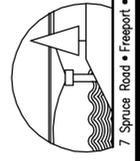
- NOTES:**
- LANDSCAPING (OTHER THAN RESTORATION OF DISTURBED LAWN AREAS), PEDESTRIAN PATHS, SITE AMENITIES AND SHORELINE STABILIZATION WORK ADJACENT TO THE BOAT LAUNCH IS PART OF A SEPARATE CONSTRUCTION PROJECT.
 - WHERE REQUIRED, INSTALL TURBIDITY CURTAIN OR SHEET PILING FOR ALL PORTIONS OF WORK THAT CANNOT BE STABILIZED COMPLETE & IN PLACE BETWEEN TIDE CYCLES, TYP.
 - DRIVE PILES TO A MINIMUM DEPTH OF 30 FEET OR REFUSAL. IF REFUSAL IS LESS THAN 10 FEET, CONTACT ENGINEER.



PROFILE

VERTICAL SCALE: 1"=10'
HORIZONTAL SCALE: 1"=10'

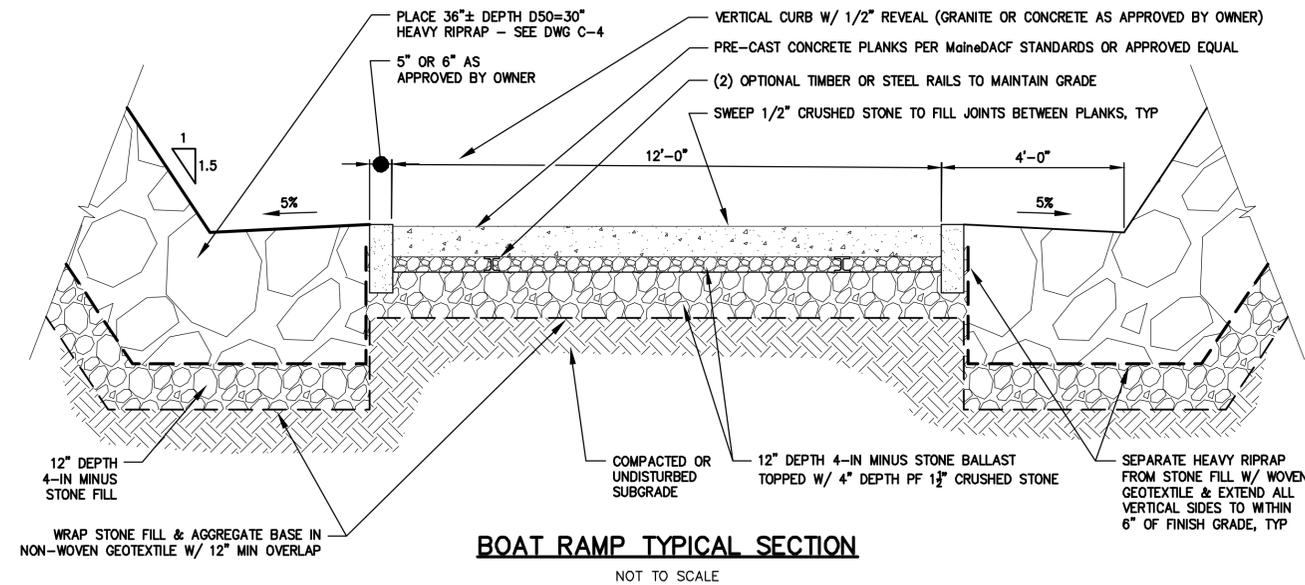
ALL WORK IMMEDIATELY ADJACENT TO & WITHIN COASTAL WETLAND SHALL BE STABILIZED AT END OF EACH DAY WHERE FEASIBLE - SEE NOTES

	
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SHEET TITLE: BOAT LAUNCH - GRADING PLAN & LAUNCH PROFILE	PROJECT: TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I BOWDOINHAM, MAINE
DESIGNED BY: TJP DRAWN BY: MMC CHECKED BY: BUB SCALE: AS SHOWN	PERMITTING SUBMISSION NO. A DATE: 04.08.20 INT.
DATE: APRIL 2020	CONTRACT NO. 18-20
SHEET NO. C-4	REV. A

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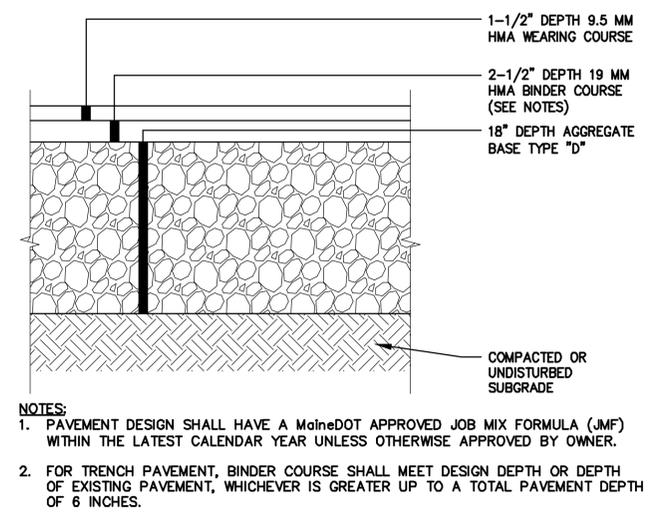
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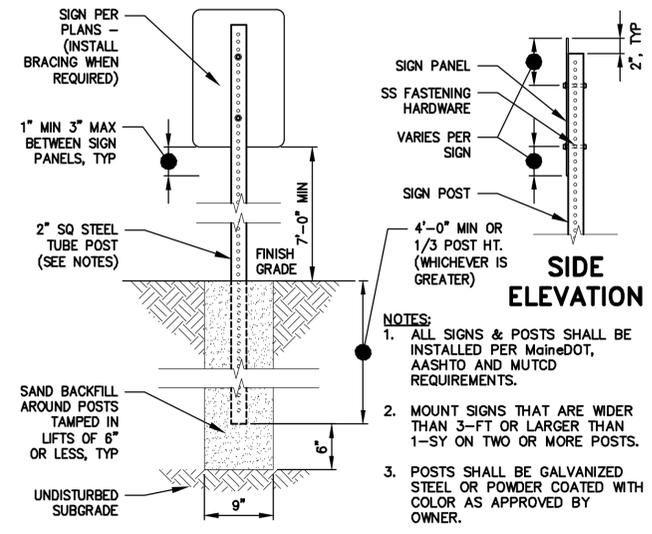
BOAT RAMP TYPICAL SECTION

NOT TO SCALE



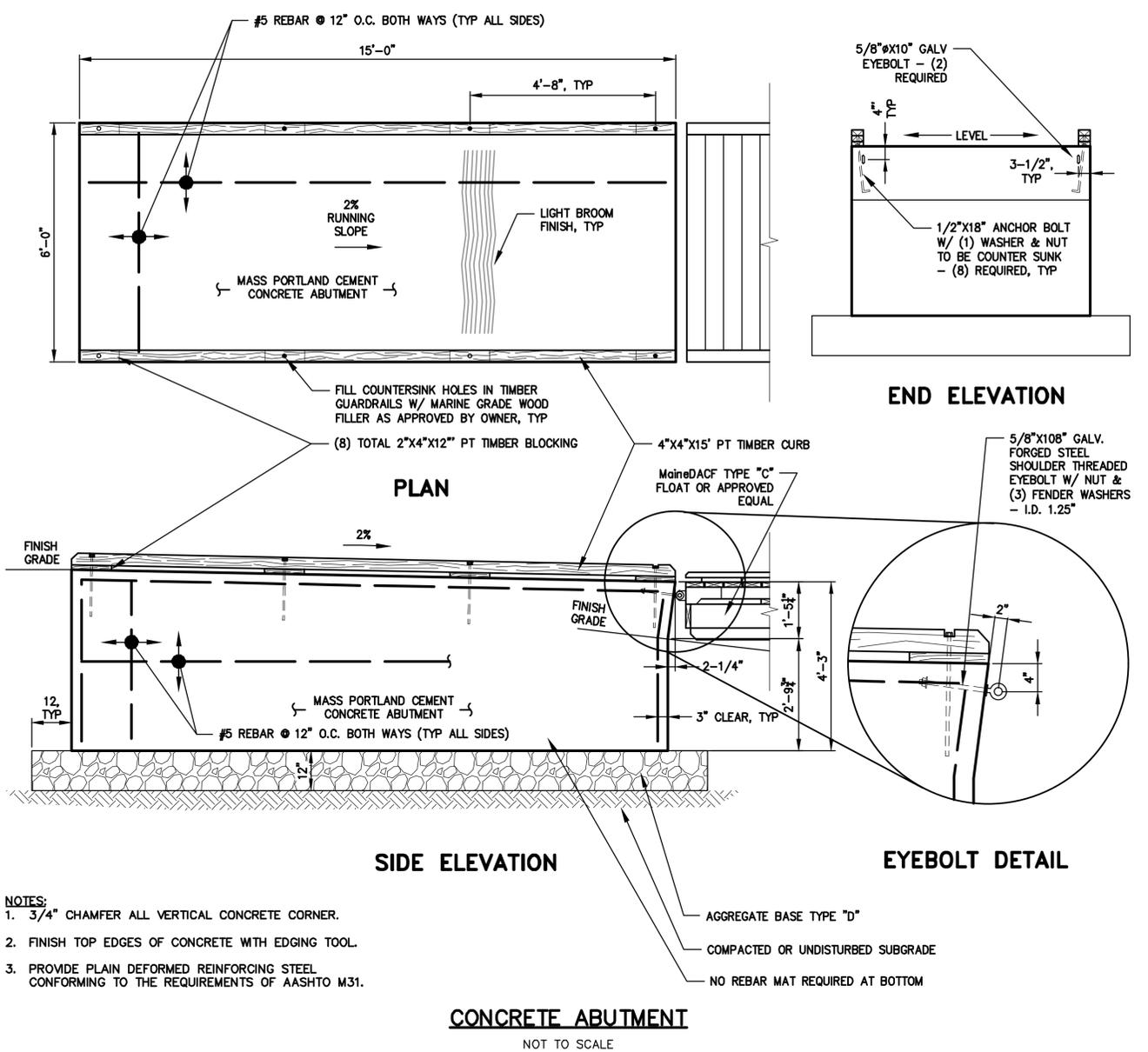
HMA PARKING AREA TYPICAL SECTION

NOT TO SCALE



STEEL SIGN POST - SQUARE TUBULAR

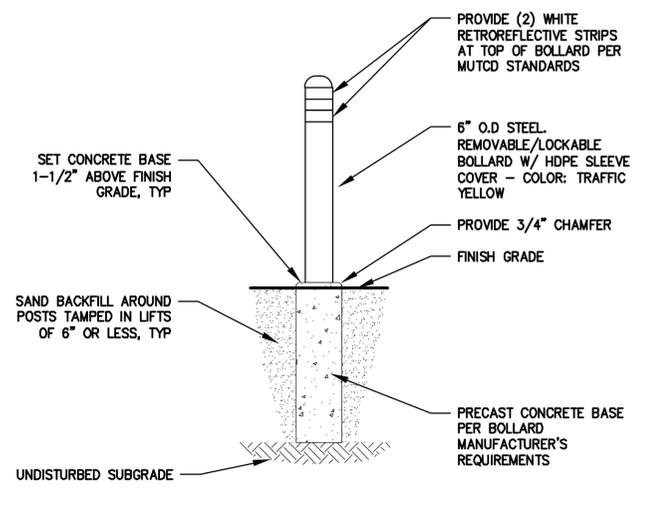
NOT TO SCALE



CONCRETE ABUTMENT

NOT TO SCALE

- NOTES:**
- 3/4" CHAMFER ALL VERTICAL CONCRETE CORNER.
 - FINISH TOP EDGES OF CONCRETE WITH EDGING TOOL.
 - PROVIDE PLAIN DEFORMED REINFORCING STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M31.



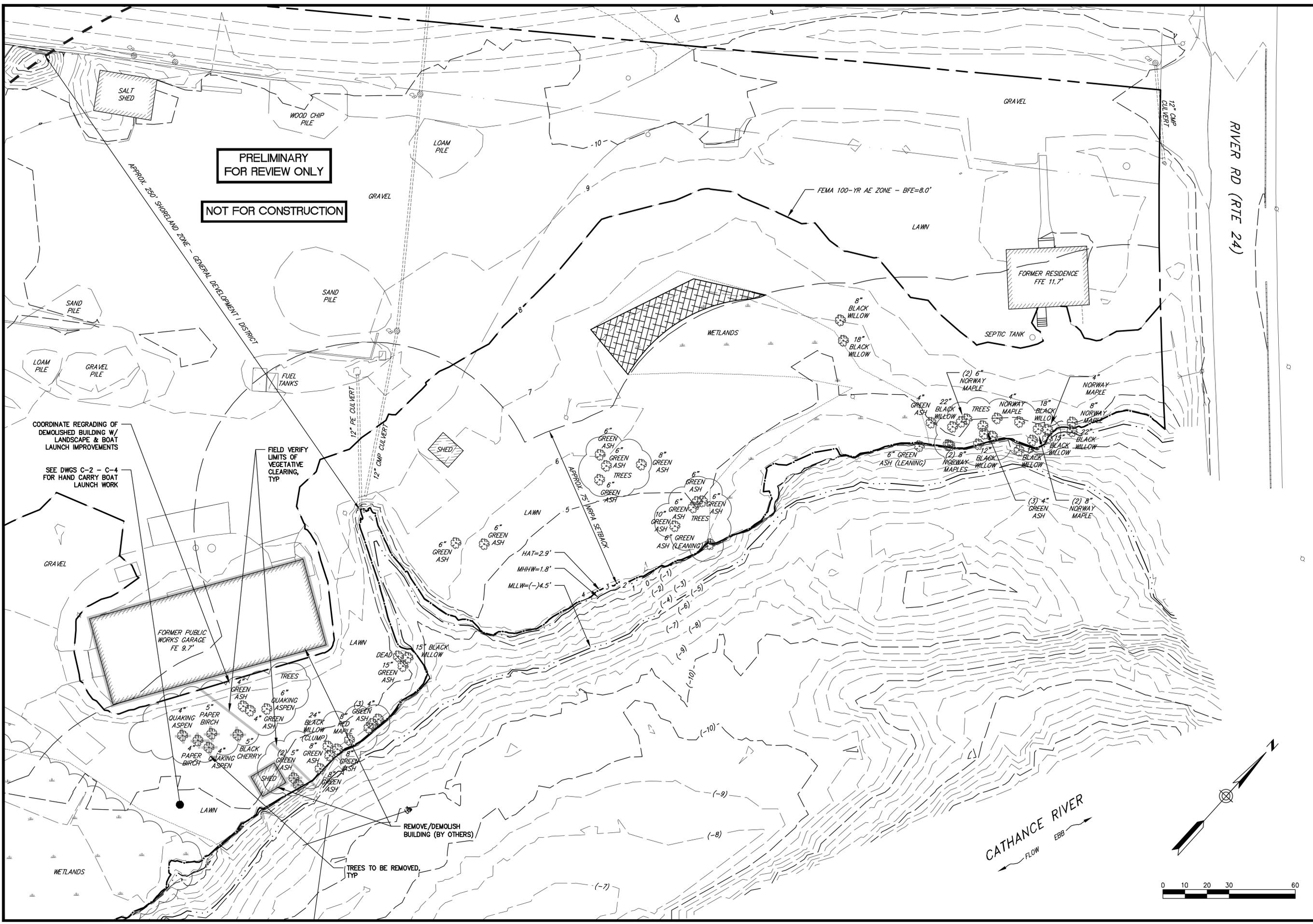
METAL BOLLARD

NOT TO SCALE

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DESIGNED BY:	TJP	DRAWN BY:	MVC	CHECKED BY:	BUB
SCALE:	AS SHOWN	PERMITTING	NO.	DATE	INT.
				04.08.20	
BOAT LAUNCH - DETAILS					
TOWN OF BOWDOINHAM					
WATERFRONT PLAN - PHASE I					
BOWDOINHAM, MAINE					
DATE	APRIL 2020				
CONTRACT NO.	18-20				
SHEET NO.	REV.				
C-5	A				

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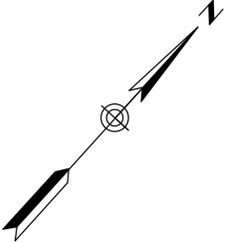
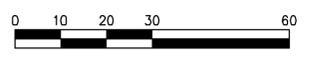
COORDINATE REGRADING OF
DEMOLISHED BUILDING W/
LANDSCAPE & BOAT
LAUNCH IMPROVEMENTS

FIELD VERIFY
LIMITS OF
VEGETATIVE
CLEARING,
TYP

REMOVE/DEMOLISH
BUILDING (BY OTHERS)

TREES TO BE REMOVED,
TYP

CATHANCE RIVER
FLOW
EBB



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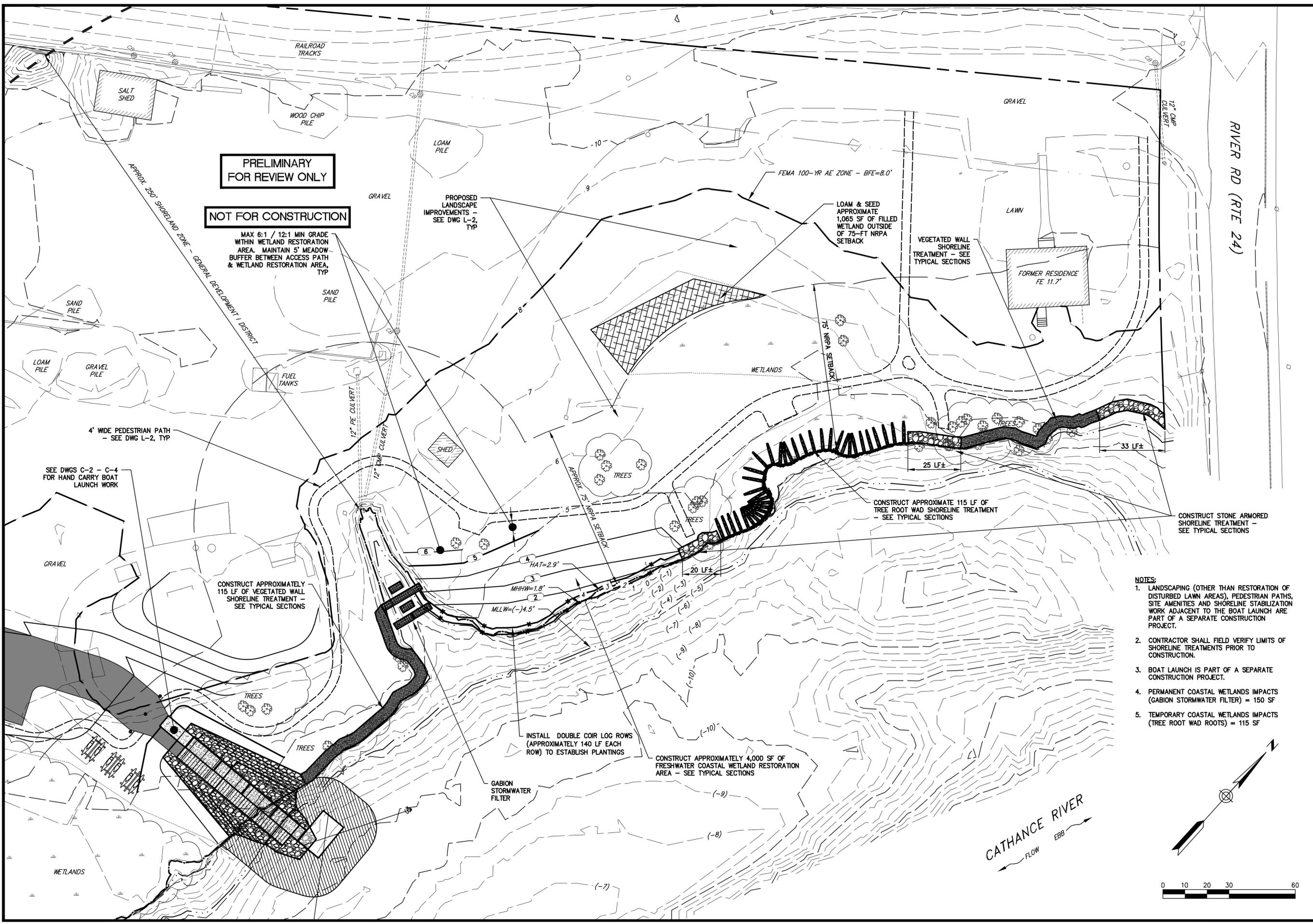
DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BUB
SCALE:	AS SHOWN

SHEET TITLE: **SHORELINE STABILIZATION - EX CONDITIONS, DEMOLITION & ESC PLAN**
PROJECT: **TOWN OF BOWDOINHAM, MAINE WATERFRONT PLAN - PHASE I**

DATE:	APRIL 2020
CONTRACT NO.:	18-20
SHEET NO.:	C-6
REV.:	A

PERMITTING SUBMISSION	NO.
DATE	04.08.20
TJP	INT.

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MAX 6:1 / 12:1 MIN GRADE WITHIN WETLAND RESTORATION AREA. MAINTAIN 5' MEADOW BUFFER BETWEEN ACCESS PATH & WETLAND RESTORATION AREA, TYP

- NOTES:**
- LANDSCAPING (OTHER THAN RESTORATION OF DISTURBED LAWN AREAS), PEDESTRIAN PATHS, SITE AMENITIES AND SHORELINE STABILIZATION WORK ADJACENT TO THE BOAT LAUNCH ARE PART OF A SEPARATE CONSTRUCTION PROJECT.
 - CONTRACTOR SHALL FIELD VERIFY LIMITS OF SHORELINE TREATMENTS PRIOR TO CONSTRUCTION.
 - BOAT LAUNCH IS PART OF A SEPARATE CONSTRUCTION PROJECT.
 - PERMANENT COASTAL WETLANDS IMPACTS (GABION STORMWATER FILTER) = 150 SF
 - TEMPORARY COASTAL WETLANDS IMPACTS (TREE ROOT WAD ROOTS) = 115 SF

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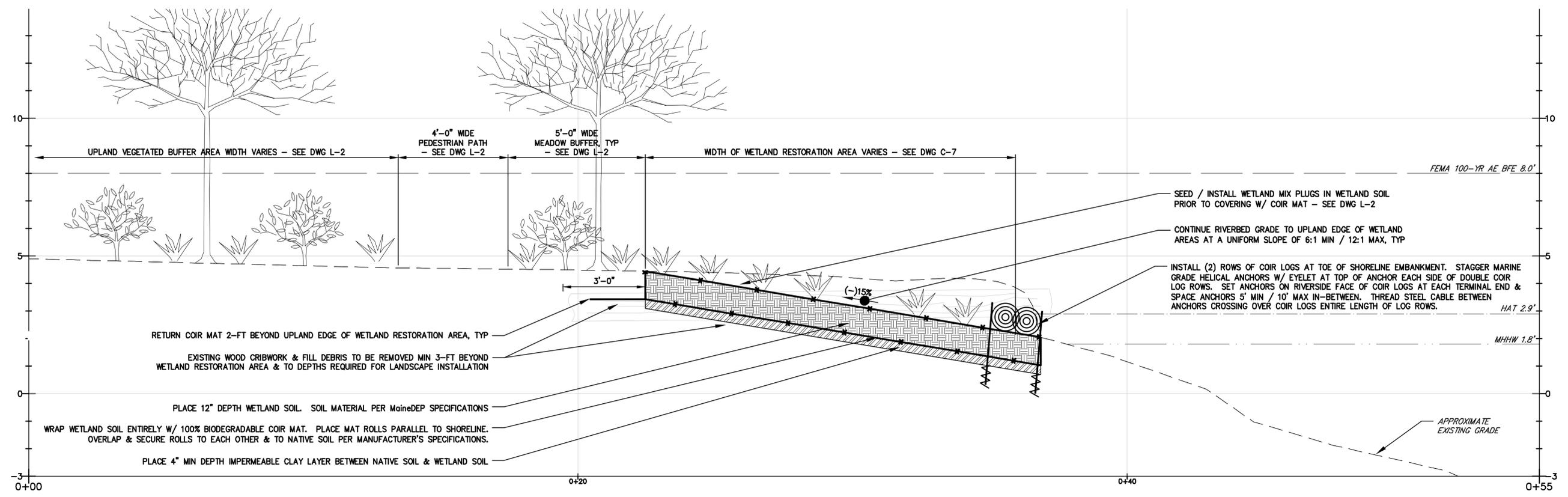
DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BJB
SCALE:	AS SHOWN

SHEET TITLE: SHORELINE STABILIZATION SITE PLAN
PROJECT: TOWN OF BOWDOINHAM, MAINE WATERFRONT PLAN - PHASE I

DATE:	APRIL 2020
CONTRACT NO.:	18-20
SHEET NO.:	C-7
REV.:	A

PERMITTING SUBMISSION DATE: 04.08.20 TJP INT.

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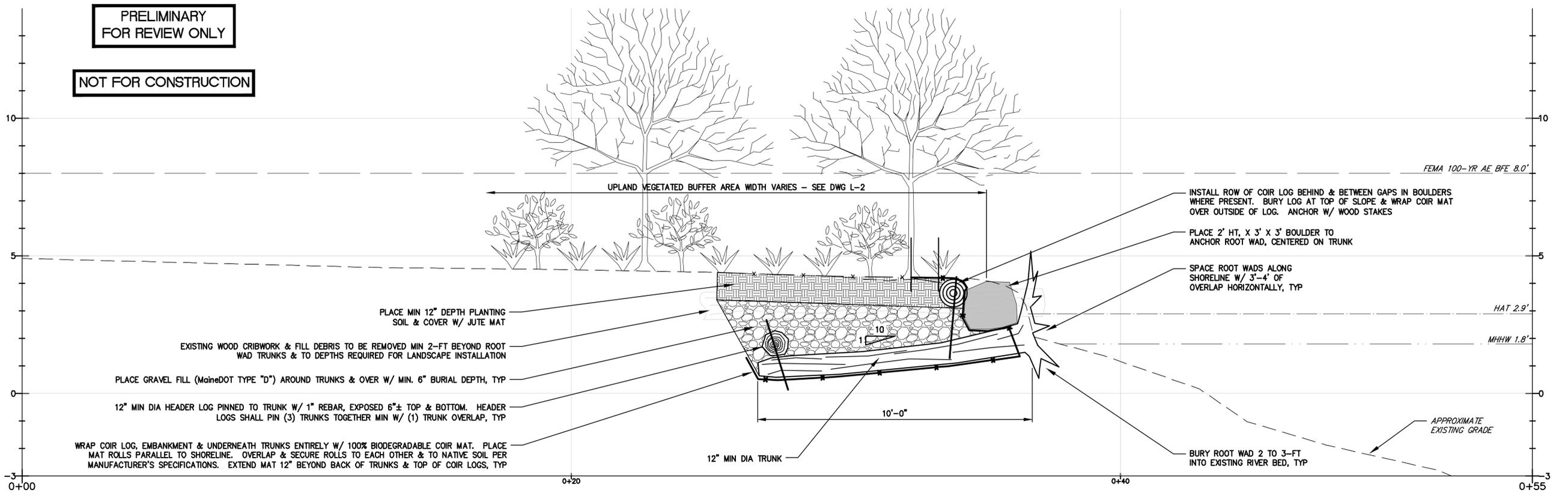


FRESHWATER COASTAL WETLAND SHORELINE TREATMENT

VERTICAL SCALE: 1"=2'
HORIZONTAL SCALE: 1"=2'

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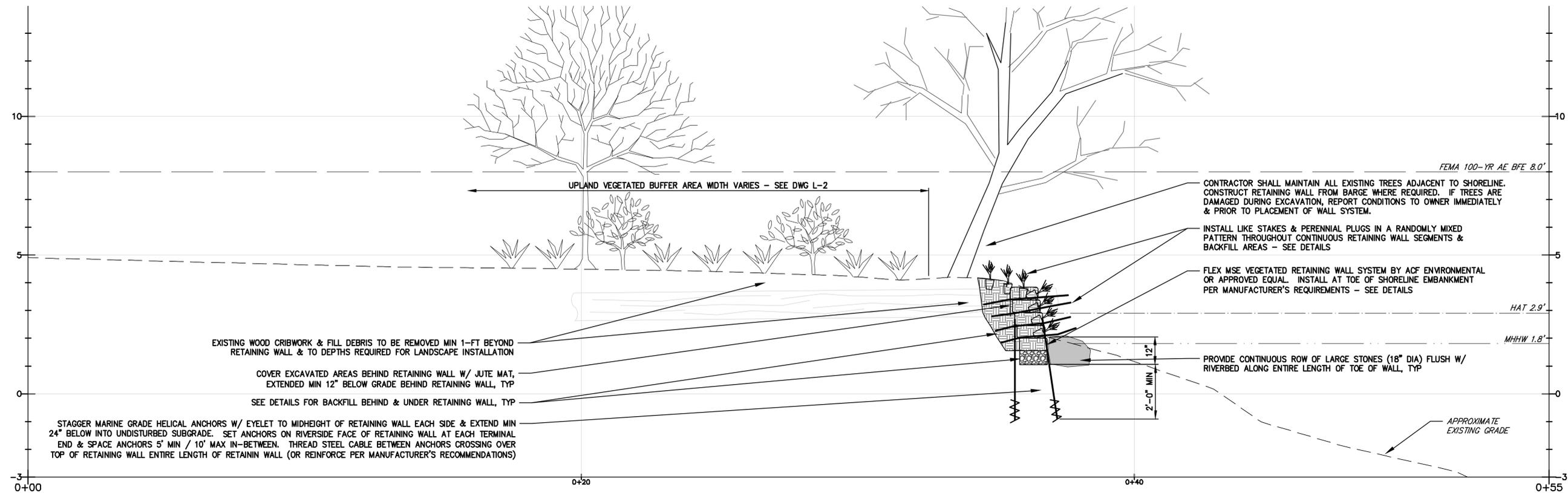
TREE ROOT WAD SHORELINE TREATMENT

VERTICAL SCALE: 1"=2'
HORIZONTAL SCALE: 1"=2'

- NOTES:**
- ALL COIR AND JUTE MATTING SHALL BE STAKED OR STAPLED TO SURFACE PER MAINE DEP BEST MANAGEMENT PRACTICES & PER MANUFACTURER'S REQUIREMENTS.
 - ALL SLOPE STABILIZATION WORK SHALL BE INSTALLED AND STABILIZED COMPLETE AND IN PLACE AT THE END OF EACH WORKDAY AND PRIOR TO FORECAST STORMS.

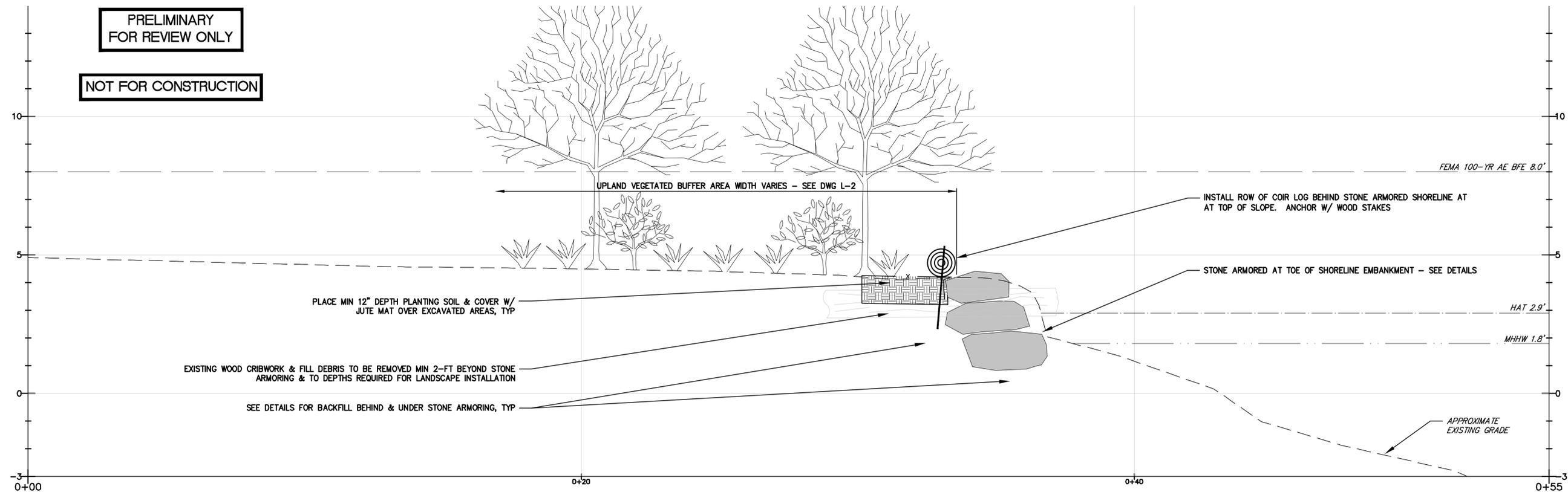
<p>BAKER DESIGN CONSULTANTS Civil, Marine, and Structural Engineering 7 Spruce Road • Freeport • Maine • 04032 • 207-866-9724 • info@bakerdcs.com</p>	
<p>SHORELINE STABILIZATION TYPICAL SECTIONS I</p>	<p>WATERFRONT PLAN - PHASE I</p>
<p>DESIGNED BY: TJP DRAWN BY: MMC CHECKED BY: BJB SCALE: AS SHOWN</p>	<p>TOWN OF BOWDOINHAM BOWDOINHAM, MAINE</p>
<p>DATE: APRIL 2020 CONTRACT NO.: 18-20</p>	
<p>SHEET NO. C-8</p>	<p>REV. A</p>

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VEGETATED WALL SHORELINE TREATMENT

VERTICAL SCALE: 1"=2'
HORIZONTAL SCALE: 1"=2'



STONE ARMOR SHORELINE TREATMENT

VERTICAL SCALE: 1"=2'
HORIZONTAL SCALE: 1"=2'

- NOTES:**
1. ALL COIR AND JUTE MATTING SHALL BE STAKED OR STAPLED TO SURFACE PER Maine DEP BEST MANAGEMENT PRACTICES & PER MANUFACTURER'S REQUIREMENTS.
 2. ALL SLOPE STABILIZATION WORK SHALL BE INSTALLED AND STABILIZED COMPLETE AND IN PLACE AT THE END OF EACH WORKDAY AND PRIOR TO FORECAST STORMS.

**PRELIMINARY
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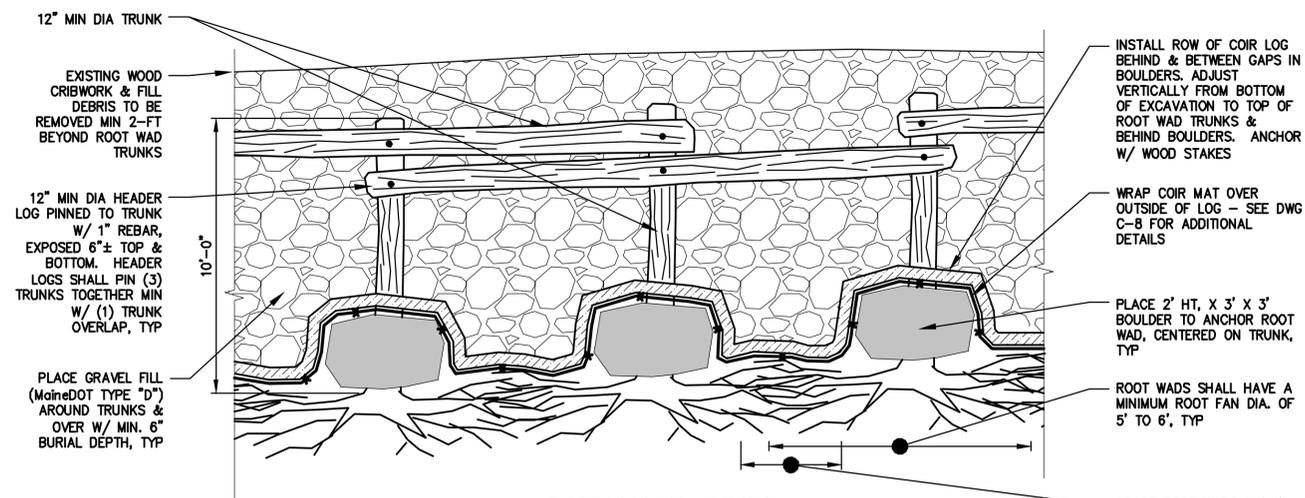
NO.	DATE	TYP	INT.
A	04.08.20		
SUBMISSION		PERMITTING	

DESIGNED BY:	TJP
DRAWN BY:	MWC
CHECKED BY:	BJB
SCALE:	AS SHOWN

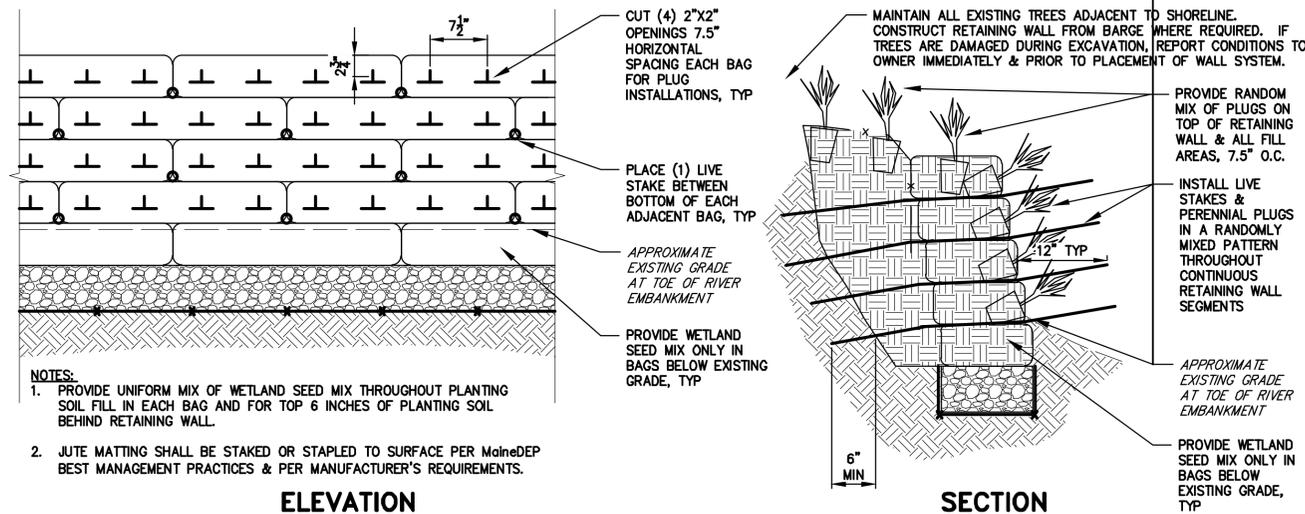
SHEET TITLE: **SHORELINE STABILIZATION II**
OPTIONS TYPICAL SECTIONS II
PROJECT: TOWN OF BOWDOINHAM
WATERFRONT PLAN - PHASE I
BOWDOINHAM, MAINE

DATE	APRIL 2020
CONTRACT NO.	18-20
SHEET NO.	C-9
REV.	A

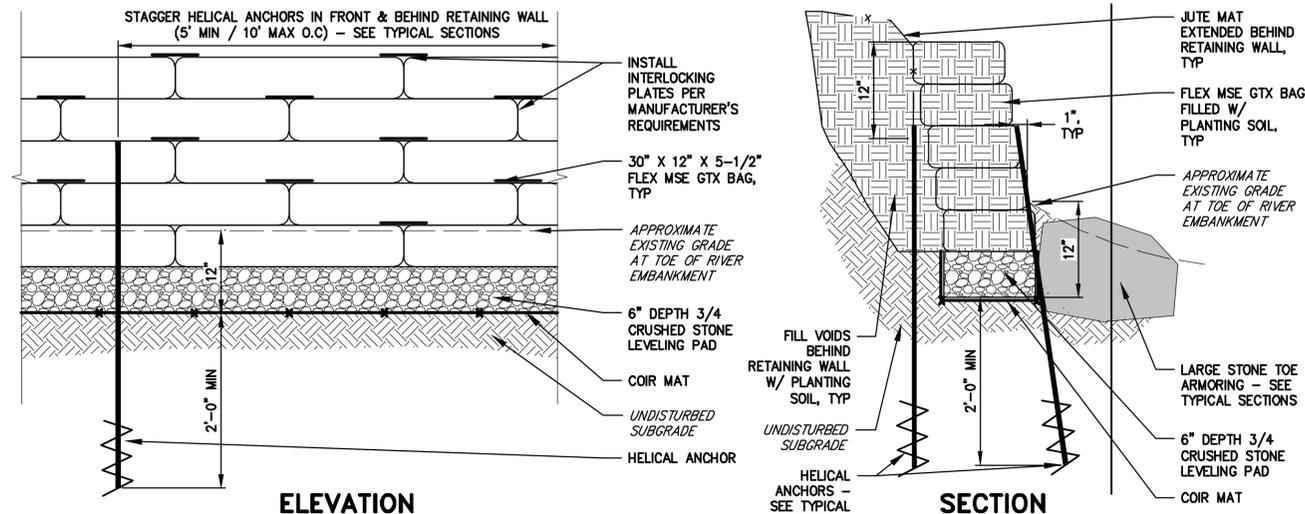
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**CATHANCE RIVER
TREE ROOT WAD LAYOUT**
NOT TO SCALE



MSE RETAINING WALL PLANTING
NOT TO SCALE

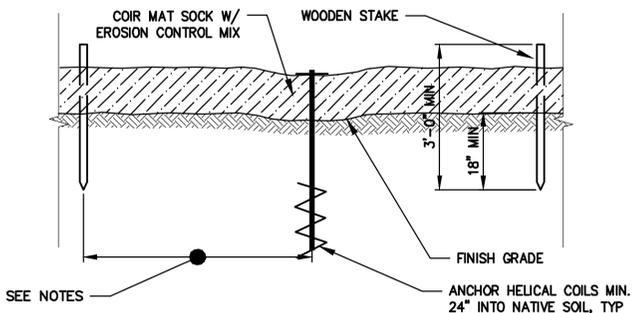


MSE RETAINING WALL
NOT TO SCALE

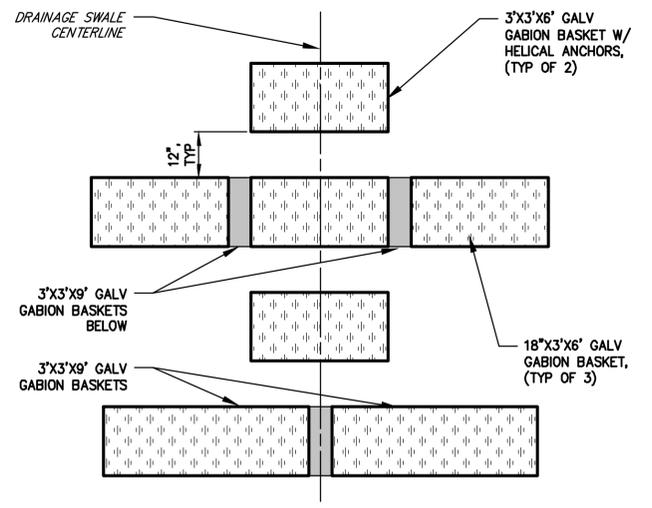
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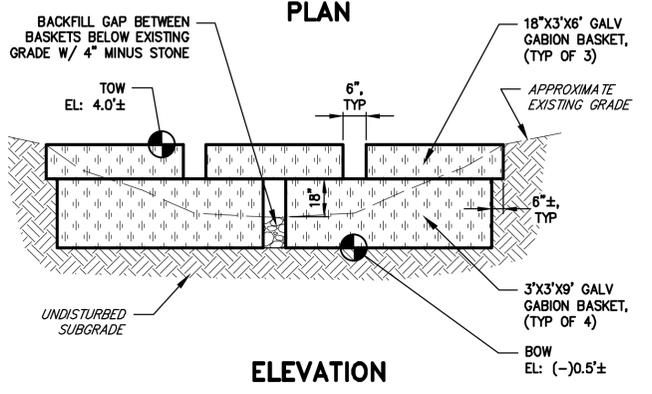
PLANT LIST						
KEY	QTY	SCIENTIFIC NAME COMMON NAME	SIZE	SPACING	ROOTING	NOTES
LIVE STAKES						
CA	67	CORNUS AMOMUM SILKY DOGWOOD	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
CR	66	CORNUS RACEMOSA GRAY DOGWOOD	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
CS	67	CORNUS SERICEA REDOSIER DOGWOOD	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
SB	66	SALIX CINEREA GREY WILLOW	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
SD	67	SALIX DISCOLOR PUSSY WILLOW	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
SP	67	SALIX PUPUREA VAR. 'NANA' DWARF ARTIC WILLOW	1/2" TO 1-1/2" DIA	30"/ROW O.C.	BARE ROOT	SEE DETAILS
PLUGS						
AA	333	CALAMAGROSTIS CANADENSIS BLUEJOINT GRASS	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
JC	334	CAREX GYNANDRA NODDING SEDGE	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
JH	333	CAREX VULPINOIDEA BROWN FOX SEDGE	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
MP	334	SCHOENOPLECTUS AMERICANUS THREE-SQUARE BULRUSH	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
PM	333	SCIRPUS CYPERINUS COTTONGRASS BULRUSH	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
PQ	333	SPARTINA PECTINATA CORD GRASS	5-7 PPP	7.5" O.C.	PLUG	SEE DETAILS
OTHER						
		WETLAND SEED MIX				SEE DWG L-1



SEDIMENT BARRIER - COIR LOG
NOT TO SCALE



GABION STORMWATER FILTER
NOT TO SCALE



STONE ARMORING TYPICAL SECTION
NOT TO SCALE

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TYP	MVC	BUB	AS SHOWN	DATE	TYP	INT.	NO.
A	A	A	A	04.08.20	A	A	A
DESIGNED BY: TJP				DRAWN BY: MVC			
CHECKED BY: BUB				SCALE: AS SHOWN			
SHEET TITLE: SHORELINE STABILIZATION DETAILS							
PROJECT: TOWN OF BOWDOINHAM WATERFRONT PLAN - PHASE I							
DATE: APRIL 2020							
CONTRACT NO. 18-20							
SHEET NO. C-10				REV. A			

PLANTING SCHEDULE:

Symbol	Quantity	Scientific Name	Common Name	Size	Root Size	Notes
Trees						
NS	8	<i>Nyssa sylvatica</i>	Blackgum	1.5" - 2" dia (10'-14')	20" - 24"	
SN	2	<i>Salix nigra</i>	Black Willow	1" dia (6'-10')	12" - 18"	
AS	7	<i>Acer saccharum</i>	Sugar Maple	2" dia (10'-14')	20" - 24"	
AR	7	<i>Acer rubrum</i>	Red Maple	2" dia (10'-14')	20" - 24"	
AC	18	<i>Amelanchier canadensis</i>	Shadblow / Serviceberry	1" dia (6'-10')	12" - 18"	
HIA	2	<i>Hamamelis virginiana</i>	Witchhazel	1" dia (6'-10')	12" - 18"	
	44					
Shrub Mix 1						
KA	195	<i>Kalmia angustifolia</i>	Sheep Laurel	3 gal	3 gal	
IVN	84	<i>Ilex verticillata 'Red Sprite'</i>	Winterberry	3 gal	3 gal	
IVJ	11	<i>Ilex verticillata 'Jim Dandy'</i>	Winterberry (male)	3 gal	3 gal	
AM	38	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal	3 gal	
	328					
Shrub Mix 2						
KA	5	<i>Kalmia angustifolia</i>	Sheep Laurel	3 gal	3 gal	Sunny/Part Shade Areas
VA	5	<i>Vaccinium angustifolium</i>	Lowbush Blueberry	1 gal	1 gal	Sunny/Part Shade Areas
GB	8	<i>Gaylussacia baccata</i>	Huckleberry	1 gal	1 gal	Sunny/Part Shade Areas
CS	15	<i>Cornus sericea 'Farrow'</i>	Red Twig Dogwood	2 gal	2 gal	
IVN	14	<i>Ilex verticillata 'Red Sprite'</i>	Winterberry	3 gal	3 gal	
IVJ	2	<i>Ilex verticillata 'Jim Dandy'</i>	Winterberry (male)	3 gal	3 gal	
CA	12	<i>Clethra alnifolia 'Tom's Compact'</i>	Summersweet Clethra	3 gal	3 gal	
VD	5	<i>Viburnum dentatum 'Blue Muffin'</i>	Arrowwood viburnum	3 gal	3 gal	
	66					
Shrub Mix 3						
LB	14	<i>Lindera Benzoin</i>	Spicebush	5 gal	5 gal	
AM	108	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal	3 gal	
AB	55	<i>Aronia arbutifolia 'brilliantissima'</i>	Chokeberry	3 gal	3 gal	
VA	125	<i>Vaccinium angustifolium</i>	Lowbush Blueberry	1 gal	1 gal	Sunny/Part Shade Areas
CS	50	<i>Cornus sericea 'Farrow'</i>	Red Twig Dogwood	2 gal	2 gal	
	352					
Upland Mix						
		<i>Festuca rubra</i>	Red Fescue			
		<i>Elymus virginicus</i>	Virginia Rye			
		<i>Helopsis helianthoides</i>	Smooth Oxeye			
		<i>Spartina pectinata</i>	Cord Grass			
		<i>Sorghastrum nutans</i>	Indian Grass			
		<i>Coreopsis lanceolata</i>	Lance-leaf Coreopsis			
		<i>Verbena hastata</i>	Blue Vervain			
		<i>Solidago juncea</i>	Early Goldenrod			
Bottomland Mix 3740 SF.						
		<i>Elymus riparius</i>	Riverbank Wild Rye			
		<i>Spartina pectinata</i>	Cord Grass			
		<i>Carex vulpinoidea</i>	Fox Sedge			
		<i>Carex lurida</i>	Lurid Sedge			
		<i>Carex scoparia</i>	Blunt Broom Sedge			
		<i>Verbena hastata</i>	Blue Vervain			
		<i>Poa palustris</i>	Fowl Bluegrass			
		<i>Carex lupulina</i>	Hop Sedge			
		<i>Schoenoplectus tabernaemontani</i>	Soft-stem bulrush			
		<i>Acorus americanus</i>	American Sweetflag			
		<i>Pontederia cordata</i>	Pickereelweed			
		<i>Symphotrichum puniceum</i>	Purplestem Aster			
		<i>Iris versicolor</i>	Iris versicolor			
		<i>Symphotrichum novae-angliae</i>	New England Aster			
		<i>Rudbeckia hirta</i>	Black Eyed Susan			
		<i>Liatris spicata</i>	Marsh Blazing Star			
		<i>Solidago juncea</i>	Early Goldenrod			
Wetland Mix 3920 SF.						
		<i>Asclepias incarnata</i>	Rose Milkweed			
		<i>Bidens cernua</i>	Nodding Bur Marigold			
		<i>Calamagrostis canadensis</i>	Bluejoint Grass			
		<i>Carex bicknellii</i>	Copper-Shouldered Oval Sedge			
		<i>Carex lupulina</i>	Common Hop Sedge			
		<i>Carex lurida</i>	Sallow Sedge			
		<i>Carex scoparia</i>	Lance-Fruited Oval Sedge			
		<i>Carex vulpinoidea</i>	Brown Fox Sedge			
		<i>Eleocharis palustris</i>	Great Spike Rush			
		<i>Eutrochium maculatum</i>	Joe-pye Weed			
		<i>Iris versicolor</i>	Northern Blue Flag			
		<i>Liatris spicata</i>	Marsh Blazing Star			
		<i>Mimulus ringens</i>	Monkey Flower			
		<i>Schoenoplectus tabernaemontani</i>	Soft-stem bulrush			
		<i>Schoenoplectus americanus</i>	Three-square bulrush			
		<i>Symphotrichum puniceum</i>	Swamp Aster			
		<i>Symphotrichum novae-angliae</i>	New England Aster			
		<i>Spartina pectinata</i>	Cord Grass			
		<i>Solidago uliginosa</i>	Bog Goldenrod			
		<i>Verbena hastata</i>	Blue Vervain			
Aquatic Plants						
	120	<i>Iris versicolor</i>	Blue Flag Iris	Plug	Plug	
	50	<i>Lobelia cardinalis</i>	Lobelia / Cardinal Flower	Plug	Plug	
	20	<i>Pontederia cordata</i>	Pickereel weed	Plug	Plug	
	190					
Lawn 30825 SF.						

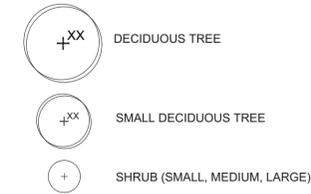
General Notes:

- All topographic and existing base information provided by David Dolan and Associates
- Limit of work shall be at property lines unless otherwise noted.
- No grading, construction or materials storage shall occur within tree protection areas or within drip-line of existing trees.
- All disturbed areas not otherwise developed shall be loamed with a minimum depth of 6" of topsoil and be seeded as specified.
- All areas not requiring grading shall be left undisturbed. Contractor shall keep out of these areas and preserve existing plantings.
- Underground and above ground utility locations are based upon best available evidence and are not field verified. Locating and protecting any above ground or underground utilities is the sole responsibility of the contractor.
- Utility conflicts shall be reported immediately to the landscape architect.
- Utility information shown is approximate only. Prior to any construction, appropriate utility companies shall be contacted and Dig-Safe Center shall be called at 1-800-DIG-SAFE, at least 72 hours (3 working days) in advance.

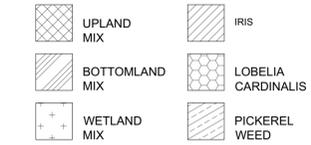
PLANTING NOTES:

- PLANT QUANTITIES, SIZES, SPACING, SPECIES, VARIETIES AND CULTIVARS, AS WELL AS PLANT BED EXTENTS MAY BE ADJUSTED DURING CONSTRUCTION.
- ALL PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE OWNER.
- PLANTS TO BE INSTALLED IN A RANDOMLY MIXED DISTRIBUTION THROUGHOUT THE RESTORATION AREA.
- WHERE POSSIBLE, SHRUB AND PERENNIAL AREAS SHOULD STRIVE TO INCLUDE GROUPINGS OF A MINIMUM OF FIVE SIMILAR SPECIES.
- CONTRACTOR SHALL REFERENCE THE FOLLOWING RESOURCES FOR SHORELINE PLANTING MEANS, METHODS AND MATERIALS:
 - UNIVERSITY OF MAINE COOPERATIVE EXTENSION
 - THE WILD SEED PROJECT
 - CUMBERLAND COUNTY SOIL & WATER CONSERVATION DISTRICT - COASTAL PLANTING GUIDE

PLANTING KEY:



PLANTING PALETTE



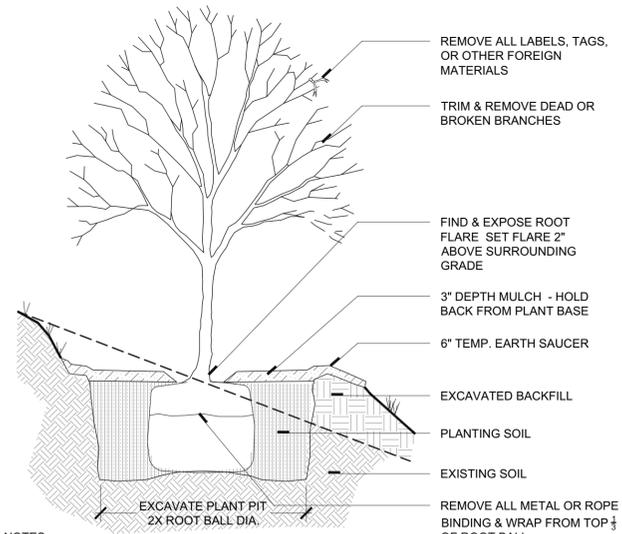
RICHARDSON & ASSOCIATES

P: 207-286-4291
F: 207-286-8850
11 Middle Street
Saco, Maine 04072
richardsonassociates.com

LANDSCAPE NOTES & SCHEDULES

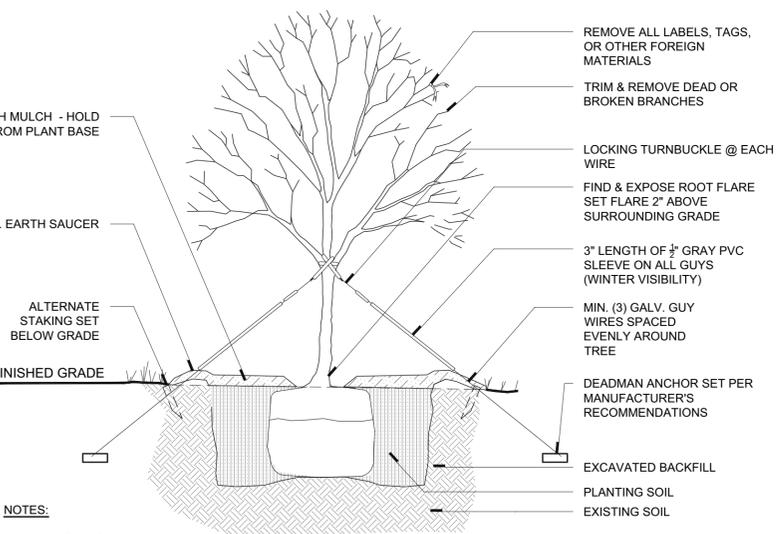
Bowdoinham Master Plan
Bowdoinham, ME

L-1



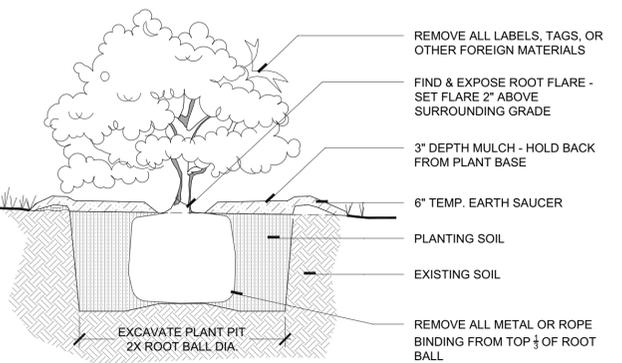
- NOTES:**
1. TREE TO BE SET PLUMB.
 2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
 3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

1 TREE PLANTING ON SLOPE
NTS



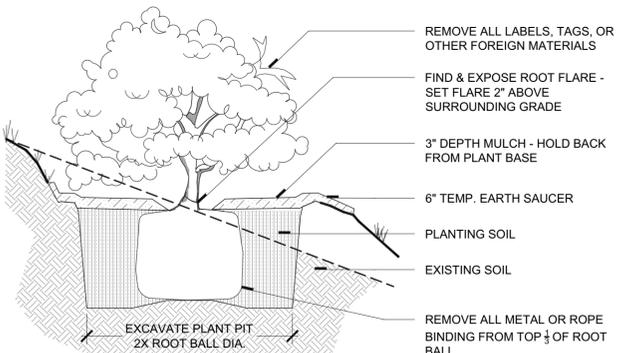
- NOTES:**
1. TREE TO BE SET PLUMB.
 2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
 3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

2 TREE PLANTING
NTS



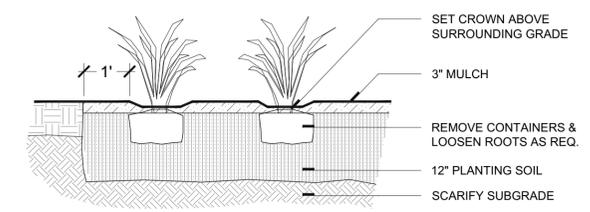
- NOTES:**
1. SHRUB TO BE SET PLUMB.
 2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER COND.
 3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

4 SHRUB PLANTING
NTS

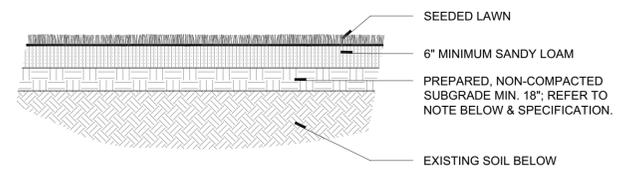


- NOTES:**
1. SHRUB TO BE SET PLUMB.
 2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER COND.
 3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

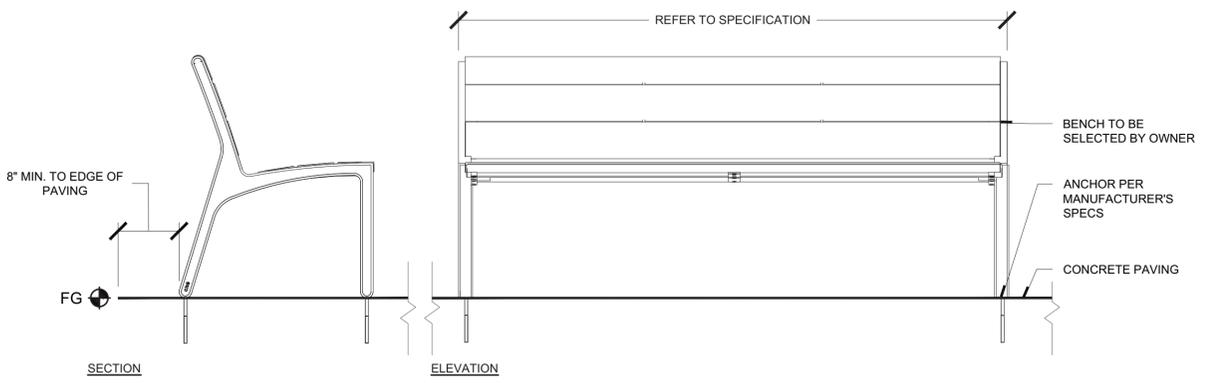
3 SHRUB PLANTING ON SLOPE
NTS



5 PERENNIAL PLANTING
1/2"=1"

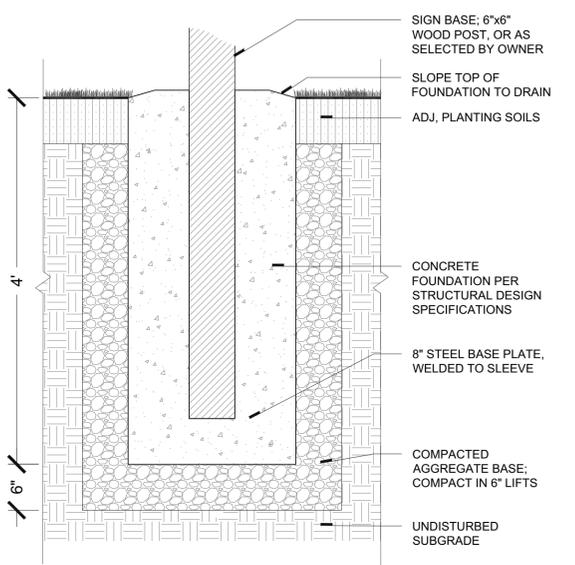


6 LAWN (SEEDED) - TYPICAL SECTION
1/2"=1"



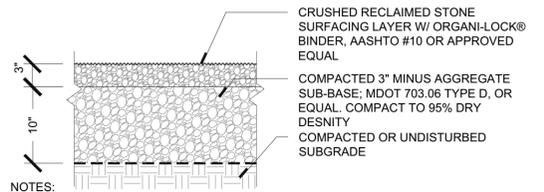
- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. MODEL AND FINISH OF BENCH TO BE SELECTED BY OWNER.

7 PREFABRICATED BENCH
1" = 1'-0"



- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, OR AS DESIGNATED BY SHOP DRAWINGS
 2. ALL MATERIALS SHALL CONFORM WITH THE MOST CURRENT MAINE DOT STANDARDS.
 3. CONTRACTOR SHALL SUBMIT ALL MIX DESIGNS TO LANDSCAPE ARCHITECT FOR APPROVAL.
 4. CONTRACTOR IS RESPONSIBLE FOR ENSURING FOOTING IS APPROPRIATELY SIZED TO MEET ALL STRUCTURAL REQUIREMENTS FOR SELECTED SIGNAGE.

8 SIGN POST BASE
1"=1'-0"



- NOTES:**
1. ORGANIC-LOCK PATHWAY AGGREGATE MUST ALWAYS BE PRE-WET FOR INSTALLATION.
 2. ALL MATERIALS SHALL CONFORM WITH THE MOST CURRENT PREVAILING MAINE DOT/AASHTO STANDARDS.
 3. CONTRACTOR SHALL SUBMIT SAMPLES OF ALL SURFACE MATERIALS AND EDGING TO LANDSCAPE ARCHITECT OR OWNER FOR APPROVAL.
 4. CONTRACTOR SHALL PROVIDE IN-PLACE MOCK-UP, NO LESS THAN 5'x10' ILLUSTRATING A VARIETY OF CONDITIONS FOR REVIEW AND APPROVAL BY OWNER.

9 STABILIZED RECLAIMED STONE PATHWAY
1"=1'-0"

- NOTE:**
1. UPON REMOVAL OF EXISTING PAVING, SUB BASE MATERIAL OF LAWN AREAS MUST BE ASSESSED TO DETERMINE COMPOSITION, COMPACTION, AND INFILTRATION RATE.
 2. PERFORM SITE TESTING TO DETERMINE COMPOSITION, COMPACTION AND INFILTRATION RATE OF EXISTING SUB-BASE.
 3. SOIL STRUCTURE FOR LAWN TO BE COMPOSED OF WELL DRAINING SANDY-LOAM, WITH pH RANGE OF 6.0 TO 7.0.

DATE: 2020-05-05

Drawn By:	TK, DB
Checked By:	
Date:	6.5.2020
Issued For:	FOR REVIEW