

Tillamook County



DEPARTMENT OF COMMUNITY DEVELOPMENT
BUILDING, PLANNING & ON-SITE SANITATION SECTIONS

1510 - B Third Street
Tillamook, Oregon 97141
www.tillamookcounty.gov
(503) 842 - 3408

Building (503) 842-3407
Planning (503) 842-3408
On-Site Sanitation (503) 842-3409
FAX (503) 842-1819
Toll Free 1 (800) 488-8280

Land of Cheese, Trees and Ocean Breeze

**ESTUARY DEVELOPMENT PERMIT #851-24-000171-PLNG
FLOWER POT CREEK – CULVERT TO BRIDGE REPLACEMENT**

*NOTICE TO MORTGAGEE, LIENHOLDER, VENDOR OR SELLER:
ORS 215 REQUIRES THAT IF YOU RECEIVE THIS NOTICE,
IT MUST BE PROMPTLY FORWARDED TO THE PURCHASER*

October 11, 2024

Dear Property Owner:

This is to confirm that the Tillamook County Department of Community Development **APPROVED WITH CONDITIONS** the above-cited request on October 11, 2024. A copy of the application, along with a map of the request area and the applicable criteria for review are available for inspection on the Tillamook County Department of Community Development website: <https://www.tillamookcounty.gov/commdev/landuseapps>. Department of Community Development office located at 1510-B Third Street, Tillamook, Oregon 97141.

Appeal of this decision. This decision may be appealed to the Tillamook County Planning Commission, who will hold a public hearing. Forms and fees must be filed in the office of this Department before **4:00pm on October 23, 2024**. This decision will become final on October 23, 2024 after 4:00pm unless an appeal is filed in accordance with Tillamook County Land Use Ordinance Article X.

- Request:** An Estuary and Floodplain Development Permit for the replacement of an existing culvert with a bridge in Fower Pot Creek, a tributary to Tillamook Bay.
- Location:** Located west of the City of Tillamook, the project is located upon Bayocean Road, a County road, as depicted on the map in 'Exhibit A'.
- Zone:** Estuary Natural (EN) Zone
- Applicant:** Liz Ransom, 7125 Bewley Creek Road, Tillamook, OR 97141
- Property Owner:** Tillamook County, 201 Laurel Ave, Tillamook, OR 97141

CONDITIONS OF APPROVAL

1. The Applicant/property owner shall obtain all required Federal, State, and Local permits and/or licenses and will comply with applicable rules and regulations.
2. Development shall be as described on the provided plans and descriptions.
3. Development shall comply with the applicable standards of TCLUO Section 3.102, 'Estuary Natural (EN)', TCLUO Section 3.510, 'Flood Hazard Overlay (FH) Zone' and TCLUO Section 4.140, 'Requirements for Protection of Water Quality and Streambank Stabilization', and any other applicable standards.
4. The fill shall comply with all Building Code requirements for Construction Materials and Methods for a structure located in the 'AE' flood zones.
5. This approval shall be void on October 11, 2026, unless construction of approved plans has begun, or an extension is requested from, and approved by this Department.

Sincerely,

Tillamook County Department of Community Development



Melissa Jenck, CFM, Senior Planner

Sarah Absher, CFM, Director

Enc.: Vicinity, Assessor's and Zoning maps



Land of Cheese, Trees and Ocean Breeze

**ESTUARY DEVELOPMENT PERMIT REQUEST
851-24-000171-PLNG:
FLOWER POT – CULVERT TO BRIDGE REPLACEMENT
ADMINISTRATIVE DECISION & STAFF REPORT**

Decision Date: October 11, 2024

**Decision: APPROVED WITH CONDITIONS
(This is not Building or Placement Permit Approval)**

Report Prepared by: Melissa Jenck, CFM, Senior Planner

I. GENERAL INFORMATION:

Request: An Estuary and Floodplain Development Permit for the replacement of an existing culvert with a bridge in Fower Pot Creek, a tributary to Tillamook Bay.

Location: Located west of the City of Tillamook, the project is located upon Bayocean Road, a County road, as depicted on the map in ‘Exhibit A’.

Zone: Estuary Natural (EN) Zone

Applicant: Liz Ransom, 7125 Bewley Creek Road, Tillamook, OR 97141

Property Owner: Tillamook County, 201 Laurel Ave, Tillamook, OR 97141

Proposal Description: The Applicant is proposing to replace an existing culvert with a new bridge within the location of Flower Pot Creek, a tributary to Tillamook Bay (Exhibit B).

The area of proposed construction is depicted on the maps included in the Applicant’s submittal, found in ‘Exhibit B’ of this report. The project area is within Bayocean Road, a County road, which traverses over

Flower Pot Creek and the tidal channels. This location is approximately 5.0 mile west of the City of Tillamook limits (Exhibit A).

As indicated on FEMA FIRM #41057C0560F dated September 28, 2018, the subject property is located entirely in an 'AE' Area of Special Flood Hazard of the Tillamook River (Exhibit A).

The application is an Estuary and Floodplain Development Permit approval for the replacement of an existing culvert with a bridge replacement (Exhibit B). The criteria and standards for this review are addressed below in this Staff Report.

II. APPLICABLE ORDINANCE AND COMPREHENSIVE PLAN PROVISIONS:

The desired use is governed through the following Sections of the Tillamook County Land Use Ordinance (TCLUO). The suitability of the proposed use, in light of these criteria, is discussed in Section III of this report:

- A. TCLUO Section 3.102, 'Estuary Natural (EN) Zone'
- B. TCLUO Section 3.120, 'Regulated Activities and Impacts Assessments'
- C. TCLUO Section 3.140, 'Estuary Development Standards'
- D. TCLUO Section 3.510, 'Flood Hazard Overlay (FH) Zone'
- E. TCLUO Section 3.545, 'Shoreland Overlay'
- F. TCLUO Section 4.140, 'Requirements for Protection of Water Quality and Streambank Stabilization'

III. ANALYSIS

The project is located within the regulatory floodplain (AE Zone) and Estuary zone and is subject to a Type II review per TCLUO Article X: Development Approval Procedures. TCLUO Section 10.070 requires notification of Type II applications to be mailed to landowners within 250 feet of the subject properties, to allow at least 14 days for written comment and requires staff to consider comments received in making the decision.

Findings: Notice of the request was mailed to property owners and agencies on July 12, 2024. Staff finds that notification requirements have been met. Comments were received from the Oregon Department of State Lands and are included as "Exhibit C".

A. TCLUO Section 3.102, 'Estuary Natural (EN) Zone'

(1) PURPOSE AND AREAS INCLUDED: The purpose of the EN Zone is to provide for preservation and protection of significant fish and wildlife habitats and other areas which make an essential contribution to estuarine productivity or fulfill scientific, research or educational needs.

Except where a goal exception has been taken in the Tillamook County Comprehensive Plan, the EN Zone includes the following areas:

(a) Development and Conservation Estuaries: Major tracts of tidal marsh, intertidal flats and seagrass and algae beds. The "major tract" determination is made through a consideration of all of the following four criteria: Size; habitat value; scarcity and degree of alteration

(b) Natural Estuaries: The EN Zone includes all estuarine waters, intertidal areas, submerged or submersible lands and tidal wetland areas.

....
ESTUARY ZONES shall be applied to all estuarine waters, intertidal areas, submerged and submersible lands and tidal wetlands up to the line of non-aquatic vegetation or the Mean Higher High Water (MHHW) line, whichever is most landward.

...

(2) *USES PERMITTED WITH STANDARDS:*

...

(g) *Bridge crossings and crossing support structures.*

...

(4) *REGULATED ACTIVITIES: The following Regulated Activities are permitted subject to the procedure of Section 3.120 and the standards in Section 3.140.*

...

(g) *Fill for installation of public boat ramps or bridge crossing support structures.*

Findings: Applicant is proposing to replace the existing culvert located in Flower Pot Creek, with a bridge (Exhibit B). A site plan was included in 'Exhibit B', which demonstrates that the proposed siting location is within the EN zone (Exhibit B).

Staff finds that the bridge crossing is an outright permitted use in the Estuary Natural (EN) Zone. Fill to support the installation of the bridge is subject to TCLUO Section 3.120 and Section 3.140, discussed below.

B. Section 3.120: Review of Regulated Activities

Findings: The purpose of this section is to provide an assessment process and criteria for local review and comment on State and Federal permit applications which could potentially alter the integrity of the estuarine ecosystem. This project includes regulated activities which are subject to State and Federal permits. Notification of the application was provided to Federal and State agencies in accordance with the provisions outlined in TCLUO Section 3.120(8).

The applicant's submittal includes project details, including erosion control methods and best management practices for construction within stream/wetland areas (Exhibit B). Comments were received from Department of State Lands (DSL) that determined the proposed project will require permitting with DSL (Exhibit C).

Staff find that the applicants materials and comments from ODFW and DSL satisfies the development standards that must be addressed as part of the impact assessment outlined in TCLUO Section 3.120.

C. Section 3.140: Estuary Development Standards

Applicable subsections:

- *Section 3.140(7): Fill in Estuarine Waters, Intertidal Areas and Tidal Wetlands*
- *Section 3.140(10): Land Transportation Facilities*
- *Section 3.140(14): Piling/Dolphin Installation*

Findings: The Applicant's narrative addresses the relevant standards and subsections of TCLUO Section 3.140 (Exhibit B). The purpose of the project is to replace an existing 48-inch culvert with a new bridge crossing approximately 44-feet wide, and approximately 60-ft long (Exhibit B). Erosion control measures and timing of construction are addressed in the construction plans (Exhibit B). Bridge placement is to promote fish passage (Exhibit B). The applicant provided the required evaluation of the impact of proposed project on the area as required in Section 3.140(10)(i) and 3.140(14)(d) (Exhibit B).

The bridge crossing is replacing an existing culvert and acts as a primary access to existing developed properties in the area. Staff find the needs for access to existing development, along with recreational development in the area demonstrate consistency with the activity needs in the area.

Staff concludes these standards have been met.

D. TCLUO Section 3.510 ‘Flood Hazard (FH) Overlay’

(5) *GENERAL STANDARDS: In all areas of special flood hazards the following standards are required:*

...

CONSTRUCTION MATERIALS AND METHODS

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

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

(f) *Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be elevated to prevent water from entering or accumulating within the components during conditions of flooding. In Flood Zones A, A1-A30, AE, V, V1-V30 or VE, such facilities shall be elevated three feet above base flood elevation. In Flood Zone AO, such facilities shall be elevated above the highest grade adjacent to the building, a minimum of one foot above the depth number specified on the FIRM (at least two feet above the highest adjacent grade if no depth number is specified).*

...

(14) *Development Permit Review Criteria*

- (1) *The fill is not within a Coastal High Hazard Area.*
- (2) *Fill placed within the Regulatory Floodway shall not result in any increase in flood levels during the occurrence of the base flood discharge.*
- (3) *The fill is necessary for an approved use on the property.*
- (4) *The fill is the minimum amount necessary to achieve the approved use.*
- (5) *No feasible alternative upland locations exist on the property.*
- (6) *The fill does not impede or alter drainage or the flow of floodwaters.*
- (7) *If the proposal is for a new critical facility, no feasible alternative site is available.*

Findings: Applicant submitted the required information on forms provided by the Community Development Department and as attachments thereto (Exhibit B). The entire property is located in an AE Area of Special Flood Hazard of the Tillamook River and no alternative upland location exists (Exhibits A and B). The project area is tidally influenced and is not located within the regulatory Floodway. The Applicant describes the to replace a culvert with improvements a 44-foot wide, and approximately 60-ft long bridge (Exhibit B).

Staff finds that these criteria are met.

E. TCLUO Section 3.545 ‘Shoreland Overlay’

In the vicinity of the proposed project, the Goal 17 element of the Tillamook County Comprehensive Plan identifies all areas within 1,000 feet of estuaries and 500 feet of coastal lakes as within the Shorelands Boundary which may be subject to the provisions of TCLUO Section 3.545, ‘SH Shoreland Overlay’. TCLUO Section 3.545 defines those areas within the Shorelands Boundary included within the Shoreland Overlay Zone. Relevant to the proposed development, TCLUO Section 3.545(2) identifies areas within 50 feet of estuaries as areas included in the Shorelands Overlay zone.

Findings: Staff finds that bridge placement is located within the Shorelands Boundary as identified in the Goal 17 element of the Tillamook County Comprehensive Plan. Staff has reviewed the proposed development and determined that shoreland areas on the subject property are categorized as ‘Rural

Shorelands' as described in TCLUO 3.545(3) and are subject to the use limitations identified in TCLUO 3.545(4)(a)(1) and the standards identified in TCLUO 3.545(6). Staff has reviewed the significant shoreland inventory contained in the Goal 17 element of the Comprehensive Plan and has verified that there are no inventoried shorelands near the subject property.

TCLUO Section 3.545(4) USES PERMITTED: Uses authorized by the underlying zone as outright or conditional uses are permitted, except at locations identified in (3) above.

(a) Rural Shorelands in General:

(1) Rural Shorelands uses are limited to:

...

(f) Other uses are allowed only upon a finding by the County that such uses satisfy a need which cannot be accommodated at any alternative upland location, except in the following cases:

...

TCLUO Section 3.545(6) STANDARDS: Uses within the SHORELAND OVERLAY ZONE are subject to the provisions and standards of the underlying zone and of this section. Where the standards of the SHORELANDS OVERLAY ZONE and the underlying zone conflict, the more restrictive provisions shall apply.

(a) Riparian vegetation shall be protected and retained according to the provisions outlined in Section 4.140, REQUIREMENTS FOR PROTECTION OF WATER QUALITY AND STREAMBANK STABILIZATION.

(b) Development in flood hazard areas shall meet the requirements of Section 3.510, FLOOD HAZARD OVERLAY ZONE.

Findings: Staff finds the project is necessary and cannot be accommodated at an upload location, and the bridge is to replace an existing culvert (Exhibit B). The requirements of TCLUO Section 4.140 and 3.510 are addressed in this report.

Staff finds these criteria have been met.

F. TCLUO Section 4.140, 'Requirements for Protection of Water Quality and Streambank Stabilization'

1) The following areas of riparian vegetation are defined:

(a) Fifty (50) feet from lakes and reservoirs of one acre or more, estuaries, and the main stems of the following rivers where the river channel is more than 15 feet in width; Nestucca, Little Nestucca, Three Rivers, Tillamook, Trask, Wilson, Kilchis, Miami, Nehalem and North and South Fork Nehalem River.

...

For estuaries, all measurements are horizontal and perpendicular from the mean high water line or the line of non-aquatic vegetation, whichever is most landward. Setbacks for rivers, streams, and coastal lakes shall be measured horizontal and perpendicular from the ordinary high water line.

(2) All development shall be located outside of areas listed in (1) above, unless:

(a) For a bridge crossing; or

Findings: The proposal is for replacement of an existing culvert with a bridge (Exhibit B). The Applicant describes measures taken for erosion control timing of construction activities to address the site, along with a vegetation plan for post construction (Exhibit B).

Staff finds that these standards have been met.

V. DECISION: APPROVED WITH CONDITIONS

Based on the findings shown above, Staff concludes that the Applicant has satisfied the review criteria, and can meet all applicable ordinance requirements at the time of application. Therefore, the Department approves Estuary Development Permit 851-24-000171-PLNG subject to the Conditions of Approval in section VI of this report.

Appeal of this decision. This decision may be appealed to the Tillamook County Planning Commission, who will hold a public hearing. The forms and fees must be filed in the office of this Department before **4:00 PM on October 23, 2024.**

VI. CONDITIONS OF APPROVAL:

1. The Applicant/property owner shall obtain all required Federal, State, and Local permits and/or licenses and will comply with applicable rules and regulations.
2. Development shall be as described on the provided plans and descriptions.
3. Development shall comply with the applicable standards of TCLUO Section 3.102, 'Estuary Natural (EN)', TCLUO Section 3.510, 'Flood Hazard Overlay (FH) Zone' and TCLUO Section 4.140, 'Requirements for Protection of Water Quality and Streambank Stabilization', and any other applicable standards.
4. The fill shall comply with all Building Code requirements for Construction Materials and Methods for a structure located in the 'AE' flood zones.
5. This approval shall be void on October 11, 2026, unless construction of approved plans has begun, or an extension is requested from, and approved by this Department.

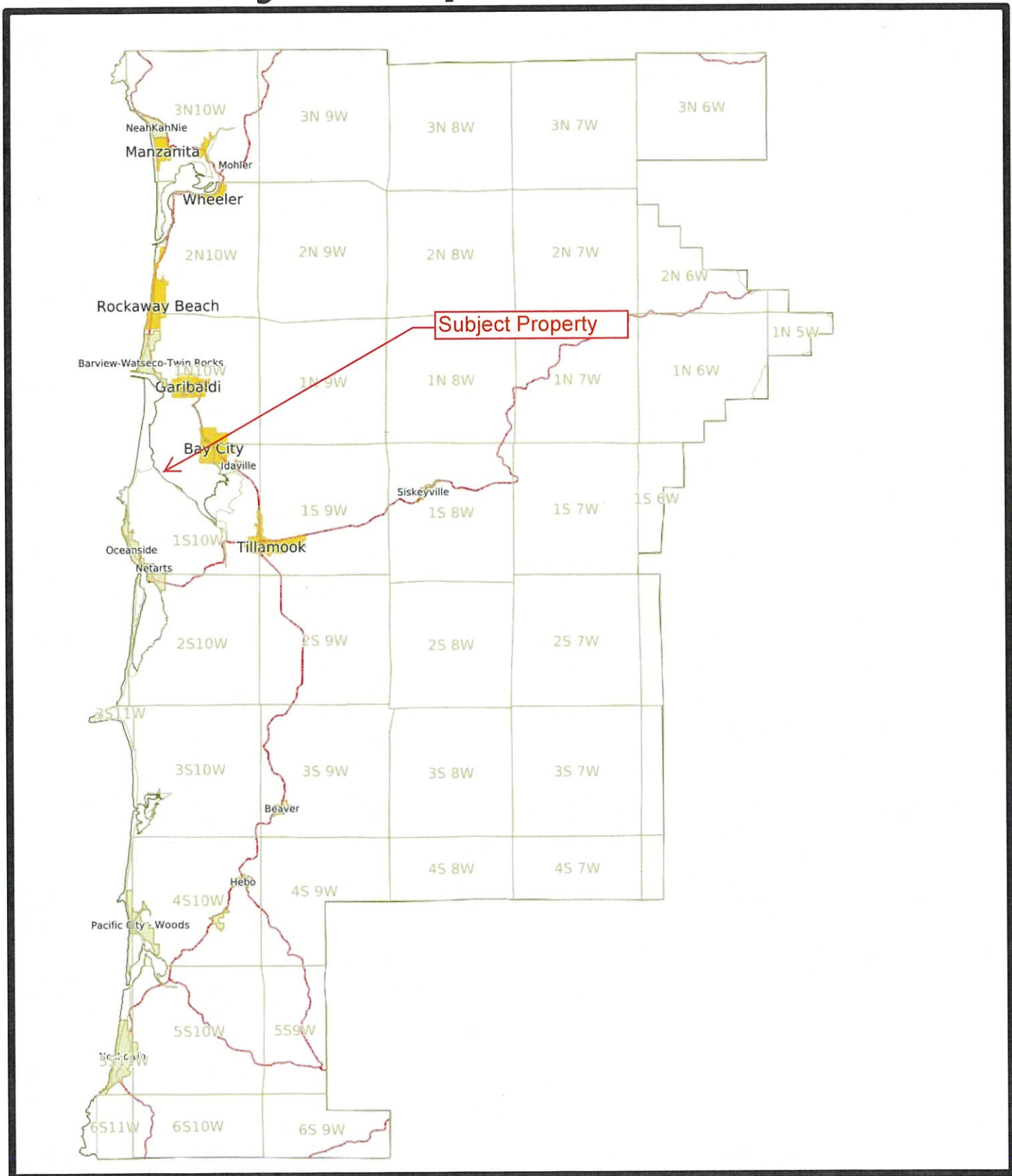
VII. EXHIBITS

All Exhibits referred to herein are, by this reference, made a part hereof:

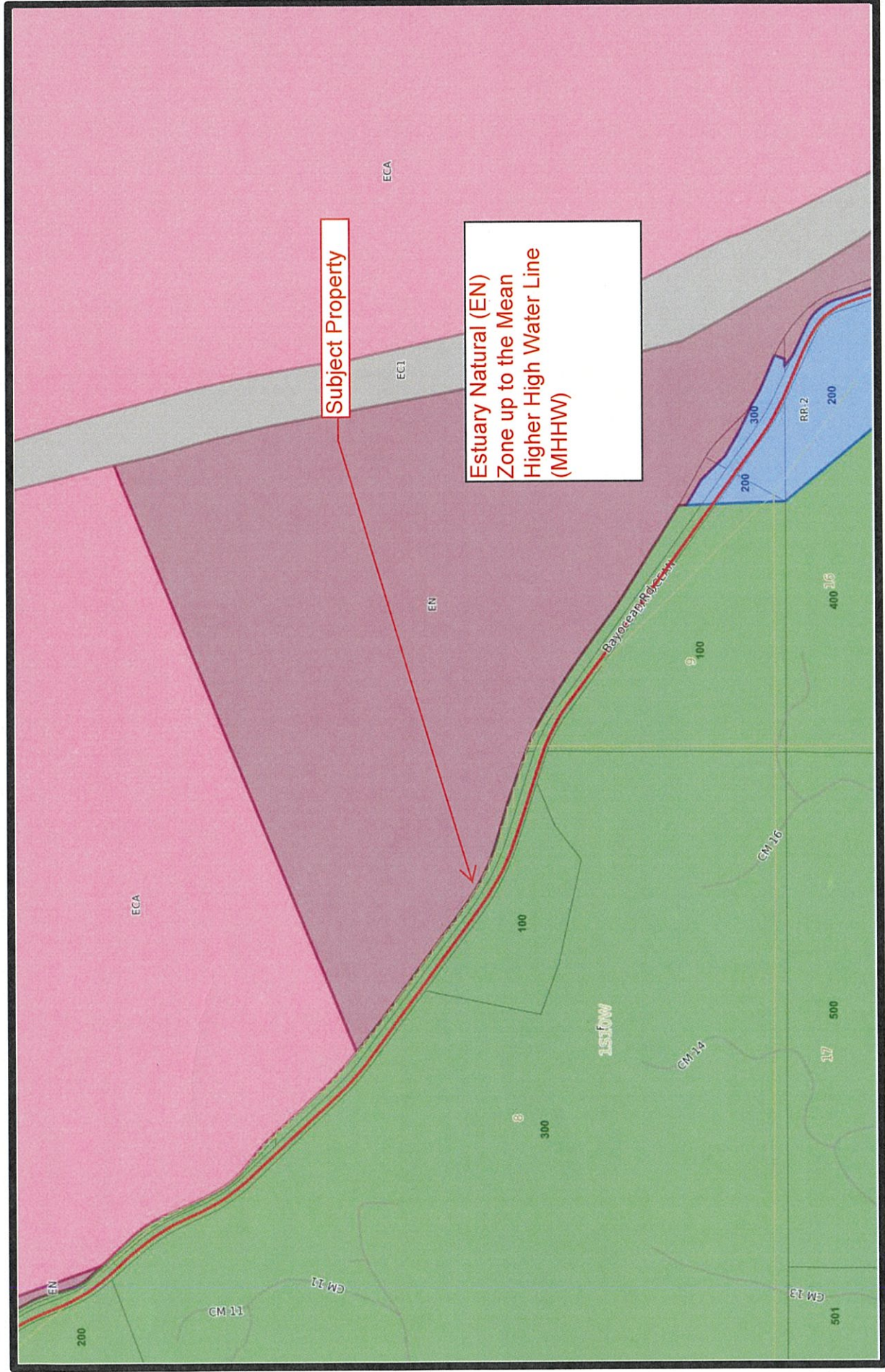
- A. Location map, Assessor map, Zoning map, FEMA FIRM, NWI Wetlands map
- B. Applicant's submittal
- C. Public Comments

EXHIBIT A

Vicinity Map



Zoning Map

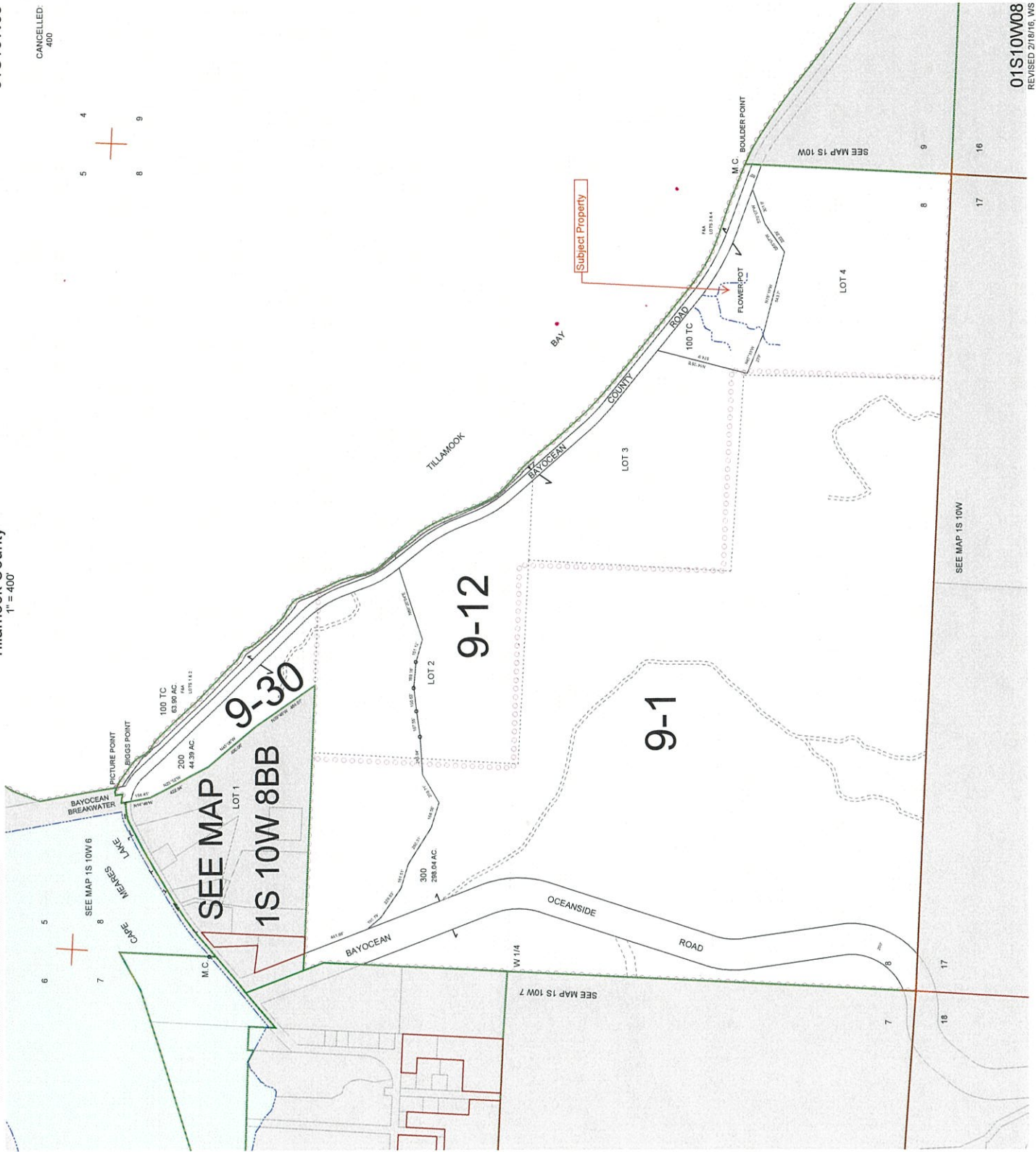


SECTION 8 T. 1S. R. 10W. W.M.
Tillamook County

01S10W08

CANCELLED:
400

FOR ASSESSMENT AND TAXATION ONLY, NOT SUITABLE FOR
LEGAL ENGINEERING OR SURVEY PURPOSES



01S10W08
REVISED 2/16/16, WS

Tillamook County
2023 Real Property Assessment Report
 Account 300613

Map 1S10080000100
Code - Tax ID 0901 - 300613
 0912 - 408126
Legal Descr See Record
Mailing COUNTY

Tax Status Non-Assessable
Account Status Active
Subtype NORMAL
Deed Reference # See Record
Sales Date/Price See Record
Appraiser ELIZABETH LOFTIS

Property Class 950 MA SA NH
RMV Class 010 01 UB UBL

Site Situs Address	City
---------------------------	-------------

Value Summary						
Code Area		RMV	MAV	AV	RMV Exception	CPR %
0901	Land	0		Land	0	
	Impr	0		Impr	0	
Code Area Total		0	0	0	0	
Grand Total		0	0	0	0	

Land Breakdown									
Code Area	ID #	RFPD	Ex	Plan Zone	Value Source	Trend %	Size	Land Class	Trended RMV
0901	1	<input checked="" type="checkbox"/>		F	Market	100	63.90 AC		0
Code Area Total							63.90 AC		0

Improvement Breakdown									
Code Area	Year Built	Stat Class	Description	Trend %	Total Sqft	Ex%	MS Acct	Trended RMV	

Exemptions / Special Assessments / Notations	
Code Area 0912	
Exemptions (AV)	Amount
■ COUNTY GOVERNMENT 307.090	0

Comments 10/19/09 Added RMV PCA. Updated RMV. Fronting and abutting tidelands. KF
 9/11/18 - Updated MA/ST/NH combo. EJ.

National Flood Hazard Layer FIRMette



123°56'9"W 45°30'N

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

Legend

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- Area of Minimal Flood Hazard *Zone X*
- Effective LOMR
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

Cross Sections with 1% Annual Chance Water Surface Elevation

- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **7/12/2024 at 7:51 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Statewide Wetlands Inventory



- Townships
- LWI Study Area
- Wetlands**
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- SWI Agate-Winlo Soils
- SWI Predominantly Hydric Soil Map Units

Date: 7/12/2024



State of Oregon
 Department of State Lands
 775 Summer Street, NE, Ste 100
 Salem, OR 97301-1279



The Statewide Wetlands Inventory (SWI) represents the best data available at the time this map was published and is updated as new data becomes available. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters (such as creeks and ponds). An onsite investigation by a wetland professional can verify actual field conditions.

EXHIBIT B



DEVELOPMENT PERMIT

Applicant (Check Box if Same as Property Owner)

Name: Liz Ransom Phone: 541-691-9233
 Address: 7125 Bewely Creek Road
 City: Tillamook State: OR Zip: 97141
 Email: Liz.Ransom@TU.org

Property Owner

Name: Chris Laity Phone: 503-842-3419
 Address: 201 Laurel Ave
 City: Tillamook State: OR Zip: 97141
 Email: claity@co.tillamook.or.us

OFFICE USE ONLY	
Date Stamp	
	
<input type="checkbox"/> Approved <input type="checkbox"/> Denied	
Received by:	
Receipt #:	
Fees:	
Permit No: 851-24-0007(-PLNG)	

Description of Work: The project will replace a failing culvert with a bridge supported on steel pilings to the West of the existing culvert. Flower Pot Creek and Tidal channels will be realigned to provide a continuous fish passable grade.

Location:

Site Address: 45.497001, -123.930462

Map Number:	1S	10W	8	100
	Township	Range	Section	Tax Lot(s)

Complete all applicable fields:

Regulatory Floodway:	Estuary: <input checked="" type="checkbox"/>	Floodplain: <input checked="" type="checkbox"/>
New: <input type="checkbox"/>	Addition: <input checked="" type="checkbox"/>	Replacement: <input type="checkbox"/>
Remodel: <input type="checkbox"/>	Demolish: <input type="checkbox"/>	
Dwelling:	Accessory Structure:	
Culvert Diameter:	Bridge Length:	
Length: 4'D, 56'L	Width:	
Fence Height:	Retaining Wall Height:	
Streambank Stabilization:	Other:	
Fill/Removal/Grading: ¹⁴⁰² / ₁₃₂₄ CY	Vegetation Removal: CY	

Flood Insurance Rate Map (FIRM) Panel Info

Tillamook County	Panel Number: 41057C
Effective Date:	Property Flood Zone(s):
Floodway: Y N	Project Flood Zone(s):
Stream/Waterbody Name:	

Elevation Data (NAVD 88)

Base Flood Elevation:	First Habitable Floor:
Lowest Floor/Horizontal Member:	
Enclosed Area:	Flood Vent Area:

Structure/Damage \$:	5 Year Construction \$:
<i>Substantial improvement/damage threshold 50% cost vs. value</i>	

Other Required Permits

Authorization

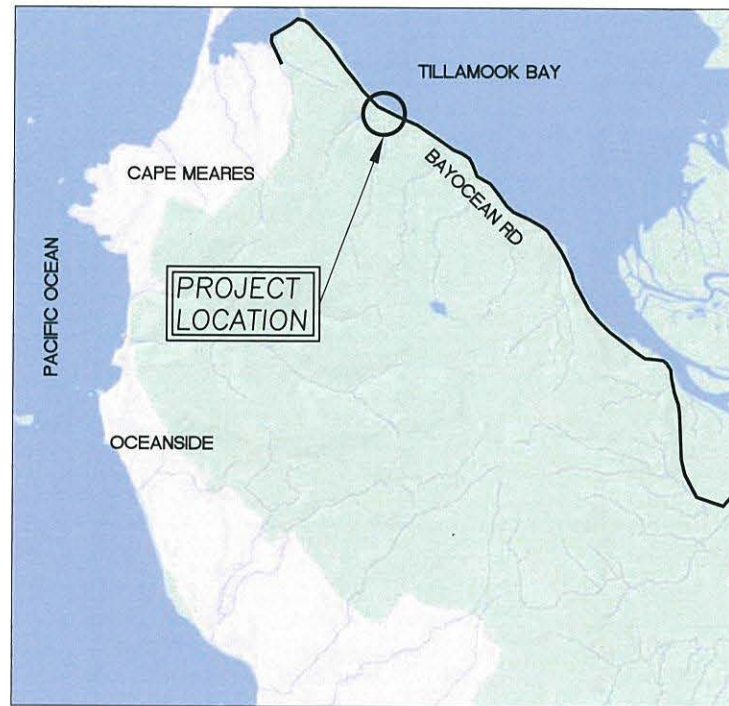
This permit application does not assure permit approval. The applicant and/or property owner shall be responsible for obtaining any other necessary federal, state, and local permits. The applicant verifies that the information submitted is complete, accurate, and consistent with other information submitted with this application.

Property Owner Signature (Required) CHRIS LAITY Date 9.25.23

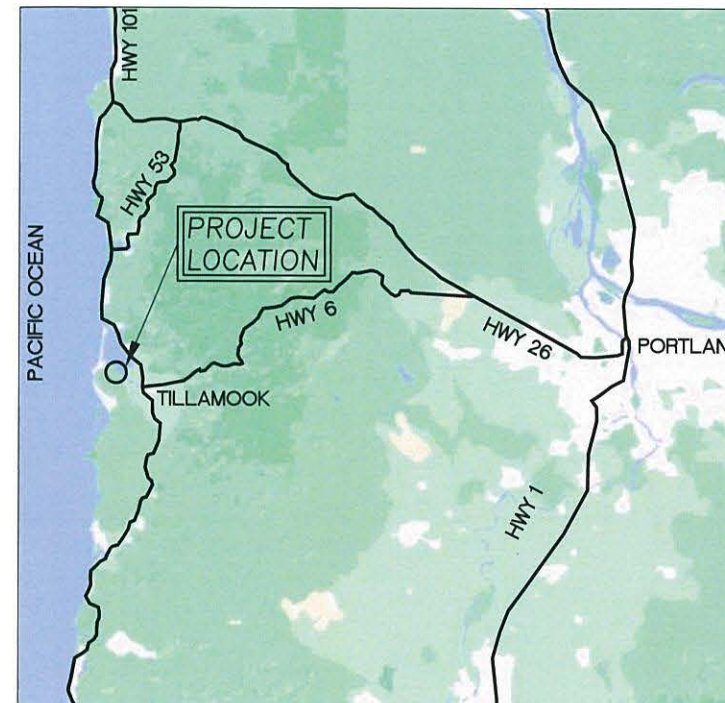
Applicant Signature _____ Date _____

FLOWER POT CREEK FISH PASSAGE PROJECT

90% DESIGN SUBMITTAL



VICINITY MAP
N.T.S. (GOOGLE)



REGIONAL MAP
N.T.S. (GOOGLE)

GENERAL NOTES

- TOPOGRAPHIC MAPPING WAS PERFORMED BY: WATERWAYS CONSULTING, INC., 1020 SW TAYLOR ST., SUITE 380, PORTLAND, OR 97205. SURVEY DATES: APRIL 28, AND MAY 6, 2022.
- ELEVATION DATUM: NAVD88.
- HORIZONTAL DATUM: OREGON STATE PLANE, NORTH ZONE NAD83.
- AERIAL PHOTO SOURCE: AUTOCAD CIVIL3D GEOLOCATION MAP
- CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
- PROPERTY LINES AND RIGHT OF WAY LINES SHOWN ARE FROM STATEWIDE LAND SURVEYING, INC.'S PROPERTY BOUNDARY SURVEY CONDUCTED ON 7/6/2022, PRINTED 7/26/2022.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STATE OF OREGON STANDARD SPECIFICATIONS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
- THESE DESIGNS ARE INCOMPLETE WITHOUT THE FINAL STAMPED SPECIAL PROVISIONS PREPARED BY WATERWAYS CONSULTING, INC. REFER TO SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.

PROPERTY AND ROW MAPPING BY:
STATEWIDE LAND SURVEYING, INC.
43 NW AVA AVE.
GRESHAM, OR 97030
SURVEY DATE: 7/6/2022

LIDAR MAPPING BY:
WATERSHED SCIENCES, INC.
506 2ND AVE #2700
SEATTLE, WA 98104
SURVEY DATE: 2009

ABBREVIATIONS

AVG.	AVERAGE	O.C.	ON CENTER
BFE	BASE FLOOD ELEVATION	PVC	POLYVINYL CHLORIDE
CC	CONCRETE	RC	RELATIVE COMPACTION
CY	CUBIC YARDS	RCP	REINFORCED CONCRETE PIPE
DIA.	DIAMETER	R.O.W.	RIGHT OF WAY
E	EXISTING	RSP	ROCK SLOPE PROTECTION
EG	EXISTING GROUND	SPK	SPIKE
ESM	ENGINEERED STREAMBANK MATERIAL	SQ.FT.	SQUARE FOOT
ELEV.	ELEVATION	O.O.A.	TO BE DETERMINED
DI	DRAINAGE INLET	TPUD	TILLAMOOK PEOPLE'S UTILITY DISTRICT
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	TYP	TYPICAL
FG	FINISHED GRADE	UNK	UNKNOWN
FT	FEET	WSE	WATER SURFACE ELEVATION
INV	INVERT	YR	YEAR
MAX	MAXIMUM		
MHHW	MEAN HIGHER HIGH WATER		
MIN	MINIMUM		
N	NEW		
NIC	NOT IN CONTRACT		
N.T.S.	NOT TO SCALE		

TREE SPECIES	
A	ALDER
DF	DOUGLAS FIR
S	SPRUCE
T	TREE (SPECIES UNKNOWN)

PROJECT DESCRIPTION

THESE DRAWINGS PROVIDE DESIGN DETAILS FOR A FISH PASSAGE IMPROVEMENT PROJECT ALONG BAYOCEAN ROAD AT THE FLOWER POT CREEK CONFLUENCE TILLAMOOK BAY IN TILLAMOOK COUNTY, OREGON.

THE PROJECT WILL REPLACE A FAILING CULVERT WITH A BRIDGE SUPPORTED ON STEEL PILING TO THE WEST OF THE EXISTING CULVERT. FLOWER POT CREEK AND TIDAL CHANNELS WILL BE REALIGNED TO PROVIDE CONTINUOUS FISH PASSAGE.

SHEET INDEX

C1	COVER
C2	OVERVIEW AND STAGING PLAN
C3	EXISTING CONDITIONS
C4	CREEK GRADING PLAN AND ROAD PROFILE
C5	CREEK PROFILE AND SECTIONS
C6	CONSTRUCTION SEQUENCING, EROSION CONTROL, AND DEWATERING PLAN
C7	REVEGETATION PLAN
C8	DETAILS
C9	DETAILS
C10	NOTES
C11	NOTES
R1	ALIGNMENT
R2	TYPICAL SECTIONS
R3	GUARDRAIL DETAILS
TC1	TRAFFIC CONTROL OVERVIEW
TC2	TRAFFIC CONTROL STAGES
S1	GENERAL NOTES
S2	BRIDGE SITE PLAN
S3	CONSTRUCTION SEQUENCE
S4	PLAN, ELEVATION, & DECK SECTION
S5	FOUNDATION PLAN
S6	BENT DETAILS
S7	SLAB DETAILS
S8	WINGWALL DETAILS

SECTION AND DETAIL CONVENTION



*** CALL BEFORE YOU DIG ***
CONTACT UNDERGROUND SERVICE ALERT (USA)
PRIOR TO ANY CONSTRUCTION WORK 1-800-332-2344

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PREPARED AT THE REQUEST OF:
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COVER

FLOWER POT CREEK FISH
PASSAGE PROJECT
90% DESIGN SUBMITTAL

DESIGNED BY: J.H.
DRAWN BY: D.H.
CHECKED BY: J.H.
DATE: 11/16/2023
JOB NO.: 21-078

BAR IS ONE INCH ON
ORIGINAL DRAWING.
ADJUST SCALES FOR
REDUCED PLOTS

C1 1 OF 17

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OVERVIEW AND
STAGING PLAN

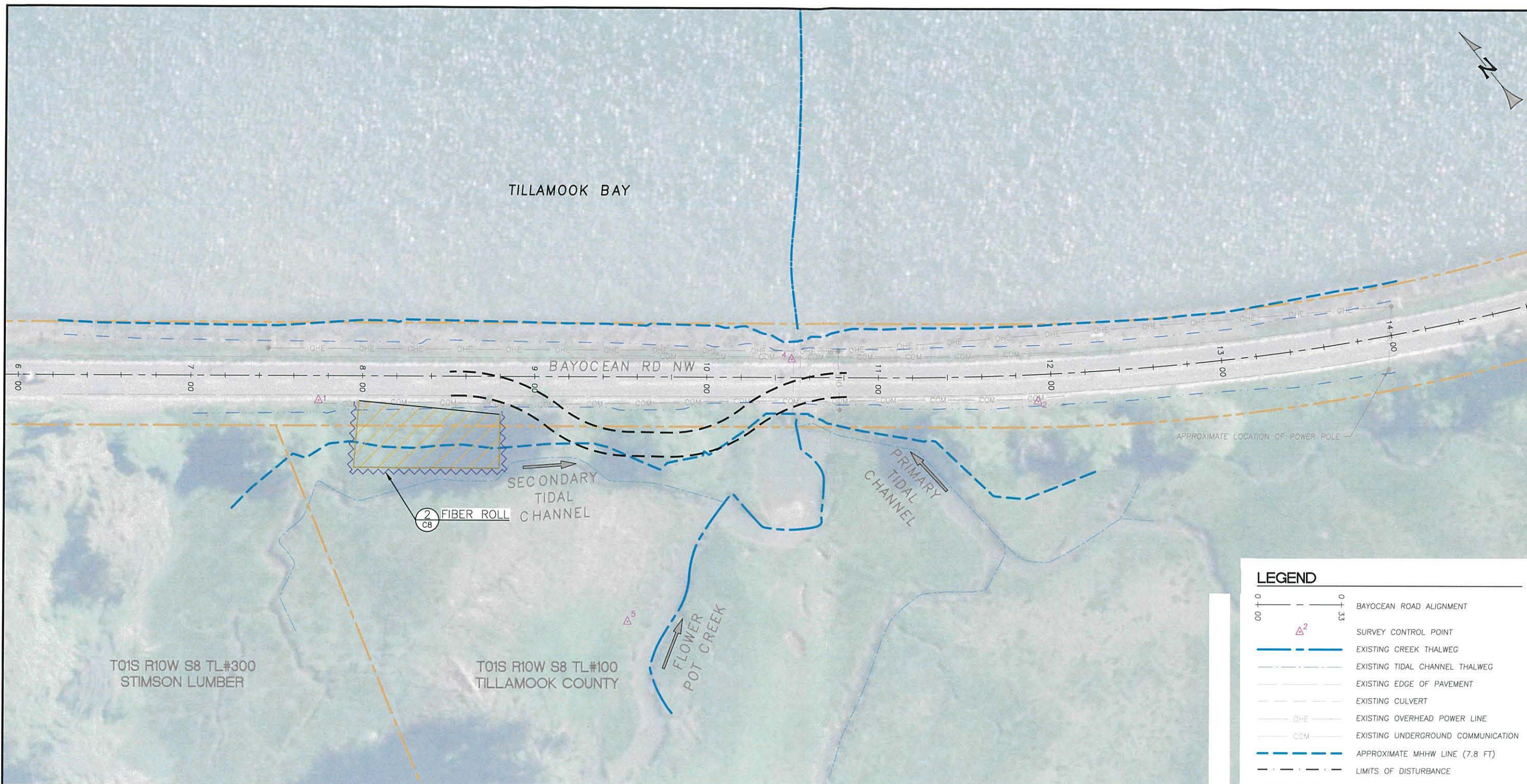
FLOWER POT CREEK FISH
PASSAGE PROJECT
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C2

2
OF
17



OVERVIEW AND STAGING PLAN
SCALE: 1" = 30'

ACCESS AND STAGING AREA NOTES

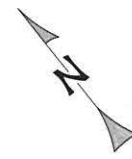
1. USE ONLY THE APPROVED ACCESS POINTS, AS SHOWN ON THE DRAWINGS. STOCKPILE MATERIALS WITHIN AN EXISTING FLAT AND PREVIOUSLY DISTURBED AREA.
2. THE ACCESS PLAN SHOWN ON THE DRAWINGS IS SCHEMATIC. SUBMIT A SITE ACCESS PLAN FOR APPROVAL BY THE ENGINEER, PRIOR TO MOBILIZATION.
3. CONTAIN THE DOWNSLOPE PERIMETER OF STAGING OR STOCKPILE AREAS WITH STRAW WATTLES.
4. STORE, MAINTAIN AND REFUEL ALL EQUIPMENT AND MATERIALS IN A DESIGNATED PORTION OF THE STAGING AREA.
5. COORDINATE WITH UTILITIES FOR TEMPORARY RELOCATION OF SERVICES DURING CONSTRUCTION.
6. INSTALL GEOTEXTILE SEPARATION FABRIC OVER EXISTING GROUND PRIOR TO PLACING ANY TEMPORARY FILL ON SURFACES BELOW THE MHHW LINE. REMOVE FILL AND FABRIC FOLLOWING CONSTRUCTION.
7. SEE T SHEETS FOR TEMPORARY TRAFFIC BYPASS ROAD

CONTROL POINTS

POINT	NORTHING	EASTING	ELEV.	DESC.
1	686128.30	7322519.19	13.34	REBAR
2	685866.84	7322845.94	12.19	REBAR
4	685975.24	7322749.22	12.98	MAG
5	685915.44	7322579.74	7.74	REBAR

LEGEND

- 0+00 ——— 0+33 BAYOCEAN ROAD ALIGNMENT
- △² SURVEY CONTROL POINT
- — — — — EXISTING CREEK THALWEG
- — — — — EXISTING TIDAL CHANNEL THALWEG
- — — — — EXISTING EDGE OF PAVEMENT
- — — — — EXISTING CULVERT
- OHE — — — — EXISTING OVERHEAD POWER LINE
- COM — — — — EXISTING UNDERGROUND COMMUNICATION
- — — — — APPROXIMATE MHHW LINE (7.8 FT)
- — — — — LIMITS OF DISTURBANCE
- — — — — TEMPORARY TRAFFIC BYPASS ROAD
- — — — — EXISTING R.O.W.
- — — — — EXISTING LOT LINE
- ▨ FIBER ROLL
- ▨ TEMPORARY CONSTRUCTION STAGING AND STOCKPILE AREA
- ⊕ EXISTING COMMUNICATIONS VAULT
- ⊙ EXISTING POWER POLE
- ⊙ EXISTING GUY ANCHOR
- ⊙ EXISTING FIBER OPTICS POST



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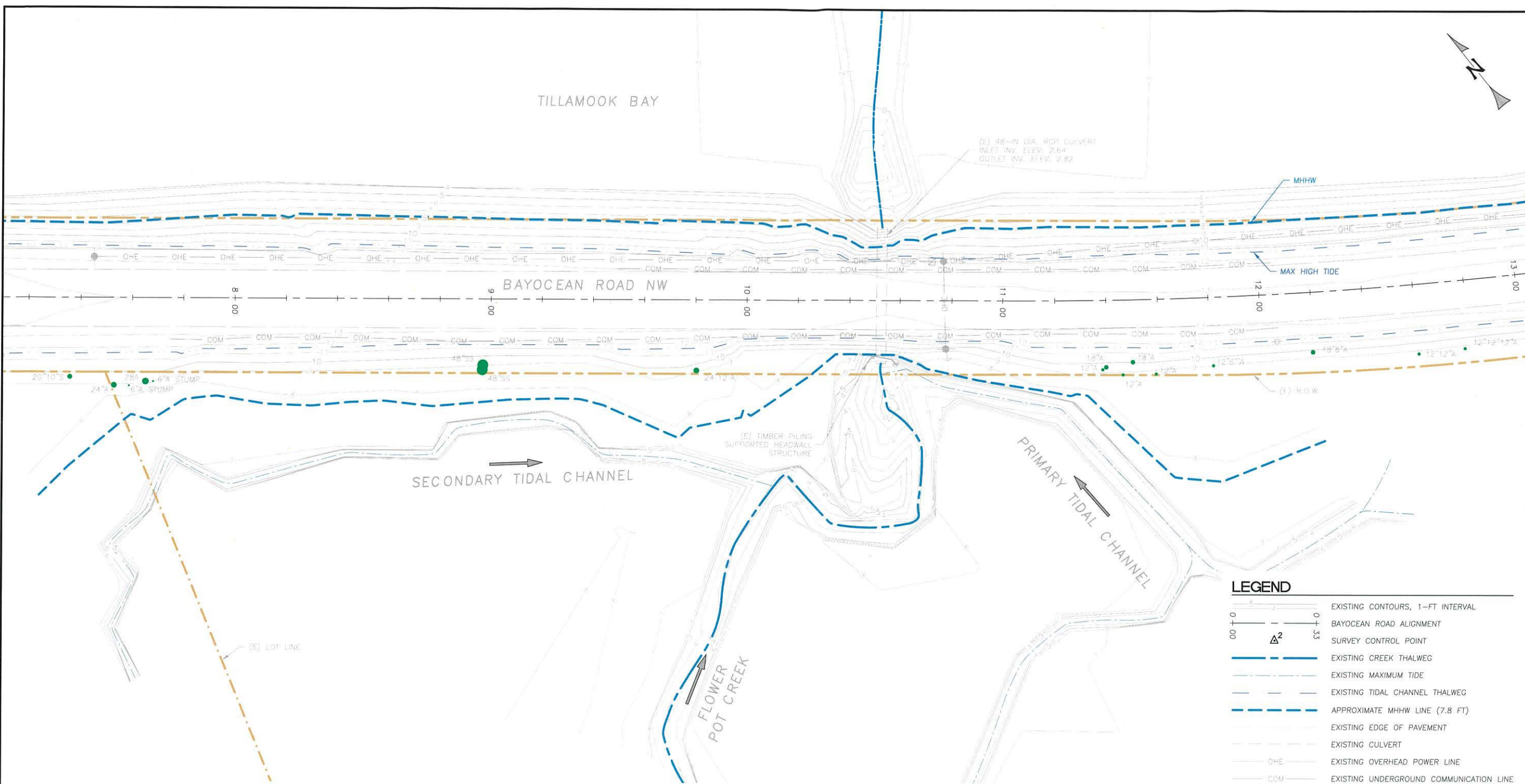
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EXISTING
 CONDITIONS

FLOWER POT CREEK FISH
 PASSAGE PROJECT
 90% DESIGN SUBMITTAL

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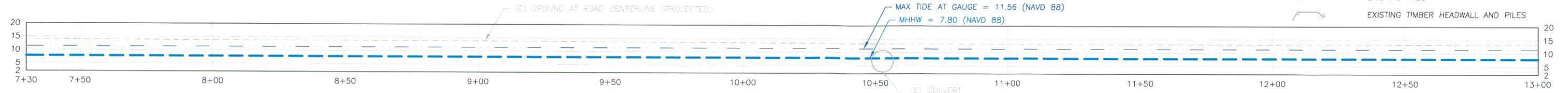
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 ADJUST SCALES FOR
 REDUCED PLOTS



EXISTING CONDITIONS
 SCALE: 1" = 20'

LEGEND

- EXISTING CONTOURS, 1-FT INTERVAL
- BAYOCEAN ROAD ALIGNMENT
- SURVEY CONTROL POINT
- EXISTING CREEK THALWEG
- EXISTING MAXIMUM TIDE
- EXISTING TIDAL CHANNEL THALWEG
- APPROXIMATE MHHW LINE (7.8 FT)
- EXISTING EDGE OF PAVEMENT
- EXISTING CULVERT
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND COMMUNICATION LINE
- EXISTING R.O.W.
- EXISTING LOT LINE
- EXISTING ROCK SLOPE PROTECTION
- EXISTING COMMUNICATIONS VAULT
- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING FIBER OPTICS POST
- EXISTING TREE
- EXISTING TIMBER HEADWALL AND PILES

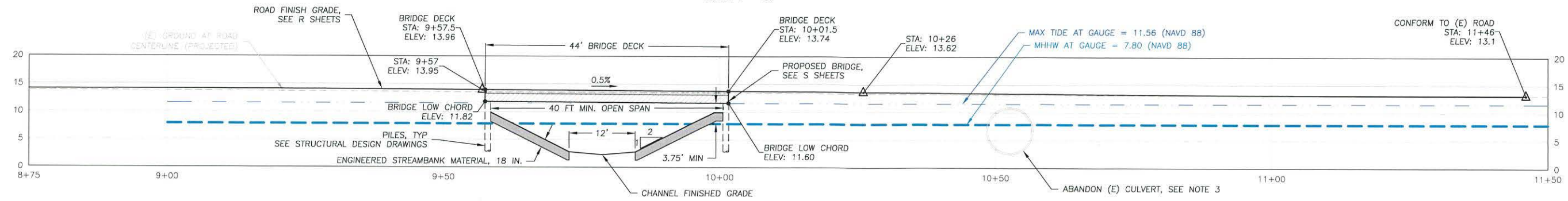
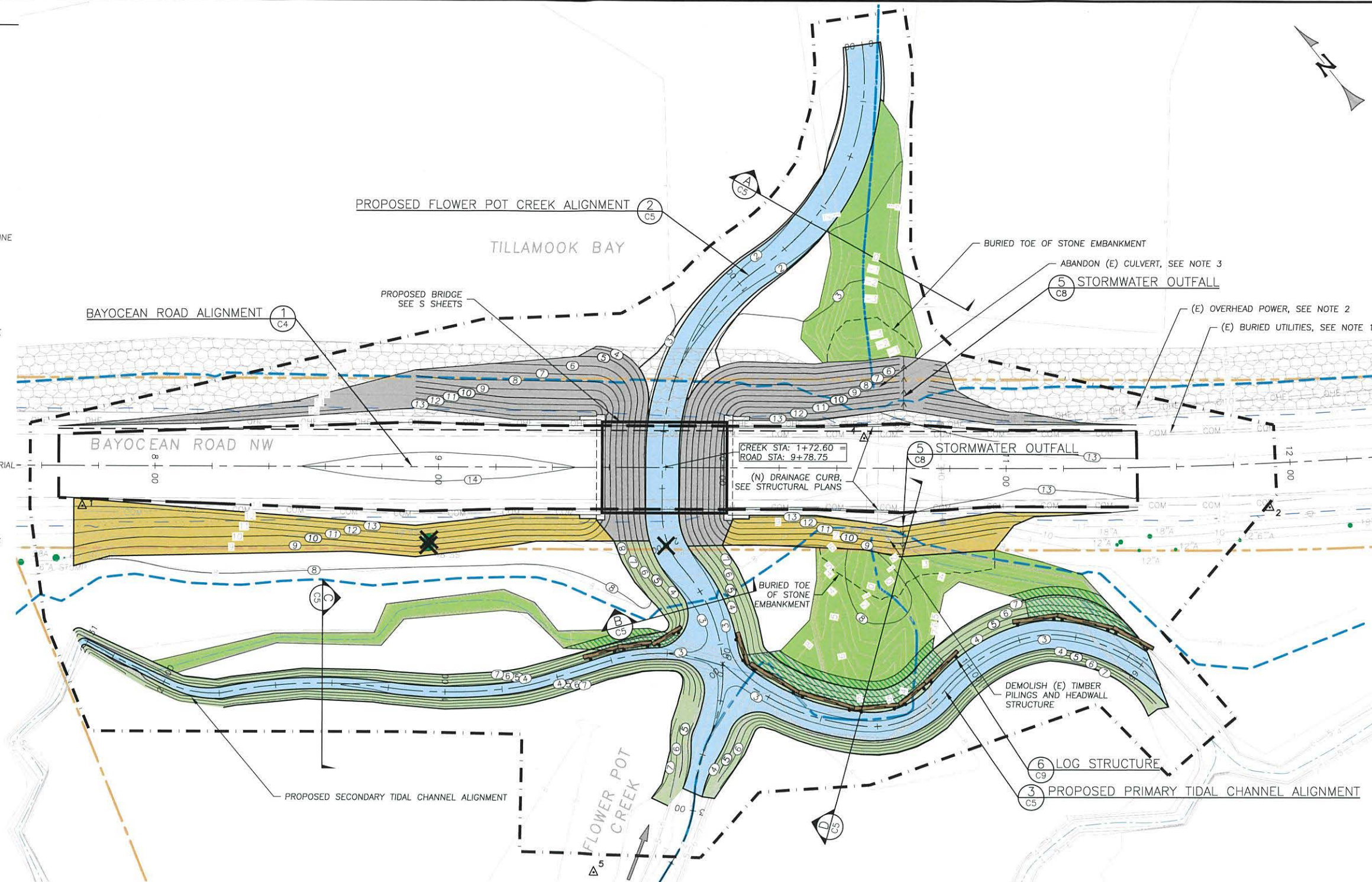


EXISTING ROAD PROFILE
 SCALE: 1" = 20'

LEGEND

- EXISTING CONTOURS, 1-FT INTERVAL
- PROPOSED CONTOURS, 1-FT INTERVAL
- PROPOSED ALIGNMENT
- SURVEY CONTROL POINT
- EXISTING PRIMARY THALWEG
- APPROXIMATE MHHW LINE (7.8 FT)
- EXISTING SECONDARY THALWEG
- EXISTING EDGE OF PAVEMENT
- EXISTING CULVERT
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND COMMUNICATION LINE
- EXISTING R.O.W.
- EXISTING LOT LINE
- LIMITS OF DISTURBANCE
- PROPOSED LIMITS OF NEW PAVING
- PROPOSED BURIED ROAD EMBANKMENT TOE
- PROPOSED STORMWATER OUTFALL
- EXISTING ROCK SLOPE PROTECTION
- PROPOSED CHANNEL BOTTOM
- PROPOSED CHANNEL BANKS
- PROPOSED WETLAND TOPSOIL FILL
- PROPOSED STONE EMBANKMENT
- PROPOSED ENGINEERED STREAMBANK MATERIAL
- PROPOSED SOD MAT
- PROPOSED BRIDGE
- PROPOSED LOG STRUCTURE
- PROPOSED DRAINAGE CURB, SEE R SHEETS
- EXISTING COMMUNICATIONS VAULT
- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING FIBER OPTICS POST
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- EXISTING TIMBER HEADWALL AND PILES

- ### NOTES:
1. POTHOLE LOCATIONS OF BURIED UTILITIES PRIOR TO EARTHWORK AND COORDINATE WITH UTILITIES ON TEMPORARY RELOCATION APPROACH.
 2. COORDINATE WITH TILLAMOOK PUD FOR RELOCATING OVERHEAD POWER LINES BEFORE CONSTRUCTION.
 3. INSTALL WATERTIGHT PLUG ON ENDS OF THE (E) CULVERT, PUMP REMAINING WATER FROM THE PIPE, AND FILL THE PIPE WITH CONTROLLED LOW STRENGTH MATERIAL BEFORE ABANDONING IN PLACE.
 4. SALVAGE TOP 12 INCHES FROM STRIPPING OPERATIONS FOR REUSE AS SOD MATS.
 5. GUARDRAILS OMITTED FOR GRAPHICAL CLARITY.



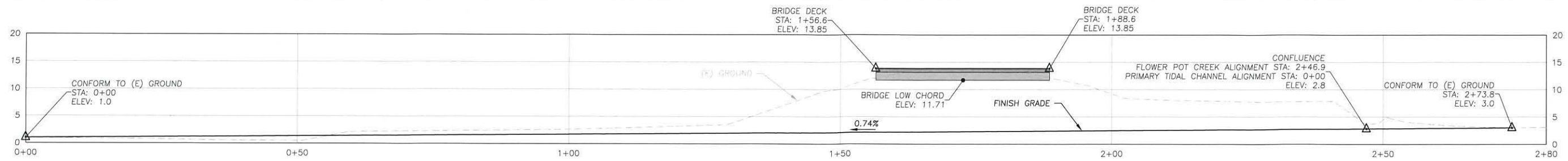
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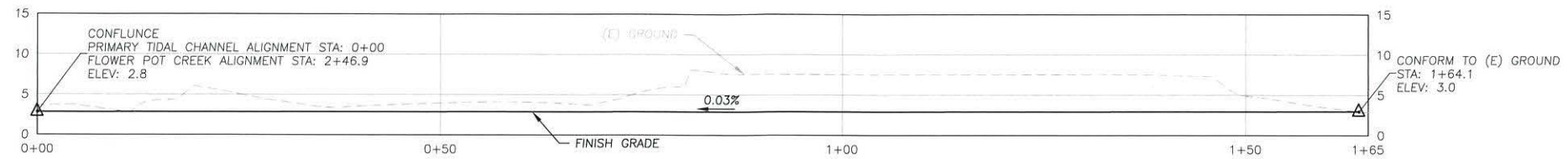
CREEK
GRADING PLAN
AND ROAD
PROFILE

FLOWER POT CREEK FISH
PASSAGE PROJECT
90% DESIGN SUBMITTAL

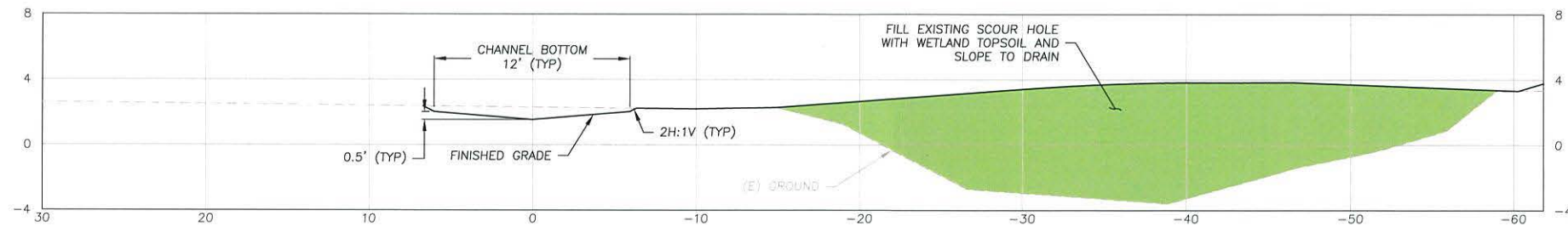
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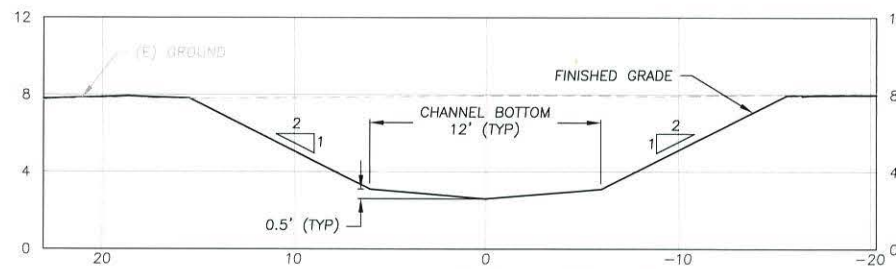
PROPOSED FLOWER POT CREEK PROFILE (2)
SCALE: 1" = 10'



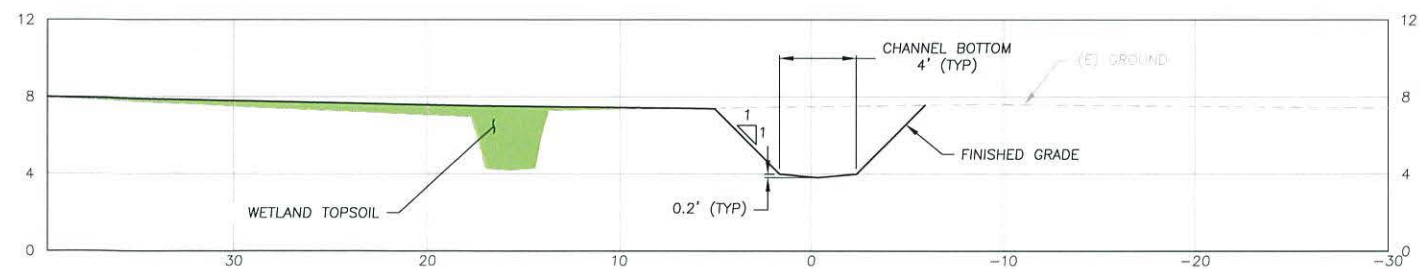
PROPOSED PRIMARY TIDAL CHANNEL PROFILE (3)
SCALE: 1" = 10'



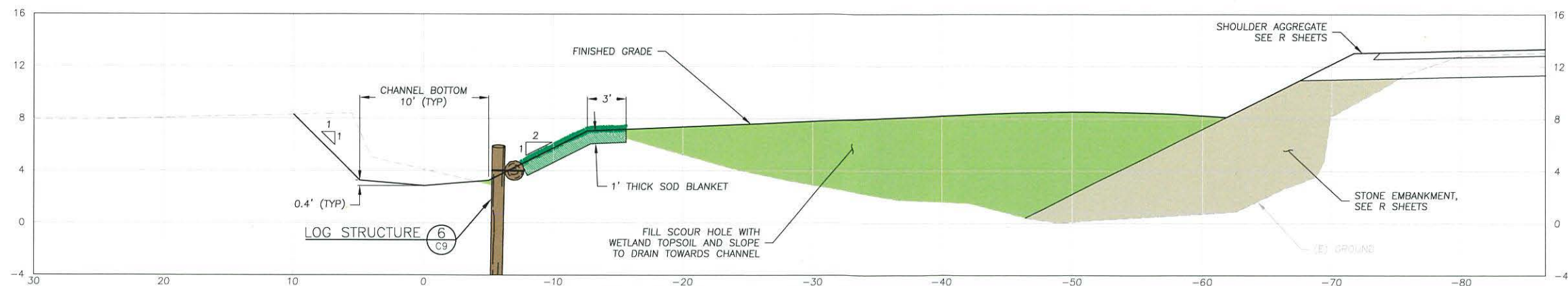
DOWNSTREAM FLOWER POT CREEK SECTION (A)
SCALE: 1" = 5'



UPSTREAM FLOWER POT CREEK SECTION (B)
SCALE: 1" = 5'



SECONDARY TIDAL CHANNEL SECTION (C)
SCALE: 1" = 5'



PRIMARY TIDAL CHANNEL SECTION (D)
SCALE: 1" = 5'

PRELIMINARY
NOT FOR CONSTRUCTION

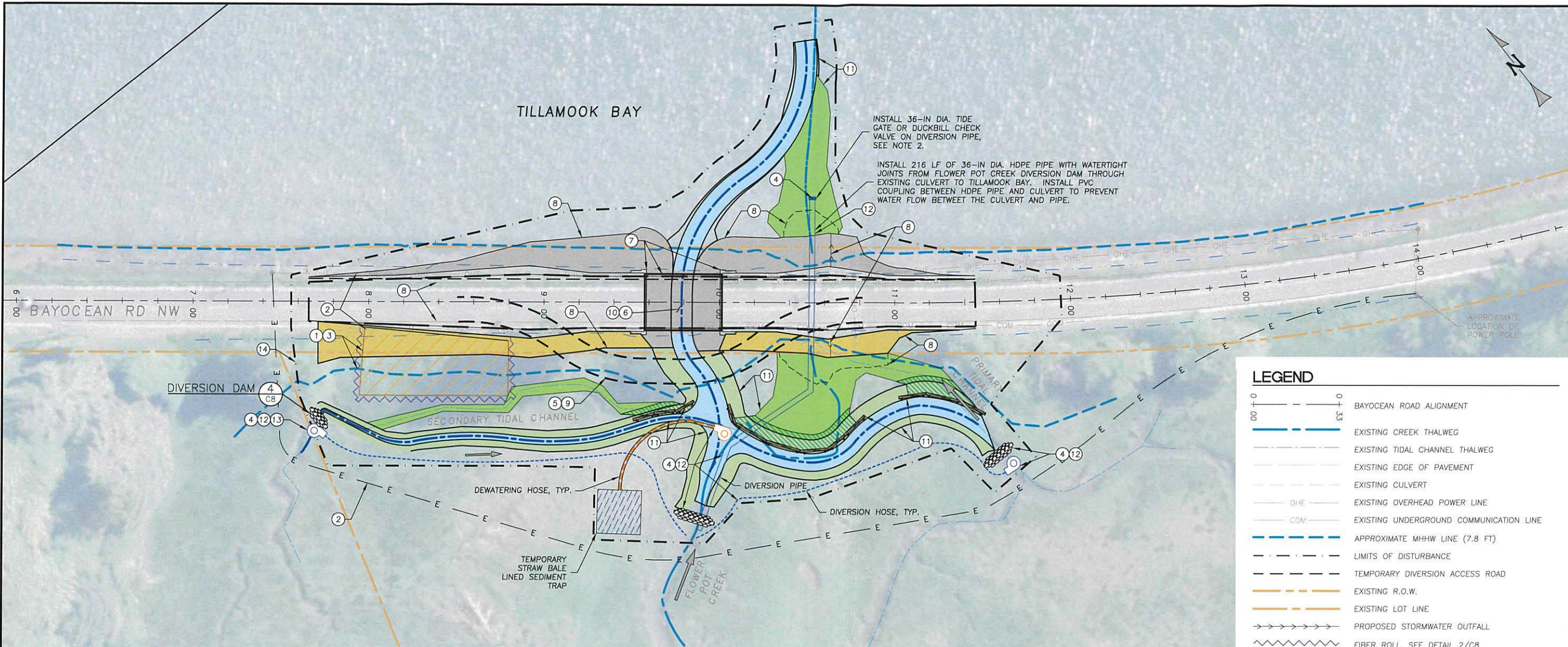
PREPARED AT THE REQUEST OF:
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CREEK PROFILE AND SECTIONS

FLOWER POT CREEK FISH PASSAGE PROJECT
90% DESIGN SUBMITTAL

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CONSTRUCTION SEQUENCING, EROSION CONTROL, AND DEWATERING PLAN
SCALE: 1" = 30'

LEGEND

0 + 00	0 + 30	BAYOCEAN ROAD ALIGNMENT
---	---	EXISTING CREEK THALWEG
---	---	EXISTING TIDAL CHANNEL THALWEG
---	---	EXISTING EDGE OF PAVEMENT
---	---	EXISTING CULVERT
OHE	OHE	EXISTING OVERHEAD POWER LINE
COM	COM	EXISTING UNDERGROUND COMMUNICATION LINE
---	---	APPROXIMATE MHHW LINE (7.8 FT)
---	---	LIMITS OF DISTURBANCE
---	---	TEMPORARY DIVERSION ACCESS ROAD
---	---	EXISTING R.O.W.
---	---	EXISTING LOT LINE
---	---	PROPOSED STORMWATER OUTFALL
---	---	FIBER ROLL, SEE DETAIL 2/CB
E	E	TEMPORARY ELECTRICAL BYPASS LINE, BY TPUD
---	---	PROPOSED CHANNEL BOTTOM
---	---	PROPOSED CHANNEL BANKS
---	---	PROPOSED WETLAND TOPSOIL FILL
---	---	PROPOSED STONE EMBANKMENT
---	---	PROPOSED ENGINEERED STREAMBANK MATERIAL
---	---	PROPOSED BRIDGE
---	---	PROPOSED SOD MAT
---	---	TEMPORARY CONSTRUCTION STAGING AND STOCKPILE AREA
---	---	EXISTING COMMUNICATIONS VAULT
---	---	EXISTING POWER POLE
---	---	EXISTING GUY ANCHOR
---	---	EXISTING FIBER OPTICS POST
---	---	EXISTING TIMBER HEADWALL AND PILES
---	---	PROPOSED LOG STRUCTURE
---	---	PROPOSED DRAINAGE CURB
---	---	TEMPORARY SANDBAG BERM
---	---	TEMPORARY DIVERSION PUMP
---	---	TEMPORARY DIVERSION HOSE/PIPE
---	---	TEMPORARY DEWATERING PUMP
---	---	TEMPORARY DEWATERING HOSE
---	---	TEMPORARY DEWATERING PIPE
---	---	TEMPORARY SEDIMENT TRAP

(X) CONSTRUCTION PHASING PLAN KEY NOTES

- THE FOLLOWING NOTES DETAIL THE RECOMMENDED SEQUENCE OF CONSTRUCTION TO CONTROL EROSION AND SEDIMENT FROM LEAVING THE PROJECT AREA DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT THE ANTICIPATED CONSTRUCTION SEQUENCING STRATEGY WITH THE CONSTRUCTION SCHEDULE FOR REVIEW BY THE ENGINEER.
1. PREPARE THE STAGING AREA AND INSTALL TEMPORARY EROSION CONTROL MATERIALS AND BMPS.
 2. COORDINATE WITH TPUD AND OTHER UTILITIES TO TEMPORARILY REROUTE THE UTILITIES AROUND THE WORK AREA.
 3. MOBILIZE HEAVY EQUIPMENT TO THE SITE.
 4. INSTALL CREEK DIVERSION AND DEWATERING EQUIPMENT.
 5. INSTALL THE TEMPORARY TRAFFIC BYPASS ROAD AND ASSOCIATED TEMPORARY TRAFFIC CONTROL SIGNS AND EQUIPMENT PER THE APPROVED TRAFFIC CONTROL PLAN.
 6. EXCAVATE ROAD FILL FOR BRIDGE INSTALLATION
 7. INSTALL THE BRIDGE PILES, CAP BEAMS, WINGWALLS, AND BRIDGE DECK.
 8. COMPLETE ROAD FILL, ENGINEERED STREAMBANK MATERIAL, PAVING, TRAFFIC SAFETY FEATURES, AND STORMWATER CONVEYANCE FEATURES.
 9. REMOVE TEMPORARY TRAFFIC BYPASS ROAD.
 10. EXCAVATE CHANNEL AND INSTALL ENGINEERED STREAMBANK MATERIAL UNDER THE BRIDGE.
 11. EXCAVATE REMAINING NEW CREEK AND TIDAL CHANNELS, FILL THE EXISTING CHANNELS, AND INSTALL BANK PROTECTION LOG STRUCTURES, AND SOD MATS.
 12. REMOVE CREEK DIVERSION AND DEWATERING EQUIPMENT AND DEMOLISH/ABANDON THE EXISTING CULVERT.
 13. DEMOBILIZE HEAVY EQUIPMENT, RESTORE STAGING AREA, AND REMOVE TEMPORARY TRAFFIC CONTROL SIGNS.
 14. INSTALL PERMANENT EROSION CONTROL BMPs AND HYDROSEED ALL EXPOSED SOILS WITHIN LIMITS OF DISTURBANCE.

NOTES:

1. PERFORM ALL EARTHWORK ON TILLAMOOK BAY SIDE OF PROJECT DURING OUTGOING TIDES.
2. INSTALL A TIDE GATE, CHECK VALVE, OR OTHER DEVICE TO PREVENT TIDAL FLOW INTO THE DIVERSION PIPE.
3. PROVIDE SUPPLEMENTARY DIVERSION PUMPING FROM FLOWER POT CREEK TO TILLAMOOK BAY WHEN CREEK FLOW VOLUMES EXCEED THE CAPACITY OF THE DIVERSION PIPE GRAVITY DRAINAGE.
4. SEE SHEET C7 FOR SEEDING NOTES AND TABLES.

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CONSTRUCTION SEQUENCING, EROSION CONTROL, AND DEWATERING PLAN

FLOWER POT CREEK FISH PASSAGE PROJECT
90% DESIGN SUBMITTAL

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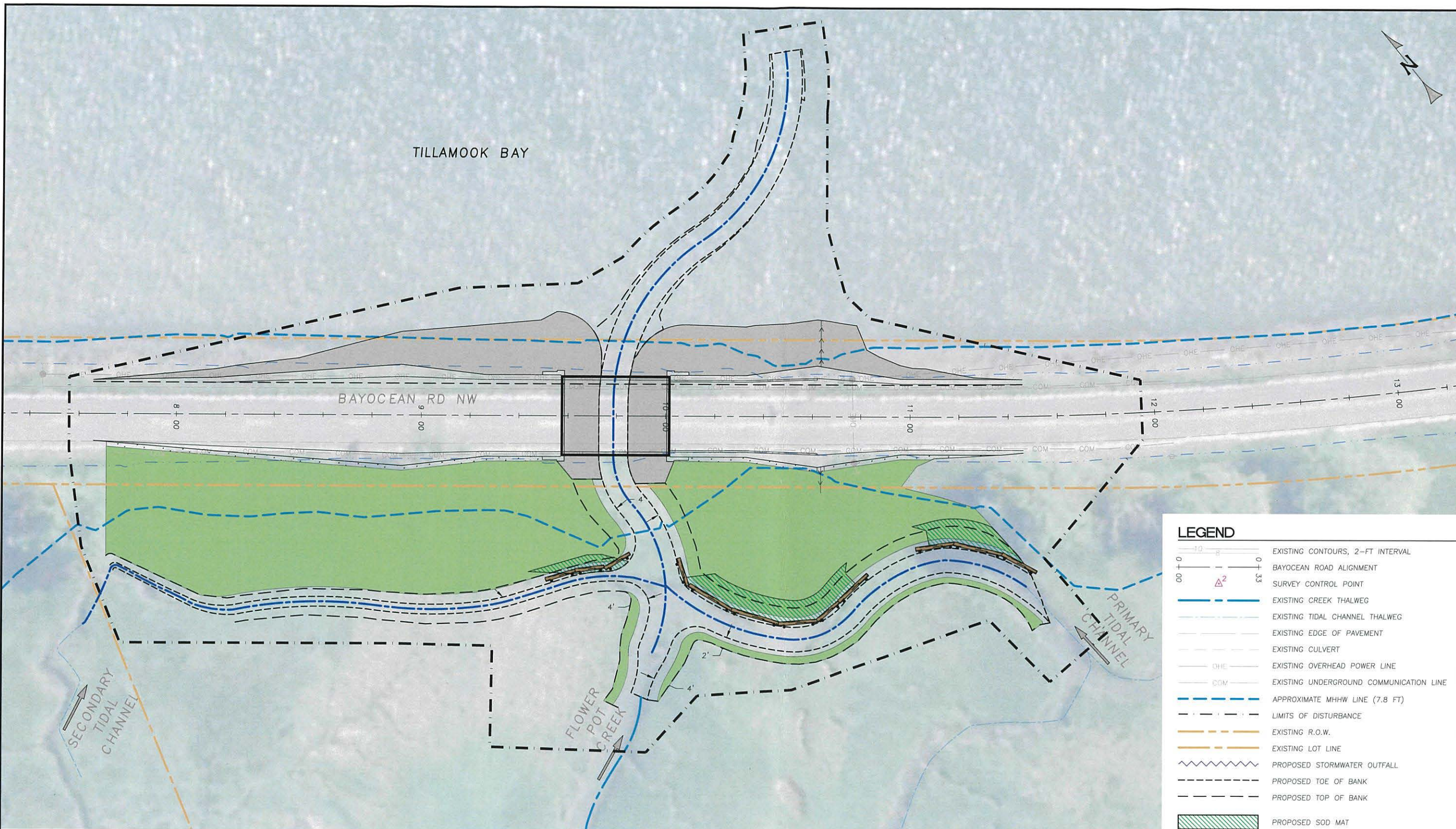
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REVEGETATION PLAN

FLOWER POT CREEK FISH PASSAGE PROJECT
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LEGEND

- EXISTING CONTOURS, 2'-FT INTERVAL
- BAYOCEAN ROAD ALIGNMENT
- SURVEY CONTROL POINT
- EXISTING CREEK THALWEG
- EXISTING TIDAL CHANNEL THALWEG
- EXISTING EDGE OF PAVEMENT
- EXISTING CULVERT
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND COMMUNICATION LINE
- APPROXIMATE MHHW LINE (7.8 FT)
- LIMITS OF DISTURBANCE
- EXISTING R.O.W.
- EXISTING LOT LINE
- PROPOSED STORMWATER OUTFALL
- PROPOSED TOE OF BANK
- PROPOSED TOP OF BANK
- PROPOSED SOD MAT
- PROPOSED ENGINEERED STREAMBANK MATERIAL
- PROPOSED SEEDING AREA (0.4 ACRE)
- PROPOSED PLANTING AREA (0.1 ACRE)
- EXISTING COMMUNICATIONS VAULT
- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING FIBER OPTICS POST
- PROPOSED LOG STRUCTURE
- PROPOSED DRAINAGE CURB

REVEGETATION PLAN
 SCALE: 1" = 20'

TABLE 1: SEED MIX

COMMON NAME	SCIENTIFIC NAME	% COMPOSITION (BY WEIGHT)
AMERICAN DUNEGRASS	ELYMUS MOLLIS	25
TUFTED HAIRGRASS	CAREX LYNGBYEI	25
THREE SQUARE BULLRUSH	SCHOENOPLECTUS AMERICANUS	25
PACIFIC REEDGRASS	CALAMAGROSTIS NUTKAENESIS	25

*APPLY SEED MIX AT A RATE OF 40 LBS/ACRE

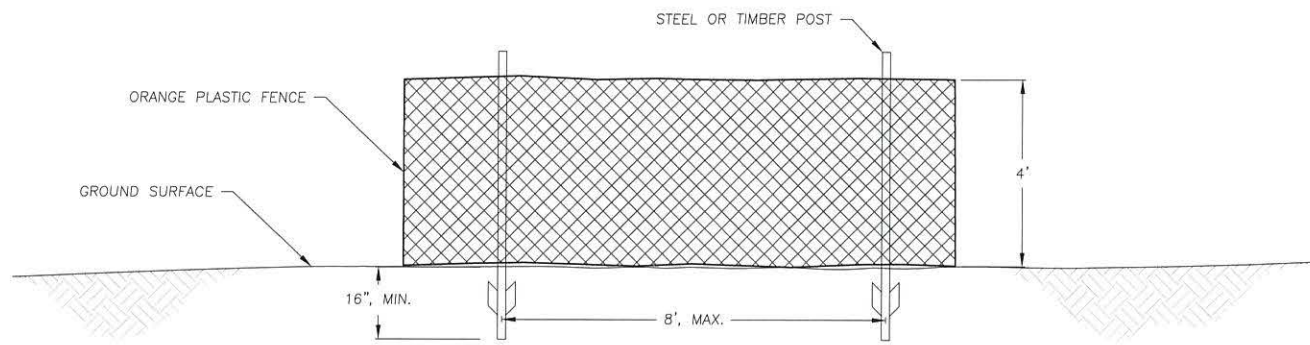
SEEDING NOTES

- SEEDING SHALL NOT BE REQUIRED FOR AREAS WHERE SOIL IS SPREAD TO A DEPTH EQUAL TO OR LESS THAN 3" OVER EXISTING VEGETATED SURFACES.
- NO SEEDING SHALL BE PLACED ON THE BASE OF CHANNELS AND THE FIRST TWO (2) VERTICAL FEET ABOVE THE BASE OF THE CHANNELS. NO SEEDING SHALL BE PLACED NORTHEAST OF THE ROAD (WITHIN TILLAMOOK BAY). ALL OTHER EXPOSED SOILS SHALL BE SEEDING AND MULCHED.
- EVENLY APPLY STRAW MULCH WITHIN 24 HOURS AFTER SEEDING.

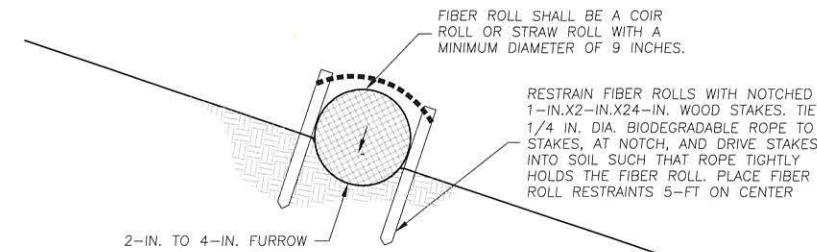
TABLE 2: PLANTING

SCIENTIFIC NAME	COMMON NAME	O.C. SPACING	# OF PLANTS	CONTAINER TYPE
GAULTHERIA SHALLON	SALAL	6'	200	1 GAL
RIBES LACUSTRE	SWAMP GOOSEBERRY	6'	200	1 GAL
RUBUS URSINUS	TRAILING BLACKBERRY	3'	400	1 GAL

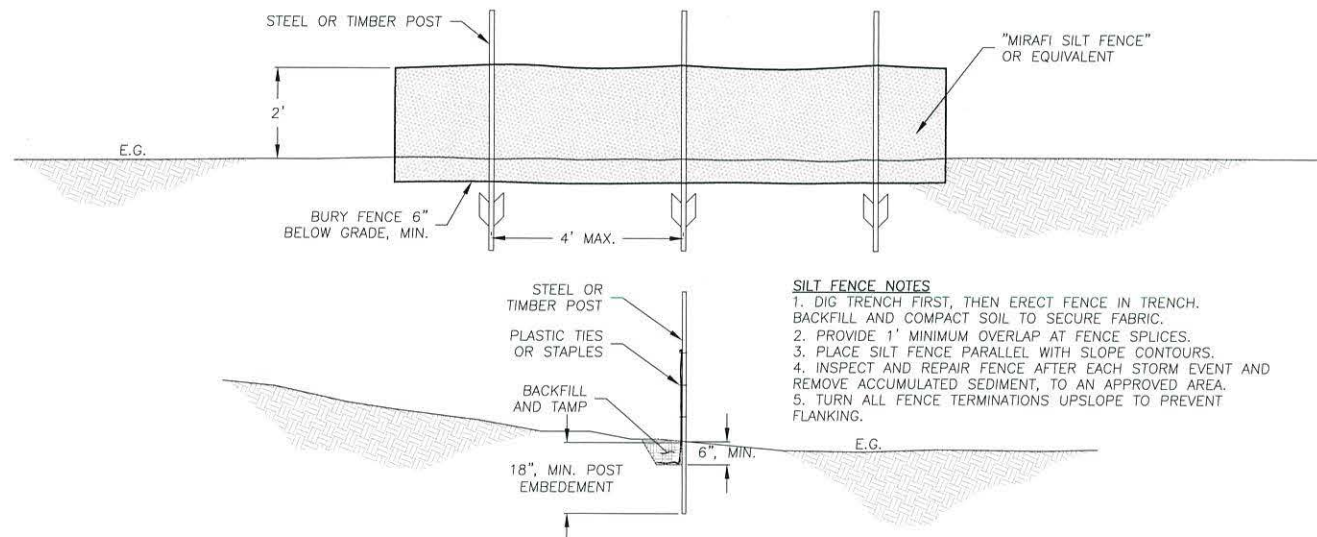
INSTALL PLANTS TO THE SOUTH OF BAYOCEAN ROAD BETWEEN THE ROAD SHOULDER AND ELEVATION 8.0.



BOUNDARY FENCE (1)
SCALE: 1" = 2'
C9

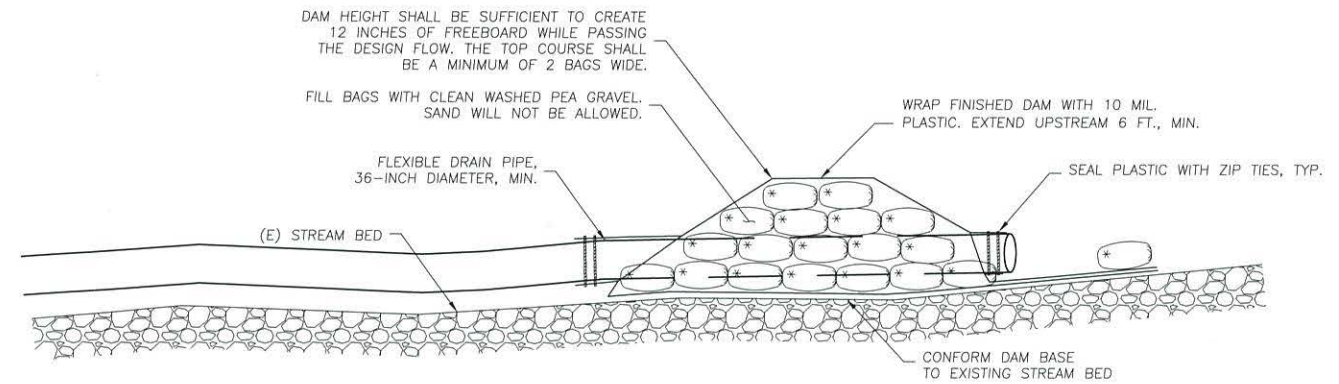


STRAW WATTLE DETAIL (2)
SCALE: 1" = 1'
C9



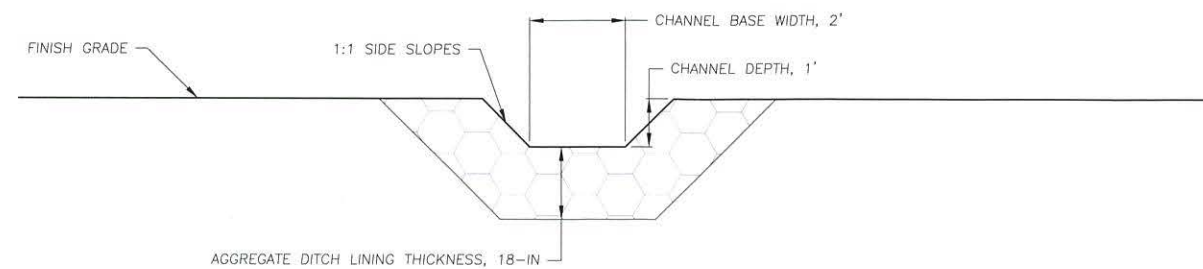
SILT FENCE (3)
SCALE: 1" = 2'
C9

- SILT FENCE NOTES**
1. DIG TRENCH FIRST, THEN ERECT FENCE IN TRENCH. BACKFILL AND COMPACT SOIL TO SECURE FABRIC.
 2. PROVIDE 1' MINIMUM OVERLAP AT FENCE SPLICES.
 3. PLACE SILT FENCE PARALLEL WITH SLOPE CONTOURS.
 4. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE ACCUMULATED SEDIMENT, TO AN APPROVED AREA.
 5. TURN ALL FENCE TERMINATIONS UPSLOPE TO PREVENT FLANKING.



DIVERSION DAM PROFILE (4)
SCALE: 1" = 5'
C6

NOTE: CONTRACTOR MAY USE ALTERNATE DAM DETAIL, SUBJECT TO APPROVAL OF THE ENGINEER AND THE PERMITTING AGENCIES.



STORMWATER OUTFALL (5)
SCALE: 1" = 2'
C4, C6, C7

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DETAILS

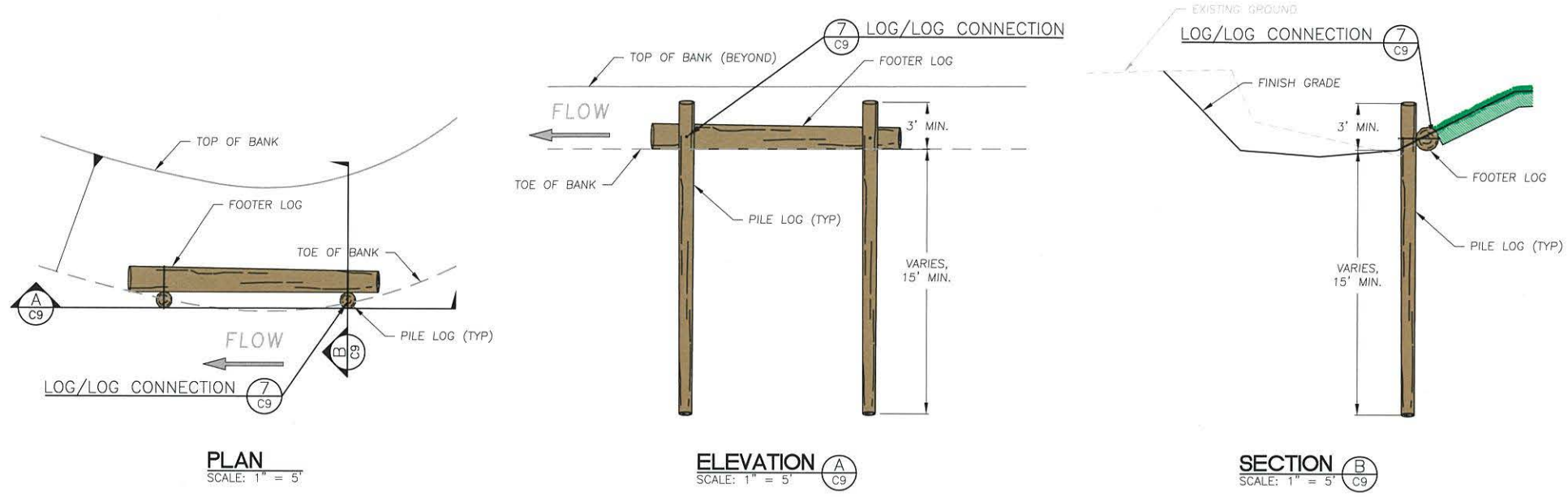
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0 1"

C8 8 OF 17



PLAN
SCALE: 1" = 5'

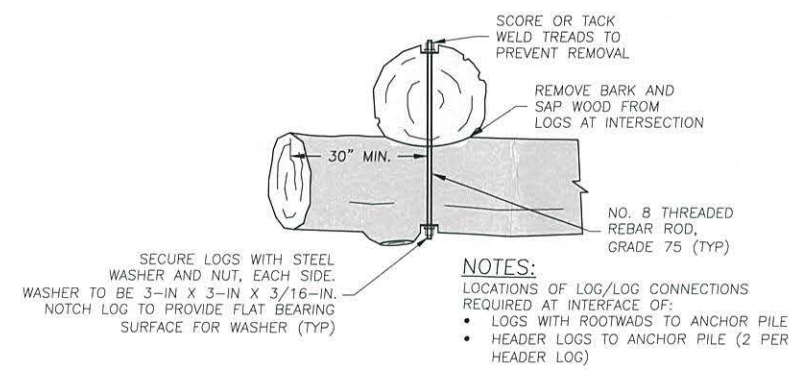
ELEVATION
SCALE: 1" = 5'

SECTION
SCALE: 1" = 5'

LOG STRUCTURE
SCALE: 1" = 5'

LOG STRUCTURE NOTES

- PLACEMENT LOCATIONS:** LOG LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER.
 - LOGS:** LOGS SHALL BE CONIFER, SOUND AND FREE OF SIGNIFICANT DECAY. PILE LOGS SHALL BE STRIPPED OF BARK BEFORE INSTALLATION. MATERIALS FOR USE IN THE STRUCTURES SHALL MEET THE FOLLOWING SIZE CRITERIA:
- | ITEM | DIAMETER (IN.) | LENGTH (FT.) | COUNT |
|-----------|----------------|--------------|-------|
| PILE LOGS | 12 | 20-25 | 18 |
| TOE LOGS | 18 | 12-20 | 9 |
- *NOTE: LENGTH AS SHOWN ON PLANS
- | ITEM | COUNT |
|---------------------|-------|
| LOG/LOG CONNECTIONS | 18 |
- CONNECTIONS:** CONNECTIONS SHALL CONSIST OF LOG/LOG CONNECTIONS, AS SHOWN ON DETAIL 5, THIS SHEET. PROVIDE A MINIMUM OF TWO (2) PER TOE LOG, OR AS DIRECTED BY THE ENGINEER. PLACE ALL CONNECTIONS TO MINIMIZE VISUAL IMPACT.
 - LOG STRUCTURE DESIGNS** ARE SHOWN CONCEPTUALLY DUE TO THE INHERENT VARIABILITY OF MATERIAL PROPERTIES. THE DESIGN REQUIRES THAT THE ENGINEER WILL OBSERVE CONSTRUCTION OF THE LOG STRUCTURES TO ENSURE THE INTENT OF THE DESIGN IS MET. OBSERVATIONS MUST INCLUDE LOG AND BOULDER SELECTION, PLACEMENT, AND BACKFILLING. ANY LOG STRUCTURES CONSTRUCTED WITHOUT THE ENGINEER PRESENT ON-SITE MAY RESULT IN REJECTION OF THE WORK BY THE ENGINEER.



- NOTES:**
LOCATIONS OF LOG/LOG CONNECTIONS REQUIRED AT INTERFACE OF:
- LOGS WITH ROOTWADS TO ANCHOR PILE
 - HEADER LOGS TO ANCHOR PILE (2 PER HEADER LOG)

LOG/LOG CONNECTION
SCALE: 1" = 2'

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DETAILS

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DATE: 11/16/2023
JOB NO.: 21-078

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS

EROSION CONTROL NOTES

1. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
2. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
3. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
4. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.
5. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
6. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
7. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
8. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
9. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
10. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.
11. FUELING ACTIVITIES MUST BE LOCATED A MINIMUM OF 150 FEET FROM ORDINARY HIGH WATER AND SENSITIVE WATERS, INCLUDING WETLANDS.
12. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.
13. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
14. ONSITE VEHICLE SPEED ON UPAVED SURFACES SHALL BE LIMITED TO 15 MPH.
15. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE.
16. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
17. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR.
18. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS.
19. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER.
20. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
21. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
22. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS, DRAINAGE WAYS, OR WETLANDS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS.
23. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE.
24. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.
25. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS AS THEY ARE COMPLETED. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS.

STREAM/WETLAND CONSTRUCTION BEST MANAGEMENT PRACTICES

1. ALL WORK WITHIN THE WETTED CHANNEL SHALL BE COMPLETED WITHIN THE IN-WATER WORK WINDOW AS LISTED IN THE PERMITS.
2. FISH RELOCATION
 - 2.1. SHALL BE PERFORMED BY THE CONTRACTOR (UNLESS STATED OTHERWISE IN THE CONTRACT DOCUMENTS) PRIOR TO PERFORMING ANY CONSTRUCTION WITHIN THE WETTED CHANNEL. ALL FISH RELOCATION WORK SHALL BE SUPERVISED BY A QUALIFIED FISHERIES BIOLOGIST WITH EXPERIENCE IN WORK AREA ISOLATION, AND A VALID ODFW SCIENTIFIC TAKE PERMIT. PERFORM THE FOLLOWING STEPS IN THE ORDER LISTED FOR FISH RELOCATION:
 - 2.2. CONDUCT FISH RELOCATION ACTIVITIES DURING PERIODS OF THE DAY WITH THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE.
 - 2.3. ISOLATE THE WETTED STREAM CHANNEL AT THE UPSTREAM END OF THE LIMITS OF DISTURBANCE WITH BLOCK NETS. CLOSELY MONITOR ALL BLOCK NETS THROUGHOUT CONSTRUCTION TO ENSURE THEY STAY SECURED TO THE BANKS AND FREE OF ORGANIC ACCUMULATION.
 - 2.4. CONDUCT AN INITIAL SWEEP OF THE WETTED CHANNEL WITH SEIN NETS WITHIN THE WORK ZONE FROM UPSTREAM TO DOWNSTREAM.
 - 2.5. ISOLATE THE DOWNSTREAM END OF THE WETTED CHANNEL WITH BLOCK NETS.
 - 2.6. INSTALL DEWATERING EQUIPMENT AND BEGIN SLOWLY DEWATERING WHILE CONTINUING FISH RELOCATION ACTIVITIES.
 - 2.7. ELECTROFISHING SHALL FOLLOW NMFS (2000) GUIDELINES
 - 2.8. FISH TRANSPORT
 - 2.8.1. MINIMIZE THE TIME FISH ARE IN TRANSPORT CONTAINERS.
 - 2.8.2. KEEP TRANSPORT CONTAINERS IN SHADED AREA.
 - 2.8.3. LIMIT THE NUMBER OF FISH WITHIN CONTAINERS AND ONLY KEEP FISH OF RELATIVELY COMPARABLE SIZE WITHIN A GIVEN CONTAINER.
 - 2.8.4. USE AERATORS OR REPLACE THE WATER IN THE CONTAINERS AT LEAST EVERY 15 MINUTES WITH COLD CLEAR WATER.
 - 2.8.5. RELEASE FISH IN AN AREA UPSTREAM OF THE CONSTRUCTION AREA WITH ADEQUATE COVER AND FLOW REFUGE. DOWNSTREAM IS ACCEPTABLE PROVIDED THE RELEASE SITE IS BELOW THE INFLUENCE OF CONSTRUCTION.
 - 2.8.6. MONITOR AND RECORD FISH PRESENCE, HANDLING, AND INJURY/MORTALITY DURING ALL PHASES OF FISH RELOCATION AND SUBMIT A FISH SALVAGE REPORT AS REQUIRED BY PERMITS WITHIN 60 DAYS.
3. DEWATERING/BYPASS FLOWS
 - 3.1. PUMPS: WHENEVER A PUMP IS USED TO DEWATER THE ISOLATION AREA AND ESA-LISTED FISH MAY BE PRESENT, A FISH SCREEN WILL BE USED THAT MEETS THE MOST CURRENT VERSION OF NMFS'S FISH SCREEN CRITERIA (NMFS 2011A). NMFS APPROVAL IS REQUIRED FOR PUMPING AT A RATE THAT EXCEEDS 3 CFS.
 - 3.2. TREAT ALL DISCHARGE WATER FROM DEWATERING ACTIVITIES WITHIN THE CONSTRUCTION AREA USING BEST MANAGEMENT PRACTICES TO REMOVE DEBRIS, SEDIMENT, PETROLEUM PRODUCTS, AND ANY OTHER POLLUTANTS LIKELY TO BE PRESENT. DEWATER THE SHORTEST LINEAR EXTENT OF WORK AREA PRACTICABLE.
 - 3.3. FLOW BYPASS SHALL BE PERFORMED AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
 - 3.4. RE-WATERING OF THE WORK AREA FOLLOWING CONSTRUCTION SHALL BE PERFORMED SLOWLY TO PREVENT LOSS OF SURFACE FLOW DOWNSTREAM AND ANY SUDDEN INCREASE IN STREAM TURBIDITY.
4. TEMPORARY STREAM CROSSINGS
 - 4.1. MINIMIZE THE NUMBER OF STREAM CROSSINGS TO MAXIMUM EXTENT PRACTICABLE.
 - 4.2. NO STREAM CROSSINGS SHALL BE ALLOWED IN ACTIVE SPAWNING SITES, WHEN HOLDING ADULT LISTED FISH ARE PRESENT, OR WHEN EGGS OR ALEVINS ARE IN THE GRAVEL.
 - 4.3. TEMPORARY CROSSINGS SHALL NOT OCCUR IN AREA THAT MAY INCREASE THE RISK OF CHANNEL RE-ROUTING OR AVULSION, OR IN POTENTIAL SPAWNING HABITAT.
 - 4.4. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL CROSS STREAMS AT RIGHT ANGLES TO THE MAIN CHANNEL.
 - 4.5. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL ONLY BE ALLOWED TO CROSS STREAMS IN THE WET WHERE THE STREAMBED IS BEDROCK, OR WHERE MATS OR OFF-SITE LOGS ARE PLACED IN THE STREAM AND USED AS A CROSSING.
 - 4.6. DECOMMISSION ALL TEMPORARY STREAM CROSSINGS IMMEDIATELY FOLLOWING CONSTRUCTION AND RETURN AREA TO PRECONSTRUCTION CONDITIONS.



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PRELIMINARY

NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
TROUT UNLIMITED

NOTES

**FLOWER POT CREEK FISH
 PASSAGE PROJECT
 90% DESIGN SUBMITTAL**

DESIGNED BY: J.H.
 DRAWN BY: D.H.
 CHECKED BY: J.H.
 DATE: 11/16/2023
 JOB NO.: 21-078

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS

GENERAL NOTES

1. NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER OR A DESIGNATED REPRESENTATIVE SHALL OBSERVE THE CONSTRUCTION PROCESS, AS NECESSARY TO ENSURE PROPER INSTALLATION PROCEDURES.
2. EXISTING UNDERGROUND UTILITY LOCATIONS:
 - A. CALL UNDERGROUND SERVICE ALERT (1-800-332-2344) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
 - B. PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
 - C. EXISTING UTILITY LOCATIONS SHOWN ARE COMPILED FROM INFORMATION SUPPLIED BY THE APPROPRIATE UTILITY AGENCIES AND FROM FIELD MEASUREMENTS TO ABOVE GROUND FEATURES READILY VISIBLE AT THE TIME OF SURVEY. LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND DEPTH OF UNDERGROUND UTILITIES.
 - D. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
 - E. PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POTHOLE THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
 - F. TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
 - G. UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
 - H. UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.
3. IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
5. ALL TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
6. PROJECT SCHEDULE: PRIOR TO COMMENCEMENT OF WORK, SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL A DETAILED CONSTRUCTION SCHEDULE. DO NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE ENGINEER. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL. PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
9. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTION LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. NEITHER THE PROFESSIONAL ACTIVITIES OF CONSULTANT NOR THE PRESENCE OF CONSULTANT OR HIS OR HER EMPLOYEES OR SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR AND ITS SUBCONTRACTORS OF THEIR RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE HEALTH OR SAFETY REQUIREMENTS OF ANY REGULATORY AGENCY OR OF STATE LAW.
10. MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL AS-BUILT DEVIATIONS FROM THE CONSTRUCTION AS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS, FOR THE PURPOSE OF PROVIDING THE ENGINEER OF RECORD WITH A BASIS FOR THE PREPARATION OF RECORD DRAWINGS.
11. MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. STORE ALL MATERIALS WITHIN APPROVED STAGING AREAS.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL PERMIT CONDITIONS, LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS, WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
13. PROVIDE, AT CONTRACTOR'S SOLE EXPENSE, ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.
15. FIELD INSPECTIONS AND OR THE PROVISION OF CONSTRUCTION STAKES DO NOT RELIEVE THE CONTRACTOR OF THEIR SOLE RESPONSIBILITY FOR ESTABLISHING ACCURATE CONSTRUCTED LINES AND GRADES, AS SPECIFIED.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
17. TREE DIMENSIONS: TRUNK DIAMETERS SHOWN REPRESENT DIAMETER AT BREAST HEIGHT (DBH), MEASURED IN INCHES. DBH IS MEASURED 4.5 FT ABOVE GROUND FOR SINGLE TRUNKS AND TRUNKS THAT SPLIT INTO SEVERAL STEMS CLOSE TO THE GROUND. THE DBH FOR TREES THAT SPLIT INTO SEVERAL STEMS CLOSE TO THE GROUND MAY BE CONSOLIDATED INTO A SINGLE DBH BY TAKING THE SQUARE ROOT OF THE SUM OF ALL SQUARED STEM DBH'S, UNLESS OTHERWISE NOTED. WHERE TREES FORK NEAR BREAST HEIGHT, TRUNK DIAMETER IS MEASURED AT THE NARROWEST PART OF THE MAIN STEM BELOW THE FORK. FOR TREES ON A SLOPE, BREAST HEIGHT IS REFERENCED FROM THE UPPER SIDE OF THE SLOPE. FOR LEANING TREES, BREAST HEIGHT IS MEASURED ON THE SIDE THAT THE TREE LEANS TOWARD. TREES WITH DBH LESS THAN 8" ARE TYPICALLY NOT SHOWN.

12"DF = 12" DBH DOUGLAS FIR
18. TREE TRUNK DIMENSIONS MAY BE SHOWN OUT-OF-SCALE FOR PLOTTING CLARITY. CAUTION SHOULD BE USED IN DESIGNING NEAR TREE TRUNKS. THERE ARE LIMITATIONS ON FIELD ACCURACY, DRAFTING ACCURACY, MEDIUM STRETCH AS WELL AS THE "SPREAD" OR "LEANING" OF TREES. REQUEST ADDITIONAL TOPOGRAPHIC DETAIL WHERE CLOSE TOLERANCES ARE ANTICIPATED. INDIVIDUAL TREES ARE NOT TYPICALLY LOCATED WITHIN DRIPLINE CANOPY AREAS SHOWN.
19. APPROXIMATE CENSUS OF TREES TO BE REMOVED:

COMMON NAME	NUMBER
ALDER	1
SITKA SPRUCE	2
TOTAL:	3
20. ALL STANDARD STREET MONUMENTS, LOT CORNER PIPES, AND OTHER PERMANENT MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE REPLACED AND A RECORD OF SURVEY OR CORNER RECORD PER SECTION 8771 OF THE PROFESSIONAL LAND SURVEYORS ACT FILED BEFORE ACCEPTANCE OF THE IMPROVEMENTS BY TILLAMOOK COUNTY. COPIES OF ANY RECORD OF SURVEY OR CORNER RECORDS SHALL BE SUBMITTED TO THE COUNTY.
21. CONTRACTOR IS REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
22. CULTURAL RESOURCES: IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHALL CEASE WITHIN A 100-FOOT RADIUS. THE CONTRACTOR SHALL NOTIFY THE TILLAMOOK COUNTY CORONER AND THE OWNER'S REPRESENTATIVE IMMEDIATELY.

EARTHWORK NOTES

1. ALL GRADING SHALL COMPLY WITH THE REPORT OF GEOTECHNICAL SERVICES, AND WITH THE APPLICABLE REQUIREMENTS OF THE TILLAMOOK COUNTY GRADING ORDINANCE. REFER TO GEOTECHNICAL INVESTIGATION REPORT BY:

PALI CONSULTING
4891 WILLAMETTE FALLS DRIVE, SUITE 1
WEST LINN, OR 97068
(503) 502-0820
JOB No. 014-21-007

PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL BE FAMILIAR WITH THE GEOTECHNICAL INVESTIGATION. IN THE EVENT OF DISCREPANCY BETWEEN THE REPORT AND THE NOTES HEREIN, THE REPORT SHALL PREVAIL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND MAKE HIS OWN INTERPRETATIONS WITH REGARD TO MATERIALS, METHODS AND EQUIPMENT NECESSARY TO PERFORM THE WORK REQUIRED FOR THIS PROJECT.
2. GRADING SUMMARY:

TOTAL CUT VOLUME =	1,402 CY
TOTAL FILL VOLUME =	1,324 CY
NET (CUT) =	78 CY

THE ABOVE QUANTITIES ARE APPROXIMATE IN-PLACE VOLUMES CALCULATED AS THE DIFFERENCE BETWEEN EXISTING GROUND AND THE PROPOSED FINISH GRADE, PREPARED FOR PERMITTING PURPOSES ONLY. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. PROPOSED FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF WORK TO BE CONSTRUCTED. THE QUANTITIES HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, OVER EXCAVATION, AND RECOMPACTION, UNDERGROUND UTILITY AND SUBSTRUCTURE SPOILS AND CONSTRUCTION METHODS.

THE CONTRACTOR SHALL PERFORM AN INDEPENDENT EARTHWORK ESTIMATE FOR THE PURPOSE OF PREPARING BID PRICES FOR EARTHWORK. THE BID PRICE SHALL INCLUDE COSTS FOR ANY NECESSARY IMPORT AND PLACEMENT OF EARTH MATERIALS OR THE EXPORT AND PROPER DISPOSAL OF EXCESS OR UNSUITABLE EARTH MATERIALS.
3. PRIOR TO COMMENCING WORK, PROTECT ALL SENSITIVE AREAS TO REMAIN UNDISTURBED WITH TEMPORARY FENCING, AS SHOWN ON THE DRAWINGS, AS SPECIFIED, OR AS DIRECTED BY THE ENGINEER.
4. DO NOT DISTURB AREAS OUTSIDE OF THE DESIGNATED LIMITS OF DISTURBANCE, UNLESS AUTHORIZED IN WRITING BY THE ENGINEER. THE COST OF ALL ADDITIONAL WORK ASSOCIATED WITH RESTORATION AND REVEGETATION OF DISTURBED AREAS OUTSIDE THE DESIGNATED LIMITS OF DISTURBANCE, AS SHOWN ON THE DRAWINGS, SHALL BE BORNE SOLELY BY THE CONTRACTOR.
5. CLEARING AND GRUBBING, SUBGRADE PREPARATION AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND THESE DRAWINGS.
6. FINE GRADING ELEVATIONS, CONFORMS, AND SLOPES NOT CLEARLY SHOWN ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO DIRECT DRAINAGE TO PROTECTED DRAINAGE CONTROL STRUCTURES OR NATURAL WATERWAYS IN A MANNER THAT SUPPORTS THE INTENT OF THE DESIGN. ALL FINAL GRADING SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.



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PREPARED AT THE REQUEST OF:

TROUT UNLIMITED

NOTES

**FLOWER POT CREEK FISH
PASSAGE PROJECT
90% DESIGN SUBMITTAL**

DESIGNED BY: J.H.
DRAWN BY: D.H.
CHECKED BY: J.H.
DATE: 11/16/2023
JOB NO.: 21-078

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS
0" = 1"

C10

**10
OF
17**

EXHIBIT C



Wetland Land Use Notice Response

Response Page

Department of State Lands (DSL) WN#*

WN2024-0484

Responsible Jurisdiction

Staff Contact	Jurisdiction Type	Municipality
Melissa Jenck	County	Tillamook
Local case file #	County	
851-24-000171-PLNG	Tillamook	

Activity Location

Township	Range	Section	QQ section	Tax Lot(s)
01S	10W	08		100p, ROW, Water

Street Address

Bayocean Rd

Address Line 2

City

Tillamook

Postal / Zip Code

97141

State / Province / Region

OR

Country

Tillamook

Latitude

45.497023

Longitude

-123.930527

Wetland/Waterway/Other Water Features



- There are/may be wetlands, waterways or other water features on the property that are subject to the State Removal-Fill Law based upon a review of wetland maps, the county soil survey and other available information.
- The National Wetlands Inventory shows wetland, waterway or other water features on the property
- The National Hydrography Dataset shows wetland, waterway or other water features on the property
- The county soil survey shows hydric (wet) soils on the property. Hydric soils indicate that there may be wetlands.
- The property includes or is adjacent to designated Essential Salmonid Habitat.

- The property includes or is adjacent to state-owned waters.

Your Activity

- It appears that the proposed project **will** impact Essential Salmonid Habitat and, therefore, **requires** a State permit.

- It appears the proposed project is within a state-owned water and **may** require an authorization

- It appears that the proposed project **will** impact wetlands and **requires** a State Permit.

- An onsite inspection by a qualified wetland consultant is recommended prior to site development to determine if the site has wetlands or other waters that may be regulated. The determination or delineation report should be submitted to DSL for review and approval. Approved maps will have a DSL stamp with approval date and expiration date.

Applicable Oregon Removal-Fill Permit Requirement(s)

- A state permit is required for 50 cubic yards or more of fill removal or other ground alteration in wetlands, below ordinary high water of waterways, within other waters of the state, or below highest measured tide.
- A state permit is required for any amount of fill, removal, and/or other ground alteration in Essential Salmonid Habitat and within adjacent off-channel rearing or high-flow refugia habitat with a permanent or seasonal surface water connection to the stream.

DSL Review

Wetland Ecologist Comments

Based on review of available information, the proposed project ("Flower Pot Creek Fish Passage Project") appears to involve impacts to waters of this state, Essential Salmonid Habitat, and state-owned waters. Given that the project involves a realignment of the channel and wetland fill, it is my understanding that a state Removal-Fill permit is required for this activity.

It is recommended that the applicant either (1) hire a qualified wetland professional to prepare a wetland delineation report for DSL's review and approval, or (2) assume that all Removal-Fill activities will take place within wetlands/waters and move straight into applying for a Removal-Fill permit.

If the latter is the preferred route, I recommend reaching out to Heather Dimke (503-856-6517, heather.dimke@dsl.oregon.gov), the Aquatic Resource Coordinator for Tillamook County, to discuss the project, what type of application it fits, and proposed mitigation.

This is a preliminary jurisdictional determination and is advisory only.

This report is for the State Removal-Fill law only. City or County permits may be required for the proposed activity.

A Federal permit may be required by The Army Corps of Engineers: (503)808-4373

Contact Information

For information on permitting, use of a state-owned water, wetland determination or delineation report requirements please contact the respective DSL Aquatic Resource, Proprietary or Jurisdiction Coordinator for the site county.

Response Date

8/6/2024

Response by:

Jessica Salgado

Response Phone:

541-408-1892