



**DAN JOHNSON**  
DIRECTOR

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
DEVELOPMENT SERVICES BUILDING  
150 BEAVERCREEK ROAD OREGON CITY, OR 97045

October 19, 2023

BCC Agenda Date/Item: \_\_\_\_\_

Board of County Commissioners  
Clackamas County

**Approval of an Funding Agreement with Molalla River Watch for the Woodcock Creek at Grimm Road Bridge Replacement Project. Total Value of agreement \$348,671. Funding is through the Oregon Watershed Enhancement Board. No County General Funds are involved.**

<b>Previous Board Action/Review</b>	10/17/23: Request for Consent 06/29/23: Board approval of construction contract with Bent, LLC 12/29/21: Approval to accept the Oregon Watershed Enhancement Board Restoration grant award 04/22/2021: BCC approval to partner with Molalla River Watch in Applying for an Oregon Watershed Enhancement Board Grant		
<b>Performance Clackamas</b>	The project will build a strong infrastructure		
<b>Counsel Review</b>	Yes - Hong Huynh	<b>Procurement Review</b>	No
<b>Contact Person</b>	Devin Patterson	<b>Contact Phone</b>	503-742-4666

**EXECUTIVE SUMMARY:** The Grimm Road Bridge over Woodcock Creek is experiencing significant scour and undermining of the existing four-sided box bridge. The bridge also is a barrier to the passage of endangered species throughout much of the year. The Department of Transportation and Development staff have selected the construction of a modular bridge as the most appropriate and cost-effective alternative for replacement. The design of the project is complete and the County has entered into a construction contract with Bent, LLC to construct the modular bridge, expected during the summer of 2024.

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Molalla River Watch was awarded an Oregon Watershed Enhancement Board (OWEB) Restoration Grant in the amount of \$348,671.00 for the project. Clackamas County has already committed the remaining \$1,001,848.00 in Road Funds for the construction contract. The agreement outlines the rights, commitments, and responsibilities of both Clackamas County and Molalla River Watch as they relate to the project and the secured OWEB funding.

**RECOMMENDATION:** Staff respectfully recommends the Board of County Commissioners' approval of an agreement with Molalla River Watch for the Woodcock Creek at Grimm Road Bridge Replacement Project.

Respectfully submitted,

*Dan Johnson*

Dan Johnson  
Director of Transportation & Development

**WOODCOCK CREEK & GRIMM ROAD  
FISH-PASSAGE PROJECT  
AGREEMENT**

**THIS AGREEMENT** is entered into by and between CLACKAMAS COUNTY, hereinafter referred to as "County," and MOLALLA RIVER WATCH, INC., hereinafter referred to as "MRW," each herein referred to individually as a "Party" and collectively as the "Parties."

**RECITALS**

1. Inspections of the existing Grimm Road Bridge over Woodcock Creek have indicated significant scour and undermining of the existing four-sided box bridge. The bridge is located approximately 1200 feet south of the intersection of Grimm Road and Munson Road in southern Clackamas County, as more particularly depicted in the attached Exhibit "A". The existing bridge is approximately 50-years old and 28 feet long by 30 feet wide and is a complete barrier to passage of endangered species throughout much of the year.
2. After discussions with regulatory agency personnel from the U.S. Army Corps of Engineers, Oregon Department of Fish and Wildlife, and National Marine Fisheries Service, Department of Transportation and Development (DTD) staff have selected the construction of a modular bridge as the most appropriate and cost-effective alternative for the replacement. The engineer construction cost estimate of the project is \$789,674, however the apparent low bidder cost is \$1,350,519.00..
3. The Oregon Watershed Enhancement Board (OWEB) has a restoration grant funding opportunity and the funding priorities include the removal or remediation of structures such as roads, culverts, and channels to improve water quality and/or fish habitat of which this project fits appropriately. The OWEB grant requires the application to come from the local watershed council and MRW is the local council. The project fits MRW's priorities, and MRW was willing to submit the application in partnership with the County. The grant required a minimum 25 percent match, however, MRW and DTD staff proposed a 50 percent match to make the application more competitive. Therefore, DTD staff proposed a funding request of \$348,671 with the County Road Fund providing the remaining matching funds.
4. On October 26, 2021, OWEB awarded the grant to MRW in the amount of \$348,671 (the "OWEB Grant"). Based on the project estimate, DTD staff anticipated the need to supplement the OWEB Grant award with approximately \$441,003 in County Road Fund match. However, the apparent low bidder cost is \$1,350,519.00, a difference of \$1,002,848.00.
5. The OWEB Grant is to fund the work described in the OWEB Grant and OWEB Grant Application, as more particularly described in the attached Exhibit "B" (the "Project").
6. Except as set forth herein, the County will be primarily responsible for delivering the Project, including procurement, design, construction, project management and project monitoring. MRW will be responsible for administering the OWEB Grant and providing reimbursement to the County for Project work completed, and for completing those site restoration and replanting requirements associated with the Project, as more particularly described in the OWEB Grant Application.
7. The Parties desire to define their respective obligations in regards to the Project.

## **TERMS OF AGREEMENT**

**NOW, THEREFORE**, the premises being in general as stated in the foregoing Recitals, it is agreed by and between the Parties hereto as follows:

1. **Term.** This Agreement becomes effective as of the last date of signature by a Party indicated below. Unless terminated earlier pursuant to Section 4 of this Agreement, this Agreement will expire upon the completion of the Project by the Parties and the final payment by MRW pursuant to the terms of this Agreement, or by December 31, 2029 whichever is sooner.
  
2. **County Obligations.**
  - a. The County will contract for the scope of work set out in the OWEB Grant, as more particularly described in the attached Exhibit "B", except for those tasks described below in Section 3(b). The County agrees to manage the Project, and will timely administer any associated engineering, design and construction work. The County is responsible for the procurement of consultants and contractors under ORS 279C, as necessary.
  - b. Subject to MRW's reimbursement of County costs described in Section 3(c), County shall be exclusively responsible for all costs and expenses related to its performance of work under this Agreement. The County will also be responsible for all costs incurred in delivering the Project in excess of the amount of Three Hundred Forty Eight Thousand Six Hundred Seventy One Dollars (\$348,671).
  - c. The County will invoice MRW monthly for its costs incurred in delivering the Project. Pursuant to Section 3(c), MRW shall not be liable for amounts in excess of Three Hundred Forty Eight Thousand Six Hundred Seventy One Dollars (\$348,671).
  - d. If authorized by MRW, the County shall submit disbursement requests directly to OWEB for purposes of substantiating expenditures related to the Project and expediting payment requests to be made pursuant to the OWEB grant.
  
3. **MRW Obligations.**
  - a. MRW agrees to the scope of work set out in the OWEB Grant and the OWEB Grant Application, as more particularly described in the attached Exhibit "B".
  - b. MRW agrees to manage certain work associated with the Project, including the administration of the OWEB Grant and the completion of Project site restoration and replanting requirements. Costs incurred in delivering the work described in this section shall be the sole responsibility of MRW and shall be eligible to be reimbursed from the funds awarded from the OWEB Grant in an amount not to exceed Nineteen Thousand, One Hundred and Twenty-Two Dollars and Thirty-Three Cents (\$19,122.33). All costs incurred in delivering the work described in this subsection that exceed Nineteen Thousand, One Hundred and Twenty-Two Dollars and Thirty-Three Cents (\$19,122.33) shall not be subject to any reimbursement and shall not offset against the remaining funds awarded from the OWEB Grant that may be reimbursed to the County pursuant to Section 3(c) below.
  - c. MRW agrees to cooperate with the County to prepare the Project Completion

Report and the Post-Implementation Status Report as required by the OWEB Grant.

- d. MRW agrees to reimburse the County for costs incurred in delivering the Project, from funds awarded from the OWEB Grant, in an amount not to exceed Three Hundred Forty Eight Thousand Six Hundred Seventy One Dollars (\$348,671). All costs of the Project in excess of Three Hundred Forty Eight Thousand Six Hundred Seventy One Dollars (\$348,671) shall be the responsibility of the County.
- e. MRW agrees to notify the County in writing of any objection to costs identified in any invoice within 10 days of receipt.
- f. MRW shall delegate to the County the authority to act as its agent under the OWEB Grant for purposes of submitting disbursement requests in the event MRW is in default under the terms of the OWEB Grant, or the parties jointly determine it is in the Parties' interest for the County to assume the responsibility of submitting such disbursement requests.
- g. MRW shall abide by all terms and conditions contained in the OWEB Grant. MRW is solely responsible for ensuring receipt of the funds subject to the grant.

#### **4. Termination.**

- a. The County and MRW, by mutual written agreement, may terminate this Agreement at any time.
- b. MRW may terminate this Agreement effective upon delivery of written notice to the County, or at such later date as may be established by MRW, if the County fails to perform any of its obligations under this agreement, or so fails to pursue its obligations as to endanger performance of this Agreement in accordance with its terms, and after receipt of written notice from MRW fails to correct such failures within ten (10) days or such longer period as is reasonably necessary to cure such default.
- c. Either Party may terminate this Agreement effective upon delivery of written notice to the other, or at such later date as may be established by the noticing Party, if OWEB fails to provide funding to MRW consistent with the terms of the OWEB Grant.
- d. The County may terminate this Agreement effective upon delivery of written notice to MRW, or at such later date as may be established by County, if MRW fails to perform any of its obligations under this Agreement, or under the OWEB Grant, or so fails to pursue its obligations as to endanger performance of this Agreement or the OWEB Grant in accordance with the terms of those respective agreements, and after receipt of written notice from County fails to correct such failures within ten (10) days or such longer period as is reasonably necessary to cure such default.
- e. Nothing herein shall prevent the Parties from meeting to mutually discuss the Project or any of the obligations contained in this Agreement. Each Party shall use best efforts to coordinate with the other to minimize conflicts.
- f. Any termination of this Agreement shall not prejudice any rights or obligations accrued to the Parties prior to termination.

## 5. Indemnification.

- a. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, the County agrees to indemnify, save harmless and defend MRW, its officers, elected officials, agents and employees from and against all costs, losses, damages, claims or actions and all expenses incidental to the investigation and defense thereof (including legal and other professional fees) arising out of or based upon damages or injuries to persons or property caused by the negligent or willful acts of the County or its officers, elected officials, owners, employees, agents, or its subcontractors or anyone over which the County has a right to control.
- b. MRW agrees to indemnify, save harmless and defend the County, its officers, elected officials, agents and employees from and against all costs, losses, damages, claims or actions and all expenses incidental to the investigation and defense thereof (including legal and other professional fees) arising out of or based upon damages or injuries to persons or property caused by the negligent or willful acts of MRW or its officers, elected officials, owners, employees, agents, or its subcontractors or anyone over which MRW has a right to control.

## 6. General Provisions

- a. **Oregon Law and Forum.** This Agreement shall be construed according to the laws of the State of Oregon, without giving effect to the conflict of law provisions thereof.
- b. **Applicable Law.** The Parties hereto agree to comply in all ways with applicable local, state and federal ordinances, statutes, laws and regulations.
- c. **Non-Exclusive Rights and Remedies.** Except as otherwise expressly provided herein, the rights and remedies expressly afforded under the provisions of this Agreement shall not be deemed exclusive, and shall be in addition to and cumulative with any and all rights and remedies otherwise available at law or in equity. The exercise by either Party of any one or more of such remedies shall not preclude the exercise by it, at the same or different times, of any other remedies for the same default or breach, or for any other default or breach, by the other Party.
- d. **Access to Records.** The Parties acknowledge and agree that each Party, the federal government, and their duly authorized representatives shall have access to each Party's books, documents, papers, and records which are directly pertinent to this Agreement for the purpose of making audit, examination, excerpts, and transcripts for a period of three years after final payment. Copies of applicable records shall be made available upon request. The cost of such inspection shall be borne by the inspecting Party.
- e. **Debt Limitation.** This Agreement is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.
- f. **Severability.** If any provision of this Agreement is found to be unconstitutional, illegal or unenforceable, this Agreement nevertheless shall remain in full force and effect and the offending provision shall be stricken. The Court or other authorized body finding such provision unconstitutional, illegal or unenforceable shall construe

this Agreement without such provision to give effect to the maximum extent possible the intentions of the Parties.

- g. **Integration, Amendment and Waiver.** Except as otherwise set forth herein, this Agreement constitutes the entire agreement between the Parties on the matter of the Project. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. No waiver, consent, modification or change of terms of this Agreement shall bind either Party unless in writing and signed by both Parties and all necessary approvals have been obtained. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. The failure of either Party to enforce any provision of this Agreement shall not constitute a waiver by such Party of that or any other provision.
- h. **Interpretation.** The titles of the sections of this Agreement are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions.
- i. **Independent Contractor.** Each of the Parties hereto shall be deemed an independent contractor for purposes of this Agreement. No representative, agent, employee or contractor of one Party shall be deemed to be a representative, agent, employee or contractor of the other Party for any purpose, except to the extent specifically provided herein. Nothing herein is intended, nor shall it be construed, to create between the Parties any relationship of principal and agent, partnership, joint venture or any similar relationship, and each Party hereby specifically disclaims any such relationship.
- j. **No Third-Party Beneficiary.** Neither Party intends that this Agreement benefit, or create any right or cause of action in, or on behalf of, any person or entity other than the County or MRW.
- k. **No Assignment.** No Party shall have the right to assign its interest in this Agreement (or any portion thereof) without the prior written consent of the other Party, which consent may be withheld for any reason. The benefits conferred by this Agreement, and the obligations assumed hereunder, shall inure to the benefit of and bind the successors of the Parties.
- l. **Counterparts.** This Agreement may be executed in any number of counterparts (electronic, facsimile or otherwise) all of which when taken together shall constitute one agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of this Agreement so executed shall constitute an original.
- m. **Authority.** Each Party represents that it has the authority to enter into this Agreement on its behalf and the individual signatory for a Party represents that it has been authorized by that Party to execute and deliver this Agreement.
- n. **Necessary Acts.** Each Party shall execute and deliver to the others all such further instruments and documents as may be reasonably necessary to carry out this Agreement.

- o. **Attorney Fees.** The Parties shall bear their own costs and attorney fees in the event an action is brought to enforce, modify or interpret the provisions of this Agreement.

**THE PARTIES,** by execution of this Agreement, hereby acknowledge that their signing representatives have read this Agreement, understand it, and agree to be bound by its terms and conditions.

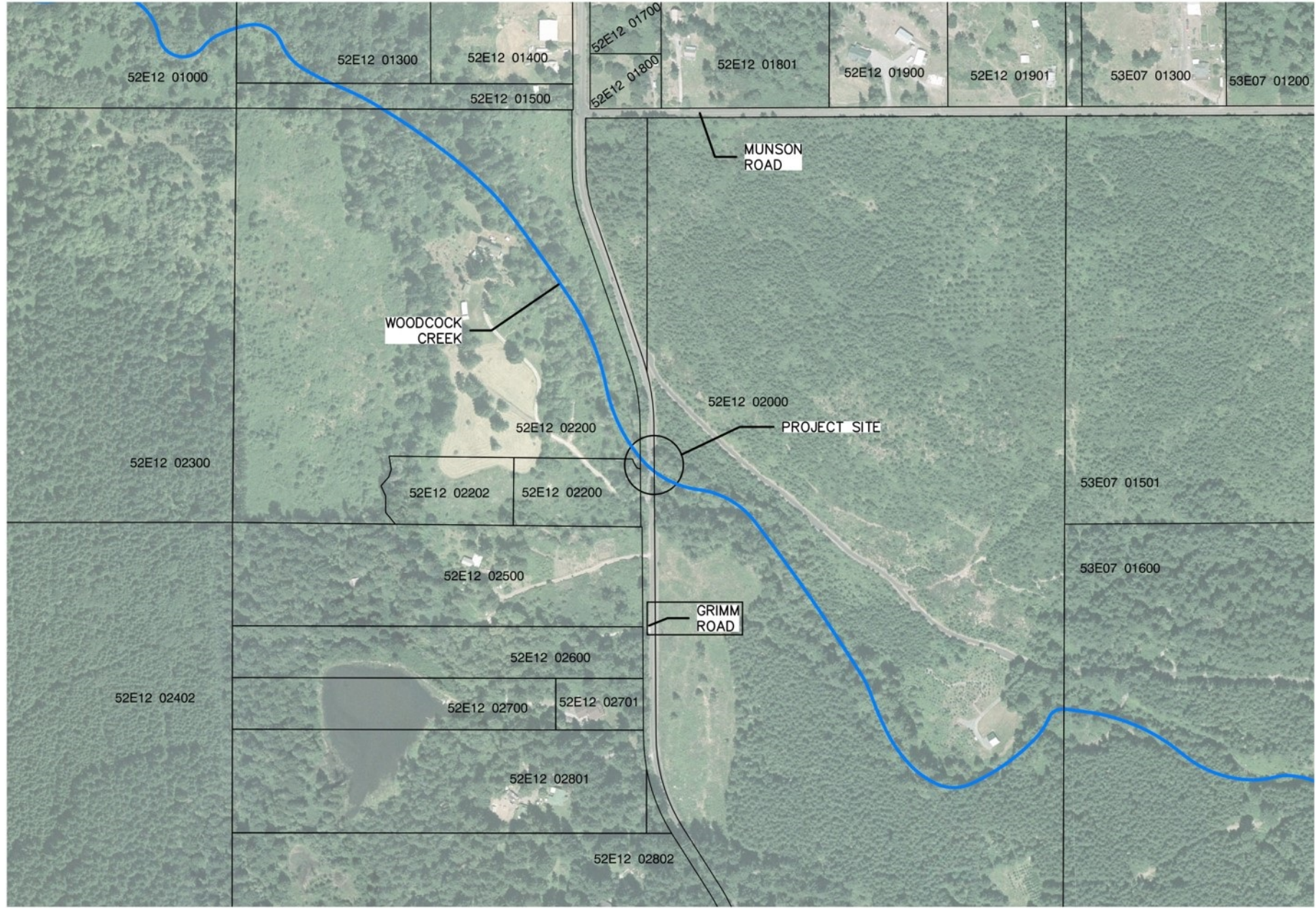
<p><b>MOLALLA RIVER WATCH</b></p> <p>Sign <u>Asako Yamamuro</u></p> <p>Print <u>Asako Yamamuro</u></p> <p>Date <u>August 30, 2023</u></p>
<p><b>MOLALLA RIVER WATCH – Agency Contact</b></p> <p>Asako Yamamuro P.O. Box 867 Molalla, OR 97038 503-559-0885 molallariverwatch@gmail.com</p>

<p><b>COUNTY OF CLACKAMAS</b></p> <p>Sign _____</p> <p>Print _____</p> <p>Date _____</p>
<p><b>COUNTY OF CLACKAMAS – Agency Contact</b></p> <p>Devin Patterson 150 Beaver Creek Rd. Oregon City, OR 97045 (503) 742-4666 DevinPat@clackamas.us</p>





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REVISIONS		DESIGNED BY	STAFF
NO.	DATE	CREATED BY	MIS
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Sheet No. 1		CLACKAMAS COUNTY DEPT. OF TRANSPORTATION AND DEVELOPMENT 150 BEAVERCREEK ROAD OREGON CITY, OR 97059	
EXHIBIT A		DIRECTOR	
WOODCOCK CREEK AT GRIMM ROAD BRIDGE REPLACEMENT		DAN JOHNSON	
[DATE] 1/21/2020		[PROJECT NO.] [BM] 06267	



**Exhibit B – OWEB Grant and OWEB Project Application**

## Exhibit B

Grant Application

Grant Agreement

**Application Name:** Woodcock Creek & Grimm Road Fish-Passage Project

**Application Number:** 000-0000-19609

**By:** Molalla River Watch Inc

**Offering Type:** Open Solicitation

**Application Type:** Restoration

**OWEB Region:** Willamette Basin

**County:** Clackamas

**Coordinates:** 45.147147,-122.502782

**Applicant:**

Asako Yamamuro  
PO Box 867  
Molalla OR 97038  
(503) 559-0885  
molallariverwatch@gmail.com

**Payee:**

Asako Yamamuro  
PO Box 867  
Molalla OR 97038  
(503) 559-0885  
molallariverwatch@gmail.com

**Project Manager:**

Devin Patterson/Joel Howie  
150 Beaver Creek Road  
Oregon City OR 97045  
503-742-4666/503-919-0091  
devinpat@clackamas.us

**Budget Summary:**

OWEB Amount Requested: \$358,351  
Total Project Amount: \$688,351

## Administrative Information

### Abstract

Provide an abstract statement for the project. Include the following information: 1) Identify the project location; 2) Briefly state the project need; 3) Describe the proposed work; 4) Identify project partners.

An existing 10' wide box culvert in Clackamas County between Colton and the City of Molalla carries Woodcock Creek under Grimm Road. Woodcock Creek is a tributary of Milk Creek, which flows into the Molalla River. Woodcock Creek drains 12.8 square miles and contains 25.2 miles of anadromous fish habitat. This culvert is the remaining complete fish passage barrier on Woodcock Creek and prohibits access to 11 miles or more of high-quality habitat. The existing box culvert is undersized and perched approximately 16" on the outfall end, making it a partial or complete barrier to fish passage. Additionally, the culvert has a flat concrete floor which creates a sheet flow with an average depth of two inches at lower flows and with extreme velocities at higher flows. Upstream aggradation and excessive erosion downstream are constant problems due to the constricting nature of the narrow culvert. The proposed solution is to replace the box with a modular bridge, 1.5 times bank-full stream width. Replacing the culvert will reduce erosion, allow natural streambed processes to occur, and potentially provide an additional 11 miles or more of high-quality spawning and rearing habitat for ESA threatened upper Willamette DPS winter steelhead, upper Willamette DPS spring Chinook, coho, and cutthroat. Also, much needed habitat complexity will be added by installing large wood, boulders, and plantings throughout the project area. Partners include Molalla River Watch (MRW), ODFW, and Clackamas County Department of Transportation & Development (CCDTD). CCDTD has provided survey work, engineered design development of the preferred alternative, and will provide construction oversight. MRW will replant the associated riparian zone. ODFW will continue to provide technical support. Additional partners and funding are being pursued. OWEB funds will be used for construction of the modular bridge, riparian restoration, project management, grant administration, and community outreach.

### Location Information

*What is the ownership of the project site(s)?*

*Public land (any lands owned by the Federal government, the State of Oregon, a city, county, district or municipal or public corporation in Oregon)*

What agency(ies) are involved?

The project area, including the bridge, road, and swales, is primarily in Clackamas County Right-of-Way (ROW), although temporary construction easements will be acquired for legal access through private property. We may need to acquire a permanent easement for the stormwater swales and/or for large woody debris outside of the ROW with the intent to protect those structures.

*Private (land owned by non-governmental entities)*

Please select one of the following Landowner Contact Certification statements:

I certify that I have informed all participating private landowners involved in the project of the existence of the application, and I have advised all of them that all monitoring information obtained on their property is public record.

I certify that contact with all participating private landowners was not possible at the time of application for the following reasons: Furthermore, I understand that should this project be awarded, I will be required by the terms of the OWEB grant agreement to secure cooperative landowner agreements with all participating private landowners prior to expending Board funds on a property.

Please include a complete list of participating private landowners

All landowners are aware of the project and have provided signed Right-of-Entry forms allowing

County/consultant access for project research. County can/will contact them to inform them of the grant application.

Not applicable to this project

This grant will take place in more than one county.

## **Permits**

Other than the land-use form, do you need a permit, license or other regulatory approval of any of the proposed project activities?

- Yes  
 No

For Details Go to Permit Page

*I acknowledge that I am responsible for verifying applicable permits, licenses, and General Authorizations required for the project, and can update information at grant agreement execution.*

Yes

## **Racial and Ethnic Impact Statement**

### Racial and Ethnic Impact Statement

- The proposed grant project policies or programs could have a disproportionate or unique POSITIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs could have a disproportionate or unique NEGATIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs WILL HAVE NO disproportionate or unique impact on minority persons.



## **Insurance Information**

*If applicable, select all the activities that are part of your project - These require a risk assessment tool unless otherwise noted (check all that apply).*

- Working with hazardous materials (not including materials used in the normal operation of equipment such as hydraulic fluid)*
- Earth moving work around the footprint of a drinking water well*
- Removal or alteration of structures that hold back water on land or instream including dams, levees, dikes, tidegates and other water control devices (this does not include temporary diversion dams used solely to divert water for irrigation)*
- Applicant's staff or volunteers are working with kids related to this project (DAS Risk assessment tool not required, additional insurance is required )*
- Applicant's staff are applying herbicides or pesticides (DAS Risk assessment tool not required, additional insurance is required)*
- Insurance not applicable to this project*

## **Additional Information**

- This project affects Sage-Grouse.*

## Problem Statement

Describe the watershed problem(s) that this restoration project seeks to address.

The road crossing at Grimm Road on Woodcock Creek has been identified by Molalla River Watch, Clackamas County Department of Transportation & Development (CCDTD), and ODFW as a high priority culvert replacement to improve fish passage by opening more stream habitats to Upper Willamette ESU spring Chinook, ESA threatened upper Willamette DPS listed winter steelhead, along with naturalized coho, and native cutthroat trout. Woodcock Creek is a perennial tributary to Milk Creek and the Molalla River that has a 10' wide concrete-bottom box culvert at Grimm Road. The downstream end of the culvert is perched higher than the channel and a sizeable scour hole has formed at the outlet. The resulting discontinuous water surface is greater than the maximum 0.5 feet allowed by NMFS and ODFW, and, in combination with the concrete floor and constricted flow, causes an obstruction to fish passage. The concrete floor creates a sheet flow through the culvert at less than two inches deep at lower flows and presents extreme velocities at higher flows, making it a barrier to juvenile and adult fish. During the 5% exceeding flow during the migration period for winter steelhead, the existing bridge is expected to have a minimum flow depth of 9.6 inches with a minimum average velocity of 6.61 feet per second. During the 95% exceeding flow, the existing bridge is expected to have a minimum flow depth of 1.0 inch with a minimum average velocity of 2.08 feet per second. In both conditions, there is a sharp break in the downstream water surface elevation greater than 6 inches.

The existing culvert is also undermined. Recent inspections by ODOT Bridge inspection staff have created cause for concern as up to seven feet of the culvert floor is undermined on the downstream end. Woodcock Creek flows continue to scour and undermine base material from under the culvert floor.

Fish passage barriers, chronic sediment, erosion and the lack of proper stream function have been documented to adversely affect aquatic resources in Woodcock Creek. The current box culvert inhibits natural stream function and process and limits transport of large wood and channel substrate due to its undersized and narrow dimensions. Replacing the existing box culvert with an appropriately sized bridge, 1.5 times the active channel width will potentially provide an additional 11 miles or more of high-quality habitat and refugia to all life stages of aquatic species including anadromous and native fish.

Partnerships in two areas of the Woodcock Creek watershed have formed to restore riparian and fish habitat. Port Blakely, a forestry company, owns forested land with high intrinsic potential located immediately upstream of the culvert. Molalla River Watch and Clackamas Soil & Water Conservation District have worked with Port Blakely on a riparian restoration project (native planting after invasive Himalayan blackberry removal) to improve wildlife habitat and riparian diversity immediately upstream of Grimm Rd crossing. In March 2021, over 1,400 trees, shrubs, plants, grasses, and sedges making up a total of 49 species were planted along Woodcock Creek on Port Blakely property immediately upstream of the proposed project site. ODFW surveyed the Port Blakely section of Woodcock Creek and is working with Port Blakely staff to donate salvage logs from their forests that were burned in the Riverside Fire to a future instream large wood project on their property.

Oregon State University College of Forestry owns property, called Ramsdell Forest, at the headwaters of Woodcock Creek. ODFW has secured an instream restoration commitment from OSU to install large wood structures for fish habitat on their property. Project implementation may begin as early as 2022. The combination of projects throughout the Woodcock Creek watershed to improve fish passage, riparian diversity and health, and instream habitat and function will greatly improve habitat quality and quantity for salmonids and trout.

How have past or current land management practices contributed to the problem?

Federal lands owned by the BLM comprise about 35 percent of the basin, 53 percent is private industrial forestland, and the remaining land is used primarily for agriculture, interspersed by parcels of rural residential, urban, and some industrial land in the lower basin. The Lower Molalla River and Milk Creek Watershed Assessment (Cole et al., 2004) and the Willamette Basin Conservation and Recovery Plan (ODFW, NOAA 2011) identified habitat degradation and fish passage barriers in the Molalla Watershed as key limiting factors for anadromous fish

population recovery. Clackamas County DTD fish passage priority inventory has also identified this sub-basin as a priority for improving fish passage. Historical limiting factors for salmonids and other native fish species is access to high-quality spawning and rearing habitat and the degraded stream channel characteristics, process and function. Prior land management techniques underestimated culvert size necessary to conserve stream function and have caused the Grimm Road crossing to be perched and created unnatural stream velocity during high flow events and unpassable sheet flow during low flow conditions. Improperly designed and installed culverts impede or completely block upstream fish passage for both juvenile and adult anadromous and native fish species.

## Project History

Continuation - Are you requesting funds to continue work on a project previously funded by OWEB where that work did not result in a completed project?

- Yes  
 No

Resubmit - Have you submitted, but were not awarded an OWEB application for this project before?

- Yes  
 No

Provide OWEB Application #  
221-3015-19074

*Indicate sections where this application addresses concerns identified in the previous OWEB evaluation.*

✓ *Problem Statement*

Please note the questions where concerns were addressed in this section.

How will the resulting project benefit salmonid habitat?

- Previously, stream net data showed the end of anadromous fish use at 0.4 miles from the project site. ODFW biologist, Dave Stewart, recently provided additional survey along Woodcock Cr with the intent of looking for barriers. Dave did not encounter any passage barriers and indicated clear passage up to Grimm Road & beyond at least a few miles. Dave will update the stream net data GIS layer.
- Addition of large wood & boulders & swales

✓ *Proposed Solution*

Please note the questions where concerns were addressed in this section.

Objective #2, Describe activities

- Added instream restoration component.

Objective #4

- Added riparian restoration details for Port Blakely property.
- Added more details on moving forward with instream restoration with Port Blakely & OSU Forestry in the Woodcock Cr watershed.

List the major project activities & time schedule table.

- Revised start & end dates for each element.

Instream Habitats

- Added ODFW passage project update
- Added instream habitat restoration details

✓ *Wrap-up/Optional Monitoring*

Please note the questions where concerns were addressed in this section.

Watershed Benefit

- Added ODFW fish biologist surveyed for anadromous fish passage barrier previously documented in stream net data. No barrier was found.
- Added instream restoration of large wood and boulder installation.
- Update on Port Blakely Woodcock Cr riparian restoration & progress on instream restoration at both Port Blakely & OSU Forestry's Ramsdell properties in the Woodcock Cr watershed.

Design

- Design progressed to 90% with large wood & boulders based on ODFW input.

✓ *Budget*

Please note the questions and line items where concerns were addressed in this section.

Budget Table

- For LWD Structures line item, changed from 3 to 6 structures, increased price of each structure to from \$2,000 to \$3,000 , changed Clackamas County's match from \$3,000 to \$15,000.
- Contingency line item, changed unit cost from \$101,017 to \$103,542, changed Clackamas County's match from \$50,509 to \$53,034.

✓ *Funding and Match*

Please note the questions and line items where concerns were addressed in this section.

Fund Sources and Amounts

- changed Clackamas County Department of Transportation & Development contribution match from \$315,475 to \$330,000

✓ *Uploads*

Please note the uploads where concerns were addressed in this section.

Included Project Design 90% Grimm-Woodcock Draft Plans.

✓ *Permits*

Please note the permits where concerns were addressed in this section.

Permit Table

- Culvert replacement (fish passage approval) line item change status from not yet submitted to initial review by Greg Apke completed. Additional review will occur upon JPA submission.
- Instream work below OHW line item change status from not yet submitted to JPA in process.
- Work in waters of the U.S. line item change status from not yet submitted to JPA in process.
- Component of JPA line item change status from not yet submitted to JPA in process.

*No concerns needing to be addressed.*

Phased - Is proposed work in this application a phase of a comprehensive watershed restoration plan or project?

Yes

No

## Plans and Salmon

Is the proposed restoration activity(ies) identified in a local assessment or other plan?

- Yes  
 No

Provide name of local plan, Watershed assessment or other locally relevant document.

- o Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead, 2011. ODFW, the State of Oregon, NOAA Fisheries NW Region.
- o Middle and Lower Molalla River Restoration Action Plan, 2011. John Runyon/Cascade Environmental Group, LLC.
- o Lower Molalla River and Milk Creek Watershed Assessment, 2004. ABR, Cole et al./ Inc.-Environmental Research & Services.
- o 2011-2012 Molalla Rapid Bio Assessment Final Report. Steve Trask/Bio-Surveys, LLC.

Will this project benefit salmon or steelhead?

- Yes  
 No

- ✓ Upper Willamette River - Steelhead
- ✓ Upper Willamette River - Chinook Salmon

How will the resulting restoration project benefit salmon or steelhead or their habitat?

Molalla River Watch, CCDTD, and ODFW have categorized the Grimm Road crossing on Woodcock Creek in the Molalla River Watershed as a priority culvert replacement to restore fish passage to upstream habitats for all aquatic species. This project will replace a perched, concrete-bottom undersized culvert that is a fish passage barrier with a modular bridge that is 1.5 times bank-full width. A bridge will provide an open, natural streambed bottom and will allow fish-passage and natural channel processes beneath and in proximity to Grimm Road. This is the last remaining complete fish passage barrier on Woodcock Creek and prohibits access to 11 miles or more of upstream high-quality habitat. On 4/20/2021, ODFW Biologist Dave Stewart surveyed Woodcock Creek for barriers. Stream net data showed end of anadromous fish use 0.4 miles from the proposed project site. No barriers were encountered at that location and instead found clear passage and great habitat up to Grimm Road and beyond a few miles, likely all the way up to the OSU Ramsdell property (Dave Stewart personal communication, April 2021).

Woodcock Creek has been identified as a high priority to restore based on being an important tributary to Milk Creek that provides functional cool water refugia for salmonids (Molalla Rapid BioAssessment, 2012). Providing cool water refugia for juvenile salmonids in Woodcock Creek is especially significant given the mainstem Molalla River is 303(d) listings for temperature. Snorkel surveyors noted water temperatures at the mouth of Woodcock Creek were cold. Removing the fish-passage impediment at Grimm Road will potentially provide an additional 11 miles or more of high-quality spawning and rearing habitat available for cold water refugia during summer low flow periods.

The proposed project will also install several pieces of large-wood, boulders, native plantings, and vegetated swales. These actions will increase habitat complexity and diversity and will restore natural stream processes to this reach of Woodcock Creek. Currently, the narrow culvert constricts the stream, which results in problematic upstream aggradation and excessive erosion downstream. Replacing the undersized box culvert with a bridge 1.5 times the bank-full width will reduce water velocity during high-flow events, reduce associated erosion, and allow for natural stream processes including sediment and woody debris transport. This project will help to restore the hydrologic processes that will increase habitat area, complexity and quality for ESA threatened Upper Willamette ESU spring Chinook, threatened upper Willamette DPS listed winter steelhead, along with coho, and native cutthroat trout.

The Molalla River typically experiences summer low flows and high water temperatures, which often exceeds 65 F,

due to lack of a large snowpack or water stored in reservoirs (Middle & Lower Molalla River Action Plan, 2011). These factors reduce habitat availability, especially for ESA-listed salmon and steelhead. Shading streams with native trees can help reduce high water temperatures. With technical assistance from Clackamas SWCD's riparian specialist, we plan to replant the riparian area adjacent to the project site with trees that will shade the stream, prevent erosion, reduce fine sediment loads, filter road runoff, and eventually provide nutrients and natural wood recruitment to improve stream complexity. In the Lower Molalla River and Milk Creek Assessment (2004), Upper Milk Creek and Woodcock Creek subwatersheds were identified as having land use dedicated to forestry. Therefore, once the fish passage impediment at Grimm Road is removed, access to the upstream forested areas with cooler water temperatures will provide high-quality spawning and rearing habitat. Those properties include Port Blakely, immediately upstream of the project site, and Ramsdell at the headwaters of Woodcock Creek, which are managed forests with commitments to improve fish habitat quality.

Does the project address a restoration action identified in a regional assessment or recovery plan?

- Yes  
 No

Regional Assessments or Recovery Plans
Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead

For each plan chosen above, describe how your project is consistent with specific recovery/restoration actions cited in that plan.

Replacing the box culvert with an open-bottom bridge as well as the installation of large-wood, boulders and native plantings will reduce erosion, restore hydrologic processes, increase habitat & complexity, allow natural streambed processes to occur and will potentially provide an additional 11 miles or more of high-quality spawning and rearing habitat for ESA threatened upper Willamette DPS winter steelhead, upper Willamette DPS spring Chinook, coho, and cutthroat.

*Does this project address one or both of the following:*

- Habitat needs for one or more Endangered Species Act-listed species and/or species of concern*  
 *Concerns identified on 303(d) listed streams*  
 *No*

## Proposed Solution

### Goal, Objectives, and Activities

State your project goal. A goal statement should articulate desired outcomes (the vision for desired future conditions) and the watershed benefit.

Goals:

1. Restore unimpeded fish-passage and make available an additional 11 miles or more of upstream habitat for anadromous fish.
2. Allow natural stream function and process to occur, including recruitment and movement of large-wood as well as bed-load movement and distribution.
3. Construct a resilient bridge structure which will allow the general public to connect with goods, services and people, now and in the future.
4. Utilize and strengthen new and existing partnerships including those with adjacent landowners and the community as a whole.

**List specific and measurable objectives. Objectives support and refine the goal by breaking it down into steps for achieving the goal. (NOTE: If you quantify your objectives, ensure all numbers match the metrics listed in your selected habitat types.) Provide up to 7 objectives.**

### Objective #1

#### Objective

Improve Grimm Rd crossing over Woodcock Cr to restore unimpeded fish-passage and make available an additional 11 miles or more of upstream habitat for anadromous fish.

Describe the project activities. Activities explain how the objective will be implemented.

Remove the existing box culvert and replace it with an open-bottom modular bridge which meets fish passage design criteria of 1.5x Active Channel Width (ACW). Replacing the box culvert with a bridge will remove high flow velocity and shallow flow barriers for fish and other aquatic organisms of all life stages.

## **Objective #2**

### **Objective**

Replace the undersized culvert at Grimm Rd on Woodcock Cr to allow natural stream function and processes (e.g., large-wood recruitment & movement, bed-load movement & distribution).

Describe the project activities. Activities explain how the objective will be implemented.

Implement construction project to replace existing undersized, failing culvert with a bridge that meets fish passage design standard of 1.5 times the Active Channel Width (ACW). Improve habitat and complexity by installing multiple pieces of large-wood with rootwads as well as boulders or "shadow rocks". Install vegetated swales to improve water quality on Woodcock Creek. The riparian zone adjacent to the newly installed bridge will be replanted. MRW created a riparian zone planting plan with technical support from Clackamas SWCD Riparian Specialist, Jenne Reische. MRW volunteers will help plant trees. MRW will help Clackamas County maintain the riparian planting by visual inspection of weed cover and planting success. Weeds and planted trees will be adaptively managed until free to grow status, where trees have reached a height where they can no longer be outcompeted by undesired plants, is met. Establishing a riparian zone will improve water quality by shading, enable future wood recruitment, filter runoff and prevent erosion, and provide nutrients to Woodcock Creek.

## **Objective #3**

### **Objective**

Construct a resilient bridge at Grimm Rd over Woodcock Cr to allow the general public to connect with goods, services and people, now and in the future.

Describe the project activities. Activities explain how the objective will be implemented.

Continue to work with engineering and environmental professionals through the design and permitting phases of the project. Upon implementation, assure qualified and competent construction team members follow all plans, specifications, and permit conditions. Continue to monitor the project post-construction to assure that it is performing as designed, and be prepared to make any necessary repairs and/or modifications whether they require additional permitting, or not.



## **Objective #4**

### **Objective**

Utilize and strengthen new and existing partnerships in the Woodcock Cr watershed, including ODFW, Port Blakely, OSU Forestry, adjacent landowners and the community as a whole.

Describe the project activities. Activities explain how the objective will be implemented.

Leverage project partnerships to complete the project including: survey, engineering design, environmental reconnaissance, permitting, and construction oversight by Clackamas County; grant management assistance, planting and various tasks by Molalla River Watch; fish distribution surveys by ODFW; upstream large-wood projects at Port Blakely's property and by stewards of the OSU Forestry owned Ramsdell Forest. Molalla River Watch also partnered with Clackamas Soil & Water Conservation District (CSWCD) to design a site-specific planting plan for the riparian restoration area.

Partnerships with two key landowners in the Woodcock Creek watershed have formed to restore riparian and fish habitat. In August 2020, Molalla River Watch and CSWCD helped Port Blakely, a forestry company, create a planting plan for riparian restoration on Woodcock Creek immediately upstream of Grimm Rd. In March 2021, over 1,400 trees, shrubs, plants, grasses, and sedges making up a total of 49 species were planted along Woodcock Creek on Port Blakely property. Wildlife habitat and riparian diversity were improved immediately upstream of the Grimm Rd crossing. ODFW surveyed the Port Blakely section of Woodcock Creek and is coordinating with Port Blakely to plan a large wood project with donated salvage logs from their forested properties burned by the 2020 Riverside Fire. Also, Port Blakely has an education program with both in class lessons and hands-on field trips. Numerous local schools visit the forested property immediately upstream of Grimm Road and lessons including the riparian restoration and future instream restoration will teach restoration practices to all students.

In 2018, Oregon State University College of Forestry held focus groups of local streamside property owners in the Molalla River Watershed to help develop an alternative riparian area management plan for demonstration purposes. ODFW is working with OSU Forestry which owns property, called Ramsdell Forest, at the headwaters of Woodcock Creek. OSU Forestry has made a commitment to ODFW to implement instream restoration and install large-wood structures for fish habitat on their property. Project implementation may begin in 2022. Instream restoration will further OSU Forestry's goals of Ramsdell as a local streamside property owner demonstration site for riparian management and instream restoration. Opening up fish passage at Grimm Road on Woodcock Creek will allow salmonids and other aquatic organisms to utilize all of the areas with greatly improved habitat quality and quantity resulting from the combination of projects throughout the Woodcock Creek watershed to improve fish passage, riparian diversity and health, and instream habitat and function.

Additionally, several proposed project adjacent landowners have already been contacted multiple times by Clackamas County DTD for discussion. Postings of the project's "Who, What, When, Why, How, and How Much" will be posted on the Clackamas County website. We will submit a press release to the local newspaper, Molalla Pioneer, prior to project implementation explaining restoration goals, implementation schedule, and any road closures. A public meeting will be planned if the community communicates a desire or need. A physical sign will be posted at the project site upon completion that indicates project partners, project funding, and that it is a fish-passage restoration project. Molalla River Watch will include an article on the project in their newsletter, annual report, website, and Facebook posts.

List the major project activities and time schedule for each, including post project implementation.

Element	Description	Start Date	End Date
Project Engineering & Design	Project engineered & designed by Clackamas County/Cardno	3/2019	8/2021
Apply for Grants	Apply to OWEB for restoration implementation funding	4/2021	7/2021
Permit Applications	Apply for permits through DSL, USACE, DEQ, ODFW, and Clackamas County	7/2021	10/2021
Bid Solicitation	Ask consultants for bids for construction costs	1/2022	3/2022
Contract Preparation	Prepare contract with selected consultant for construction	3/2022	4/2022
Construction	Culvert removal & bridge replacement, contractor TBD	6/2022	9/2022
Project Inspection	Project inspected by ODOT-certified County Inspection Staff	6/2022	12/2022
Site Restoration & Replanting	Seed disturbed areas and plant native trees/shrubs	10/2022	12/2022
Project Completion	Site will be inspected by the project manager and photos will be taken to show area where culvert was removed and plantings installed.	12/2022	12/2022
Post-Project Implementation Review	MRW and Clackamas County DTD will establish pre- and post-project photo points to include in monitoring reports and MRW will write Project Completion Report. ODFW may conduct fish presence surveys to provide effectiveness monitoring information.	1/2023	12/2023
Project Maintenance	Clackamas County DTD will inspect and maintain the site in perpetuity	1/2023	12/2026

Element	Q 1 2019	Q 2 2019	Q 3 2019	Q 4 2019	Q 1 2020	Q 2 2020	Q 3 2020	Q 4 2020	Q 1 2021	Q 2 2021	Q 3 2021	Q 4 2021	Q 1 2022	Q 2 2022	Q 3 2022	Q 4 2022	Q 1 2023	Q 2 2023	Q 3 2023	Q 4 2023	Q 1 2024	Q 2 2024	Q 3 2024	Q 4 2024	Q 1 2025	Q 2 2025	Q 3 2025	Q 4 2025	Q 1 2026	Q 2 2026	Q 3 2026	Q 4 2026
Project Engineering & Design	■	■	■	■	■	■	■	■	■	■	■																					
Apply for Grants													■	■																		
Permit Applications													■	■																		
Bid Solicitation														■																		
Contract Preparation														■	■																	
Construction															■	■	■															
Project Inspection																■	■	■														
Site Restoration & Replanting																	■															
Project Completion																		■														
Post-Project Implementation Review																		■	■	■	■											
Project Maintenance																						■	■	■	■	■	■	■	■	■	■	■

## **Habitat Types**

*In which habitat type(s) are you proposing to work?*

- Instream Habitat: below the ordinary high water mark (includes in-channel habitat restoration, bank stabilization, flow, fish screening, and fish passage) -- Details will follow.*
- Riparian Habitat: above the ordinary high-water mark of the stream and within the stream's floodplain. -- Details will follow.*
- Upland Habitat: above the floodplain and improves native habitat and watershed function.*
- Wetland Habitat: land or areas covered, often intermittently, with shallow water or have soil saturated with moisture.*
- Estuarine Habitat: tidally influenced areas.*

## **Instream Habitat**

*Select all applicable Instream categories.*

**Bank stabilization**

**Fish passage improvement**

*Select all the actions you propose to implement to address the problem.*

*Barriers at Road Crossings: Improve fish passage at road crossings.*

*Check the passage problem types that you will address.*

*Culverts*

Number of culvert crossings

1

*Bridges*

*Fords*

*Select which fish passage improvement(s) the project proposes to implement.*

*Culverts installed/improved*

*Bridges installed/improved*

Number of bridge crossings

1

Stream miles with improved access

11

*Fords installed/improved*

*Road crossings removed and not replaced*

*Non-road Crossing Barriers: Improves fish passage not located at road crossings.*

*Fish ladders or engineered bypasses not associated with road crossings*

Total stream miles with improved access

11

Total number of barriers removed or modified

1

Are you coordinating or do you plan to coordinate with ODFW's fish passage program on this project?

- Yes
- No

If you have an ODFW project number(s), please enter them below. ODFW fish passage project numbers will be in the form P-XX-XXXX.

This project has been reviewed by Greg Apke and all recommendations/requirements provided to us by Greg have been incorporated. Notably, the inclusion of large-wood and boulders.

**Fish screening project**

**Instream Flow**

**Instream habitat restoration**

*Select all the actions you propose to implement to address the problem.*

*Placement of materials in channel*

*Does the proposed project follow:*

*ODFW Guidelines*

*NOAA Guidelines*

*Other*

*What types of instream habitat materials are you proposing to install? (select all that apply)*

*Large wood*

Number of structures.

6

Average number of logs per structure.

3

Average length of logs per structure (feet)

20

Average diameter of logs per structure (feet)

1.5

*Boulders*

Number of structures.

14

Average number of boulders per structure.

2

Average size of boulders per structure (feet)

2

*Combination log/boulder*

*Other materials: Materials that stabilize the streambed*

*Channel reconfiguration and connectivity, including alcoves and side channel reconnection*

*Spawning gravel placement*

*Beaver reintroduction*

- Non-native plant control
- Nutrient enrichment
- Animal species removal

Is the primary purpose of the instream habitat restoration treatment(s) to address water quality limiting factors?

- Yes
- No

Sediment

Total miles of stream to be treated with all instream habitat restoration treatments  
0.04

Stockpiling logs

## Riparian Habitat

*Select all applicable Riparian categories.*

- Riparian road activities
- Fencing and other materials for habitat protection

Vegetation establishment or management

*Select all the actions you propose to implement to address the problem.*

Planting

For Details Go to Plant Page

Non-native plant control

Specify species

Himalayan blackberry, reed canary grass, English ivy

*Treatment(s) to be applied*

- Mechanical (cutting, mowing, girdling, etc.)
- Chemical (pesticides, fungicides, etc.)
- Biological (predators, herbivores, pathogens, etc.)

Acres to be treated

0.05

- Prescribed burnings, stand thinning, stand conversions, silviculture
- Juniper treatment

Livestock management

Debris and Structure Removal

Is an objective of the riparian treatment(s) to address water quality limiting factors?

- Yes
- No

✓High Temperature

Total linear stream miles to be treated.  
0.02

Total riparian acres to be treated.  
0.05

Left streambank miles to be treated.  
.02

Right streambank miles to be treated.  
.02

## Wrap-Up

### Watershed Benefit

Describe the watershed or ecosystem function(s) that the project will address through the proposed restoration actions and the resulting benefits to water quality, native fish and wildlife habitat, and/or watershed health. Explain why the project is a priority for investment at this time.

Fish population and passage barrier assessment is a restoration activity identified for the Molalla River Watershed (Middle & Lower Molalla River Action Plan, 2011). Woodcock Creek is a tributary of Milk Creek, which is a tributary of the Molalla River. The Milk Creek Watershed was recognized as a resource priority for flow restoration with “good” opportunity and “highest” need (Lower Molalla River & Milk Cr Assessment, 2004). ODFW Biologist Dave Stewart surveyed Woodcock Creek for barriers. He did not find barriers, but instead, high quality habitat below Grimm Rd. with clear passage likely to the OSU Ramsdell property (personal communications, 2021). The Grimm Road crossing on Woodcock Creek has been identified by Molalla River Watch (MRW), Clackamas County DTD, and ODFW as a priority culvert replacement to improve fish passage by opening more habitats to spring Chinook salmon, winter steelhead, coho, and cutthroat trout. Restoration actions in Woodcock Creek can have an immediate positive impact on the mainstem Milk Creek (Molalla Rapid Bio-Assessment, 2012).

Road crossings can restrict lateral channel movement and produce an incised channel that is disconnected from their floodplain (Lower Molalla River & Milk Cr Assessment, 2004). Removing the perched, undersized concrete bottom culvert and installing a bridge 1.5 times the active channel will open up this pinch point to natural flood, sediment, and wood transport regimes, and eliminate the fish impediment. Plans include installing several pieces of large-wood, with rootwads, as well as “shadow rocks” throughout the project reach. Also, installing vegetated swales will treat Grimm Road stormwater runoff with the intent of providing additional cool, clean water to Woodcock Creek.

Loss of shade over stream channels has been identified as a key factor that contributes to high water temperatures. In the Lower Molalla River and Milk Creek Assessment (2004), Upper Milk Creek and Woodcock Creek subwatersheds were identified as land use dedicated to forestry. Opening up Woodcock Creek at Grimm Road provides salmonids access to forested areas with cooler water temperatures and upstream spawning and rearing habitat. Therefore, this project of replacing a fish passage impediment with a bridge will potentially provide an additional 11 miles or more of high quality habitat. Additionally, planting the project riparian area will increase streamside shade.

Port Blakely is very interested in implementing fish habitat improvement projects on their property immediately upstream from the proposed Grimm Road project. ODFW surveyed Woodcock Creek upstream of the Grimm Road location through Port Blakely to suggest sites for adding large woody debris structures. Port Blakely has a Habitat Conservation Plan that includes \$25,000 to watershed councils to be used on restoration projects on their timber lands. ODFW is working to secure salvage logs from Port Blakely’s property that was burned by the 2020 Riverside Fire. In 2021, Port Blakely installed over 1,400 trees, shrubs, plants, grasses, and sedges along Woodcock Creek. Molalla River Watch and Clackamas Soil & Water Conservation District helped with their planting plan.

MRW and ODFW are also partnering with OSU Forestry at Ramsdell College Forest, located at the headwaters of Woodcock Creek. In 2018, OSU Forestry held focus groups of local streamside property owners in the Molalla River Watershed to help develop an alternative riparian area management plan for demonstration purposes. OSU has committed to ODFW to implement instream restoration with large wood structures. Project implementation may begin in 2022 and will be used to demonstrate fish habitat restoration to local streamside property owners. Once fish passage is opened at Grimm Road for salmonids and other aquatic organisms, they will have access to greatly improved habitats resulting from the combination of restoration projects throughout the Woodcock Creek watershed.

## **Public Awareness**

Does this proposed project include public awareness activities?

- Yes  
 No

Describe these activities, as well as any related products, and explain how the proposed activities relate to the project's objectives.

Molalla River Watch (MRW) will publicize the project through watershed council meetings, newsletter articles, annual report, local newspaper articles, Facebook, and MRW's website. Press releases will be submitted to the local newspaper, Molalla Pioneer, prior to project implementation explaining restoration goals, implementation schedule, and any road closures.

Clackamas County has contacted several landowners in the vicinity of the project and all adjacent landowners have been contacted. The project "Who, what, when, why, how, and how much" will be posted on the Clackamas County website. Public meetings may be held if it appears there is a need or desire within the community. Clackamas County currently maintains a project-specific website for Woodcock Creek as well. Additionally, Clackamas County would plan to post a sign upon project completion which indicates project partners, project funding, and the fact that it is a fish-passage restoration project.

Public awareness activities will help with community education regarding fish passage problems and solutions. Education regarding local fish habitat, especially at dedicated demonstration sites at Port Blakely and Ramsdell, will help with future conservation efforts.

## **Design**

Were design alternatives considered?

- Yes  
 No

Describe the design alternatives that were considered and why the preferred alternative was selected.

Clackamas County, and their consultant, Cardno Inc. developed an Alternatives Report which provided 3 alternatives for repair and/or replacement of the existing fish-passage barrier.

### 1. Downstream Step-Pool

Alternative 1, while cost-effective, is not the ideal option for long-term stability due to the nature of the materials used. The cost estimate does not account for long-term maintenance costs which is where alternative 1 would see a dramatic increase as the system would likely need complete replacement every 20 to 30 years. Additionally, meeting all fish-passage criteria would be impossible and the project would likely not be permitted under this alternative. Estimated project cost is approximately \$234,000, without inspection or monitoring.

### 2. Modular Bridge

Alternative 2, while more expensive than alternative 1, is estimated to be less expensive than alternative 3. This structure utilizes modular concrete block abutment walls. The modular nature of the blocks allows for the wing walls to be constructed at various angles for the specific needs of the stream crossing, and are easily modified in the field. Due to the skew that the stream crosses the road, pre-cast bridge deck planks approximately 44' long would be necessary to provide the 18' clear width of the stream channel per SLOPES V Restoration. Although the span of the structure necessary to provide 18' of clear stream channel is quite long, the fact that it is installed parallel to the road omits the need for extensive grading work along the sides of the stream. The County's standard asphalt



section can be applied directly to the bridge deck planks, therefore eliminating the aggregate base section, and allowing this alternative to provide a greater clear height from the stream channel to the bottom of the bridge structure. Estimated project cost is approximately \$660000, including inspection and post-project planting.

### 3. ConSpan Arch

While the County strongly considered this as a feasible option, several factors prevented it from being the preferred option. The ConSpan arch would be more costly, may not last as long as a modular bridge, and exhibits complications associated with the amount of aggregate and asphalt cover, creating a vertical curve or complete realignment of the roadway, vertically. Additionally, the pre-cast nature of the ConSpan does not allow for field changes and requires installation of fill to support the structure. The minimum cover requirements over the ConSpan arch system provided a reduced stream overhead clearance from alternative 2, and increase the footing depths of the pre-cast arch sections. Although the excavation limits to install the 18' arch sections are less than required to construct alternative 2, the overall limits of impact to construct alternative 3 are greater. Estimated project cost is approximately \$680,000, without inspection or monitoring.

Alternative number 2, the Modular Bridge, is the preferred alternative and was selected because it is easily able to meet fish-passage requirements, it restores natural stream process and it appears to be the most fiscally responsible option, meeting both environmental as well as infrastructure needs.

#### Select the appropriate level of design for your project.

- No design is required.
- 10-30%: Conceptual design (evaluation of alternatives, concept-level plans, design criteria for project elements, rough cost estimates).
- 30-85%: Preliminary design (selection of the preferred alternative, draft plans, draft design report, preliminary cost estimates).
- 85-100%: Final design (final design report, plans, and specifications, contracting and bidding documents, monitoring plan, final cost estimate).

#### If work remains on the project's design, describe the work that remains to be done and when you expect to have it completed. If no design is required put "N/A"

90% design has recently been completed by Cardno and is under review by County Engineering and Maintenance staff. Cardno is expected to provide 100% plans and specifications for review again by County staff by 7/15/2021, and will then provide 100% Plans, Specifications, Cost Estimate by 10/01/2021.

#### Describe the steps you will take to minimize adverse impacts to the site and adjacent lands during and after project implementation.

Given recent plan changes based on feedback from ODFW's Greg Apke as well as from County staff, there will be more work below the ordinary high water (OHW) than originally anticipated. Installation of large-wood structures and "shadow rocks" as well as channel grading and removal of invasive species will all require dewatering of Woodcock Creek via an ODFW & NMFS approved pumping plan and it will be necessary to place tracked equipment below the OHW. All tracked equipment on the project will be required to be pressure-washed immediately prior to delivery to the site, must use a vegetable-based hydraulic oil and will be "diapered" as protection from any leaks that develop. Any gas-powered equipment (pumps, generators) below the OHW will be required to be placed in containment pools. Spill kits and absorbent materials must be on-site and readily available. The culvert removal and modular bridge replacement can likely be done completely from the roadway. Equipment access will likely be from the NW and/or the NE corner of the existing bridge.

Our intent will be to preserve as much native vegetation as possible. The project ESCP will require the contractor to utilize orange construction fencing to delineate sensitive areas and/or to delineate vegetation that is to be protected. At this time (90% plans) we believe we will be able to preserve and protect the mature trees which exist adjacent to

the existing bridge. There will be some minor bank shaping, however we selected the modular bridge option partially due to the fact that it won't require a large amount of disturbance or reshaping of the bank.

## **Project Management**

List the key individuals, their roles, and qualifications relevant to project and post project implementation. At a minimum include the following: project management, project design, project implementation, and project inspection.

<b>Role</b>	<b>Name</b>	<b>Affiliation</b>	<b>Qualifications</b>	<b>Email</b>	<b>Phone</b>
Project Management & Implementation	Devin Patterson	Clackamas County	Over two decades of experience Implementing & managing road/bridge & fish-passage projects in Oregon	devinpat@clackamas.us	(503) 742-4666
Contract Oversight	Joel Howie	Clackamas County	PE, decades of bridge engineering experience and contract implementation and oversight	JHowie@clackamas.us	(503) 742-4658
Project Management/Grant Assistance	Asako Yamamuro	Molalla River Watch	MS & PhD in stream ecology, 3 years as a FS fish tech, 2 years as MRW's restoration project coordinator, 4 years as MRW's ED	molallariverwatch@gmail.com	(503) 559-0885
Project Design	Cedomir Jesic	Cardno	Principal, Water Resource Practice Leader at Cardno	Cedomir.Jesic@cardno.com	(503) 419-2579
Project Inspection	Mike Oleson	Clackamas County	Over two decades of experience Implementing & inspecting road/bridge & fish-passage projects in Oregon	MichaelOle@clackamas.us	(503) 742-4698
Post-implementation status reporting	Devin Patterson	Clackamas County	Over two decades of experience Implementing & inspecting road/bridge & fish-passage projects in Oregon	devinpat@clackamas.us	(503) 742-4666

## Optional Monitoring

### OPTIONAL: Restoration Project Monitoring

- Salmonid Monitoring*
- Non-salmonid biological monitoring*
- Water (quantity) flow monitoring*
- Water quality monitoring*
- Rangeland monitoring*
- Onsite*
- Downstream*
- Upstream*
- Upslope*

Will effectiveness monitoring be conducted for this project?

- Yes
- No

## Budget

Item	Unit Type	Unit Number	Unit Cost	OWEB Funds	External Cash	External In-Kind	Total Costs
<b>Salaries, Wages and Benefits</b>							
Clackamas County Project Manager (Devin Patterson)- Manage construction, contractors, employees and permit compliance, fish-salvage, establish photo points, completion reporting.	Hours	80	\$74.00	\$2,960	\$2,960	\$0	\$5,920
Clackamas County Construction Inspector (Mike Oleson)- Inspection, compliance with plans/specs, photos, daily diaries, property owner communications	Hours	160	\$73.00	\$5,840	\$5,840	\$0	\$11,680
Clackamas County Civil Engineering Supervisor (Joel Howie)- Assure compliance with contract, plans/specs, & contractor payment	Hours	10	\$125.00	\$625	\$625	\$0	\$1,250
Molalla R Watch ED (Asako Yamamuro)- Project management assistance, volunteer & project coordination for riparian planting, partnership coordination, outreach	Hours	160	\$36.10	\$5,776	\$0	\$0	\$5,776
<b>Category Sub-total</b>				<b>\$15,201</b>	<b>\$9,425</b>	<b>\$0</b>	<b>\$24,626</b>
<b>Contracted Services</b>							
3/4" - 0 Aggregate Base (00641)	Tons	7	\$44.00	\$154	\$154	\$0	\$308
1-1/2" - 0 Aggregate Base (00641)	Tons	14	\$35.00	\$245	\$245	\$0	\$490
Level 2, 1/2" Dense Asphalt Cement Pavement (00744)	Tons	25	\$125.00	\$1,563	\$1,562	\$0	\$3,125
Level 2, 3/4" Dense Asphalt Cement Pavement (00744)	Tons	25	\$152.00	\$1,900	\$1,900	\$0	\$3,800
Streambed Sediment (01040)	Tons	60	\$40.00	\$1,200	\$1,200	\$0	\$2,400
Streambed Cobbles, 6" to 10" (01040)	Tons	60	\$40.00	\$1,200	\$1,200	\$0	\$2,400
General Excavation	Cubic yards	350	\$22.00	\$3,850	\$3,850	\$0	\$7,700
Embankment - In-Place	Cubic yards	225	\$17.00	\$1,913	\$1,912	\$0	\$3,825
Structure Excavation (00510)	Cubic yards	100	\$47.00	\$2,350	\$2,350	\$0	\$4,700
Granular Wall Backfill (00510)	Cubic yards	51	\$120.00	\$3,060	\$3,060	\$0	\$6,120
Imported Top Soil, 12" Section (01040)	Cubic yards	37	\$50.00	\$925	\$925	\$0	\$1,850
Mobilization	Each	1	\$45,800.00	\$22,900	\$22,900	\$0	\$45,800
Temporary Signs (00225)	Each	1	\$1,080.00	\$540	\$540	\$0	\$1,080
Temporary Sign Supports	Each	10	\$120.00	\$600	\$600	\$0	\$1,200
Temporary Barricades, Type III	Each	4	\$100.00	\$200	\$200	\$0	\$400
Portable Changeable Message Signs	Each	2	\$8,800.00	\$8,800	\$8,800	\$0	\$17,600
Matting, Type D	Each	1	\$386.00	\$193	\$193	\$0	\$386

Concrete Washout Facility	Each	1	\$2,200.00	\$1,100	\$1,100	\$0	\$2,200
Removal of Surfacing	Each	1	\$2,400.00	\$1,200	\$1,200	\$0	\$2,400
Bridge Removal Work (00501)	Each	1	\$32,375.00	\$16,188	\$16,187	\$0	\$32,375
Shoring, Cribbing, and Cofferdams (00510)	Each	1	\$15,200.00	\$7,600	\$7,600	\$0	\$15,200
Precast Modular Bridge (00550)	Each	1	\$300,000.00	\$150,000	\$150,000	\$0	\$300,000
Guardrail Anchors, Type 1 (00810)	Each	4	\$1,000.00	\$2,000	\$2,000	\$0	\$4,000
Guardrail End Pieces, Type B (00810)	Each	4	\$110.00	\$220	\$220	\$0	\$440
Guardrail Transition (00810)	Each	4	\$2,700.00	\$5,400	\$5,400	\$0	\$10,800
Guardrail Terminals, Flared (00810)	Each	4	\$3,100.00	\$6,200	\$6,200	\$0	\$12,400
LWD Structures	Each	6	\$3,000.00	\$3,000	\$15,000	\$0	\$18,000
Contingency (20%)	Each	1	\$103,542.00	\$50,508	\$53,034	\$0	\$103,542
Permanent Seeding, EC Mix (01030)	Acres	0.03	\$6,500.00	\$97	\$98	\$0	\$195
Sediment Fence	Feet	325	\$4.00	\$650	\$650	\$0	\$1,300
Removal of Guardrail	Feet	290	\$5.00	\$725	\$725	\$0	\$1,450
Guardrail, Type 2A Weatherized (00810)	Feet	250	\$55.00	\$6,875	\$6,875	\$0	\$13,750
Guardrail, Type 3 Weatherized (00810)	Feet	75	\$70.00	\$2,625	\$2,625	\$0	\$5,250
Longitudinal Pavement Markings, Paint (00860)	Feet	140	\$1.00	\$70	\$70	\$0	\$140
<b>Category Sub-total</b>				<b>\$306,051</b>	<b>\$320,575</b>	<b>\$0</b>	<b>\$626,626</b>
<b>Travel and Training</b>							
MRW TRAVEL	Miles	139	\$0.56	\$78	\$0	\$0	\$78
<b>Category Sub-total</b>				<b>\$78</b>	<b>\$0</b>	<b>\$0</b>	<b>\$78</b>
<b>Materials and Supplies</b>							
Native Seed	Pounds	2	\$25.00	\$50	\$0	\$0	\$50
Mulch	Cubic yards	18.5	\$36.00	\$666	\$0	\$0	\$666
Plantings	Each	200	\$2.75	\$550	\$0	\$0	\$550
<b>Category Sub-total</b>				<b>\$1,266</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,266</b>
<b>Equipment</b>							
<b>Category Sub-total</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Other</b>							
<b>Category Sub-total</b>				<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Modified Total Direct Cost Amounts</b>				<b>\$322,596</b>	<b>\$330,000</b>	<b>\$0</b>	<b>\$652,596</b>
<b>Indirect Costs</b>							
Federally Accepted 'de minimis' Indirect Cost Rate (up to 10%)	10%			\$32,260	\$0		\$32,260
<b>Post Grant</b>							
Status Reporting Amount	Status Reporting	3	\$1,165.00	\$3,495	\$0	\$0	\$3,495
<b>Total</b>				<b>\$358,351</b>	<b>\$330,000</b>	<b>\$0</b>	<b>\$688,351</b>

\* = OWEB funds excluded from indirect.

Provide context and justification for how your budget was developed. Explain how project costs and/or rates were determined.

- MRW and Clackamas County staff cost requests/rates are based actual payroll costs.
- Costs/rates for contracted services are based on contractor's quotes for removing the culvert and installing the bridge and instream work.
- MRW travel is based on the current US General Service Administration travel rates.
- Native seed, mulch, and plantings are based on current pricing.

Does the budget identify a contingency amount for specific line item(s) within the Contracted Services and/or Material and Supplies budget category?

Yes

No

Explain the specific reasons a contingency is needed for each line item.

Design implementation components such as engineer estimates for the vegetated swales and large-wood installation are currently unknown.

## Funding and Match

No Fund Source Contribution Amounts have been identified for this application.

No Fund Source Contribution Amounts have been identified for this application.

## Fund Sources and Amounts

Organization Type	Name	Source Note	Contribution Type	Amount	Description	Status
County	Clackamas County Dept of Transportation & Development	Construction	Cash	\$330,000	Invested interest in fish barrier restoration at Grimm Rd on Woodcock Cr	Secured
<b>Fund Source Cash</b>				<b>\$330,000</b>	<b>Fund Source In-Kind</b>	<b>\$0</b>
<b>Total</b>					<b>Total</b>	

## Match

Contribution Source-Type: Description	Amount
Clackamas County Dept of Transportation & Development-Cash: Invested interest in fish barrier restoration at Grimm Rd on Woodcock Cr	\$330,000
<b>Match Total</b>	<b>\$330,000</b>

Do match funding sources have any restrictions on how funds are used, timelines or other limitations that would impact the portion of the project proposed for OWEB funding?

- Yes  
 No

Do you need state OWEB dollars (not Federal) to match the requirements of any other federal funding you will be using to complete this project?

- Yes  
 No

Does the non-OWEB cash funding include Pacific Coast Salmon Recovery Funds?

- Yes  
 No

## Uploads

Support Letters: [Grimm Rd MRW LOS CSWCD.pdf - Clackamas SWCD Support letter](#)

Support Letters: [DTD 1 Letter 5-7-2020.pdf - Clackamas County Support Letter](#)

Support Letters: [Letter of Support\\_Gorski\\_OSUForestry.pdf - OSU Forestry Support Letter](#)

Support Letters: [Grimm Road Letter.pdf - ODFW Support Letter](#)

Support Letters: [Grimm Rd\\_LetterOfSupport\\_PortBlakely.pdf - Port Blakely Support Letter](#)

Map: [Woodcock-Grimm Map1.pdf - Site map](#)

Map: [Woodcock-Grimm Map2.pdf - Site map](#)

Map: [Woodcock-Grimm Map2.pdf - Site map](#)

Photos: [Woodcock Creek-Grimm Road Photos.pdf - Site photos](#)

Project Design: [2020-07-08 Grimm - Woodcock -60% Draft Plans.pdf - 60% Design](#)

Project Design: [2021-03-18 - Woodcock Creek at Grimm Road-90pct.pdf - 90% Design](#)

Planting Details: [PlantingPlan\\_GrimmRdWoodcockCr.pdf - Planting plan](#)

Secured Match Forms: [MatchForm.pdf - Match Form](#)



## Plant Page

### Planting Questions

#### Relationship to other conservation programs

This project will use OWEB funds to increase the planting density on CREP acres.

### Planting Activities

Describe the current condition of the site(s) to be planted.

Overstory in the vicinity of the project site is primarily Douglas-fir, western red cedar, and red alder. The understory varies from vine maple and California hazel to dense thickets of salmonberry. Ground cover consists of salal, Oregon grape and western sword fern. Predominant invasive species include Himalayan blackberry, reed canarygrass, and English ivy.

Describe how you will prepare the site(s) prior to planting and how those activities are appropriate considering the site conditions described in the previous question.

All ground disturbed in the project area due to construction would be restored with native herbaceous species in addition to trees and shrubs. Following construction, riparian grass seed mix will be hand broadcast to help with bank stabilization. Trees removed during construction will be replaced. Interplanting among existing natives, with a focus on willows, red-osier dogwood, and shrubs will help increase bank stability, stream shading, riparian diversity, and habitat complexity. Herbaceous areas throughout the proposed construction entrances and excavation areas would be re-seeded with a native riparian grass mix.

Fill out the table below. Identify the vegetation communities you plan on planting in, the acres each vegetation community encompasses, and the density of your planting.

Vegetation Community	Acres	Density
riparian	0.05	2000 stem/acre

Fill out the table below for each vegetation community listed in the table above, provide the common and scientific names of up to five plants that will be planted, the form(tree, shrub, grass), type of plant (bare root, cutting, etc) and the planting timing.

Vegetation Community	Plants: Common Name	Plants: Scientific Name	Form	Type	Year	Month
riparian	Bigleaf Maple	Acer macrophyllum	Tree	Rooted	1	November
riparian	Pacific Willow	Salix lasiandra	Tree	Cutting	3	November
riparian	Sitka Willow	Salix sitchensis	Tree	Cutting	3	November
riparian	Vine Maple	Acer circinatum	Tree	Rooted	1	November
riparian	Oregon Ash	Fraxinus latifolia	Tree	Rooted	1	November
riparian	Snowberry	Symphoricarpos albus	Shrub	Rooted	1	November
riparian	Red-Osier Dogwood	Cornus sericea	Shrub	Cutting	3	November
riparian	Nootka Rose	Rosa nutkana	Shrub	Rooted	1	November
riparian	Tall Oregon Grape	Mahonia aquifolium	Shrub	Rooted	1	November
riparian	Thimbleberry	Rubus parviflorus	Shrub	Rooted	1	November
riparian	Salmonberry	Rubus spectabilis	Shrub	Rooted	1	November
riparian	Spiraea	Spiraea douglasii	Shrub	Rooted	1	November

## **Plant Stewardship**

After the plantings are installed, will you conduct plant stewardship (“free to grow”)?

- Yes
- No

Are you requesting OWEB funds for plant stewardship activities?

- Yes
- No

Explain how you plan to carry out activities to help the plantings survive and grow over time.  
Free to grow

## **Measures of Planting Success**

Use the table below to explain how you will document and determine success for the plantings.

<b>Vegetation Community</b>	<b>Parameter</b>	<b>Percentages</b>
riparian	Native Cover	75

If, in the course of the 3-5 years following planting, the success rate falls below your standard, what is your plan?

With the help of volunteers, pull invasive weeds, and replant natives if native cover is below 75%.

## Permit Page

<b>Project Activity Requiring a Permit or License</b>	<b>Name of Permit or License</b>	<b>Entity Issuing Permit or License</b>	<b>Status</b>
Culvert replacement	Fish Passage Approval	OR Dept of Fish & Wildlife	initial review by G. Apke completed. next w/JPA
Culvert replacement	Land Use Compatibility Statement	Clackamas County	not yet submitted
Instream work below OWH disturbing more than 50 CY	Joint Removal/Fill	OR Dept of State Lands	JPA is in process
Work in waters of the United States	Joint Removal/Fill	US Army Corps of Engineers	JPA is in process
Component of JPA	SHPO below ground archaeological survey	SHPO review, USACE issues Section 404 permit	JPA is in process
Dewatering channel for construction & fish salvage	Scientific Take Permit	OR Dept of Fish & Wildlife	not yet submitted



# Clackamas Soil and Water Conservation District

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7/23/2020

Oregon Watershed Enhancement Board  
775 Summer Street NE, Suite 360  
Salem, OR 97301

Dear Oregon Watershed Enhancement Board,

It is my pleasure to write a letter of support on behalf of Clackamas Soil and Water Conservation District for the Woodcock Creek & Grimm Road Fish-Passage Project being submitted to OWEB by Molalla River Watch and Clackamas County. We strongly support this project and the focus on improving fish passage by removing a perched and undersized culvert on Woodcock Creek and replacing it with an open-bottom modular bridge.

Clackamas Soil and Water Conservation District has a strong, long-term interest in improving watershed health toward stronger, more resilient watershed conditions in the Molalla River Watershed. The riparian restoration project portion will positively improve stream health by removing nonnative plants like English ivy, Himalayan blackberry, and reed canary grass. The existing native trees and additional native plants to be planted after the bridge installation will help provide erosion control, prevent runoff, provide wildlife habitat, and shade the creek.

If funded, the District plans to collaborate with the Council to restore and enhance riparian habitat on approximately 200 feet of Woodcock Creek at the Grimm Rd. site. Technical assistance staff time will be limited to approximately 40 hours at a rate of \$52.37/hour for consultation, site visits, and planning activities. Clackamas Soil and Water Conservation District has a long-term interest in protecting and restoring fish habitat and water quality in the Molalla River Watershed to assure future supplies of clean water for people, plants, and animals.

Please give this proposal your full consideration. We strongly support this project which will restore and protect natural resources on Woodcock Creek. If you have any questions I can answer, feel free to contact our riparian specialist at 503/210-6011.

Sincerely,

Lisa Kilders  
Acting General Manager, CSWCD

**22055 S. Beaver Creek Rd. Beaver Creek, OR 97004**  
**Mailing address: PO Box 830, Beaver Creek, OR 97004**  
**Ph: 503.210.6000; [conservationdistrict.org](http://conservationdistrict.org)**

**22055 S. Beaver creek Rd. Beaver creek, OR 97004**  
**Mailing address: PO Box 830, Beaver creek, OR 97004**  
**Ph: 503.210.6000; [conservationdistrict.org](http://conservationdistrict.org)**



**DAN JOHNSON**  
DIRECTOR

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
DEVELOPMENT SERVICES BUILDING  
150 BEAVERCREEK ROAD OREGON CITY, OR 97045

May 7, 2020

Oregon Watershed Enhancement Board  
775 Summer Street NE, Suite 360  
Salem, Oregon 97301-1290

**RE: Support of the OWEB Restoration Grant Application for Woodcock Creek at Grimm Road Fish Passage Improvement Project Submitted by the Molalla River Watch (MRW)**

To whom it may concern:

This letter is in strong support of MRW's grant proposal to improve fish passage through an undersized four-sided box bridge on Woodcock Creek at Grimm Road. On behalf of Clackamas County and as a partner with long-term interest in the restoration and protection of our local natural resources, the County lends our support and interest in working with the MRW on this project.

This project will develop a long-term solution related to a fish-passage barrier on Woodcock Creek and would provide approximately 11 additional miles of upstream habitat to aquatic species. The existing County-maintained box bridge is undersized for purposes of water conveyance and has a concrete bottom which is perched approximately sixteen inches on the outfall, making it a barrier to most or all aquatic species including ESA-listed Coho, Chinook and Winter Steelhead.

Clackamas County has a long-term, invested interest in the restoration and protection of our local natural resources, and we continue our commitment to the enhancement and recovery of ESA-listed species County-wide, including those within the Molalla River Basin. Therefore, we encourage OWEB and its reviewers to favorably consider the grant application for this project proposed for Woodcock Creek at Grimm Road.

Sincerely,

Jim Bernard  
Chair, Board of County Commissioners

Dear Board Members of OWEB,

I am writing in support of the project proposed by Asako Yamamuro, Executive Director of Molalla Riverwatch, to replace the culvert on Woodcock Creek at Grimm Rd, Clackamas County. Clackamas County Department of Transportation and Oregon Department of Fish & Wildlife have determined that the culvert poses a barrier to fish passage. NOAA Critical Habitat for Upper Willamette River Winter Steelhead terminates 0.36 miles downstream of Grimm Rd. on Woodcock Creek. If the culvert is repaired, winter steelhead would gain access upriver.

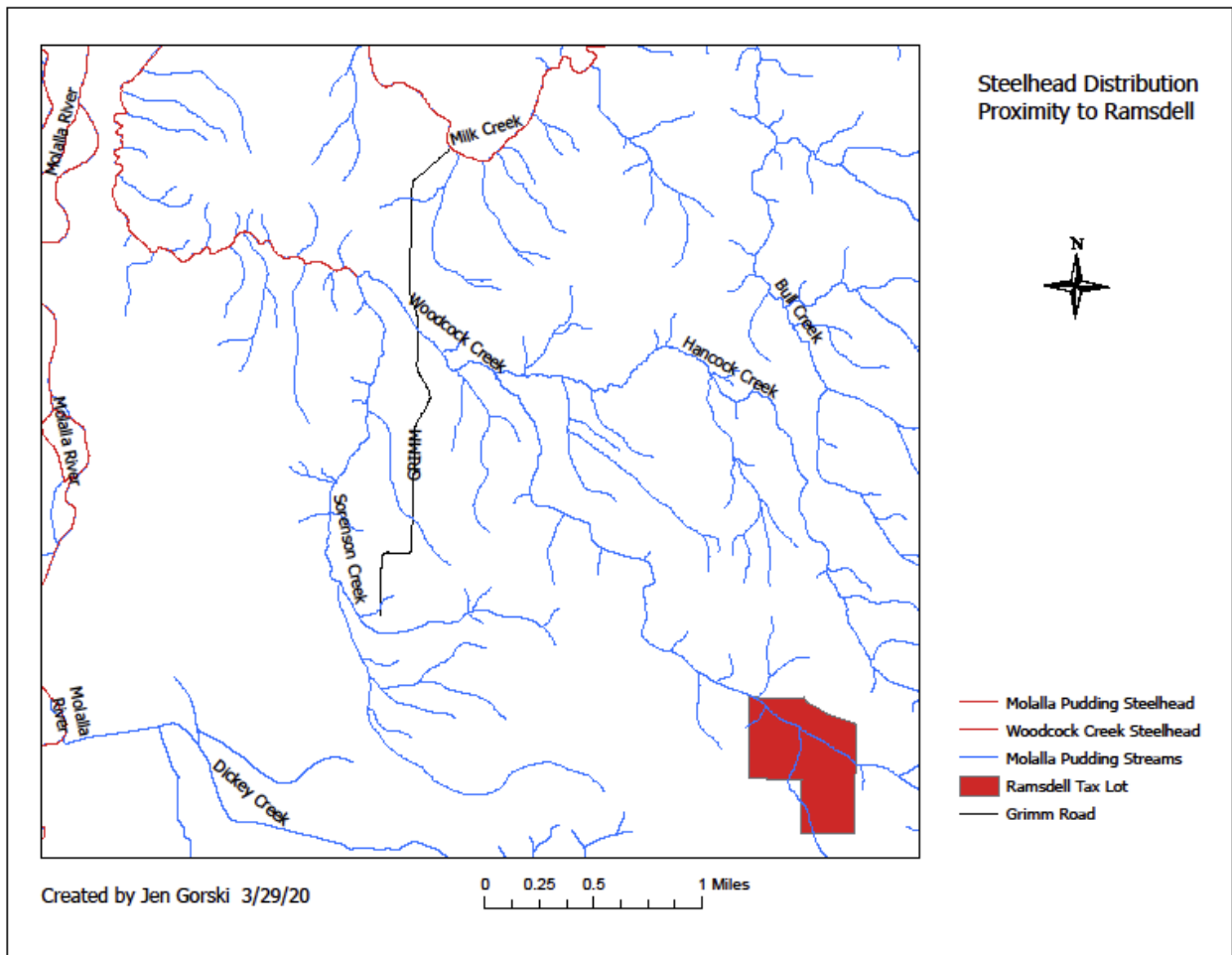
The headwaters of Woodcock Creek flow 2.3 miles upriver from Grimm Rd to Ramsdell Forest, an Oregon State University Research Forest. Woodcock Creek flows upriver of Ramsdell Forest, down through the east to the west boundaries of Ramsdell (0.6 miles), then flows into Milk Creek, Molalla River, Willamette River, the Columbia, and finally to the Pacific Ocean. My Master's project at Oregon State University consists of completing a portion of the Forest Management Plan for Ramsdell Forest. I conducted an ODFW Aquatic Habitat Inventory and a vegetation inventory within the floodplain of Ramsdell Forest. A wide floodplain characterizes the riparian area, with an average valley width index of 20.5. The index is calculated from the number of active channel widths that can fit into the total width of the terrace on either side of the stream. It was measured at 17 locations dispersed along Woodcock Creek within the forest.



Dave Stewart, ODFW fish biologist, marking locations for large wood placement, February 2020

This measurement is very high and creates a unique floodplain that can geomorphologically accommodate pools and off channel salmonid rearing habitat. Dave Stewart, ODFW fish biologist for Clackamas North Willamette Watershed District Office and I marked locations for large wood placement for a salmonid habitat enhancement project at Ramsdell Forest which will be included in the Ramsdell Forest Management Plan. This project is contingent on culvert replacement at Grimm Rd. The project is further enhanced by a bridge repair and large wood placement project due to be completed in 2020 by the Clackamas County Department of Transportation at the David Phillips Bridge which is downriver on Woodcock Creek from Grimm Rd. This offers an opportunity to enhance the total watershed surrounding Woodcock Creek and provide essential habitat for the threatened Upper Willamette River Winter Steelhead. In addition, OSU has plans to involve forest landowners in educational events so they can learn how to enhance the riparian areas within their forests. Ramsdell provides a prototype.

Please grant the requested funds for the culvert replacement to Molalla Riverwatch. A map follows which illustrates the proximity of Woodcock Creek in Ramsdell Forest to Grimm Rd.

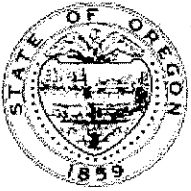




Thank you,

*Jen Gorski*

Jen Gorski  
Master's of Forestry student  
Forest Engineering, Watershed Processes  
Oregon State University  
[jennifer.gorski@oregonstate.edu](mailto:jennifer.gorski@oregonstate.edu)  
(503) 250-4046



# Oregon

Kate Brown, Governor

## Department of Fish and Wildlife

Northwest Region  
17330 SE Evelyn Street  
Clackamas, OR 97015-9514  
(971) 673-6000  
FAX (971) 673-6070



July 15, 2020

Oregon Watershed Enhancement Board  
775 Summer Street NE, Suite 360  
Salem OR 97301-1290

Re: Grimm Road Fish Passage Project

To OWEB Review Committee,

The Oregon Department of Fish and Wildlife (ODFW) supports the proposed Grimm Road fish passage project on Woodcock Creek, a tributary to Milk Creek in the Molalla River basin. Substantial restoration efforts have been dedicated to this important sub-watershed within the Molalla River basin. Improved fish passage at this site will extend fish distribution by allowing salmonid populations access to additional habitat for rearing and spawning, key limiting factors to their recovery. The current culvert is a barrier to juvenile fish and, at certain flows, also impedes adult migration.

The Upper Willamette Conservation and Recovery Plan lists the Molalla River as a high priority basin for the recovery of Endangered Species Act (ESA) listed winter steelhead. The Molalla River also supports populations of spring chinook (ESA listed), coho salmon, cutthroat trout and a number of lamprey species. All of these species will benefit from an improved fish passage structure at Grimm Road. ODFW will continue to be a partner working collaboratively with the Watershed Council and Clackamas County on this project by dedicating time to review project plans, providing technical assistance, assisting with pre- and post-survey work, and in managing large wood restoration in adjacent upstream reaches.

Please give me a call if you have any questions regarding ODFW's involvement and support for this project.

Sincerely,

Dave Stewart  
Stream Restoration Biologist, ODFW  
17330 SE Evelyn Street  
Clackamas, OR 97015  
[dave.stewart@state.or.us](mailto:dave.stewart@state.or.us)



July 24, 2020

Oregon Watershed Enhancement Board  
775 Summer Street NE, Suite 360  
Salem, OR 97301-1290

**Re: Support of the OWEB Restoration Grant Application for Woodcock Creek at Grimm Road Fish Passage Improvement Project Submitted by the Molalla River Watch (MRW)**

Dear Oregon Watershed Enhancement Board,

We are submitting this letter to express our strong support for the project proposed by the Molalla River Watch. We understand this application seeks funding to improve fish passage by removing a perched and undersized culvert on Woodcock Creek and replacing it with an open-bottom modular bridge. We want to convey our full support for the effort to improve the quantity and quality of habitat for native fish species in Woodcock and Hancock Creeks.

This project will develop a long-term solution for a fish-passage barrier on Woodcock Creek. The existing concrete-bottom culvert blocks fish passage for most or all fish and other aquatic organisms and removal of it would open approximately 11 miles of upstream habitat and refugia. The existing County-maintained culvert is undersized for purposes of water conveyance, it is perched approximately 18 inches on the outfall, and summertime flows spread out across the concrete floor with an average depth of less than two inches.

Port Blakely deems this a worthy project and will continue to support MRW and Clackamas County in their mission to restore fish passage at Grimm Road. We encourage OWEB and its reviewers to favorably consider this project which is vital to the restoration of habitat on Woodcock and Hancock Creeks and in the Molalla River Basin.

We look forward to working with the MRW and encourage you to help fund the MRW's efforts on behalf of this region, its residents, and the fish we steward.

Sincerely,

Port Blakely US Forestry

A handwritten signature in black ink that reads "Lance Christensen".

Lance Christensen  
Area Manager, NW Oregon

*Claudine Reynolds*

Claudine Reynolds  
Director, Wildlife & Fisheries

**US Forestry**

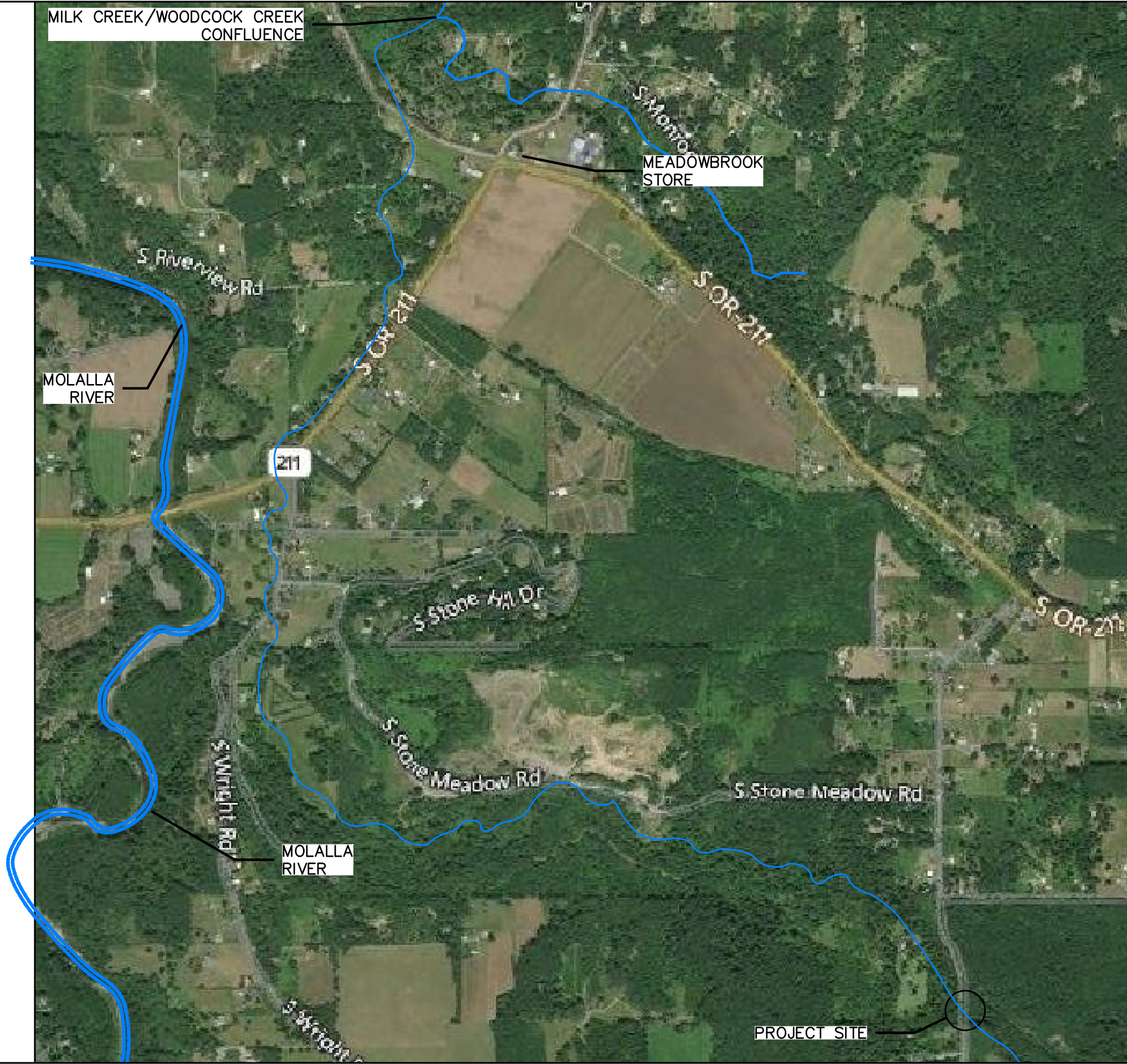
PO Box 800

Molalla, OR 97038

P 503-829-5396 F 503-829-6707

PortBlakely.com

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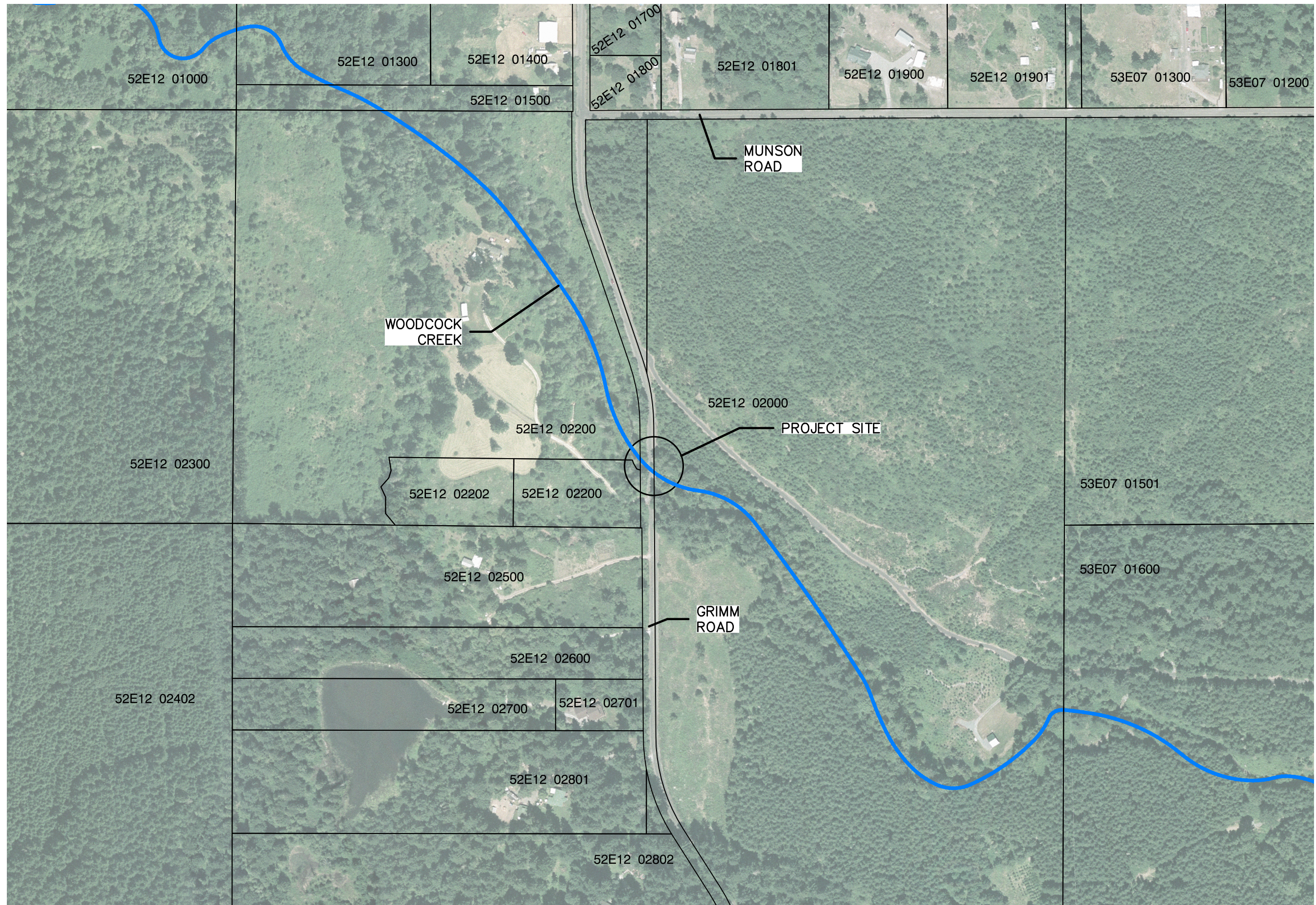
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NO DATE:		DRAFTED BY: MB		
		CHECKED BY: DP		
Sheet No.	1	DAN JOHNSON	DIRECTOR	DATE: 7/21/2020
				PROJECT NO.: BM 06287

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<b>EXHIBIT 2 MAP</b>													
<b>WOODCOCK CREEK AT GRIMM ROAD BRIDGE REPLACEMENT</b>													
DATE: 7/21/2020 PROJECT NO.: BM 06287													
<b>CLACKAMAS COUNTY</b> DEPT. OF TRANSPORTATION AND DEVELOPMENT 150 BEAVERCREEK ROAD OREGON CITY, OR 97045													
DAN JOHNSON DIRECTOR													
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<b>EXHIBIT 2 MAP</b>													
<b>WOODCOCK CREEK AT GRIMM ROAD BRIDGE REPLACEMENT</b>													
DATE: 7/21/2020 PROJECT NO.: BM 06287													
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<b>Photo 1</b>	<b>Looking: Left bank to right bank</b>	<b>Note: Perched, concrete floor</b>
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<b>Photo 2</b>	<b>Looking: Upstream</b>	<b>Note: Perched concrete floor creates partial or complete barrier</b>
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<b>Photo 3</b>	<b>Looking: Upstream</b>	<b>Note: Flows spread out across entire concrete floor</b>
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<b>Photo 4</b>	<b>Looking: Downstream</b>	<b>Note: Choke point prevents unrestricted movement of cobbles, wood and sediment</b>
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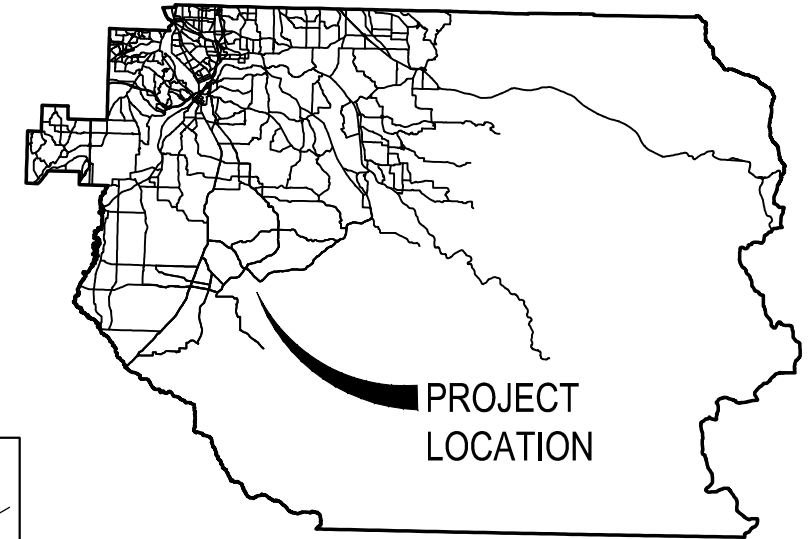


# CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

## WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT

EARTHWORK, ABUTMENTS,  
MODULAR BRIDGE, PAVING,  
GUARDRAIL AND STRIPING

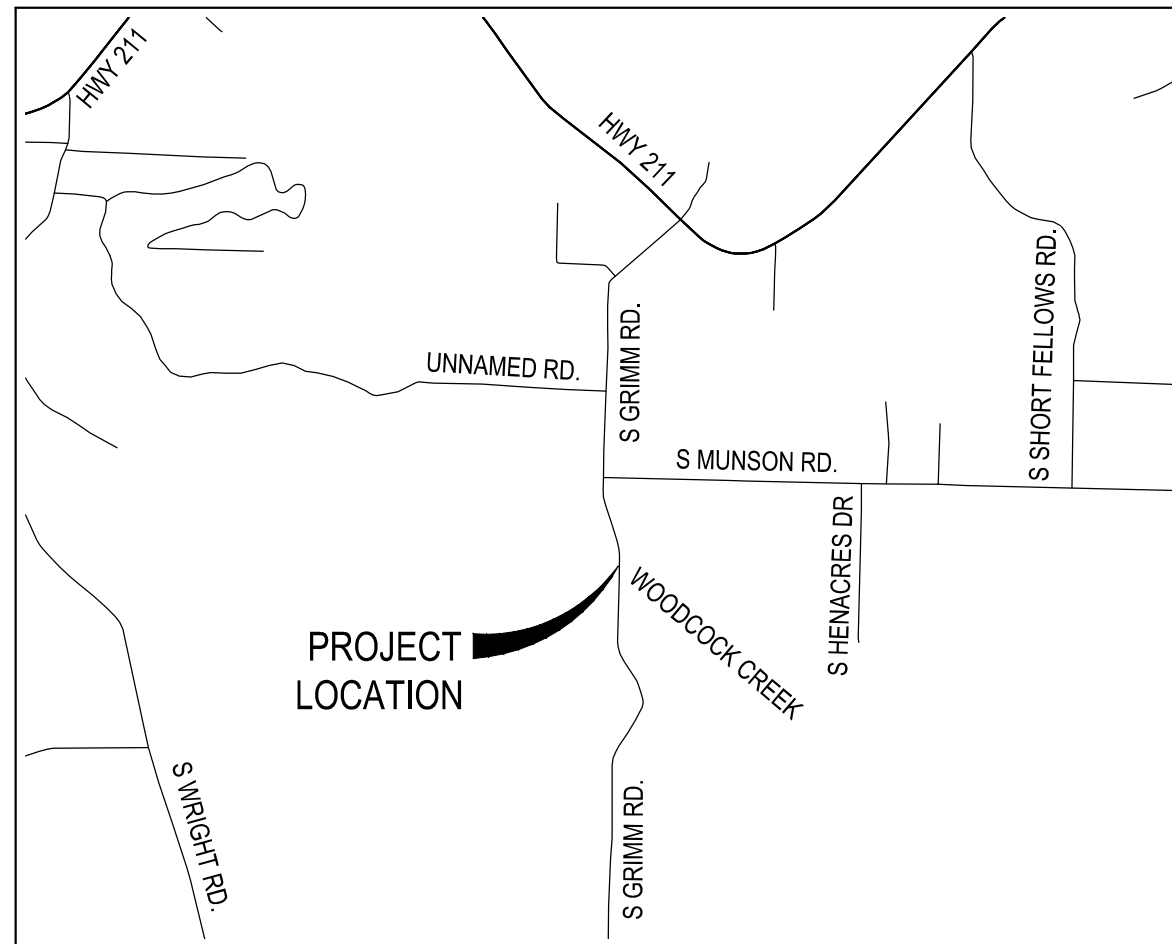
MOLALLA, OREGON  
SUMMER 2021



INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
1A	LEGEND
1B	STD DWG'S & ABBREVIATIONS
2A	TYPICAL SECTIONS
2A-2	TYPICAL SECTIONS
2A-3	TYPICAL SECTIONS
2A-4	TYPICAL SECTIONS
2A-5	TYPICAL SECTIONS
2B	BYPASS PLAN
2C	EROSION CONTROL PLAN
3A	STREAM PLAN
3B	STREAM PROFILE
4A	CONSTRUCTION NOTES & PLAN
4B	CONSTRUCTION PROFILE

DATUM:  
TO BE PROVIDED

BASIS OF BEARING:  
TO BE PROVIDED



**VICINITY MAP**  
SCALE: NTS



T. 5S, R. 2E, SEC. 12

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TITLE SHEET  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

DATE: JANUARY 2020    PROJECT NO.: XX-XXXX

PORTLAND  
6720 SW MACADAM AVE, STE 200, PORTLAND, OR  
97219 TEL: (503) 419-2500 FAX: (503) 419-2600  
www.cardno.com

DAN JOHNSON  
DIRECTOR




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CHECKED BY:	CJ

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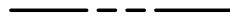

















SYMBOLS

EXISTING PROPOSED

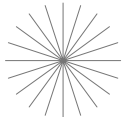
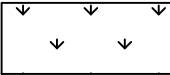

	MAIL BOX
	TELEPHONE RISER
	SINGLE SUPPORT SIGN

LINETYPES

EXISTING PROPOSED

	CONCRETE SURFACE	
	ROW LINE	
	EDGE OF UNPAVED SURFACE	
	EDGE OF PAVED SURFACE	
	FENCE LINE	
	GUARDRAIL	
	CENTERLINE	
	STORM PIPE	
	DITCH LINE	
	UNDERGROUND TELEPHONE LINE	

VEGETATION

	EVERGREEN TREE		WETLAND AREA
	DECIDUOUS TREE		

LEGEND

WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

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**ODOT STANDARD DRAWING REFERENCES**

BR233	THRIE-BEAM RAIL AND TRANSITION
RD400	GUARDRAIL AND METAL MEDIAN BARRIER
RD405	GUARDRAIL AND METAL MEDIAN BARRIER PARTS
RD410	GUARDRAIL PARTS (THRIE BEAM)
RD415	GUARDRAIL AND METAL MEDIAN BARRIER PARTS
RD610	ASPHALT CONCRETE PAVEMENT (ACP) DETAILS
RD615	ASPHALT CONCRETE PAVEMENT (ACP) DETAILS
RD1005	CHECK DAMS TYPE 1, 3 AND 4
RD1032	SEDIMENT BARRIER TYPE 8
RD1040	SEDIMENT FENCE
TM500	PAVEMENT MARKING STANDARD DETAIL BLOCKS

**STANDARD DRAWING RESOURCES**

ODOT	<a href="http://www.oregon.gov/odot/engineering/pages/standards.aspx">HTTP://WWW.OREGON.GOV/ODOT/ENGINEERING/PAGES/STANDARDS.ASPX</a>
CLACK. CO.	<a href="http://www.clackamas.us/engineering/roadway.html">HTTP://WWW.CLACKAMAS.US/ENGINEERING/ROADWAY.HTML</a>
WES	<a href="https://www.clackamas.us/wes/stormwaterstandards.html">HTTPS://WWW.CLACKAMAS.US/WES/STORMWATERSTANDARDS.HTML</a>

**ABBREVIATIONS**

ACP	ASPHALT CEMENT PAVEMENT	N	NORTH	S	SOUTH
CB	CATCHBASIN	NOM	NOMINAL	SE	SOUTHEAST
CT	COURT	N.T.S.	NOT TO SCALE	STD	STANDARD
DWG	DRAWING	ODOT	OREGON DEPT. OF TRANSPORTATION	STA.	STATION
E	EAST	PROP, PR	PROPOSED	SD	STROM DRAIN
EC	EROSION CONTROL	PT	POINT	THKN.	THICKNESS
ELEV	ELEVATION	PVI	POINT OF VERTICAL INTERSECTION	T	TOWNSHIP
EXTG, EX	EXISTING	R	RANGE	TYP	TYPICAL
HORIZ	HORIZONTAL	RD	ROAD	VERT	VERTICAL
IE	INVERT ELEVATION	RT	RIGHT	W	WEST
LF	LINEAR FEET	R/W, ROW	RIGHT OF WAY		
LT	LEFT	SS	SANITARY SEWER		
MH	MANHOLE	SEC	SECTION		

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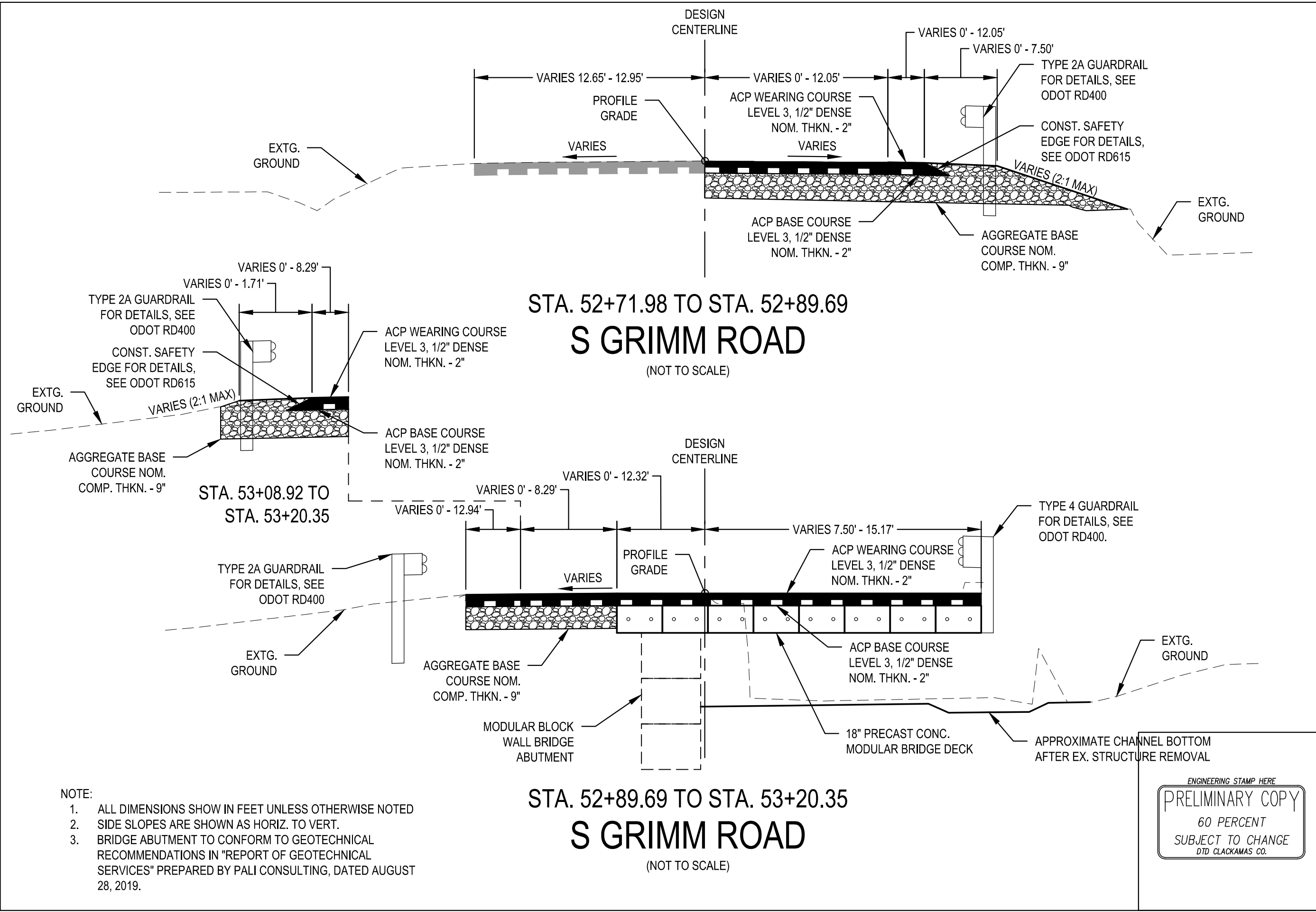


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**STD DWGS & ABBREVIATIONS**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT  
 DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

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NOTE:  
 1. ALL DIMENSIONS SHOW IN FEET UNLESS OTHERWISE NOTED  
 2. SIDE SLOPES ARE SHOWN AS HORIZ. TO VERT.  
 3. BRIDGE ABUTMENT TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS IN "REPORT OF GEOTECHNICAL SERVICES" PREPARED BY PALI CONSULTING, DATED AUGUST 28, 2019.

STA. 52+71.98 TO STA. 52+89.69  
**S GRIMM ROAD**  
 (NOT TO SCALE)

STA. 52+89.69 TO STA. 53+20.35  
**S GRIMM ROAD**  
 (NOT TO SCALE)

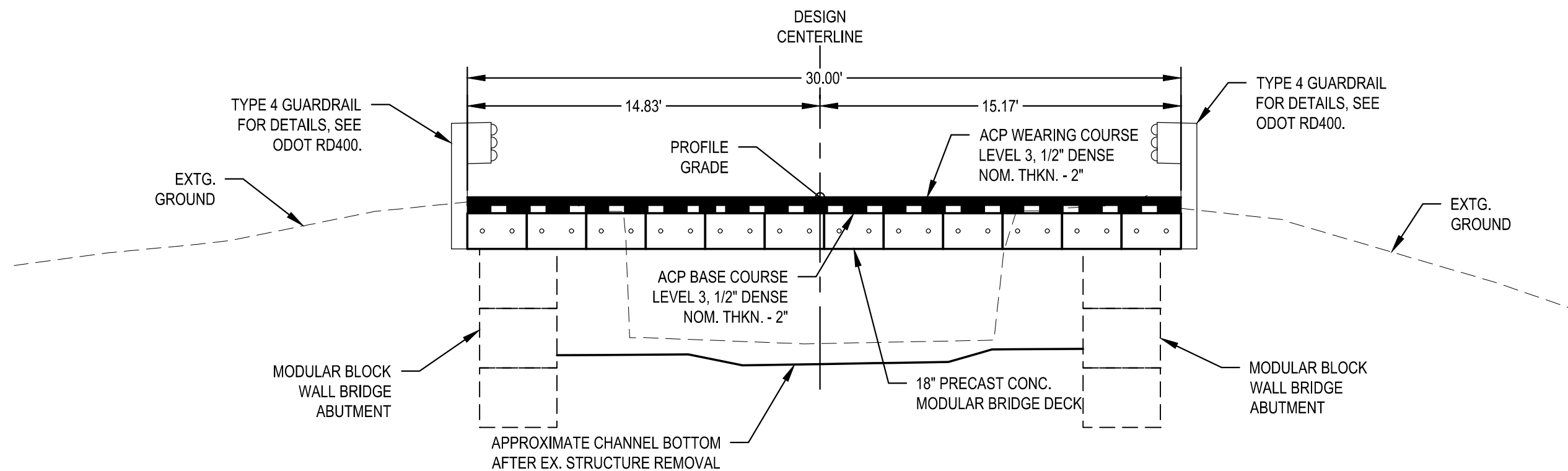
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TYPICAL SECTIONS		WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT		PROJECT NO.: XX-XXXX
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REVISIONS		NO. DATE:		
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STA. 53+20.35 TO STA. 53+24.34

# S GRIMM ROAD

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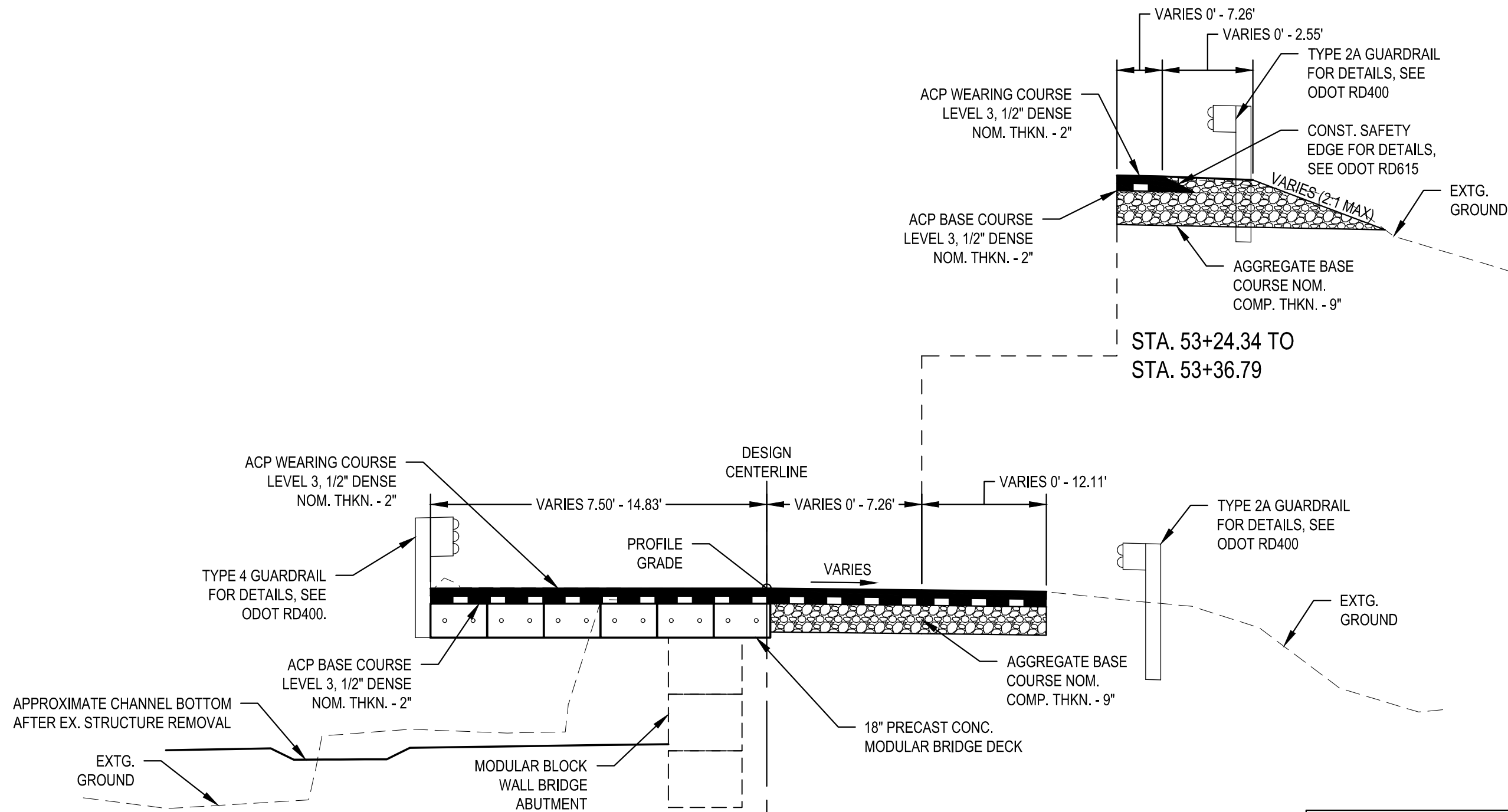
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<p><b>TYPICAL SECTIONS</b></p> <p>WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT</p>	<p>DATE: JANUARY 2020</p> <p>PROJECT NO.: XX-XXXX</p>												
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STA. 53+24.34 TO STA. 53+55.11  
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(NOT TO SCALE)

NOTE:

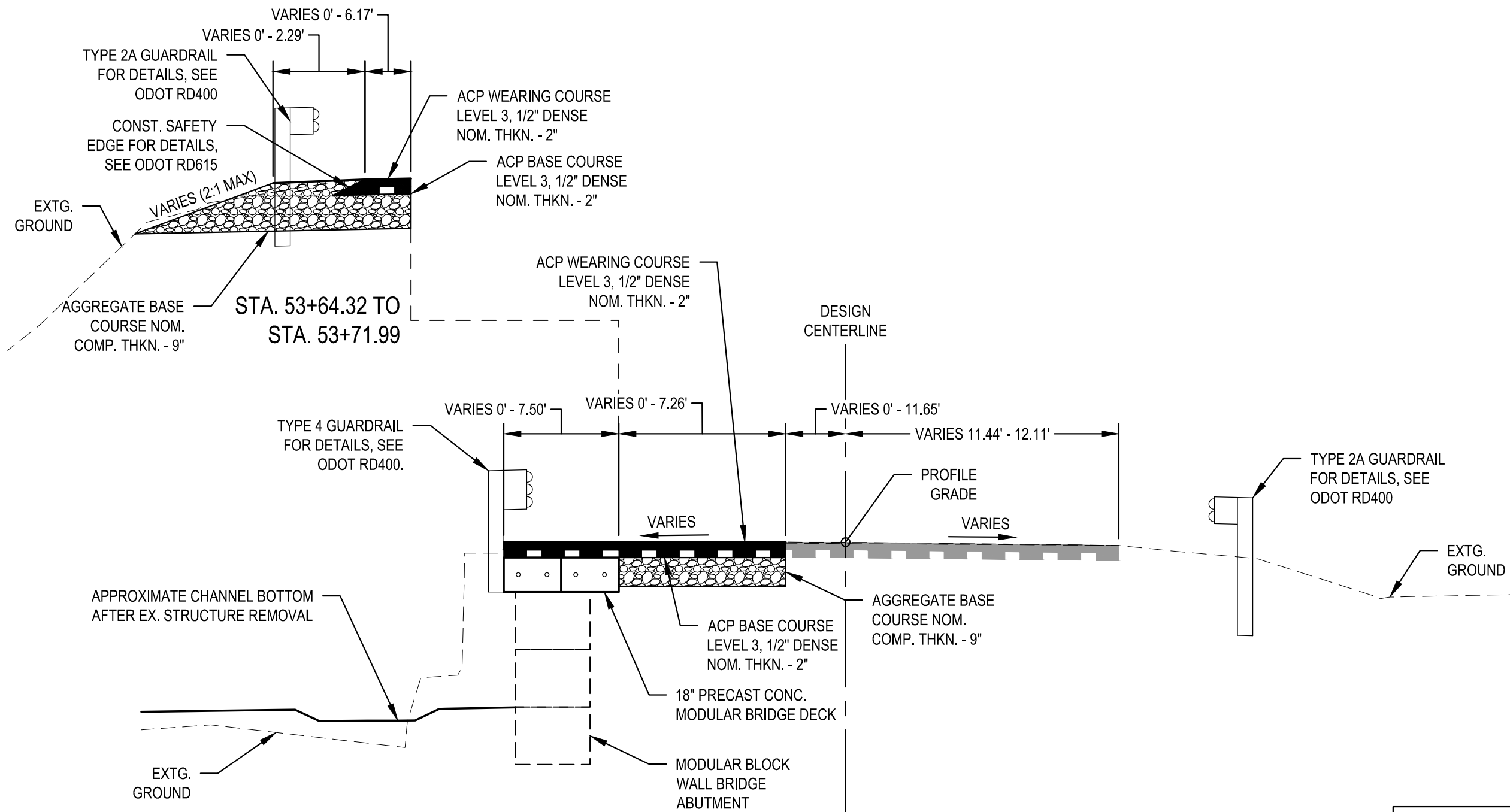
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<b>TYPICAL SECTIONS</b>	
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DATE: JANUARY 2020 PROJECT NO.: XX-XXXX	
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STA. 53+55.11 TO STA. 53+71.99

# S GRIMM ROAD

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**TYPICAL SECTIONS**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT  
 DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

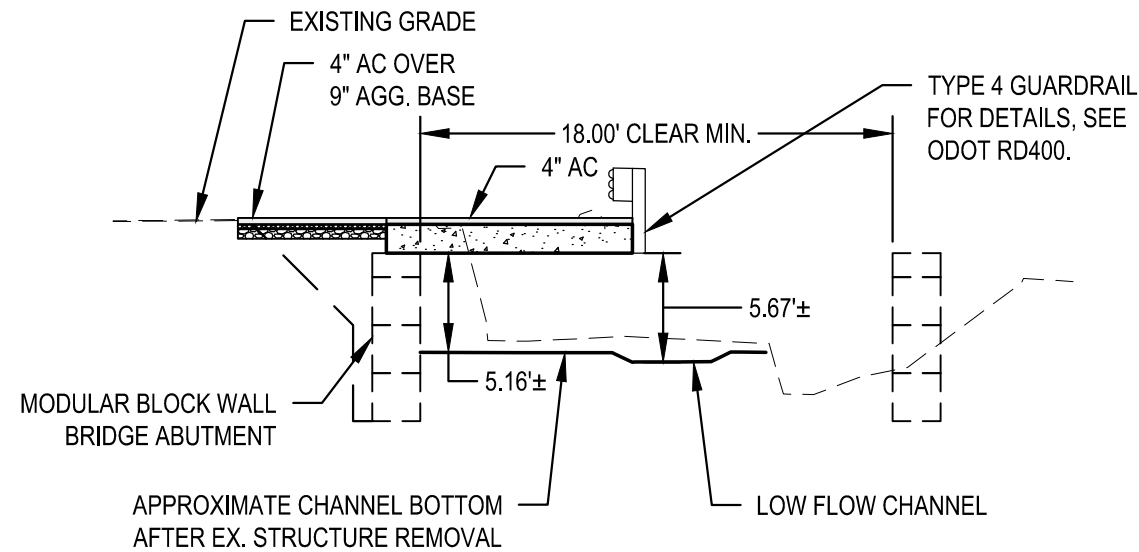
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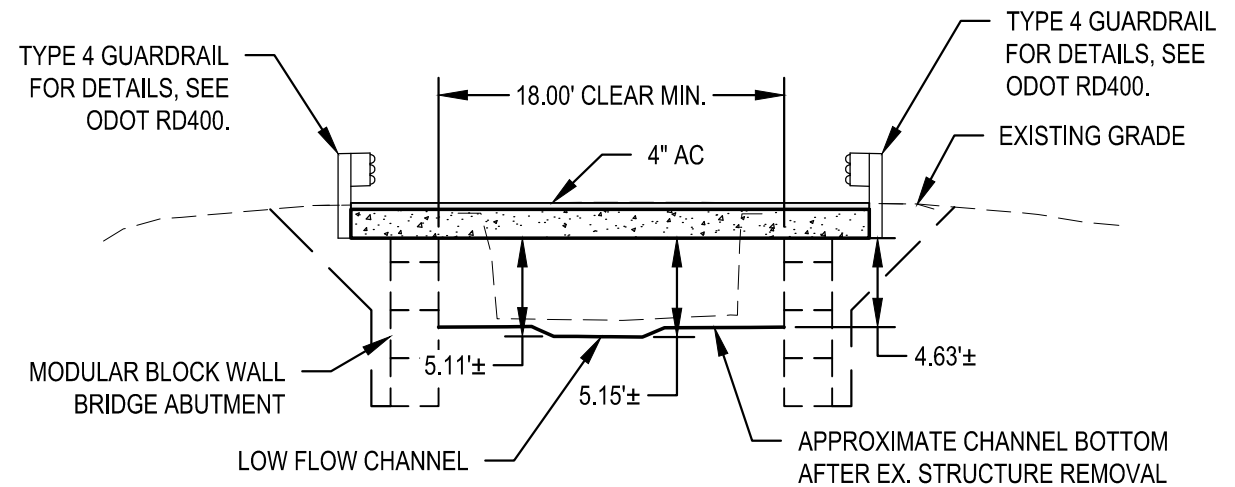
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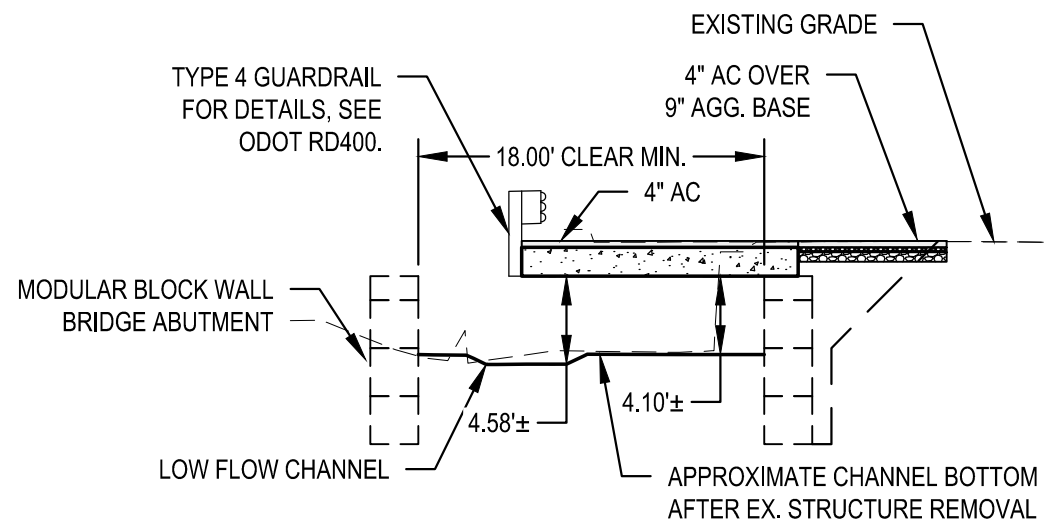
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STA. 2+24.76 TO STA. 2+59.04  
**WOODCOCK CREEK**  
 (NOT TO SCALE)



STA. 2+59.04 TO STA. 2+77.61  
**WOODCOCK CREEK**  
 (NOT TO SCALE)



STA. 2+77.61 TO STA. 3+12.31  
**WOODCOCK CREEK**  
 (NOT TO SCALE)

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**TYPICAL SECTIONS**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT  
 DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

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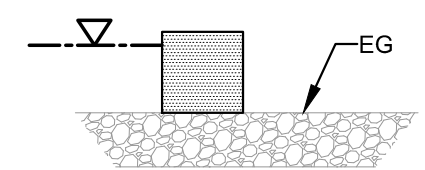
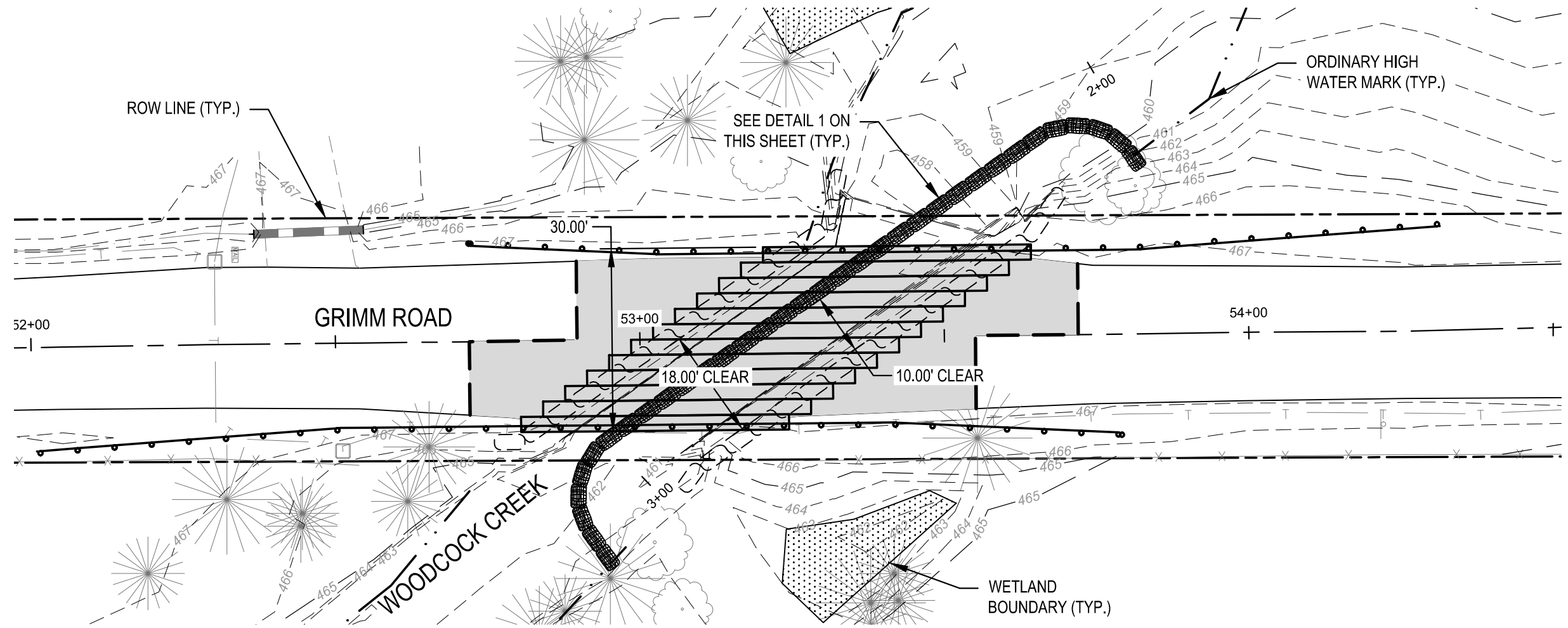
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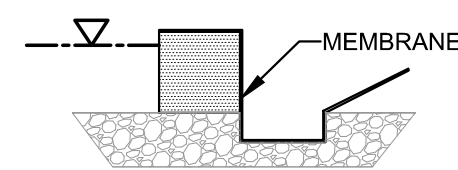
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PLACE SINGLE ROW OF BAGS ACROSS CHANNEL TO BE DIVERTED

SEQUENCE 1 - SECTION

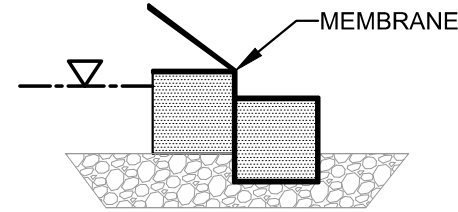
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EXCAVATE 6" DEEP TRENCH 1 BAG WIDTH ON DOWNSTREAM SIDE OF PLACED ROW OF BAGS. LAY MEMBRANE AS SHOWN.

SEQUENCE 2 - SECTION

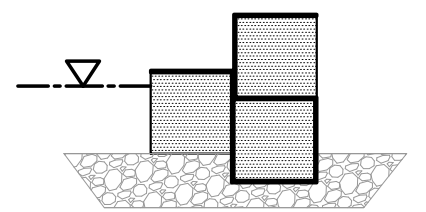
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PLACE SECOND ROW OF BAGS. WRAP MEMBRANE AS SHOWN.

SEQUENCE 3 - SECTION

NOT TO SCALE



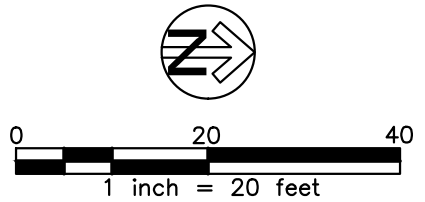
PLACE THIRD ROW ON TOP OF SECOND ROW. WRAP MEMBRANE AS SHOWN.

SEQUENCE 4 - SECTION

NOT TO SCALE

**BYPASS PLAN GENERAL NOTES**

1. BYPASS PLAN SHEETS ARE INTENDED TO SERVE AS A REFERENCE FOR POTENTIAL DISCHARGE LOCATIONS. THE CONTRACTOR SHALL PREPARE A FINAL DETAILED BYPASS PLAN FOR APPROVAL.
2. THE DESIGN, INSTALLATION, AND OPERATION OF THE TEMPORARY BYPASS AND PUMPING SYSTEM(S) SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
3. THE CONTRACTOR IS REQUIRED TO FURNISH ALL MATERIAL, LABOR, EQUIPMENT, POWER, MAINTENANCE, ETC. TO IMPLEMENT A TEMPORARY BYPASS AND PUMPING SYSTEM FOR THE PURPOSE OF DIVERTING THE EXISTING FLOW AROUND THE WORK AREAS FOR THE DURATION OF THE PROJECT.



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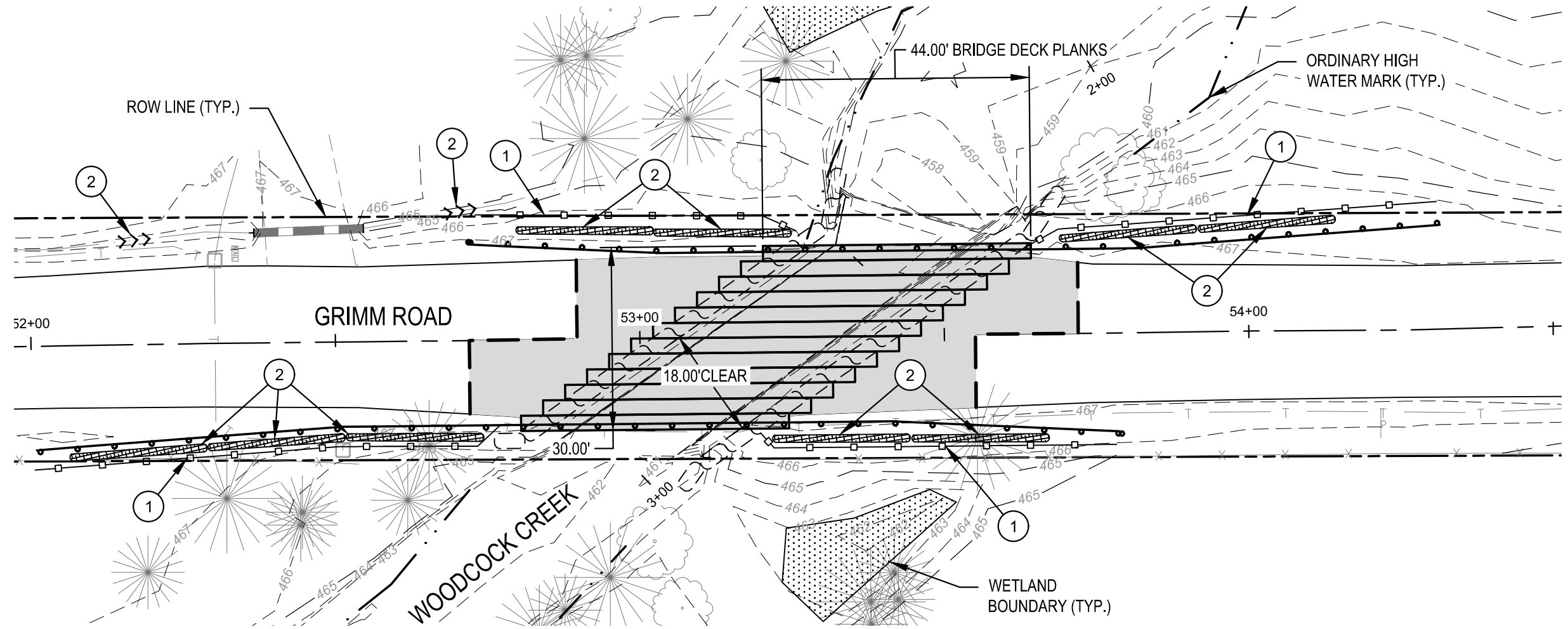
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**1** BYPASS DETAIL

SCALE:

<b>BYPASS PLAN</b>	
WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT	
DATE: JANUARY 2020	PROJECT NO.: XX-XXXX
 PORTLAND 6720 SW MACADAM AVE. STE 200, PORTLAND, OR 97219 TEL: (503) 419-2500 FAX: (503) 419-2600 www.cardno.com	
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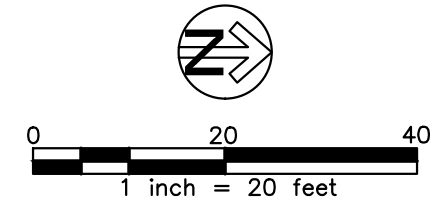


**STREET CONSTRUCTION NOTES**

- ① INSTALL SEDIMENT FENCE FOR DETAILS, SEE ODOT RD1040.
- ② INSTALL SEDIMENT BARRIER, TYPE 8 FOR DETAILS, SEE ODOT RD1032.
- ③ INSTALL CHECK DAM, TYPE 3 - X EA. L = 22', H = 8" FOR DETAILS, SEE ODOT RD1005.
- ④ INSTALL LAWN SEEDING, 6" MINIMUM DEPTH TOPSOIL, AND EROSION CONTROL MATTING, TYPE E AS DIRECTED BY COUNTY

**LEGEND**

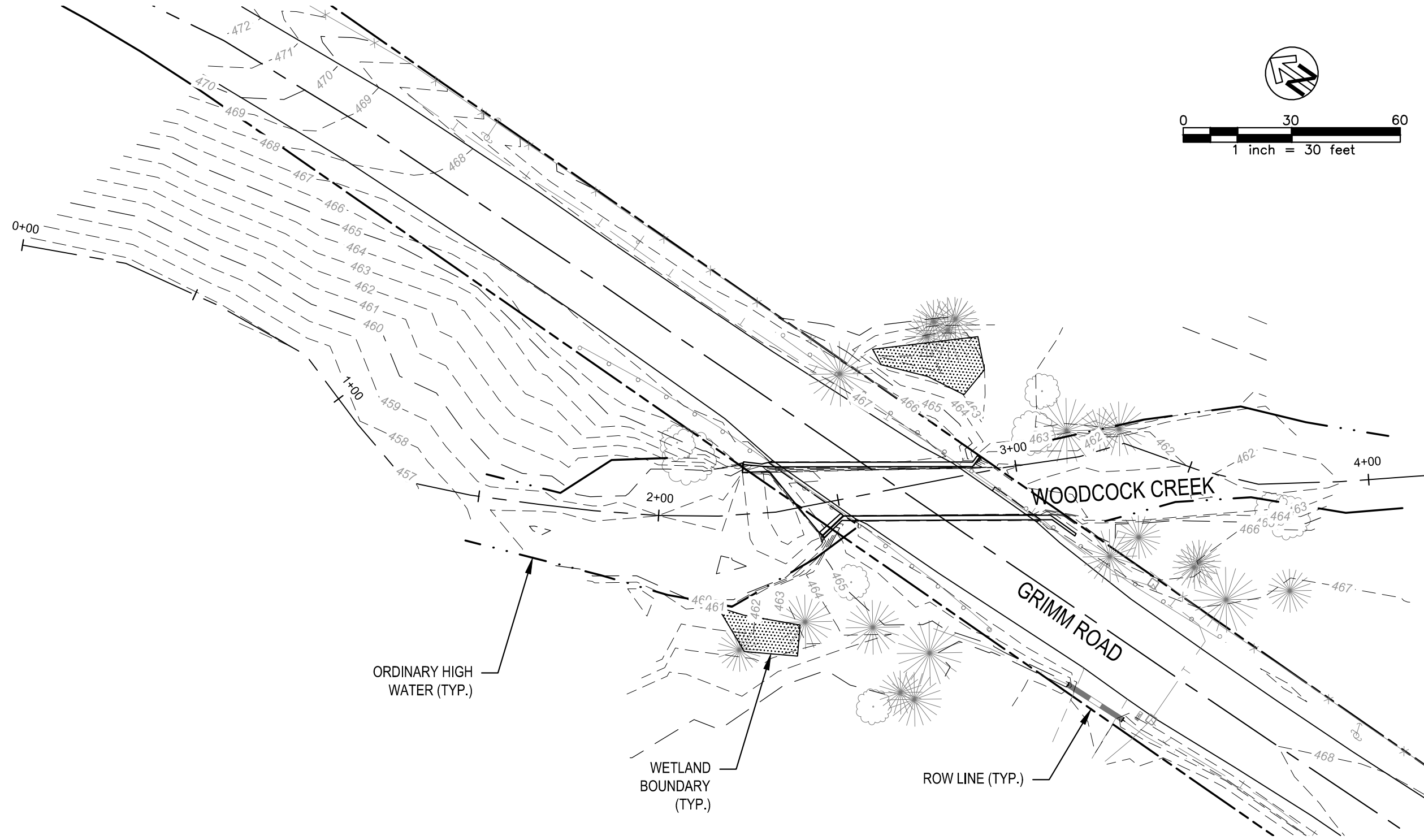
- SEDIMENT FENCE
- SEDIMENT BARRIER, TYPE 8
- CHECK DAM, TYPE 3



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<b>EROSION CONTROL PLAN</b>							
WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT							
DATE: JANUARY 2020	PROJECT NO.: XX-XXXX						
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<b>CLACKAMAS COUNTY</b> DAN JOHNSON DIRECTOR							
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**STREAM PLAN**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT

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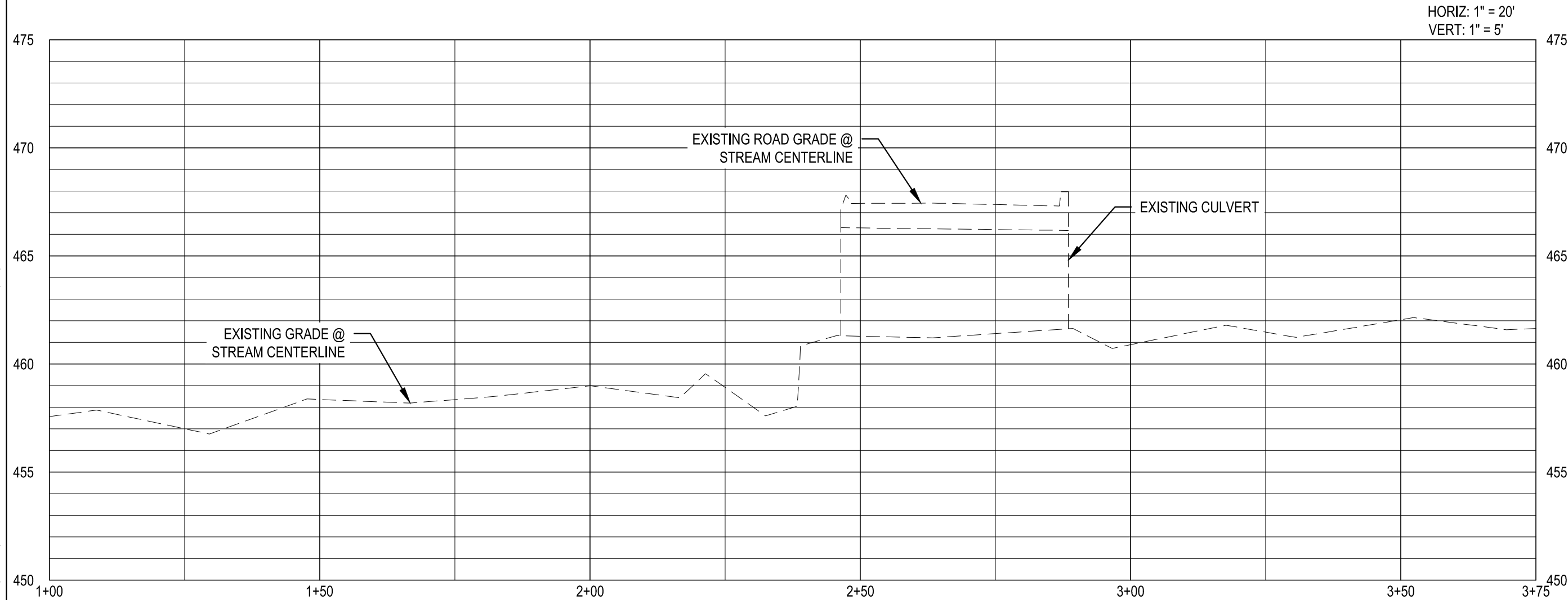
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Sheet No.  
**3A**

DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

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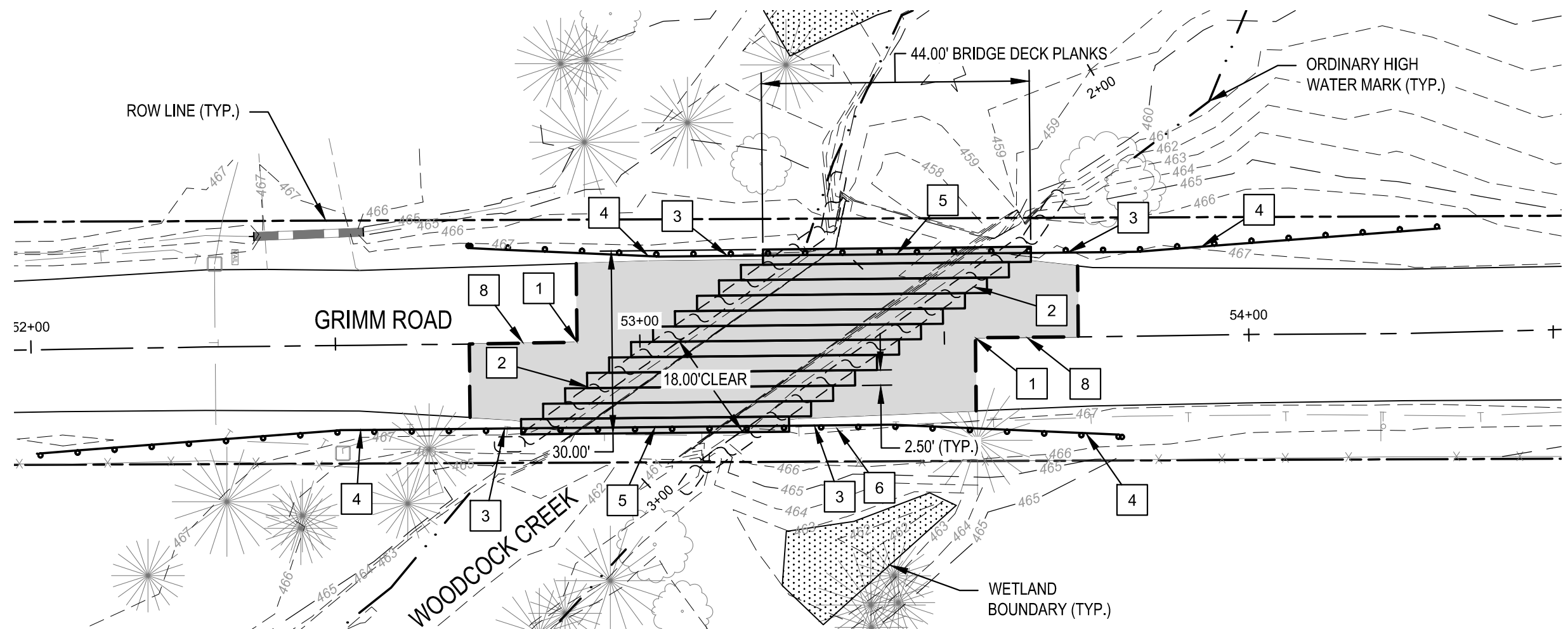


WOODCOCK CREEK - CENTERLINE PROFILE (EXISTING)

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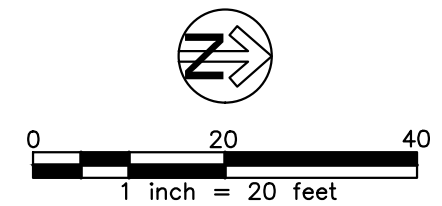
<b>STREAM PROFILE</b>													
WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT													
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DATE: JANUARY 2020      PROJECT NO.: XX-XXXXX													

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**STREET CONSTRUCTION NOTES**

- |   |   |
|---|---|
| <p>1 STA. 52+71.98 TO STA. 53+72<br/>SAWCUT EXISTING ASPHALT<br/>CONSTRUCT NEW ROADWAY<br/>FOR DETAILS, SEE SHEETS 2A THRU 2A-3</p> <p>2 NONPROPRIETARY MODULAR BLOCK WALL<br/>BRIDGE ABUTMENT SYSTEM OR<br/>PREARROVED PROPRIETARY MODULAR<br/>BLOCK WALL BRIDGE ABUTMENT SYSTEM .</p> <p>3 INSTALL WEATHERIZED GUARDRAIL<br/>TRANSITION. FOR DETAILS, SEE ODOT<br/>RD410.</p> <p>4 INSTALL WEATHERIZED TYPE 2A<br/>GUARDRAIL, TYPE 1 ANCHORS, AND TYPE B<br/>END PIECES. FOR DETAILS, SEE ODOT<br/>RD400, RD405, AND RD415.</p> <p>5 INSTALL WEATHERIZED TYPE 4 GUARDRAIL.<br/>FOR DETAILS, SEE ODOT BR233, RD400,<br/>RD405 AND RD415.</p> | <p>6 TELECOM TEMPORARY RELOCATION<br/>AND REINSTALLATION IN NEW PRECAST<br/>CONDUIT SLEEVES (BY OTHERS)</p> <p>7 REMOVE EXISTING TREES AND<br/>VEGETATION WITHIN RIGHT-OF-WAY FOR<br/>CONSTRUCTION OF WALL.</p> <p>8 REINSTALL LONGITUDINAL PAVEMENT<br/>MARKING IN KIND.</p> |
|---|---|



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**CONSTRUCTION NOTES & PLAN**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT

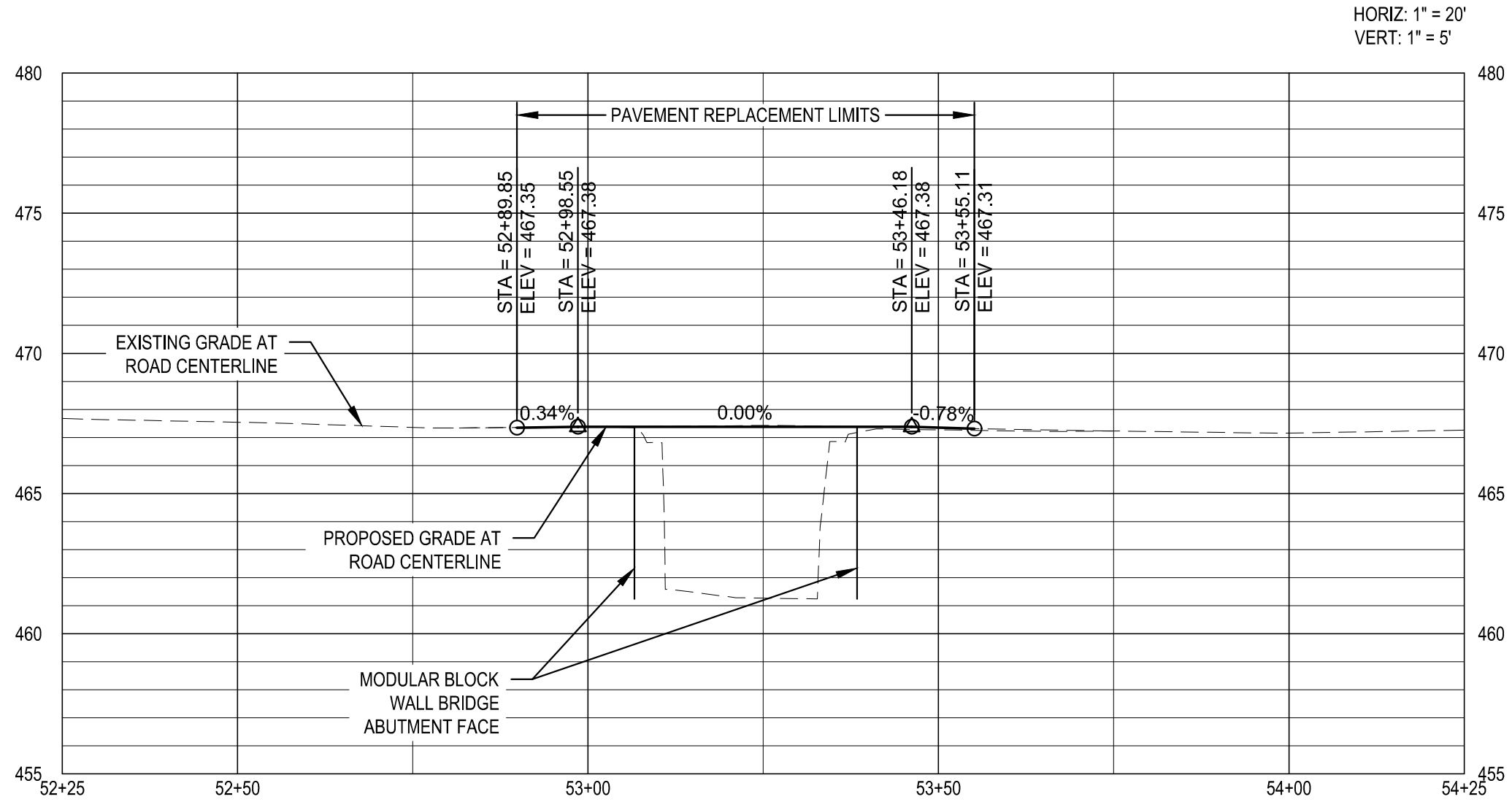
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 DIRECTOR

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GRIMM ROAD - CENTERLINE PROFILE (PROPOSED)

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<b>CONSTRUCTION PROFILE</b>	
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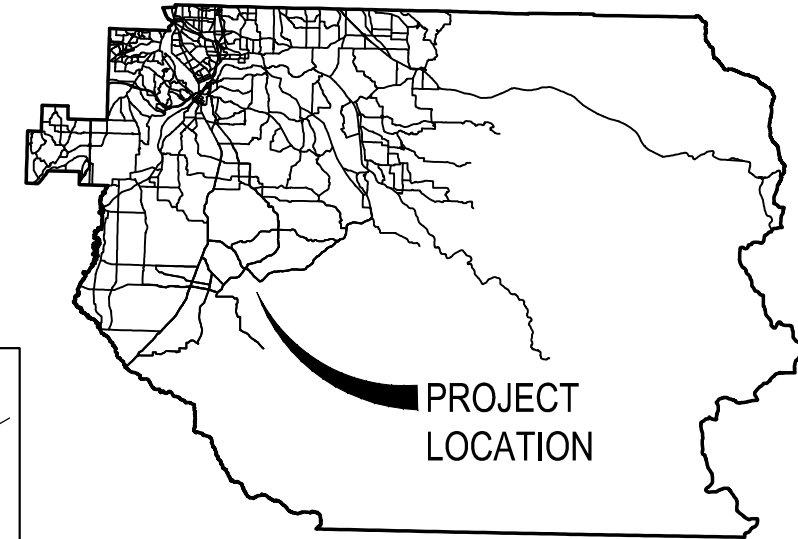


# CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

## WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT

EARTHWORK, ABUTMENTS,  
MODULAR BRIDGE, PAVING,  
GUARDRAIL AND STRIPING

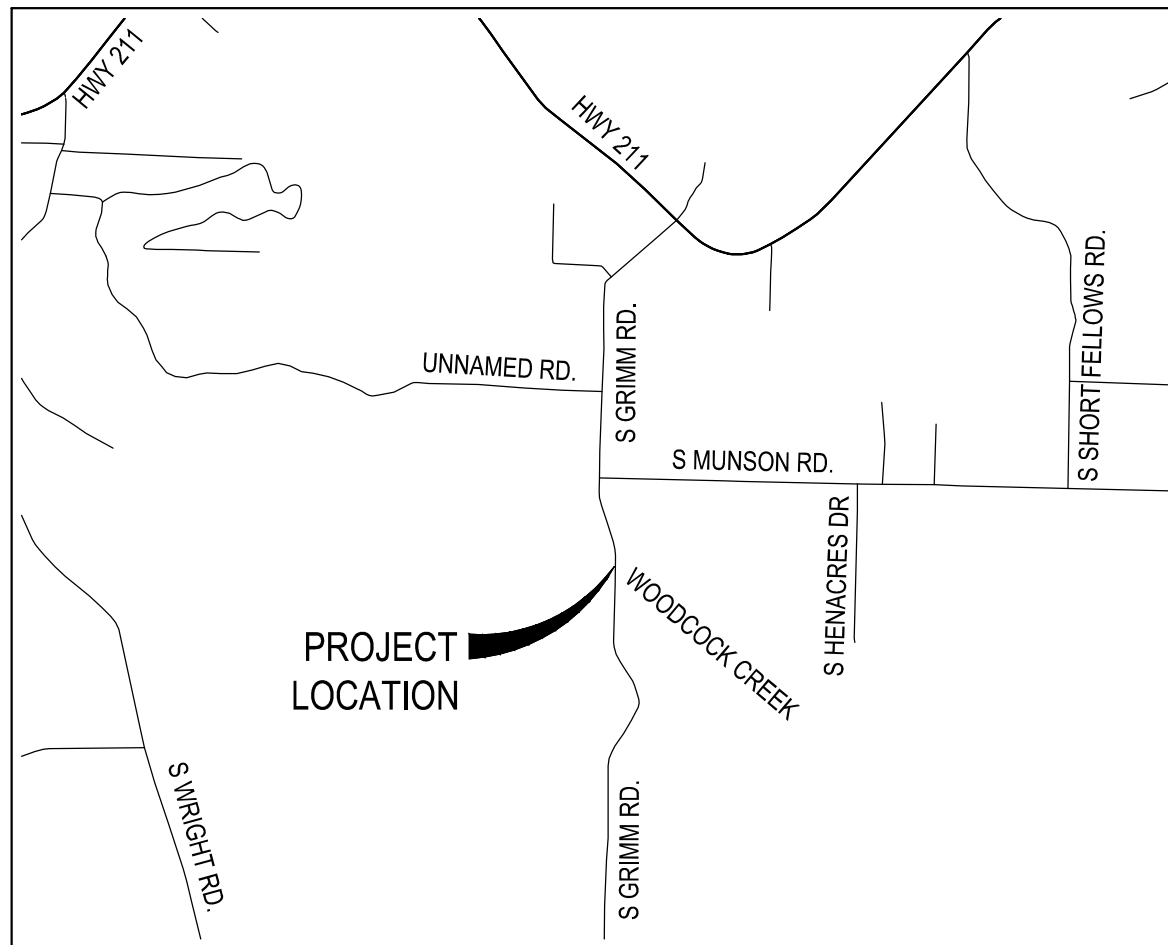
MOLALLA, OREGON  
SUMMER 2021



PROJECT  
LOCATION

DATUM:  
TO BE PROVIDED

BASIS OF BEARING:  
TO BE PROVIDED



PROJECT  
LOCATION

### VICINITY MAP

SCALE: NTS



T. 5S, R. 2E, SEC. 12

INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
1A	LEGEND
1B	STD DWG'S & ABBREVIATIONS
2A	TYPICAL SECTIONS
2A-3	TYPICAL SECTIONS
2A-4	TYPICAL SECTIONS
2A-5	TYPICAL SECTIONS
2A-6	TYPICAL SWALE DETAIL
2A-7	CHANNEL MARGIN JAM
2A-8	CHANNEL MARGIN JAM
2A-9	CHANNEL MARGIN JAM SEQUENCE
2A-10	BOULDER PLACEMENT
2B	BYPASS PLAN
2C	EROSION CONTROL PLAN
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3A-1	STREAM PLAN
3A-2	STREAMBED BACKFILL
3B	STREAM PROFILE
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3D	STREAM PROFILE
4A	CONSTRUCTION NOTES & PLAN
4B	CONSTRUCTION PROFILE
4C	GRADING PLAN
5A	BRIDGE STRUCTURAL GENERAL NOTES
5B	BRIDGE PLAN & PROFILE
5C	BRIDGE SECTIONS
5D	ABUTMENT WALL PROFILES
SS-1	PERMANENT SIGNING AND STRIPING PLAN

TITLE SHEET

WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

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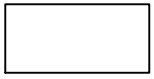

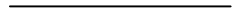







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SYMBOLS

EXISTING	PROPOSED
	MAIL BOX
	TELEPHONE RISER
	SINGLE SUPPORT SIGN
	UTILITY POLE
	GUY WIRE
	DITCH INLET

LINETYPES

EXISTING	PROPOSED
	CONCRETE SURFACE
	AC PAVEMENT SURFACE
	EDGE OF UNPAVED SURFACE
	EDGE OF PAVED SURFACE
	FENCE LINE
	GUARDRAIL
	CENTERLINE
	STORM PIPE
	DITCH LINE
	UNDERGROUND TELEPHONE LINE
	ORDINARY HIGH WATER LINE

VEGETATION

	EVERGREEN TREE		WETLAND AREA
	DECIDUOUS TREE		

LEGEND

WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

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**ODOT STANDARD DRAWING REFERENCES**

BR233	THRIE-BEAM RAIL AND TRANSITION
RD400	GUARDRAIL AND METAL MEDIAN BARRIER
RD405	GUARDRAIL AND METAL MEDIAN BARRIER PARTS
RD410	GUARDRAIL PARTS (THRIE BEAM)
RD415	GUARDRAIL AND METAL MEDIAN BARRIER PARTS
RD610	ASPHALT CONCRETE PAVEMENT (ACP) DETAILS
RD615	ASPHALT CONCRETE PAVEMENT (ACP) DETAILS
RD1005	CHECK DAMS TYPE 1, 3 AND 4
RD1032	SEDIMENT BARRIER TYPE 8
RD1040	SEDIMENT FENCE
TM500	PAVEMENT MARKING STANDARD DETAIL BLOCKS

**STANDARD DRAWING RESOURCES**

ODOT	<a href="http://www.oregon.gov/odot/engineering/pages/standards.aspx">HTTP://WWW.OREGON.GOV/ODOT/ENGINEERING/PAGES/STANDARDS.ASPX</a>
CLACK. CO.	<a href="http://www.clackamas.us/engineering/roadway.html">HTTP://WWW.CLACKAMAS.US/ENGINEERING/ROADWAY.HTML</a>
WES	<a href="https://www.clackamas.us/wes/stormwaterstandards.html">HTTPS://WWW.CLACKAMAS.US/WES/STORMWATERSTANDARDS.HTML</a>

**ABBREVIATIONS**

ACP	ASPHALT CEMENT PAVEMENT	N	NORTH	S	SOUTH
CB	CATCHBASIN	NOM	NOMINAL	SE	SOUTHEAST
CT	COURT	N.T.S.	NOT TO SCALE	STD	STANDARD
DWG	DRAWING	ODOT	OREGON DEPT. OF TRANSPORTATION	STA.	STATION
E	EAST	PROP, PR	PROPOSED	SD	STROM DRAIN
EC	EROSION CONTROL	PT	POINT	THKN.	THICKNESS
ELEV	ELEVATION	PVI	POINT OF VERTICAL INTERSECTION	T	TOWNSHIP
EXTG, EX	EXISTING	R	RANGE	TYP	TYPICAL
HORIZ	HORIZONTAL	RD	ROAD	VERT	VERTICAL
IE	INVERT ELEVATION	RT	RIGHT	W	WEST
LF	LINEAR FEET	R/W, ROW	RIGHT OF WAY		
LT	LEFT	SS	SANITARY SEWER		
MH	MANHOLE	SEC	SECTION		

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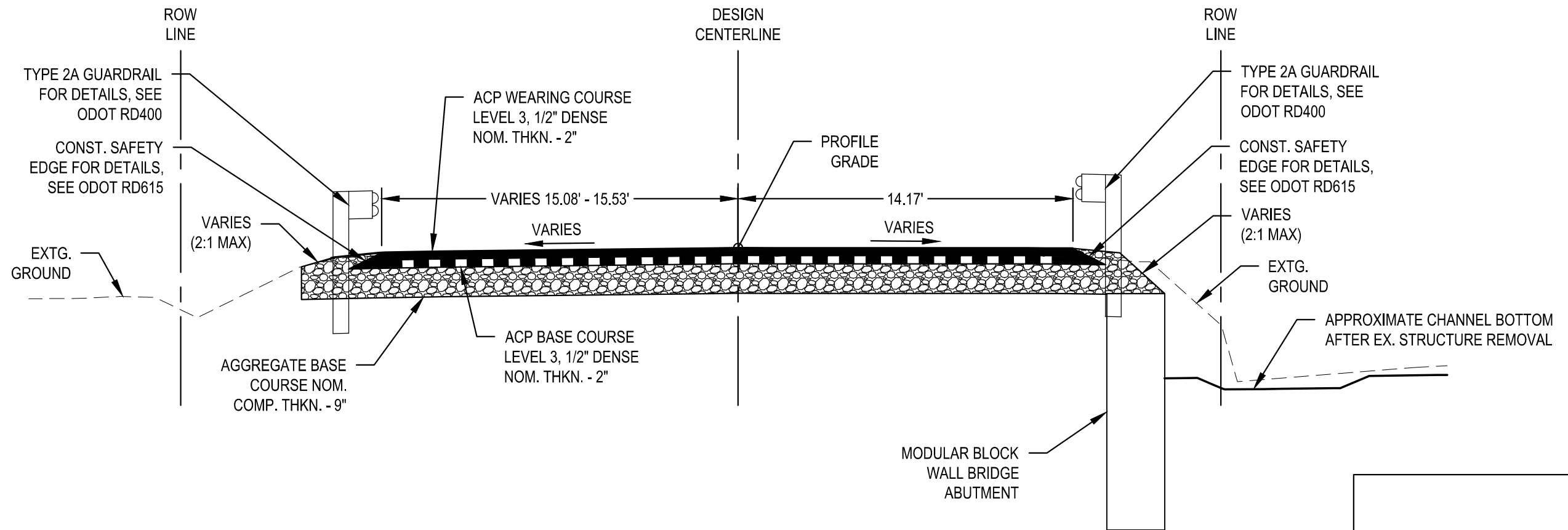
DIRECTOR

**STD DWGS & ABBREVIATIONS**

WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT

DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

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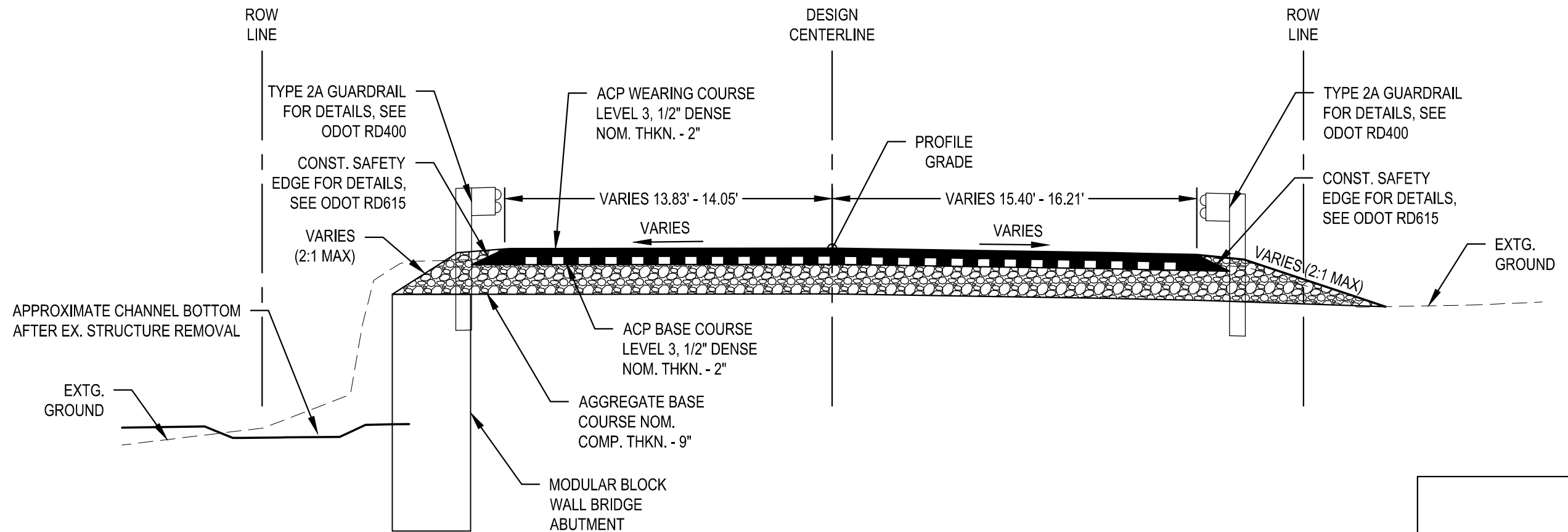
- NOTE:
1. ALL DIMENSIONS SHOW IN FEET UNLESS OTHERWISE NOTED
  2. SIDE SLOPES ARE SHOWN AS HORIZ. TO VERT.
  3. BRIDGE ABUTMENT TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS IN "REPORT OF GEOTECHNICAL SERVICES" PREPARED BY PALI CONSULTING, DATED AUGUST 28, 2019.

STA. 52+70.61 TO STA. 52+80.37  
**S GRIMM ROAD**  
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<b>TYPICAL SECTIONS</b>	
WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT	
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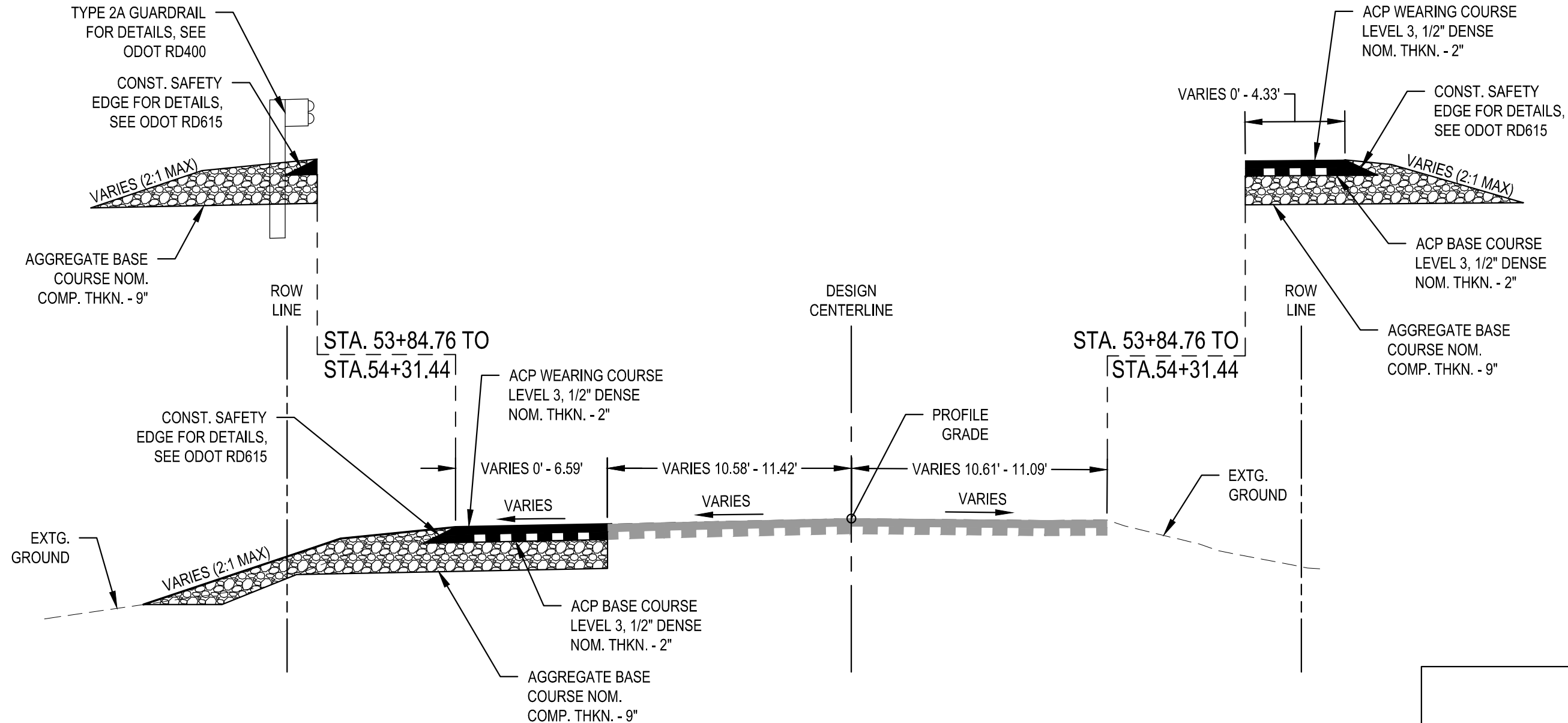
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STA. 53+64.34 TO STA. 53+84.76  
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<p><b>TYPICAL SECTIONS</b></p> <p>WOODCOCK CREEK AT GRIMM ROAD                  CULVERT REPLACEMENT</p>	<p>DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX</p>				
<p><b>Cardno</b>                  PORTLAND                  6720 SW MACADAM AVE. STE 200, PORTLAND, OR                  97219 TEL: (503) 419-2500 FAX: (503) 419-2600                  www.cardno.com</p>	<p><b>CLACKAMAS COUNTY</b>                  DAN JOHNSON                  DIRECTOR</p>				
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<p>Sheet No. 2A-4</p>					

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- NOTE:
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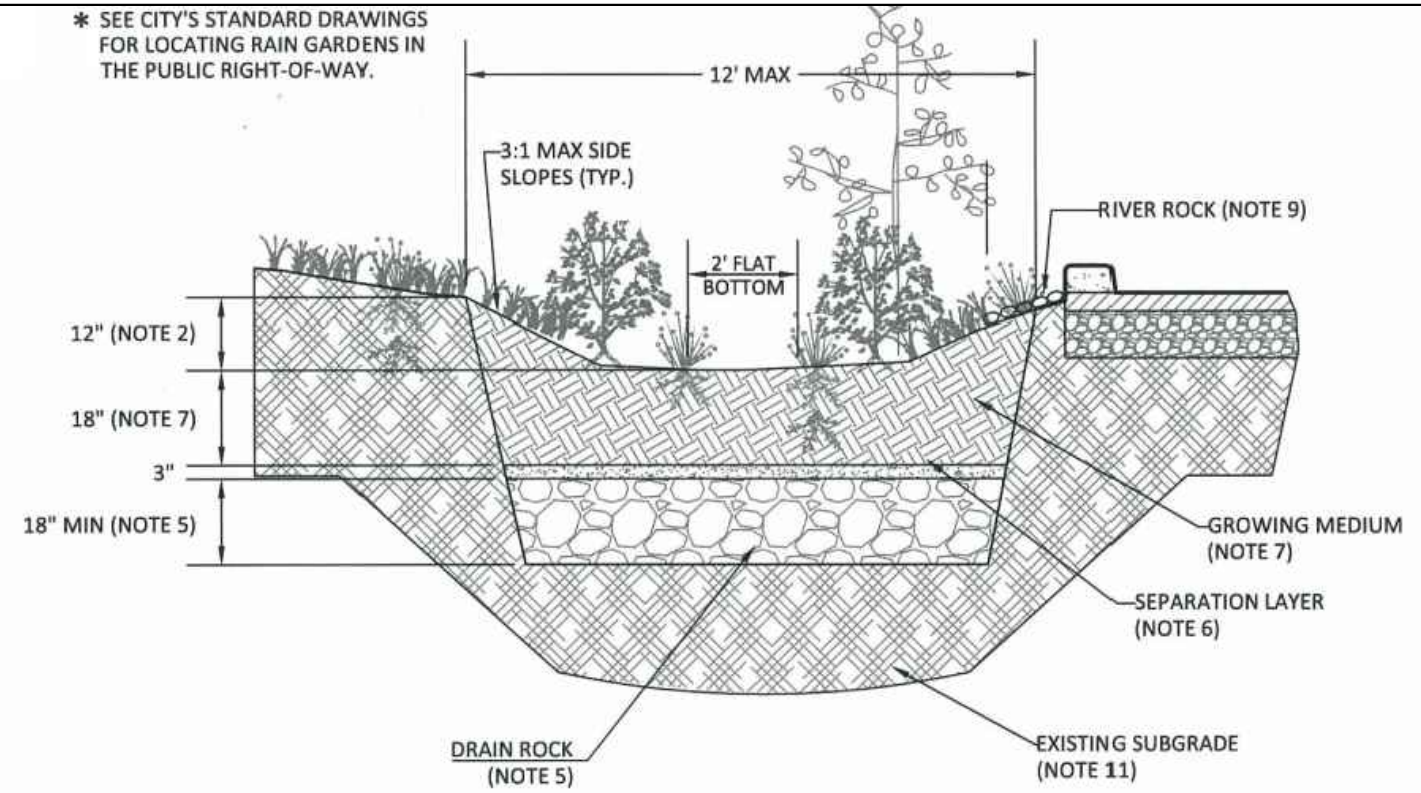
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TYPICAL SECTIONS	
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\* SEE CITY'S STANDARD DRAWINGS FOR LOCATING RAIN GARDENS IN THE PUBLIC RIGHT-OF-WAY.



**GENERAL NOTES:**

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION.
2. **DIMENSIONS:**  
 -DEPTH OF SWALE (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 12"  
 -LONGITUDINAL SLOPE OF SWALE: 6.0% OR LESS  
 -FLAT BOTTOM WIDTH: 2'  
 -SIDE SLOPES OF SWALE: 3:1 MAXIMUM
3. **SETBACKS:**  
 -INFILTRATION VEGETATED SWALES MUST BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES.
4. **OVERFLOW:**  
 -EMERGENCY OVERFLOW PATH FOR THE 100 YEAR DESIGN STORM SHALL BE IDENTIFIED ON THE STORMWATER MANAGEMENT PLAN.
5. **DRAIN ROCK:**  
 -SIZE: 1 1/2" - 3/4" - WASHED  
 -DEPTH: 18"
6. **SEPARATION BETWEEN DRAIN ROCK AND GROWING MEDIUM:** SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**  
 -18" MINIMUM  
 -SEE APPENDIX A FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX. SEE GROWING MEDIUM NOTES ON THIS SHEET  
 -FACILITY SURFACE AREA MAY BE REDUCED BY 20% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **INSTALL RIVER ROCK** OR SPLASH PAD TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3".
10. **CHECK DAMS:** SHALL BE PLACED ACCORDING TO FACILITY DESIGN.
11. **SEASONAL HIGH GROUNDWATER SEPARATION:**  
 -SEPARATION DISTANCE AS REQUIRED BY CITY.

**GROWING MEDIUM NOTES**

1. GROWING MEDIUM SHALL BE A BLEND OF LOAMY SOIL, SAND AND COMPOST THAT IS 30 TO 40 % COMPOST (BY VOLUME).
2. PARTICLE GRADATION ANALYSIS OF THE BLENDED MATERIAL, INCLUDING COMPOST, SHALL BE CONDUCTED IN CONFORMANCE WITH ASTM C117/C136 (AASHTO T11/T27). THE GRADATION OF THE BLEND SHALL MEET THE FOLLOWING GRADATION CRITERIA.
  - 1" SIEVE: 100 % PASSING
  - #4 SIEVE: 60-100 % PASSING
  - #10 SIEVE: 40-100 % PASSING
  - #40 SIEVE: 15-50 % PASSING
  - #100 SIEVE: 5-25 % PASSING
  - #200 SIEVE: 5-15 % PASSING

THE BLEND SHALL HAVE A COEFFICIENT OF UNIFORMITY (D60/D10) EQUAL TO OR GREATER THAN 6 TO ENSURE THAT IT IS WELL GRADED.
3. AN ANALYSIS OF SOIL ORGANIC MATTER CONTENT SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM D2974 (LOSS ON IGNITION TEST). THE SOIL ORGANIC MATTER CONTENT SHALL BE A MINIMUM OF 10 %.
4. GROWING MEDIUM PH SHALL BE BETWEEN PH 5.5-7.
5. COMPOST SHALL COMPLY TO THE STANDARDS ESTABLISHED BY THE US COMPOSTING COUNCIL SEAL OF TESTING ASSURANCE (STA) PROGRAM. COMPOST SHALL: HAVE 100% PASSAGE THROUGH A 1/2" SCREEN, PH 6-8, ORGANIC MATTER OF 35-65%, SOLUBLE SALT CONTENT LESS THAN 6.0 MMHOS/CM, GERMINATION GREATER THAN 80%, STABILITY CLASS 5-7, CARBON/NITROGEN RATIO LESS THAN 25:1, TRACE METALS TEST RESULTS = 'PASS', MANUFACTURED INERT MATERIAL (PLASTIC, CONCRETE, CERAMICS, METAL, ETC.) SHALL BE LESS THAN 1 % BY WEIGHT.
6. SUBMIT GROWING MEDIUM TEST RESULTS TO THE OWNERS' REPRESENTATIVE 14 WORKING DAYS IN ADVANCE OF CONSTRUCTION FOR REVIEW AND WRITTEN APPROVAL. TEST RESULTS SHALL CONFIRM THE REQUIREMENTS OF THE SAMPLE AS NOTED WITHIN THIS DESCRIPTION. INCLUDE THE NAME AND ADDRESS OF THE LABORATORY, PHONE CONTACT NUMBER AND EMAIL, TEST DATA (INCLUDING THE DATE AND NAME OF THE TEST PROCEDURE).
7. BLENDED MATERIAL SHALL BE:
  - 7.1. LOOSE AND FRIABLE.
  - 7.2. WELL MIXED AND HOMOGENOUS.
  - 7.3. FREE OF WOOD PIECES, PLASTIC, SCREENED AND FREE OF STONES 1-IN OR LARGER IN ANY DIMENSION, ROOTS, PLANTS, SOD, CLOUDS, CLAY LUMPS, POCKETS OF COARSE SAND, PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS, OR CHUNKS, CEMENT, PLASTER, BUILDING DEBRIS, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, ACID AND OTHER EXTRANEIOUS MATERIALS HARMFUL TO PLANT GROWTH.
  - 7.4. SHALL NOT BE INFESTED WITH NEMATODES, GRUBS, OTHER PESTS, PEST EGGS, OR OTHER UNDESIRABLE ORGANISMS AND DISEASE-CAUSING PLANT PATHOGENS; FRIABLE AND WITH SUFFICIENT STRUCTURE TO GIVE GOOD TILTH AND AERATION.
8. BLENDED MATERIAL SHALL BE FREE OF WEEDS AND INVASIVE PLANTS INCLUDING BUT NOT LIMITED TO:
  - 8.1. CIRSIUM ARVENSE (CANADIAN THISTLE)
  - 8.2. CONVULVULUS SPP. (MORNING GLORY)
  - 8.3. CYTISUS SCOPARUS (SCOTCH BROOM)
  - 8.4. DIPSACUS SYLVESTRIS (COMMON TEASEL)
  - 8.5. FESTUCA ARUNDINACEAE (TALL FESCUE)
  - 8.6. HEDERA HELIX (ENGLISH IVY)
  - 8.7. HOLCUS CANATUS (VELVET GRASS)
  - 8.8. LOLIUM SPP. (RYE GRASSES)
  - 8.9. LOTUS CORNICULATUS (BIRD'S FOOT TREFOIL)
  - 8.10. LYTHRUM SALICARIA (PURPLE LOOSE STRIFE)
  - 8.11. MELILOTUS SPP. (SWEET CLOVER)
  - 8.12. MYRIOPHYLLUM SPICATRUM (EURASIAN MILFOIL)
  - 8.13. PHALARIS ARUNDINACEAE (REED CANARY GRASS)
  - 8.14. RUBUS DISCOLOR (HIMALAYAN BLACKBERRY)
  - 8.15. SOLANUM SPP. (NIGHTSHADE)
  - 8.16. TRIFOLIUM SPP. (CLOVERS)
9. THE INSTALLATION SHALL INCLUDE: PROTECTING THE GROWING MEDIUM FROM SOURCES OF CONTAMINATION, PLACED IN LOOSE LIFTS NOT TO EXCEED 8" AND COMPACTED WITH A WATER-FILLED LANDSCAPE ROLLER (NO OTHERWISE MECHANICALLY COMPACTION), INSTALLED AFTER GRADING OPERATIONS, PROTECTED FROM EROSION AND PLANTED AS SOON AS POSSIBLE. PLACEMENT OF GROWING MEDIUM WILL NOT BE ALLOWED WHEN THE GROUND IS FROZEN OR SATURATED.
10. VERIFY WATER IS INFILTRATING AT A MINIMUM OF 2" PER HOUR AFTER PLACEMENT OF GROWING MEDIUM.

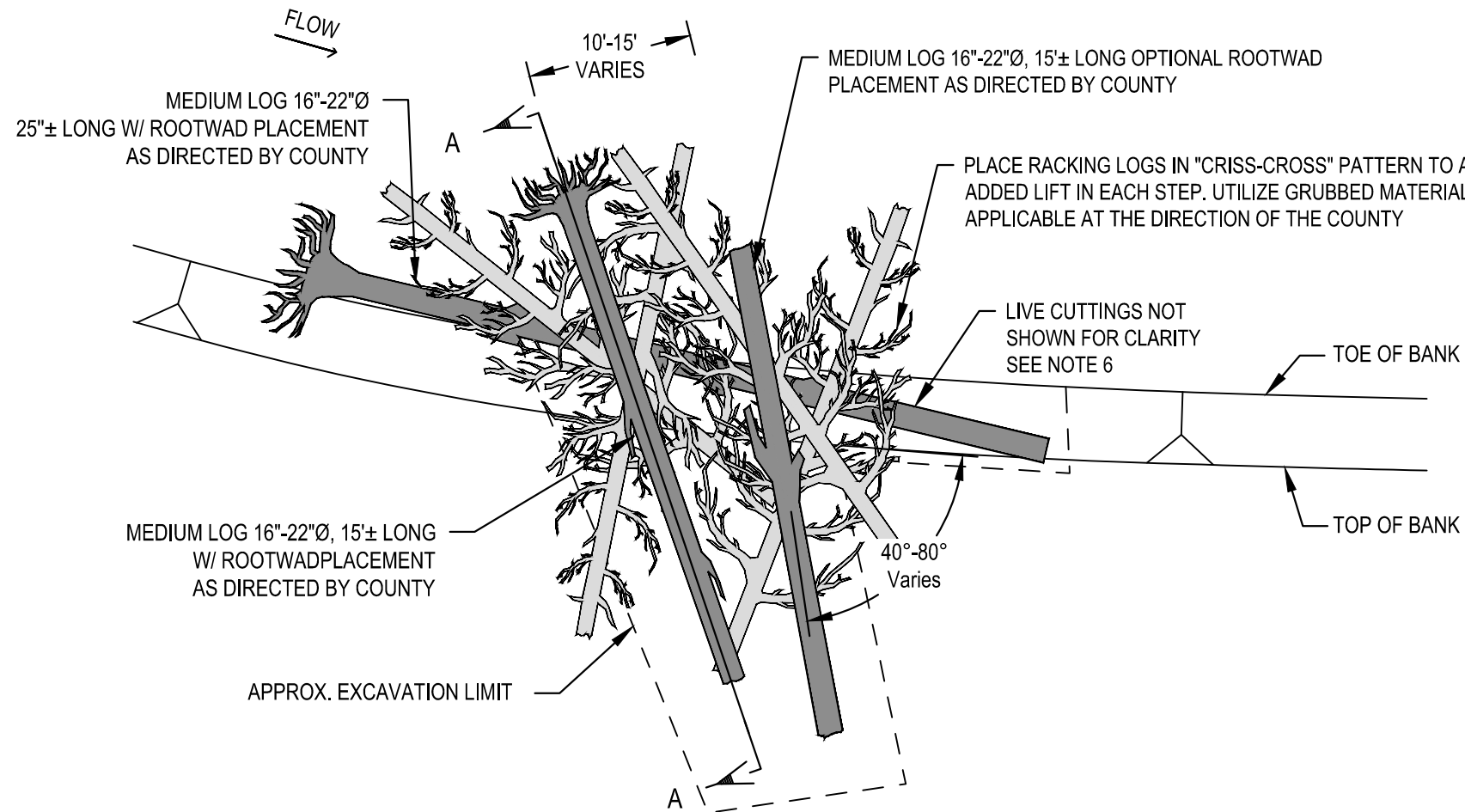
Vegetated Swale - Infiltration  
Figure C-8



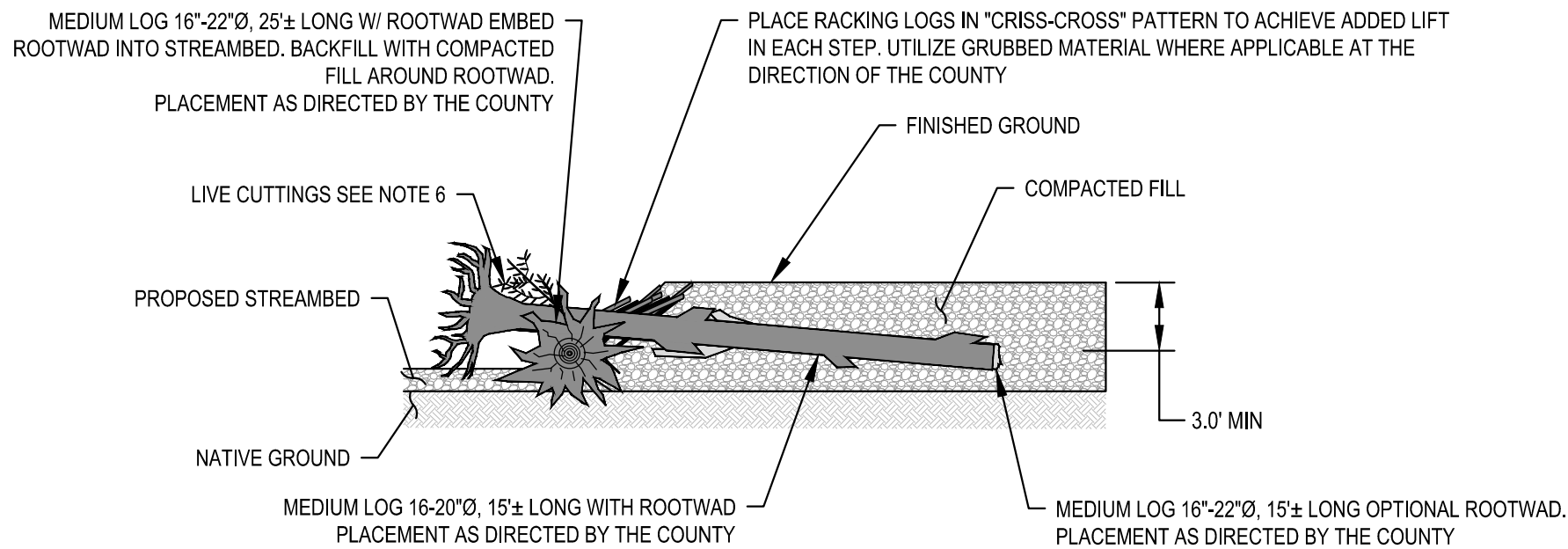
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<b>TYPICAL SWALE DETAIL</b>		
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PROJECT NO.: XX-XXXX DATE: JANUARY 2020		

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**PLAN VIEW**  
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**SECTION A-A**  
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**CONSTRUCTION NOTES:**

1. CONTRACTOR TO SELECT LARGE AND MEDIUM LOGS, PER TABLE ON 2A-8 WITH THE APPROVAL OF CLACKAMAS COUNTY
2. CONTRACTOR SHALL PLACE LOGS AS DESCRIBED IN SEQUENCE PLANS ON SHEET 2A-9.
3. RACKING LOGS AND SLASH WEDGED BETWEEN LARGE AND MEDIUM LOGS. RACKING LOGS AND SLASH SHALL HAVE IRREGULAR AND NATURAL APPEARANCE AND NOT STACKED.
4. MEDIUM LOG SHALL BE PLACED SO ITS UPSTREAM END RESTS ON STREAM BED, AND ITS DOWNSTREAM END IS EMBEDDED UP TO 6". BACKFILL AND COMPACT AROUND MEDIUM LOG WITH COMPACTED FILL.
5. BACKFILL STRUCTURE WITH COMPACTED FILL.
6. INSTALL LIVE CUTTINGS AT A RATE OF 3 CUTTINGS PER LARGE AND/OR MEDIUM LOG WHILE INSTALLING LOGS. LIVE CUTTINGS SHALL BE INSTALLED NEAR FACE OF EACH STRUCTURE WITHIN EXCAVATION LIMITS AS DIRECTED BY C.O. LIVE CUTTINGS SHALL BE PLACED SUCH THAT A MINIMUM OF 6" OF CUTTING IS SUBMERGED BELOW WATER TABLE. LIVE CUTTINGS SHALL BE BACKFILLED WITH EXCAVATED MATERIALS AND COMPACTED. LIVE CUTTINGS SHALL BE PROVIDED BY CONTRACTING AGENCY.
7. IF LOCATED IN SIDE CHANNELS, STRUCTURE MAY BE CONSTRUCTED WITH SMALLER LOGS AS DIRECTED BY THE COUNTY.
8. STRUCTURE LOCATION MAY BE FIELD ADJUSTED BY THE COUNTY.
9. ALL LARGE AND MEDIUM LOGS TO BE BROUGHT TO STRUCTURE LOCATION IN 25' LENGTHS. LOGS LISTED AT 15' LENGTH, SHALL BE BROKEN TO LENGTH. ANY REMAINING LENGTH SHALL BE USED IN STRUCTURE AS ADDITIONAL RACKING MATERIAL.
10. ALL VISIBLE ENDS OF LOGS SHALL BE CUT OR BROKEN OFF TO CREATE NATURAL APPEARANCE. NO FLAT CUTS ALLOWED.

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<b>CHANNEL MARGIN JAM</b>	WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT	DATE: JANUARY 2020	PROJECT NO.: XX-XXXX
 PORTLAND 6720 SW MACADAM AVE, STE 200, PORTLAND, OR 97219 TEL: (503) 419-2500 FAX: (503) 419-2600 www.cardno.com	 CLACKAMAS COUNTY	DAN JOHNSON DIRECTOR	DAN JOHNSON DIRECTOR
DESIGNED BY: RPM	DRAFTED BY: RPM	CHECKED BY: CJ	
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NO. DATE:			
Sheet No. 2A-7			



**CHANNEL MARGIN JAM LOCATIONS**

STRUCTURE ID	STATION	BANK
WC-01	1+54	RIGHT
WC-02	1+78	RIGHT
WC-03	1+85	LEFT
WC-04	3+12	RIGHT
WC-05	3+45	RIGHT
WC-06	3+47	RIGHT

**HYDRAULIC PURPOSE:**

- \* TEMPORARILY STABILIZE NEW BANKS IN THE SHORT TERM TO RESTORE AQUATIC AND RIPARIAN HABITATS.
- \* MAINTAIN SCOUR HOLES BY FLOW CONVERGENCE.
- \* DIVERT HIGH FLOWS INTO SIDE CHANNELS AND FLOODPLAIN.
- \* SORT AND RETAIN GRAVEL.

**HABITAT PURPOSE:**

- \* CREATE DIVERSE FISH HABITAT ALONG CHANNEL MARGIN.
- \* PROVIDE COVER.

**CHANNEL MARGIN JAM**

LOG TYPE	SIZE (DBH)	MIN LENGTH (FT)	ROOTWAD	MIN. ROOTWAD DIAMETER (FT)	BRANCHES	QUANTITY
MEDIUM	16" - 22"	25'	YES	4'	NO	1
MEDIUM	16" - 22"	15'	YES	4'	NO	1
MEDIUM	16" - 22"	15'	OPTIONAL	-	NO	1
RACKING	10" - 16"	10'	OPTIONAL	-	OPTIONAL	5
SLASH (CY)	1" - 6"	5'	-	-	YES	15
LIVE CUTTINGS	-	-	-	-	-	11

\* DBH = DIAMETER AT BREAST HEIGHT

**CHANNEL MARGIN JAM**

WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

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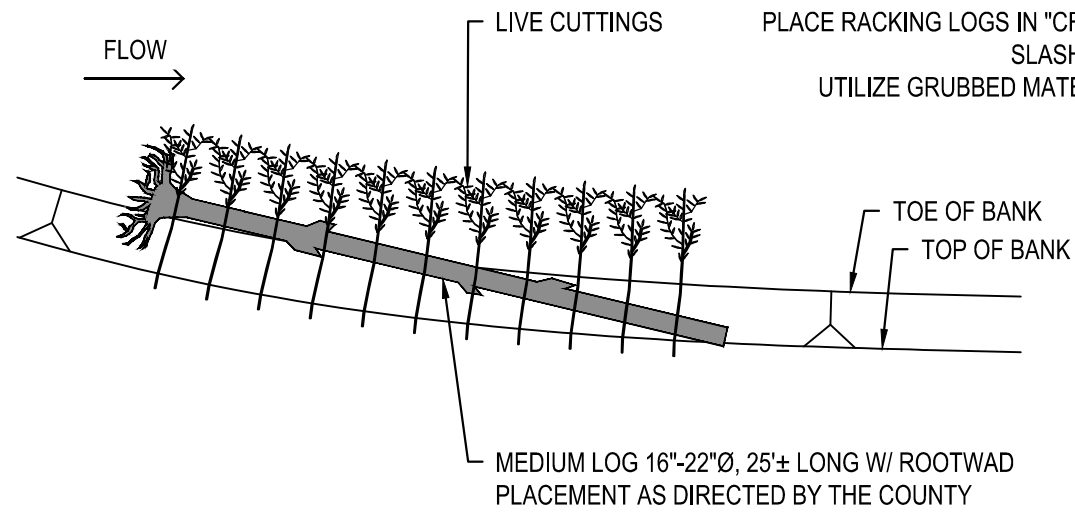
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NO	DATE	DESCRIPTION

Sheet No. 2A-8

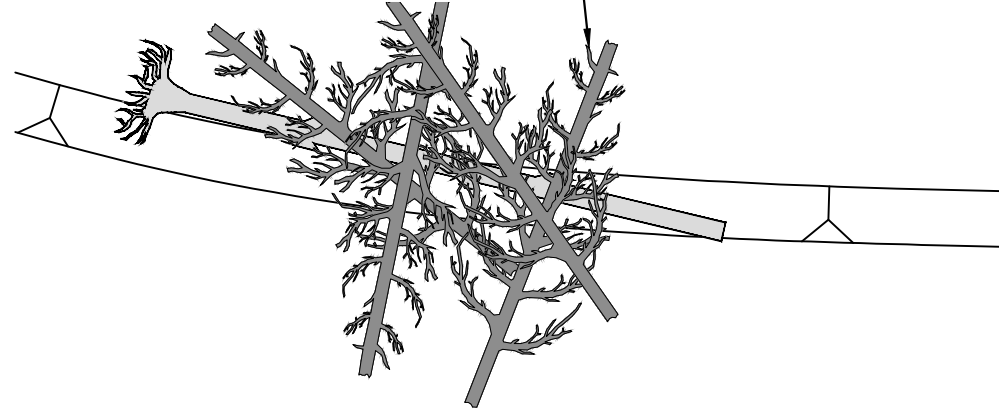
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STEP 1

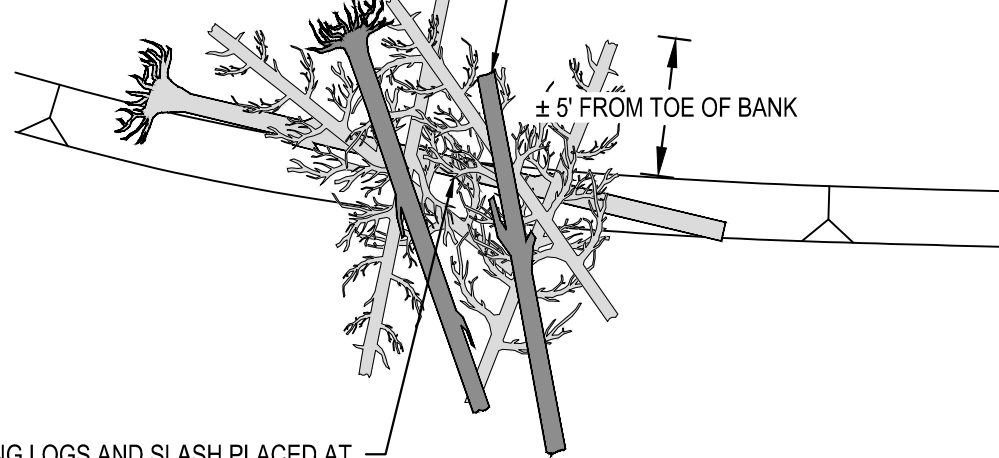
PLACE RACKING LOGS IN "CRISS-CROSS" PATTERN TO ACHIEVE ADDED LIFT IN EACH STEP.  
SLASH TO BE INCORPORATED IN STRUCTURE BETWEEN EACH STEP.  
UTILIZE GRUBBED MATERIAL WHERE APPLICABLE AT THE DIRECTION OF THE COUNTY



STEP 2

MEDIUM LOG 16"-22"Ø, 15± LONG W/ ROOTWAD.  
ANGLES MAY VARY BY STRUCTURE TYPE BASED ON COUNTY  
PLACEMENT AS DIRECTED BY THE COUNTY

MEDIUM LOG 16"-22"Ø, 15± LONG OPTIONAL ROOTWAD.  
ANGLES MAY VARY BY STRUCTURE TYPE BASED ON COUNTY  
PLACEMENT AS DIRECTED BY THE COUNTY



RACKING LOGS AND SLASH PLACED AT THE DIRECTION OF THE COUNTY

STEP 3

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CHANNEL MARGIN JAM SEQUENCE

WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

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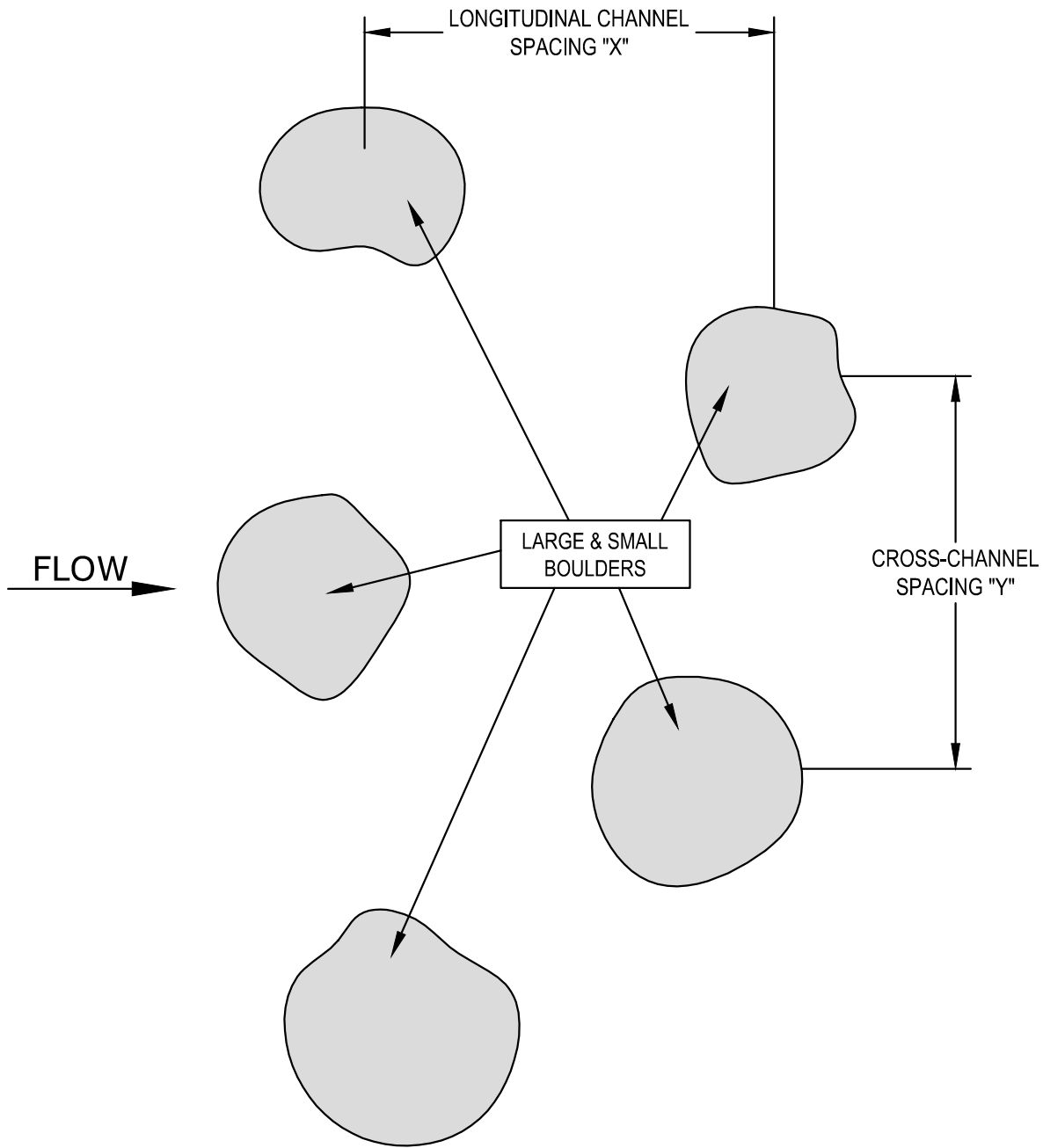
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Sheet No. 2A-9



**BOULDER PLACEMENT PLAN VIEW**  
NOT TO SCALE

BOULDER PLACEMENT DENSITY		
FEATURE	MINIMUM LONGITUDINAL CHANNEL SPACING "X"	MINIMUM CROSS-CHANNEL SPACING "Y"
WOODCOCK CREEK	12 FEET	12 FEET

**NOTES:**

1. PLACE LARGE AND SMALL BOULDERS AS DIRECTED BY C.O. ON RIFFLE FEATURES, TOPS OF GLIDE FEATURES, THROUGHOUT ROUGHENED CHANNELS, AND IN EXISTING CHANNEL BEDS.
2. LARGE TO SMALL BOULDER RATIO ON RIFFLE FEATURES, TOPS OF GLIDE FEATURES, THROUGHOUT ROUGHENED CHANNELS, AND IN EXISTING CHANNEL BEDS SHALL BE 1:1 OR AS DIRECTED BY C.O.
3. MINIMUM DENSITY OF BOULDER PLACEMENT IS DEPENDENT UPON FEATURE AS SHOWN IN TABLE.
4. STAGGER AND VARY BOULDER PLACEMENT AND EMBEDMENT DEPTHS TO MIMIC NATURAL STREAMS AND TO BREAK UP CURRENTS AS DIRECTED BY C.O.
5. BOULDERS SHALL BE PLACED IN GROUPINGS OF 1-3, IN AN UNEVEN PATTERN SO AS TO PROVIDE DIVERSE REFUGE FOR FISH.
6. MINIMUM BOULDER EMBEDMENT OF 50%.

BOULDERS	
DESCRIPTION	SIZE CLASS*
LARGE BOULDERS	GREATER THAN 24"
SMALL BOULDERS	12" - 24"

\* SIZE CLASS IS UNIQUE TO THESE DRAWINGS AND IS NOT A STANDARD.

**BOULDER PLACEMENT**  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT  
DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

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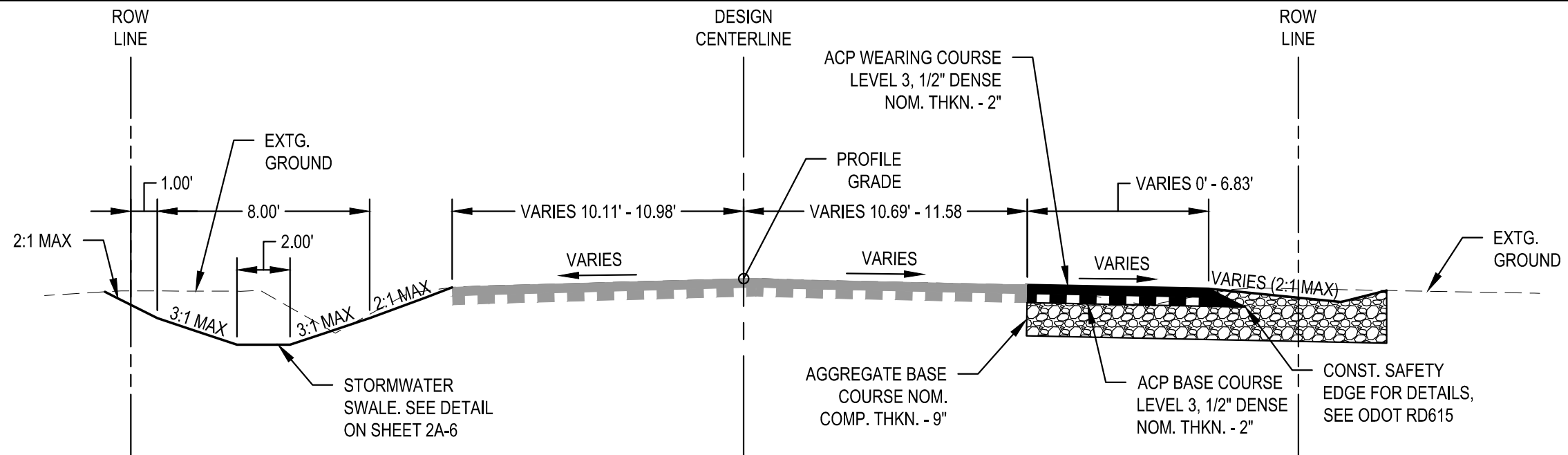
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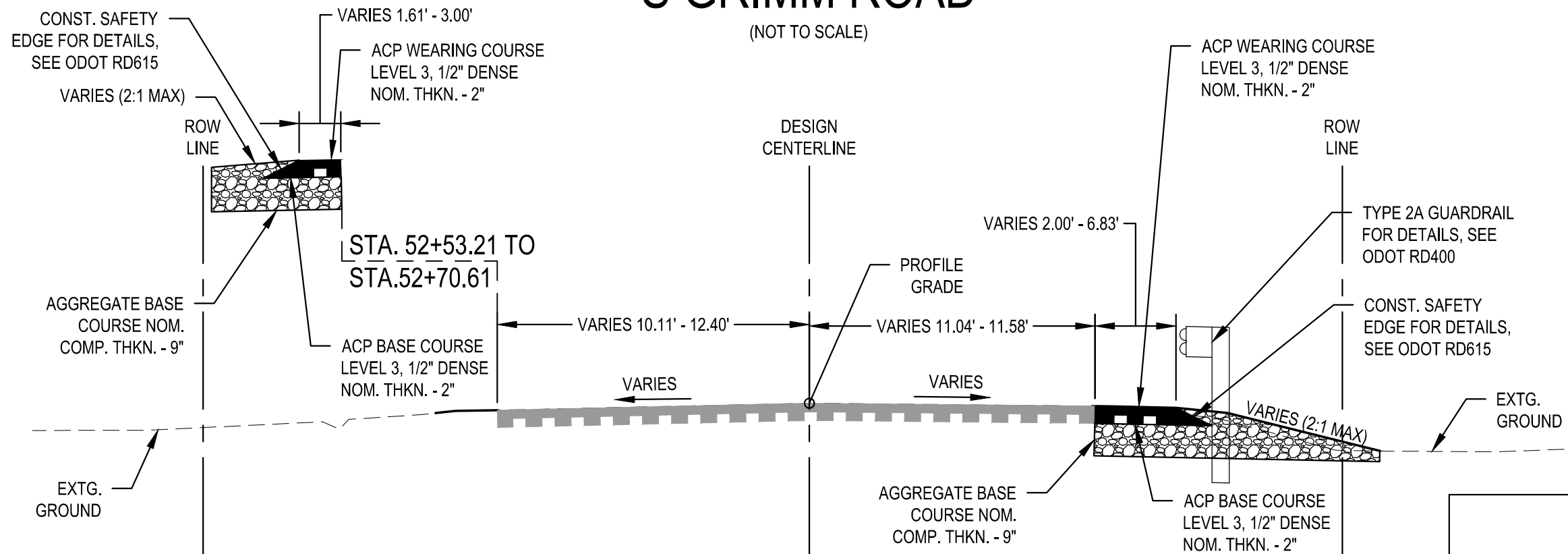
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STA. 51+43.73 TO STA. 52+00.79  
S GRIMM ROAD

(NOT TO SCALE)



STA. 52+00.79 TO STA. 52+70.61  
S GRIMM ROAD

(NOT TO SCALE)

NOTE:

1. ALL DIMENSIONS SHOW IN FEET UNLESS OTHERWISE NOTED
2. SIDE SLOPES ARE SHOWN AS HORIZ. TO VERT.
3. BRIDGE ABUTMENT TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS IN "REPORT OF GEOTECHNICAL SERVICES" PREPARED BY PALI CONSULTING, DATED AUGUST 28, 2019.

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TYPICAL SECTIONS  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT  
DATE: JANUARY 2020  
PROJECT NO.: XX-XXXXX

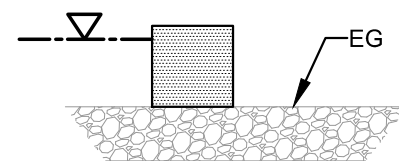
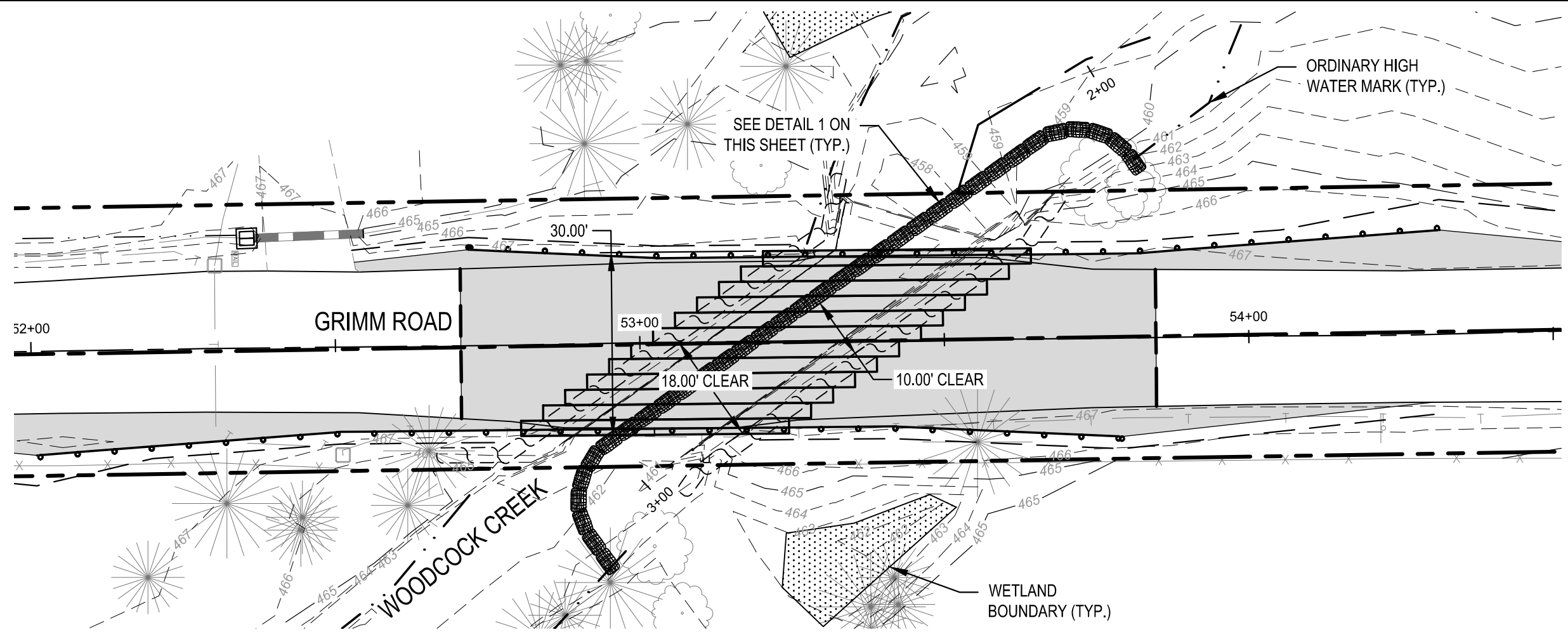
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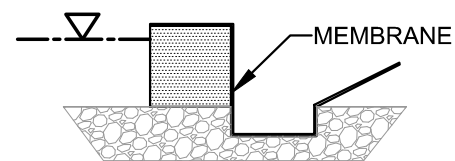
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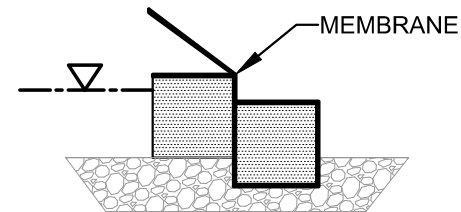
C:\LOCALDRIVES\WDRIVE\21813430\CAD\CIVIL\CD\1343-CD-BYPASS.DWG 3/18/2021 12:07 PM



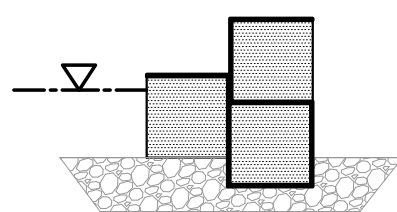
PLACE SINGLE ROW OF BAGS ACROSS CHANNEL TO BE DIVERTED



EXCAVATE 6" DEEP TRENCH 1 BAG WIDTH ON DOWNSTREAM SIDE OF PLACED ROW OF BAGS. LAY MEMBRANE AS SHOWN.



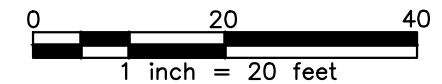
PLACE SECOND ROW OF BAGS. WRAP MEMBRANE AS SHOWN.



PLACE THIRD ROW ON TOP OF SECOND ROW. WRAP MEMBRANE AS SHOWN.

**BYPASS PLAN GENERAL NOTES**

1. BYPASS PLAN SHEETS ARE INTENDED TO SERVE AS A REFERENCE FOR POTENTIAL DISCHARGE LOCATIONS. THE CONTRACTOR SHALL PREPARE A FINAL DETAILED BYPASS PLAN FOR APPROVAL.
2. THE DESIGN, INSTALLATION, AND OPERATION OF THE TEMPORARY BYPASS AND PUMPING SYSTEM(S) SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
3. THE CONTRACTOR IS REQUIRED TO FURNISH ALL MATERIAL, LABOR, EQUIPMENT, POWER, MAINTENANCE, ETC. TO IMPLEMENT A TEMPORARY BYPASS AND PUMPING SYSTEM FOR THE PURPOSE OF DIVERTING THE EXISTING FLOW AROUND THE WORK AREAS FOR THE DURATION OF THE PROJECT.
4. CONTRACTOR SHALL USE TRASH PUMPS FOR SEEPAGE DEWATERING. ALL DEWATERING PUMPS SHALL HAVE 3/32" SCREENS. CONTRACTOR SHALL IMPLEMENT PUMP CONTAINMENT TO PREVENT ACCIDENTAL DISCHARGE OF CONTAMINANTS TO ACTIVE/FLOWING WATER.
5. CONTRACTOR SHALL PREVENT UNCURED CONCRETE FROM COMING IN CONTACT WITH ACTIVE/FLOWING WATER.



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**1** **BYPASS DETAIL**  
 SCALE: NOT TO SCALE

**BYPASS PLAN**  
**WOODCOCK CREEK AT GRIMM ROAD**  
**CULVERT REPLACEMENT**

DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

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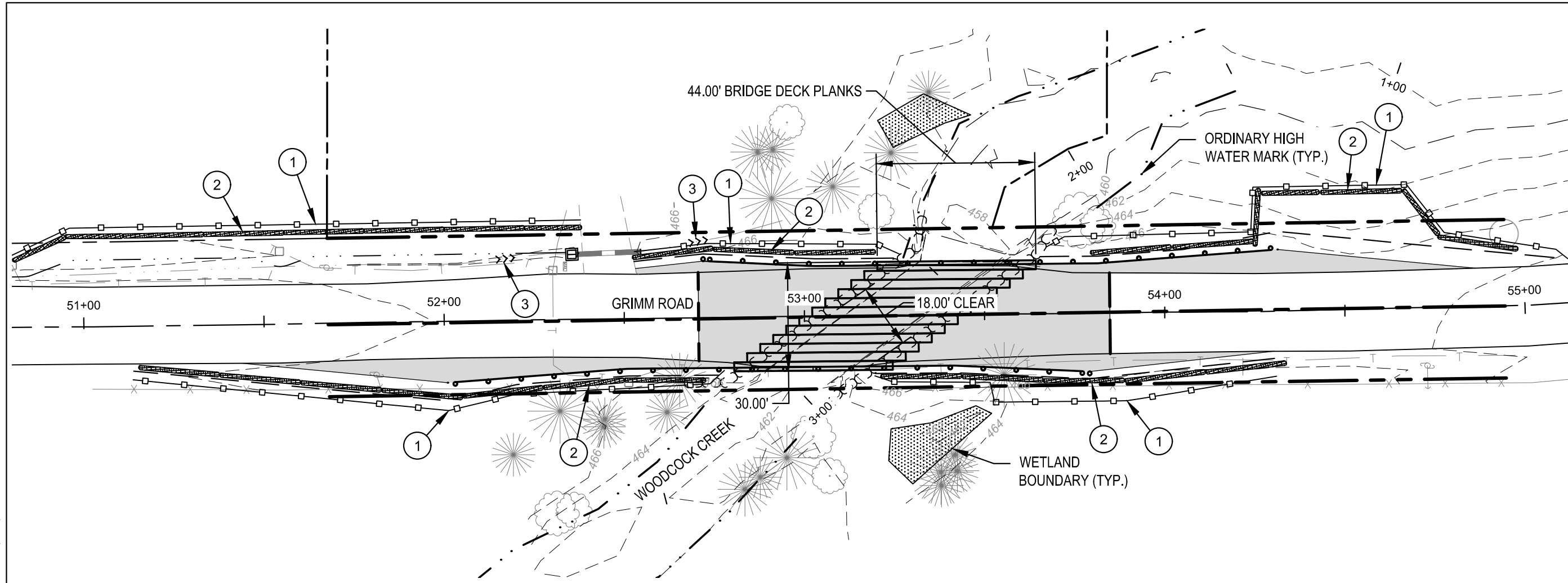
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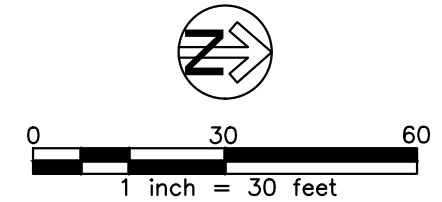


**STREET CONSTRUCTION NOTES**

- ① INSTALL SEDIMENT FENCE FOR DETAILS, SEE ODOT RD1040.
- ② INSTALL SEDIMENT BARRIER, TYPE 8 FOR DETAILS, SEE ODOT RD1032.
- ③ INSTALL CHECK DAM, TYPE 3 - X EA. L = 22', H = 8" FOR DETAILS, SEE ODOT RD1005.
- ④ INSTALL LAWN SEEDING, 6" MINIMUM DEPTH TOPSOIL, AND EROSION CONTROL MATTING, TYPE E AS DIRECTED BY COUNTY

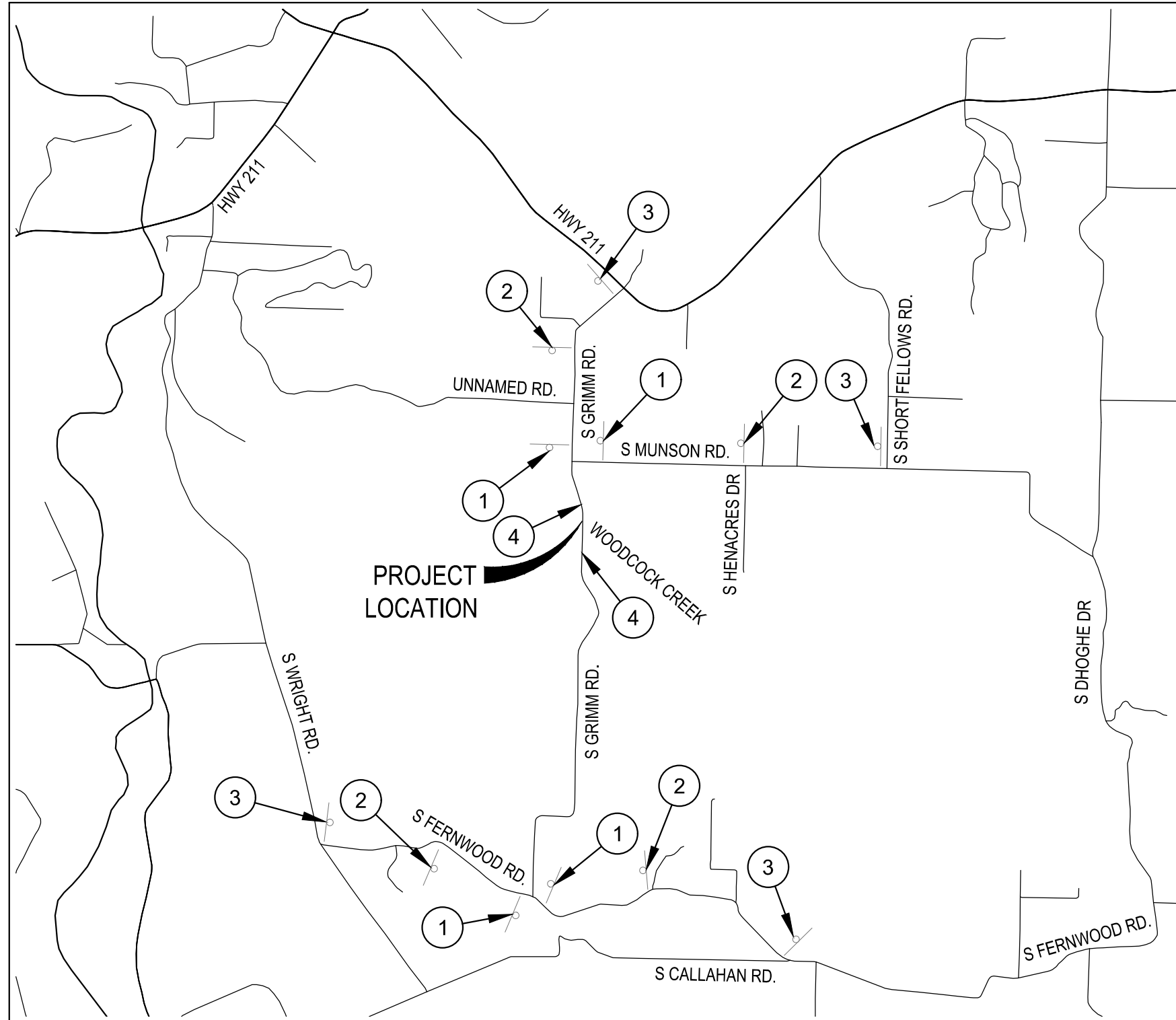
**LEGEND**

- SEDIMENT FENCE
- SEDIMENT BARRIER, TYPE 8
- CHECK DAM, TYPE 3



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<b>EROSION CONTROL PLAN</b>							
WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT							
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NOTES:

1. ALL SIGNS SHALL MOUNTED 1-WEEK PRIOR TO ROAD CLOSURE.
2. SIGNS SHALL BE MOUNTED ON TEMPORARY SIGN SUPPORTS PER ODOT RD821.



60x30

1



48x48  
W20-3

2



60x30

3



T. 5S, R. 2E, SEC. 12

1 WEEK PRIOR TO CLOSURE

GRIMM ROAD CLOSED	MMM DD TO MMM DD
-------------------	------------------

PORTABLE CHANGEABLE MESSAGE SIGN (SUGGESTED MESSAGE) (LOCATE AS DIRECTED) 2 REQD.

4

DURING CLOSURE

ROAD CLOSED X MILE	USE ALT ROUTE
--------------------	---------------

PORTABLE CHANGEABLE MESSAGE SIGN (SUGGESTED MESSAGE) (LOCATE AS DIRECTED)

4

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DETOUR PLAN

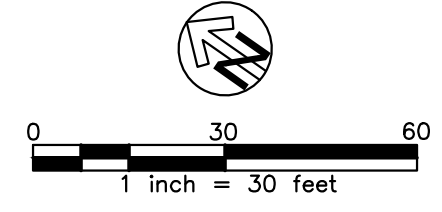
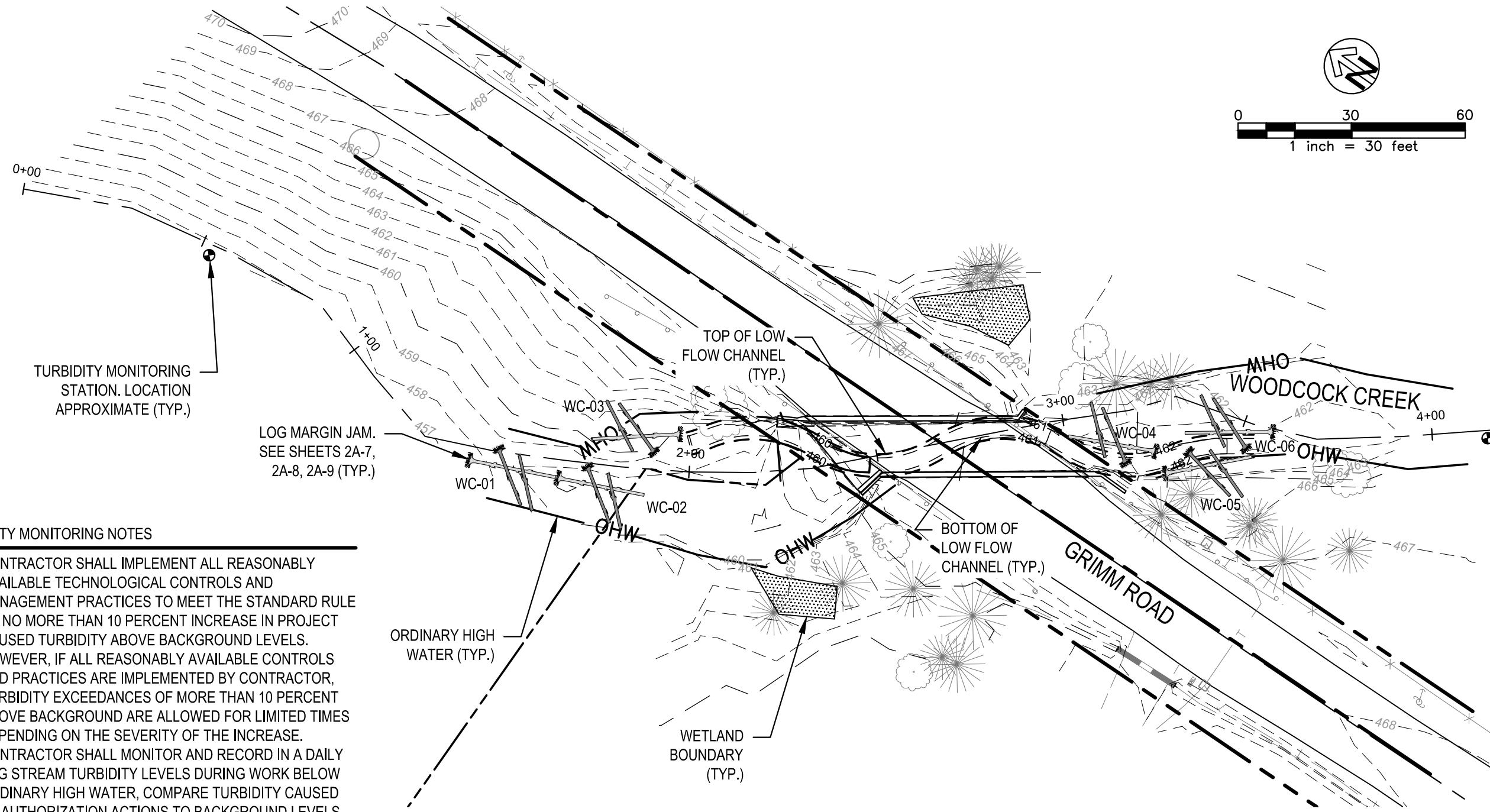
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

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TURBIDITY MONITORING STATION. LOCATION APPROXIMATE (TYP.)

LOG MARGIN JAM. SEE SHEETS 2A-7, 2A-8, 2A-9 (TYP.)

**TURBIDITY MONITORING NOTES**

1. CONTRACTOR SHALL IMPLEMENT ALL REASONABLY AVAILABLE TECHNOLOGICAL CONTROLS AND MANAGEMENT PRACTICES TO MEET THE STANDARD RULE OF NO MORE THAN 10 PERCENT INCREASE IN PROJECT CAUSED TURBIDITY ABOVE BACKGROUND LEVELS. HOWEVER, IF ALL REASONABLY AVAILABLE CONTROLS AND PRACTICES ARE IMPLEMENTED BY CONTRACTOR, TURBIDITY EXCEEDANCES OF MORE THAN 10 PERCENT ABOVE BACKGROUND ARE ALLOWED FOR LIMITED TIMES DEPENDING ON THE SEVERITY OF THE INCREASE.
2. CONTRACTOR SHALL MONITOR AND RECORD IN A DAILY LOG STREAM TURBIDITY LEVELS DURING WORK BELOW ORDINARY HIGH WATER, COMPARE TURBIDITY CAUSED BY AUTHORIZATION ACTIONS TO BACKGROUND LEVELS, AND ADAPT ACTIVITIES TO MINIMIZE PROJECT-CAUSED TURBIDITY.
3. CONTRACTOR SHALL IDENTIFY TWO MONITORING LOCATIONS IN THE DAILY LOG.
  - 3.1. BACKGROUND LOCATION SHALL BE A RELATIVELY UNDISTURBED LOCATION, APPROXIMATELY 100-FT UPSTREAM OF THE DISTURBING ACTIVITY.
  - 3.2. COMPLIANCE LOCATION SHALL BE A LOCATION DOWNSTREAM OF THE DISTURBING ACTIVITY, AT APPROXIMATELY MID-DEPTH, WITHIN ANY VISIBLE PLUME, AT THE DISTANCE THAT CORRESPONDS TO THE SIZE OF THE WATER BODY WHERE WORK IS TAKING PLACE.

**STREAM PLAN**

WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

PROJECT NO.: XX-XXXXX  
DATE: JANUARY 2020

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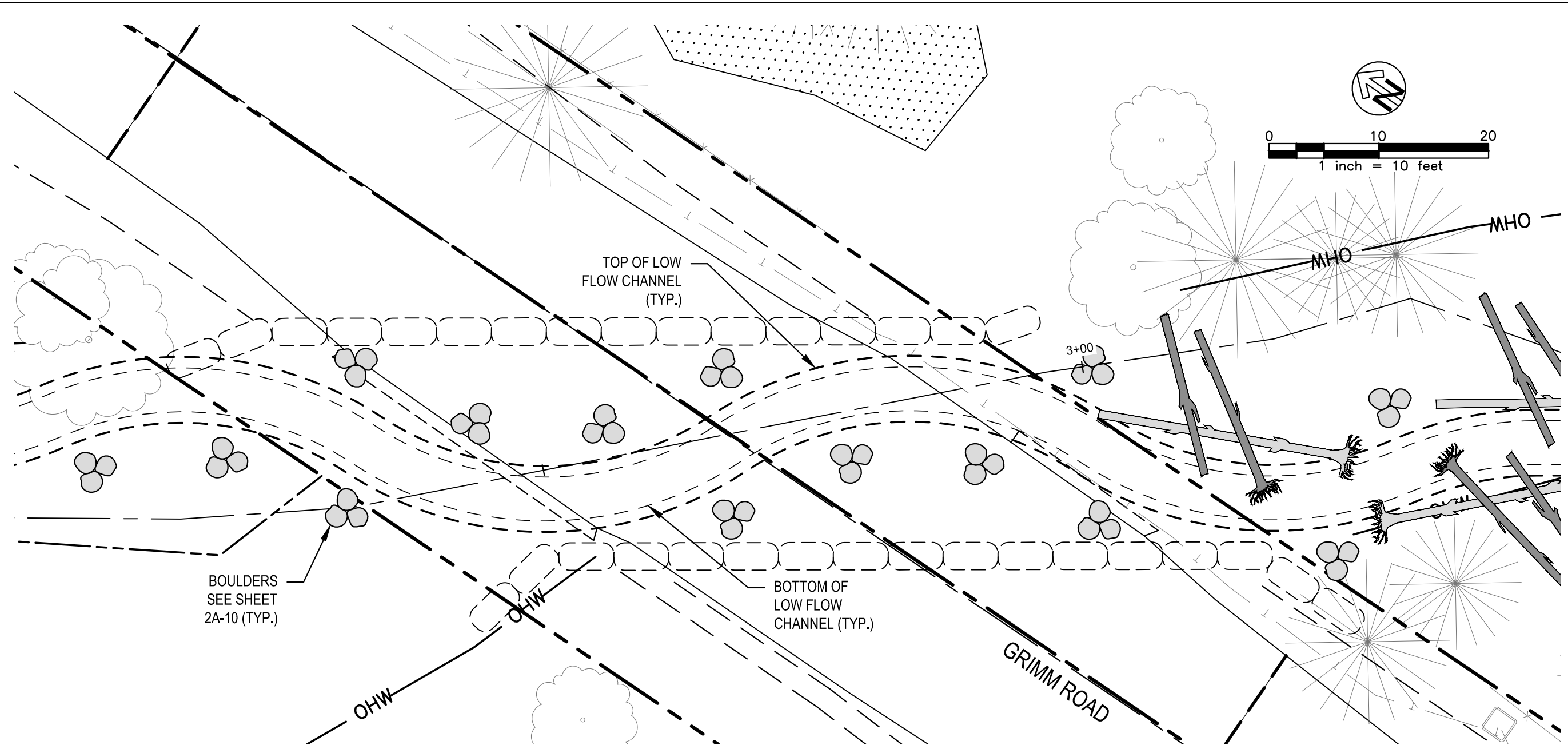
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BOULDERS  
SEE SHEET  
2A-10 (TYP.)

TOP OF LOW  
FLOW CHANNEL  
(TYP.)

BOTTOM OF  
LOW FLOW  
CHANNEL (TYP.)

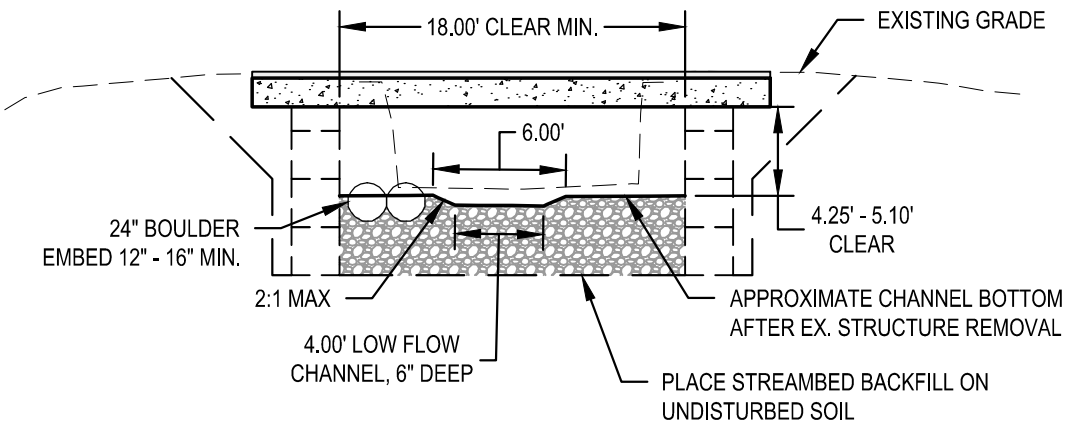
GRIMM ROAD

3+00

OHW

MHO

MHO



TYPICAL LOW FLOW CHANNEL SECTION

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STREAMBED BACKFILL  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

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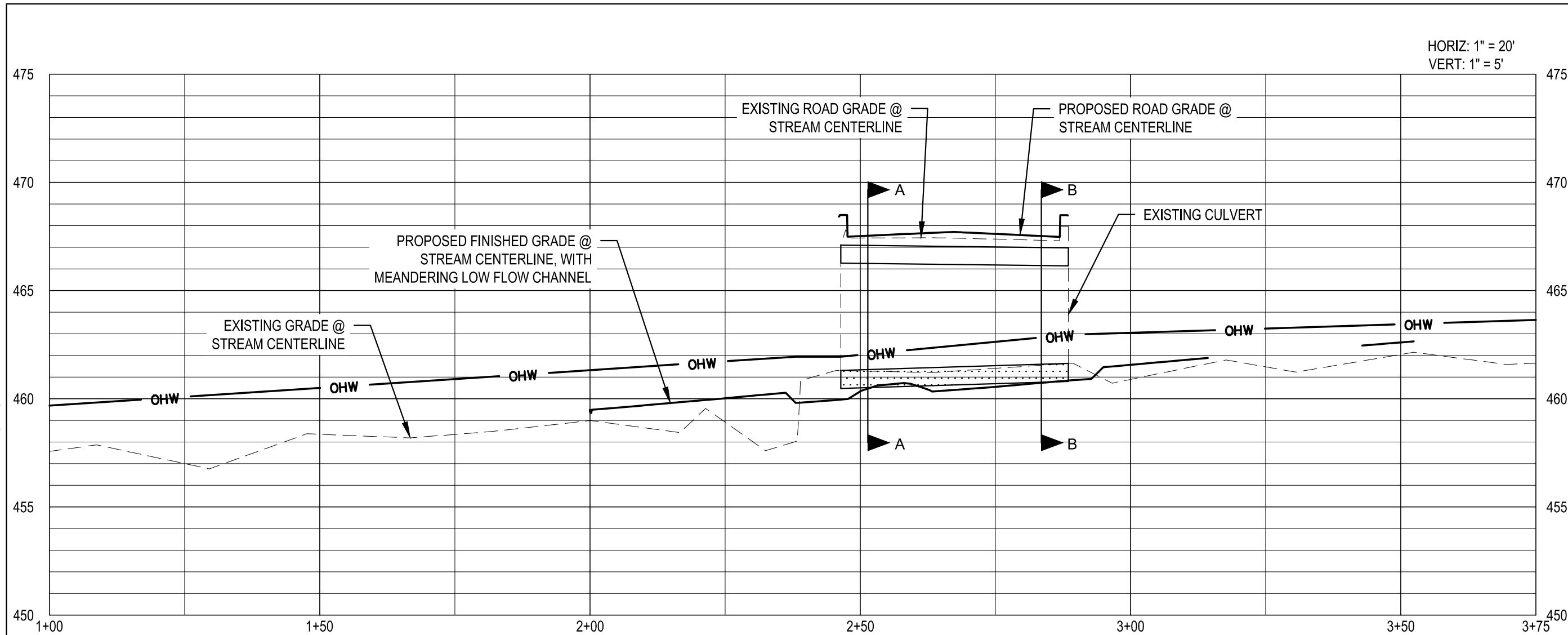
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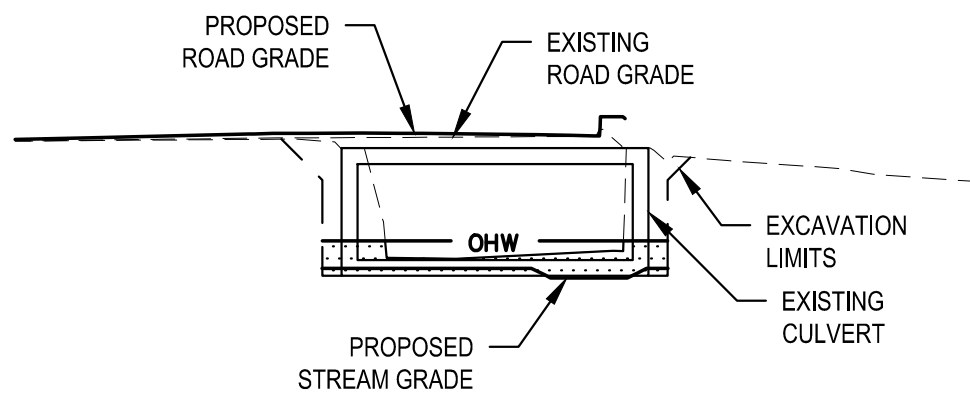
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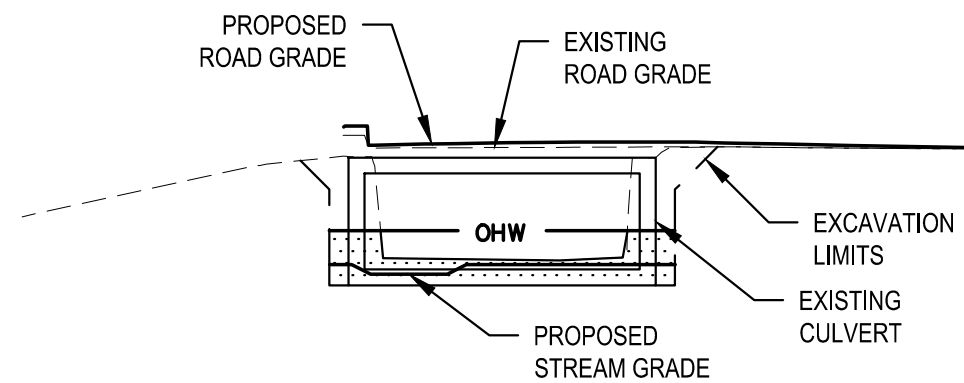
WOODCOCK CREEK - CENTERLINE PROFILE (EXISTING CULVERT)

**PERMANENT WATER IMPACTS:**  
EXISTING CULVERT REMOVAL AND BACKFILL  
REMOVAL: 2,000 SF, 74 CY



SECTION A-A - EXISTING CULVERT

SCALE: 1" = 10'



SECTION B-B - EXISTING CULVERT

SCALE: 1" = 10'

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**STREAM PROFILE**  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT  
DATE: JANUARY 2020  
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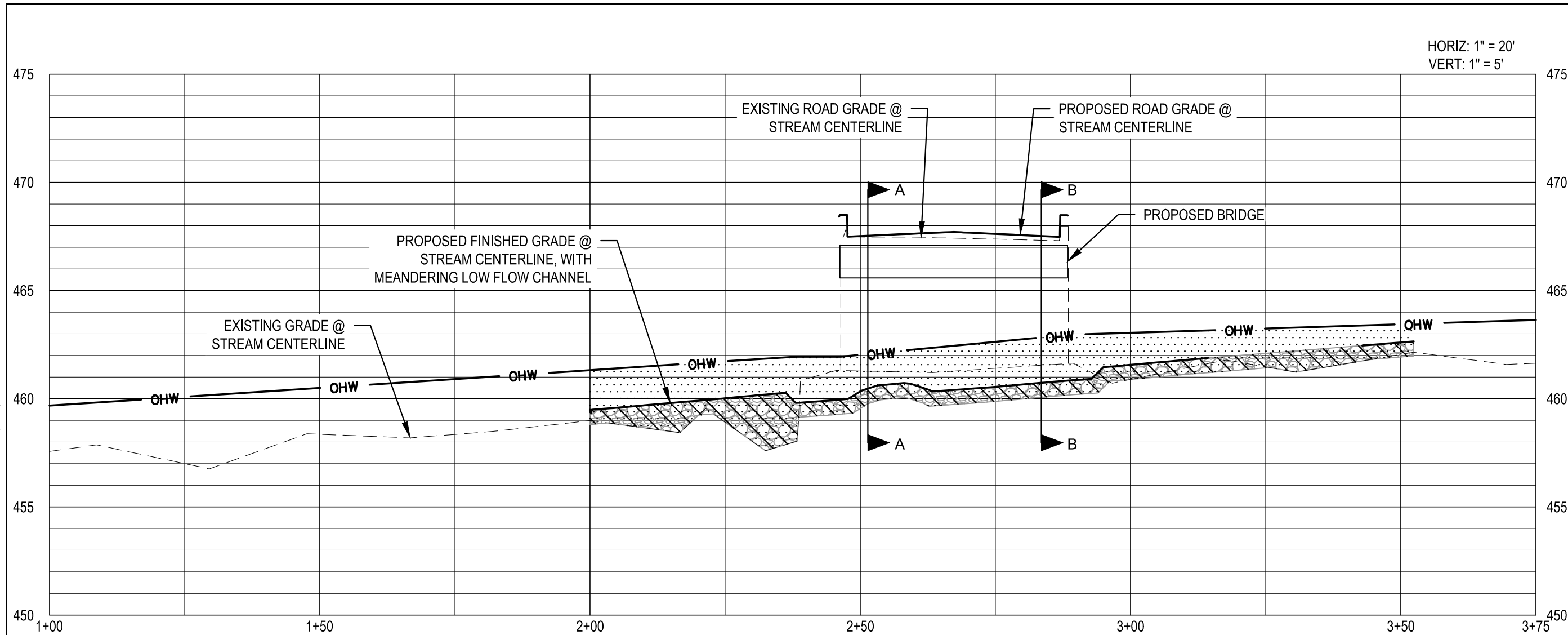
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NO	DATE	REVISIONS

Sheet No. 3B

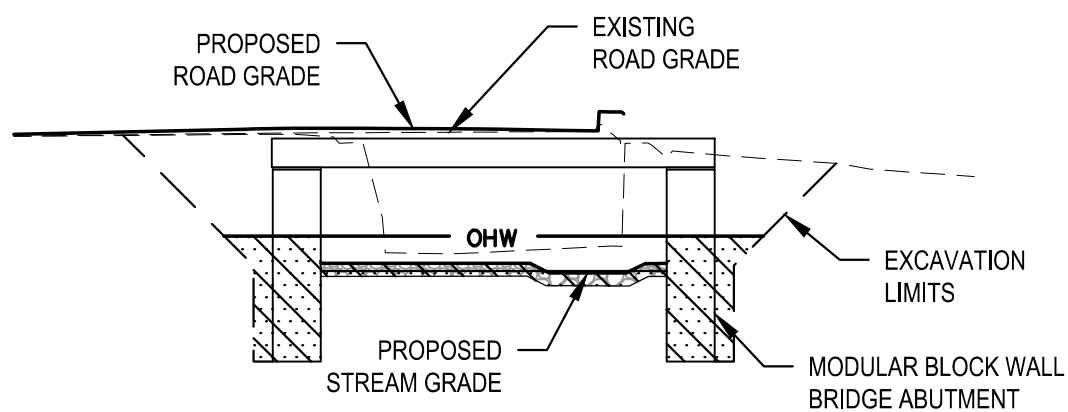
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HORIZ: 1" = 20'  
VERT: 1" = 5'

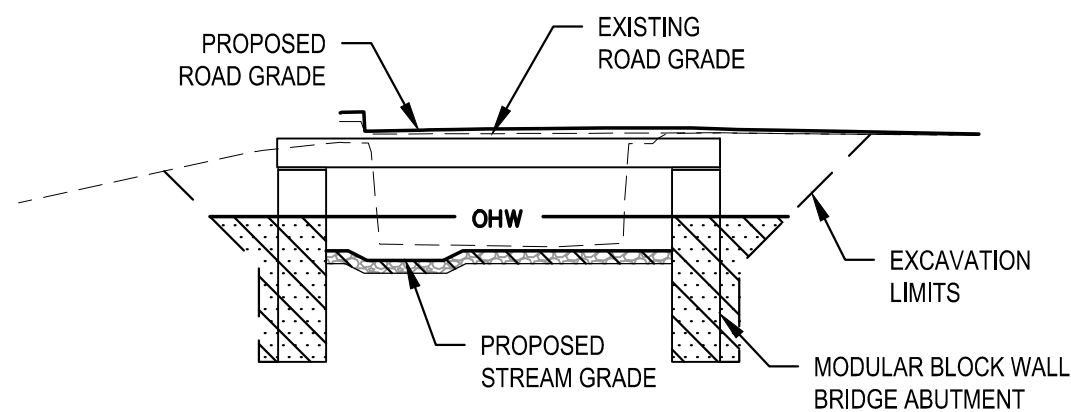
WOODCOCK CREEK - CENTERLINE PROFILE (PROPOSED BRIDGE)

**PERMANENT WATER IMPACTS:**  
 PROPOSED BRIDGE REMOVAL AND BACKFILL  
 REMOVAL: 4,940 SF, 183 CY  
 FILL: 5,640 SF, 209 CY



SECTION A-A - PROPOSED BRIDGE

SCALE: 1" = 10'



SECTION B-B - PROPOSED BRIDGE

SCALE: 1" = 10'

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**STREAM PROFILE**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT

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**CLACKAMAS COUNTY**

DAN JOHNSON  
 DIRECTOR

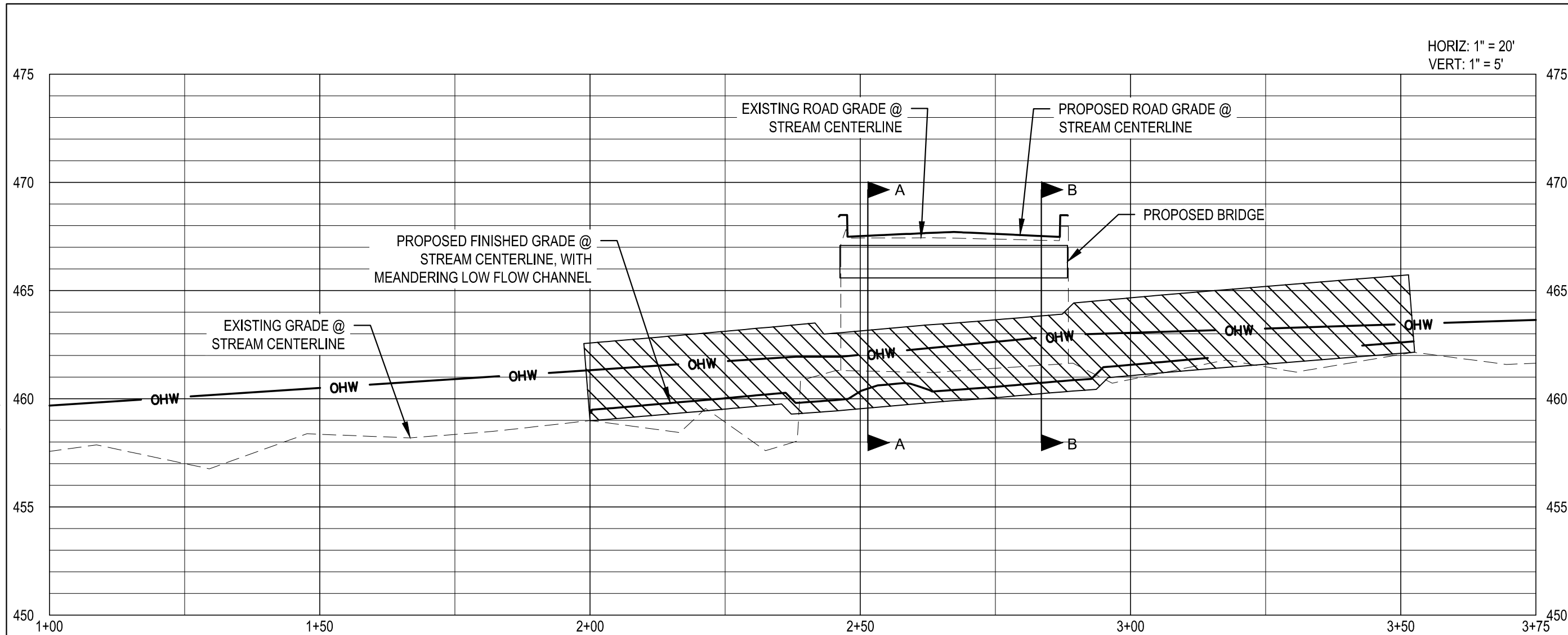
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 DRAFTED BY: RPM  
 CHECKED BY: CJ

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Sheet No. 3C

DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

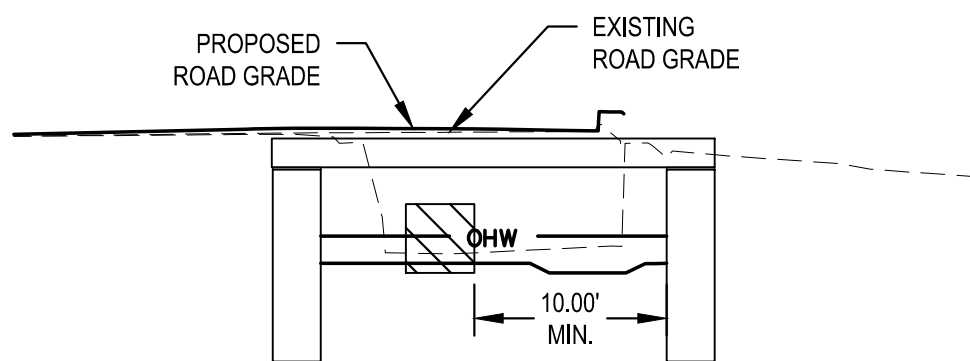
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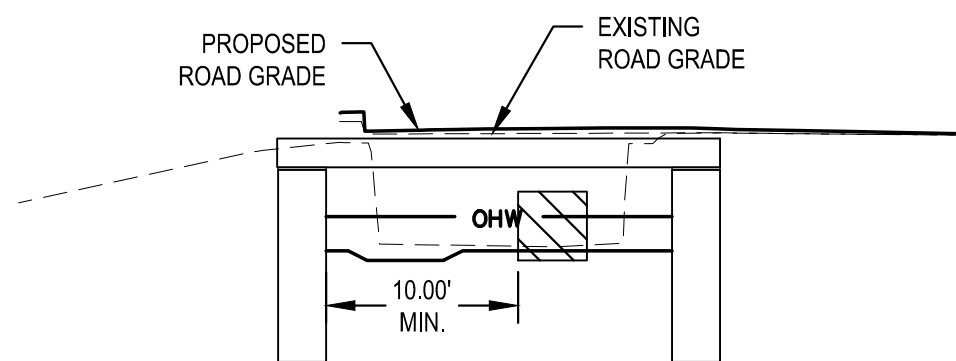
WOODCOCK CREEK - CENTERLINE PROFILE (DEWATERING)

**PERMANENT WATER IMPACTS:**  
DEWATERING REMOVAL AND BACKFILL  
FILL: 4,940 SF, 183 CY



SECTION A-A - SOUTH ABUTMENT (DEWATERING)

SCALE: 1" = 10'



SECTION B-B - NORTH ABUTMENT (DEWATERING)

SCALE: 1" = 10'

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**STREAM PROFILE**  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

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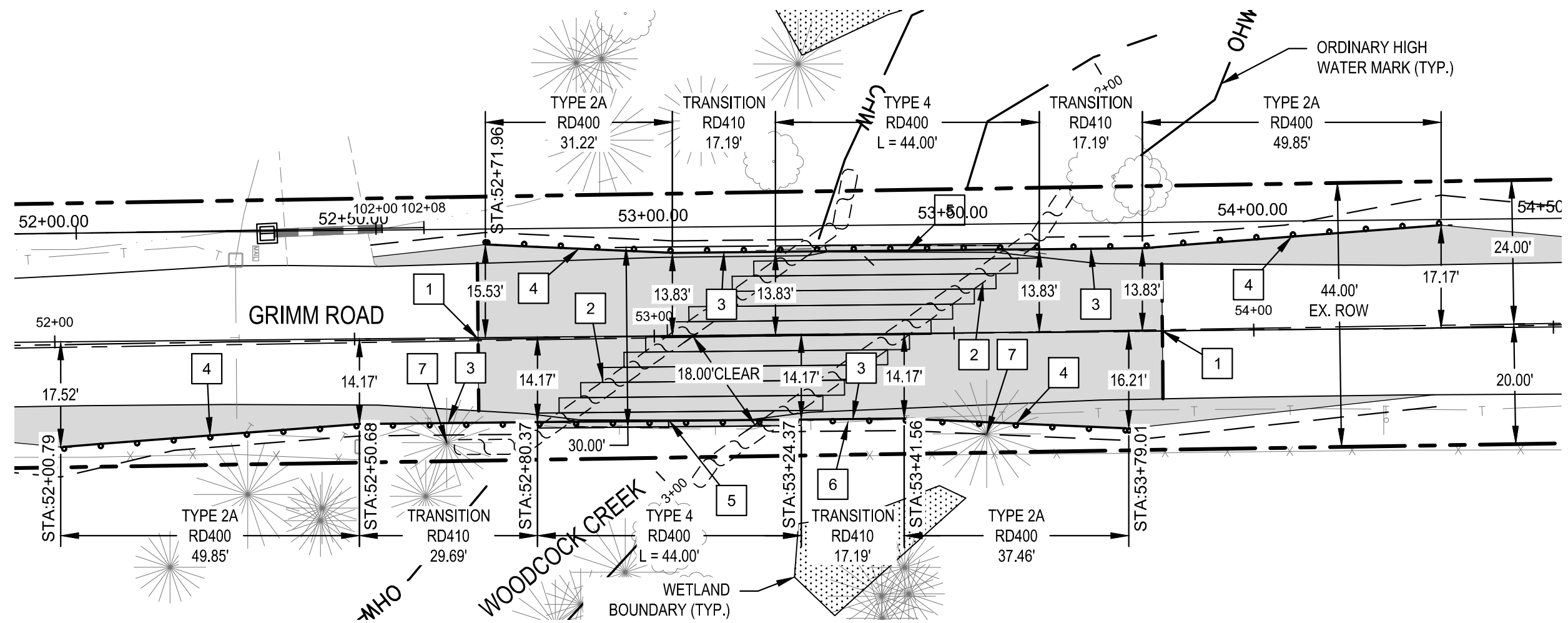
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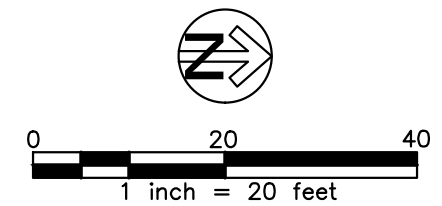
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**STREET CONSTRUCTION NOTES**

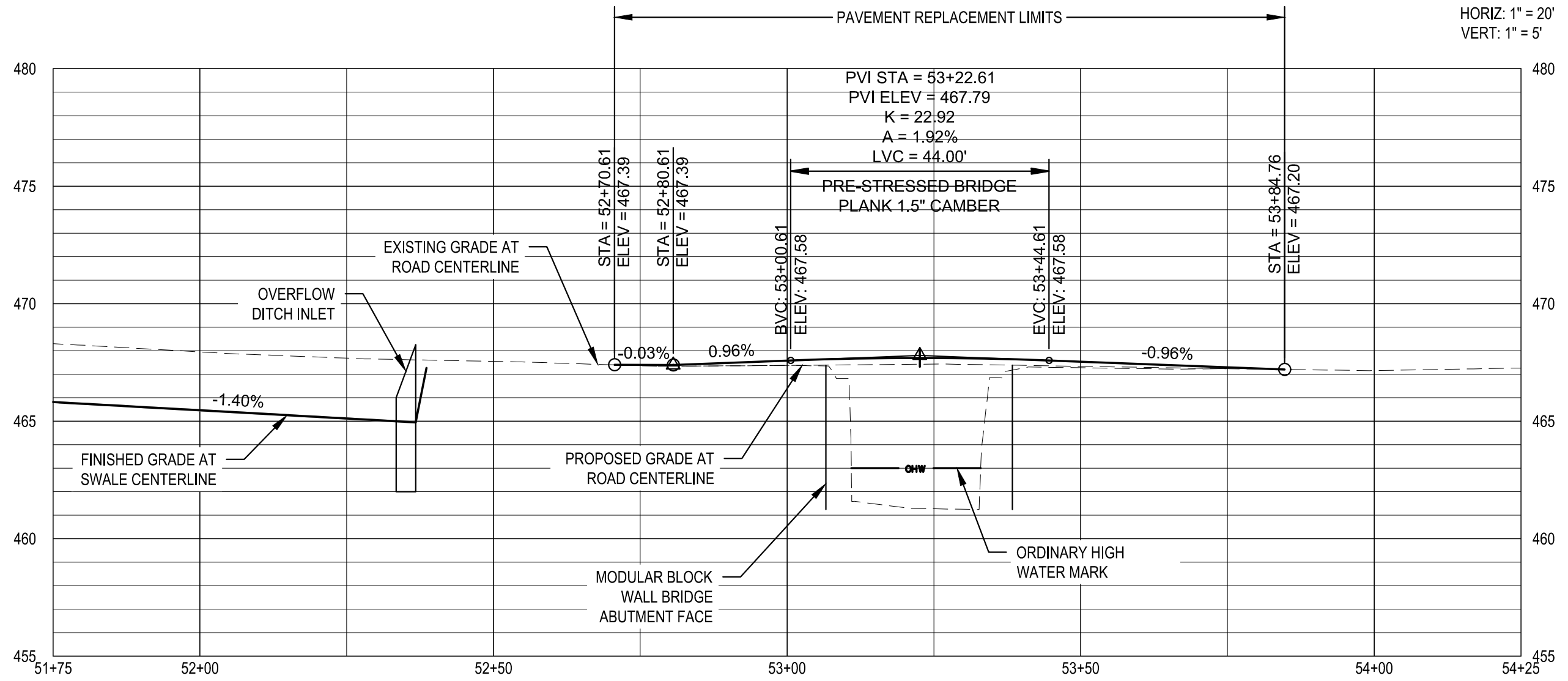
- |   |   |
|---|---|
| <p>1 STA. 52+71.98 TO STA. 53+72<br/>SAWCUT EXISTING ASPHALT<br/>CONSTRUCT NEW ROADWAY<br/>FOR DETAILS, SEE SHEETS 2A THRU 2A-3</p> <p>2 NONPROPRIETARY MODULAR BLOCK WALL<br/>BRIDGE ABUTMENT SYSTEM OR<br/>PREARROVED PROPRIETARY MODULAR<br/>BLOCK WALL BRIDGE ABUTMENT SYSTEM .</p> <p>3 INSTALL WEATHERIZED GUARDRAIL<br/>TRANSITION. FOR DETAILS, SEE ODOT<br/>RD410.</p> <p>4 INSTALL WEATHERIZED TYPE 2A<br/>GUARDRAIL, TYPE 1 ANCHORS, AND TYPE B<br/>END PIECES. FOR DETAILS, SEE ODOT<br/>RD400, RD405, AND RD415.</p> <p>5 INSTALL WEATHERIZED TYPE 4 GUARDRAIL.<br/>FOR DETAILS, SEE ODOT BR233, RD400,<br/>RD405 AND RD415.</p> | <p>6 TELECOM TEMPORARY RELOCATION<br/>AND REINSTALLATION IN NEW PRECAST<br/>CONDUIT SLEEVES (BY OTHERS)</p> <p>7 REMOVE EXISTING TREES AND<br/>VEGETATION WITHIN RIGHT-OF-WAY FOR<br/>CONSTRUCTION OF WALL.</p> <p>8 REINSTALL LONGITUDINAL PAVEMENT<br/>MARKING IN KIND.</p> |
|---|---|



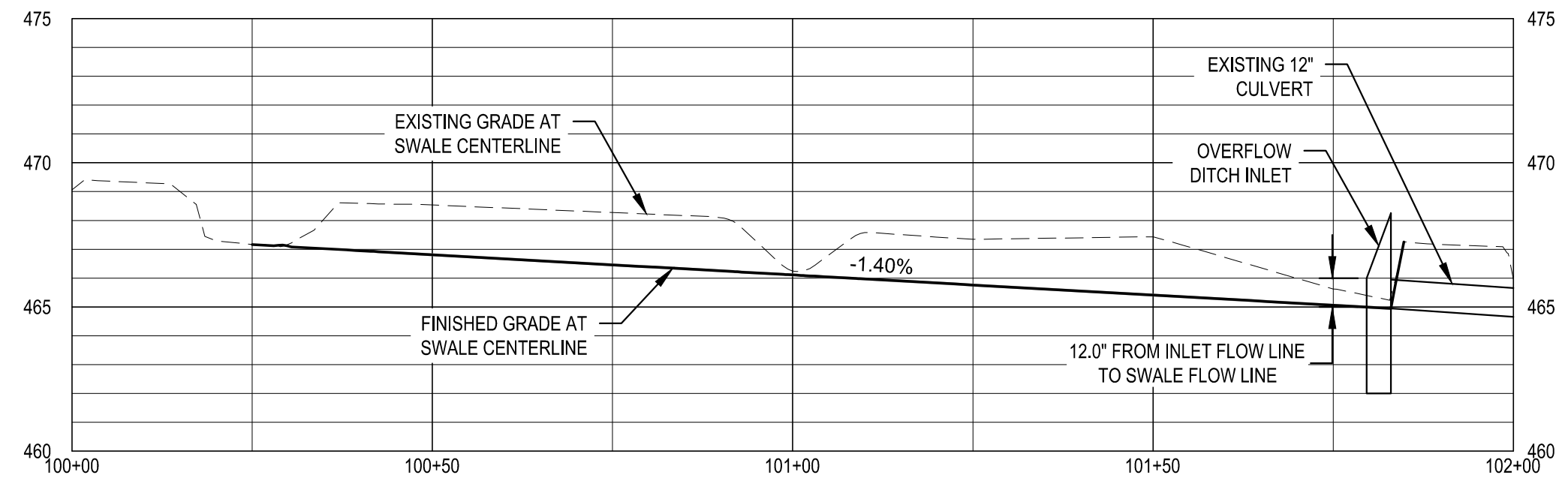
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<b>CONSTRUCTION NOTES &amp; PLAN</b>													
WOODCOCK CREEK AT GRIMM ROAD CULVERT REPLACEMENT													
DATE: JANUARY 2020	PROJECT NO.: XX-XXXX												
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CLACKAMAS COUNTY													
DAN JOHNSON DIRECTOR													
DESIGNED BY: RPM	CHECKED BY: CJ												
DRAFTED BY: RPM													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 10%;">DATE</th> <th style="width: 80%;">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		NO.	DATE	REVISIONS									
NO.	DATE	REVISIONS											
Sheet No. 4A													

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GRIMM ROAD - CENTERLINE PROFILE (PROPOSED)



SWALE - CENTERLINE PROFILE (PROPOSED)

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**CONSTRUCTION PROFILE**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT

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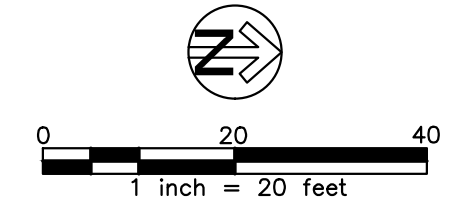
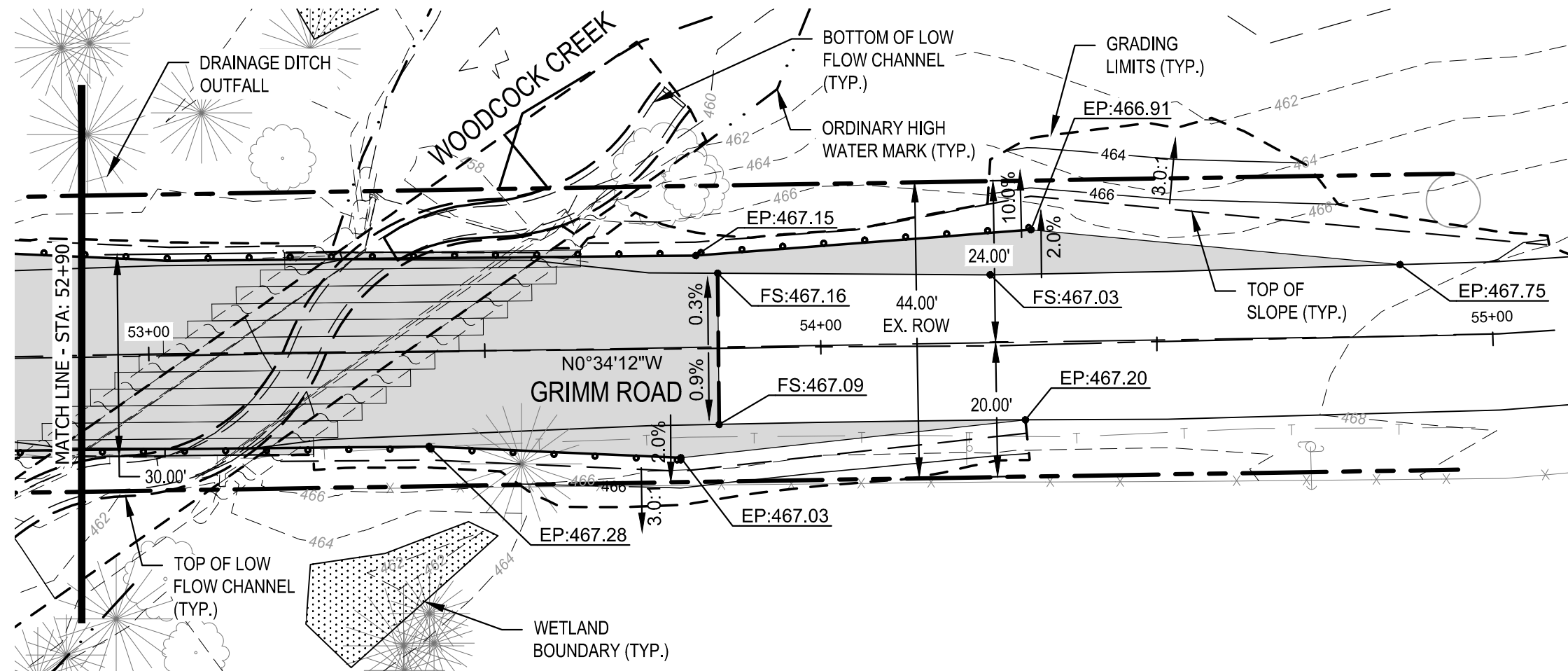
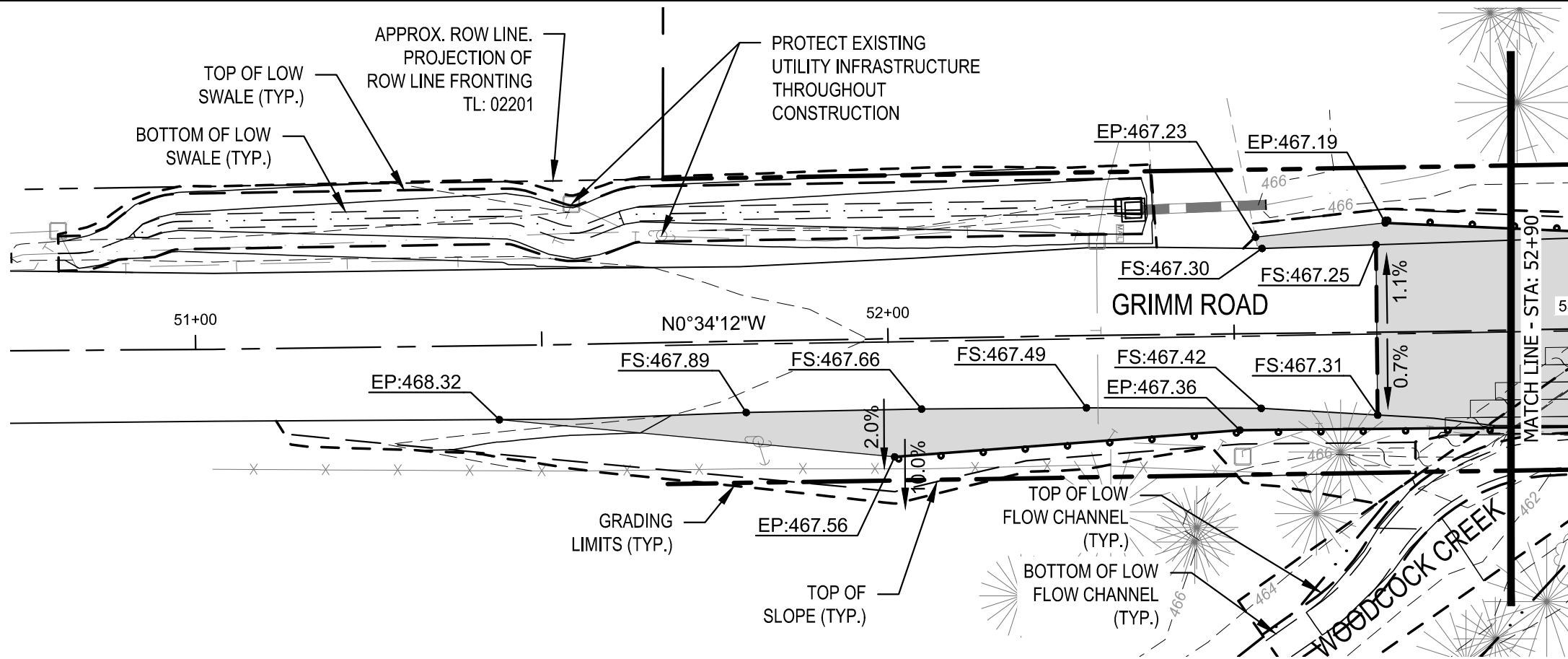
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**GRADING PLAN**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT

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Sheet No. 4C

DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

**DESIGN CRITERIA AND LOADINGS**

1. BRIDGE STRUCTURE SHALL BE DESIGNED TO COMPLY WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS DESIGN PROVISIONS, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014.
2. BRIDGE STRUCTURE DESIGN DEAD LOADS SHALL INCLUDE WEIGHT OF ALL PERMANENT BRIDGE STRUCTURE COMPONENTS AND THE FOLLOWING:
  - 2.1. FUTURE ACP WEARING SURFACE, 2" THICK
  - 2.2. DESIGN ACP WEARING SURFACE, 3.4" THICK
  - 2.3. DESIGN ACP BASE COURSE, 3.4" THICK
3. VEHICULAR LIVE LOAD
  - 3.1. SERVICE AND STRENGTH I LIMIT STATES: "HL-93" DESIGN TRUCK
  - 3.2. STRENGTH II LIMIT STATE: OR-STP-5BW
4. ABUTMENT AND WING WALL BACKFILL SOIL DESIGN PARAMETERS
  - 4.1. FAILURE STATE: AT REST
  - 4.2. DENSITY: 125 PCF
  - 4.3. COEFFICIENT OF INTERNAL FRICTION: 34 DEG.
5. SEISMIC DESIGN SHALL BE IN ACCORDANCE WITH 2ND EDITION OF THE "AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN".
6. GRS WING WALLS SHALL BE DESIGNED PER THE GEOSYNTHETIC REINFORCED SOIL INTEGRATED BRIDGE SYSTEM INTERIM IMPLEMENTATION GUIDE, FHWA-HRT-11-026, MAY 2012.

**GRS WINGWALL SYSTEM**

1. PROVIDE GRS FABRIC MARIFI HP570 OR APPROVED EQUAL.

**CONCRETE**

1. GENERAL
  - 1.1. CONCRETE SHALL COMPLY WITH ACI 301.
  - 1.2. USE NORMAL WEIGHT CONCRETE (145 ± 5 PCF) CONCRETE.
  - 1.3. AIR ENTRAINMENT VOLUME: 5% ± 1%.
  - 1.4. CONCRETE SHALL HAVE A MINIMUM CEMENT CONTENT OF 6 SACKS PER CUBIC YARD.
  - 1.5. CAST CONCRETE USING A MAXIMUM WATER/CEMENT RATIO OF 5-1/2 GAL PER SACK OF CEMENT.
2. PRECAST BRIDGE PLANKS
  - 2.1. MINIMUM 28-DAY STRENGTH: 5,000 PSI
  - 2.2. MINIMUM STRENGTH AT REMOVAL FROM FORM: 4,500 PSI
  - 2.3. AGGREGATES LARGER THAN 1" SHALL NOT BE USED.
3. PRECAST ABUTMENT BLOCK, FOOTING PLANK, AND/OR CLOSURE PANEL UNITS
  - 3.1. MINIMUM 28-DAY STRENGTH: 3,000 PSI
  - 3.2. MINIMUM STRENGTH AT REMOVAL FROM FORM: 2,000 PSI
  - 3.3. AGGREGATES LARGER THAN 3" SHALL NOT BE USED.

**MORTARS AND GROUTS**

1. PROVIDE NON-CORROSIVE NON-SHRINK CEMENTITIOUS GROUT. GROUT SHOULD BE IN A POURABLE CONSISTENCY WHEN PLACED IN LONGITUDINAL JOINTS BETWEEN BRIDGE DECK PLANKS.
  - 1.1. PROVIDE PRE-MOLDED COMPRESSIBLE BACK RODS ALONG BOTTOM AND AT ENDS OF ALL JOINTS TO RETAIN GROUT.
  - 1.2. FILL AREA AROUND TRANSVERSE ROD SLEEVES IN KEYWAY USING GROUT IN A PLASTIC CONSISTENCY. FILL TO ABOVE KEYWAY TO ENSURE THAT GROUT DOES NOT LEAK INTO VOID IN SLAB DURING KEYWAY GROUTING OPERATION.
  - 1.3. FILL LONGITUDINAL JOINTS FLUSH WITH TOP SURFACE OF PLANKS.
2. PROVIDE NON-CORROSIVE NON-SHRINK CEMENTITIOUS GROUT. GROUT SHOULD BE IN A FLUID CONSISTENCY WHEN PLACED BETWEEN TOP OF TOP ABUTMENT BLOCK UNITS AND UNDERSIDE OF PRECAST DECK PLANK UNITS.
  - 2.1. PROVIDE WOOD SETTING BLOCKS, PRE-MOLDED COMPRESSIBLE BACKER RODS, AND/OR EXPANDABLE, CLOSED-CELL, EXPANDABLE FOAM AROUND PERIMETER OF TOP ABUTMENT BLOCK(S) TO RETAIN GROUT.
3. FILL VERTICAL CYLINDRICAL VOIDS
  - 3.1. AROUND ABUTMENT-TO-DECK ANCHOR DOWEL PINS.
  - 3.2. AROUND ABUTMENT BLOCK VERTICAL POST TENSIONING RODS.
4. VIBRATE GROUT AS REQUIRED TO ENSURE ALL VOIDS ARE COMPLETELY FILLED.

**SOILS, FOUNDATIONS AND BACKFILLS**

1. REFER TO REPORT OF GEOTECHNICAL SERVICES, GRIMM ROAD BRIDGE REPLACEMENT AT WOODCOCK CREEK, PREPARED BY PALI CONSULTING, DATED AUGUST 28, 2019, FOR SITE SPECIFIC GEOTECHNICAL RECOMMENDATIONS.
2. REMOVE ANY EXISTING FILL, ANY EXISTING SILTY, SAND-SILT, OR CLAY-SILT SOIL, OR ANY SOIL THAT IS LOOSE OR HAS BEEN DISTURBED DOWN TO EXISTING VERY DENSE GRAVEL OR FOR A MINIMUM WIDTH OF 3'-6" EXTENDING AT LEAST 6" BEYOND FRONT AND BACK FACES OF FOOTING UNITS.
3. PROVIDE IMPORTED ANGULAR CRUSHED ROCK BASE PER DESIGN PLANS WHERE EXCAVATION OF FILL AND/OR SILT EXTENDS BELOW BOTTOM ELEVATION OF ABUTMENT BLOCKS.
4. IMPORTED BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION.
5. PROVIDE A NON-WOVEN, NEEDLE-PUNCHED SOIL FILTER FABRIC WITH A MINIMUM WEIGHT OF 4 OZ PER SY BETWEEN BACKFILL SOIL AND BACK FACE OF ABUTMENT WALL AND WING WALL EXTENSIONS.
  - 5.1. LAP ALL JOINTS, HORIZONTAL AND VERTICAL, A MINIMUM OF 6".
6. USE ONLY FREE-DRAINING GRANULAR MATERIAL AS BACKFILL BEHIND ABUTMENT WALLS AND WING WALLS. COMPACT MATERIAL PLACED BEHIND WALL TO 95% RELATIVE COMPACTION USING ONLY LIGHT OR HAND-OPERATED COMPACTION EQUIPMENT.
7. INSTALL SOIL IN FRONT OF ABUTMENT WALLS SIMULTANEOUSLY WITH BACKFILL BEHIND ABUTMENT WALLS. INSTALL BACKFILL AGAINST BACK FACE OF ABUTMENT WALLS NO MORE THAN 6'-0" ABOVE ELEVATION OF SOIL PLACED AGAINST FRONT FACE UNTIL AFTER ABUTMENT WALL VERTICAL REINFORCEMENT HAS BEEN GROUTED AND ONLY AFTER BRIDGE DECK PLANK UNITS HAVE BEEN DOWEL, ANCHORED AND GROUTED TO TOP OF ABUTMENT WALLS AT EACH END.

**BRIDGE STRUCTURAL GENERAL NOTES**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT  
 DATE: JANUARY 2020  
 PROJECT NO.: XX-XXXX



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DIRECTOR

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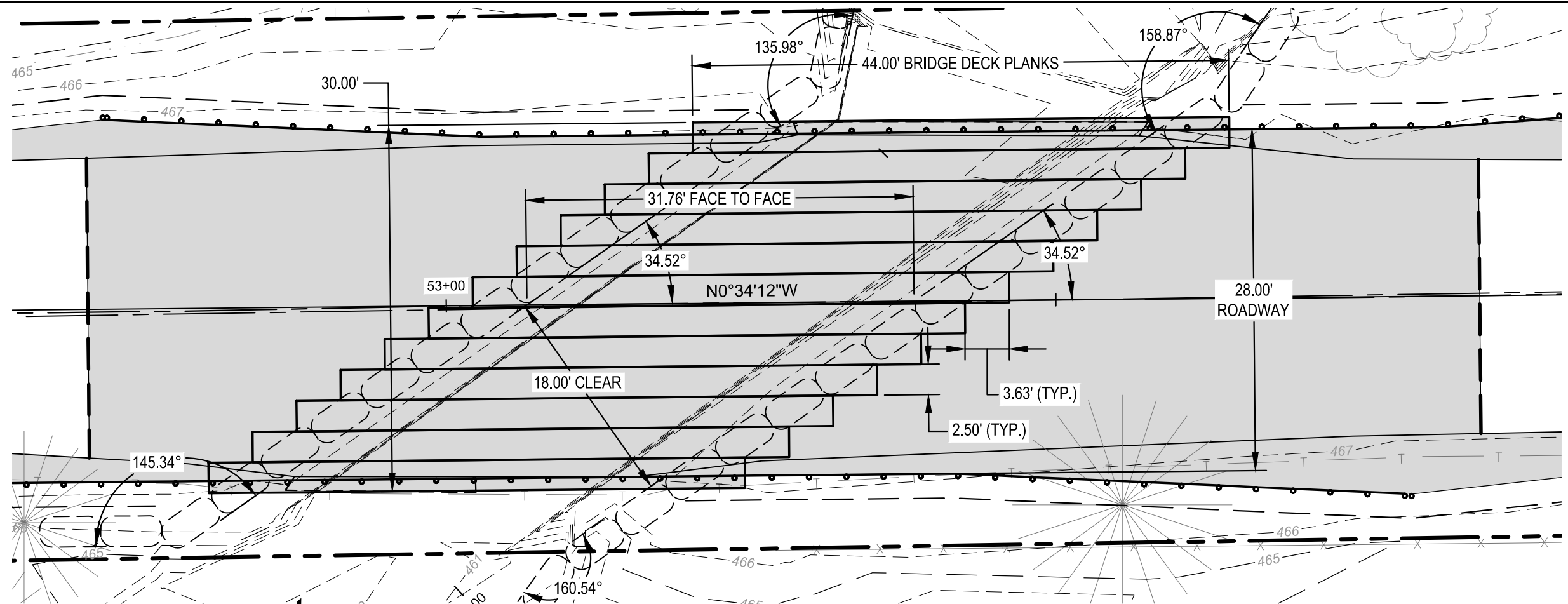
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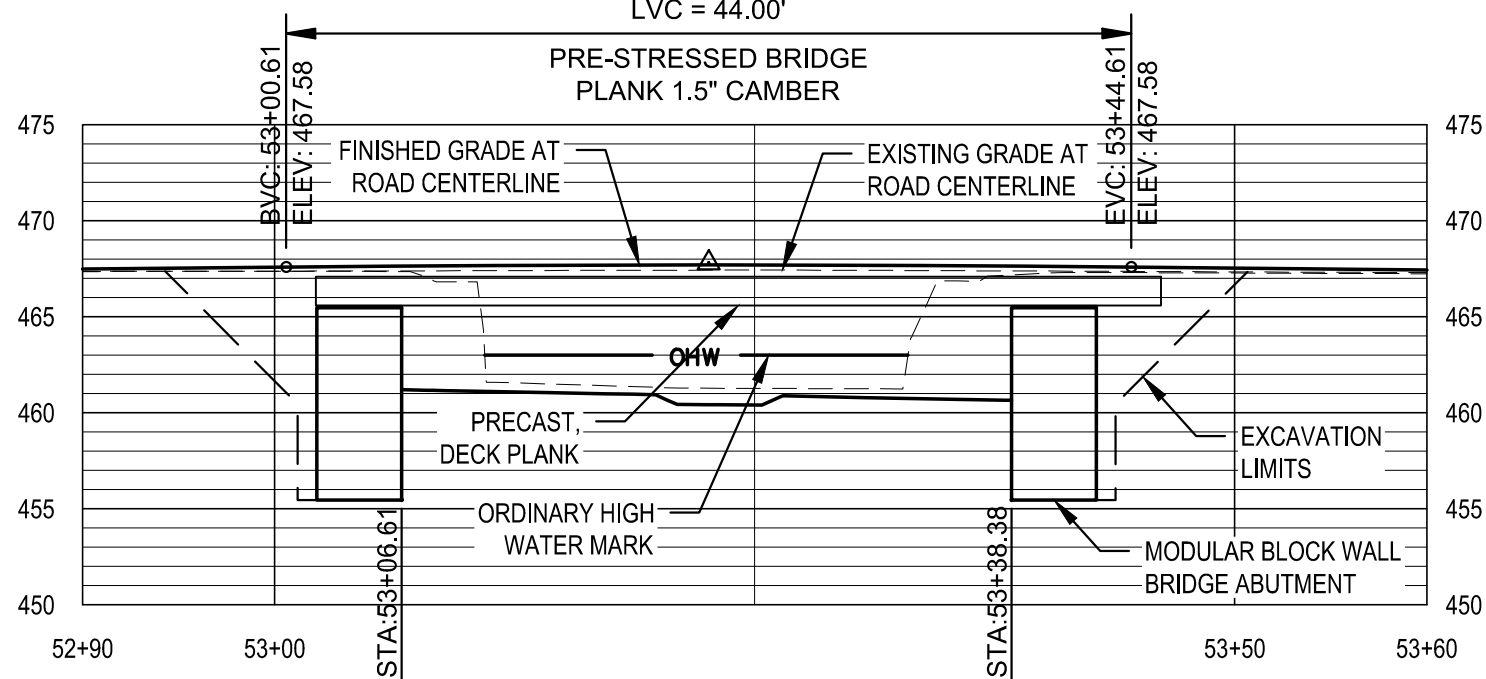
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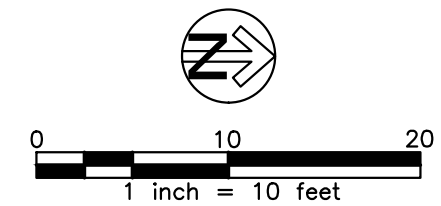
GRIMM ROAD - BRIDGE CENTERLINE PLAN

PVI STA = 53+22.61  
 PVI ELEV = 467.79  
 K = 22.92  
 A = 1.92%  
 LVC = 44.00'

HORIZ: 1" = 10'  
 VERT: 1" = 10'



GRIMM ROAD - BRIDGE CENTERLINE PROFILE



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**BRIDGE PLAN & PROFILE**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT  
 DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX

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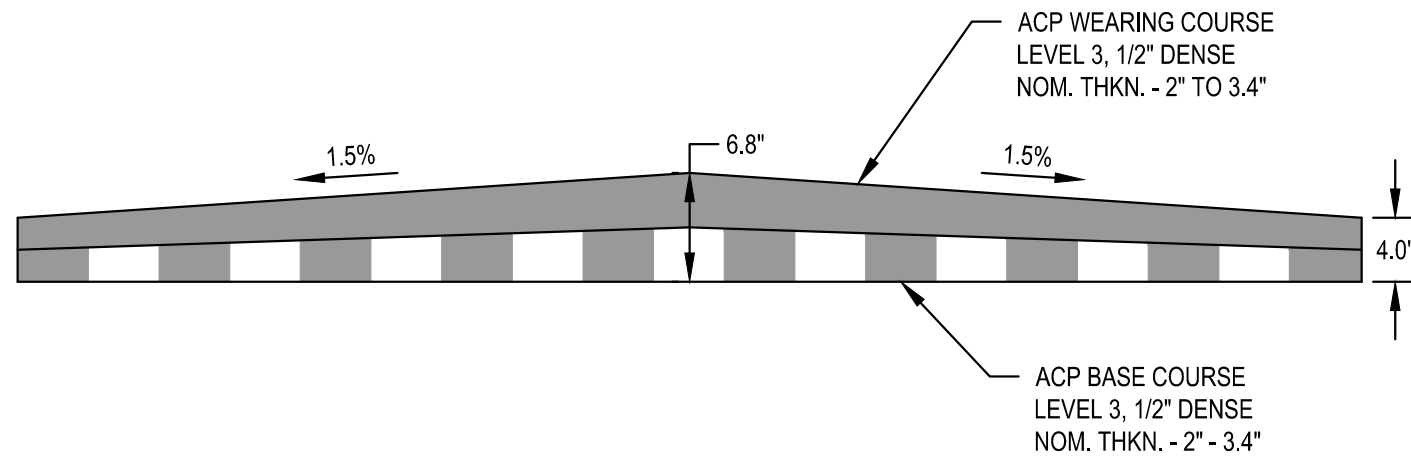
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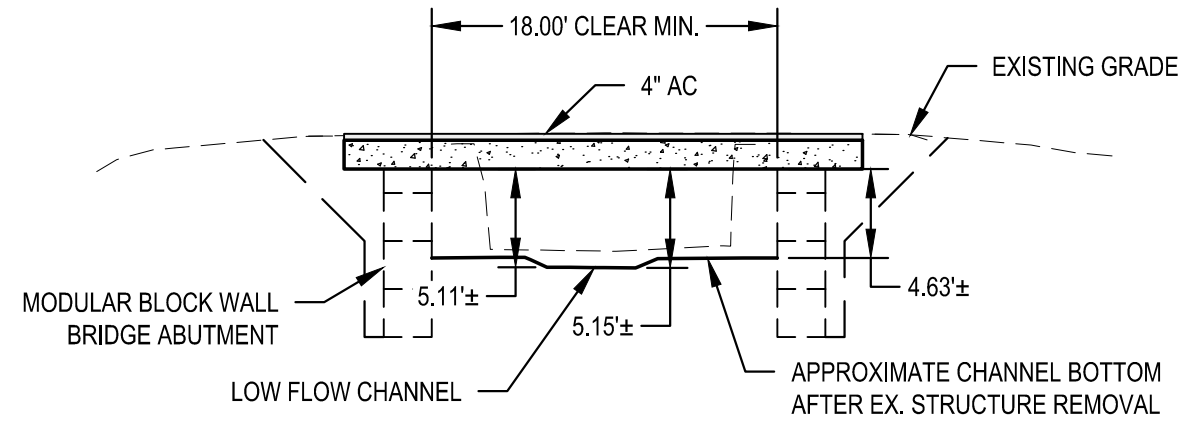
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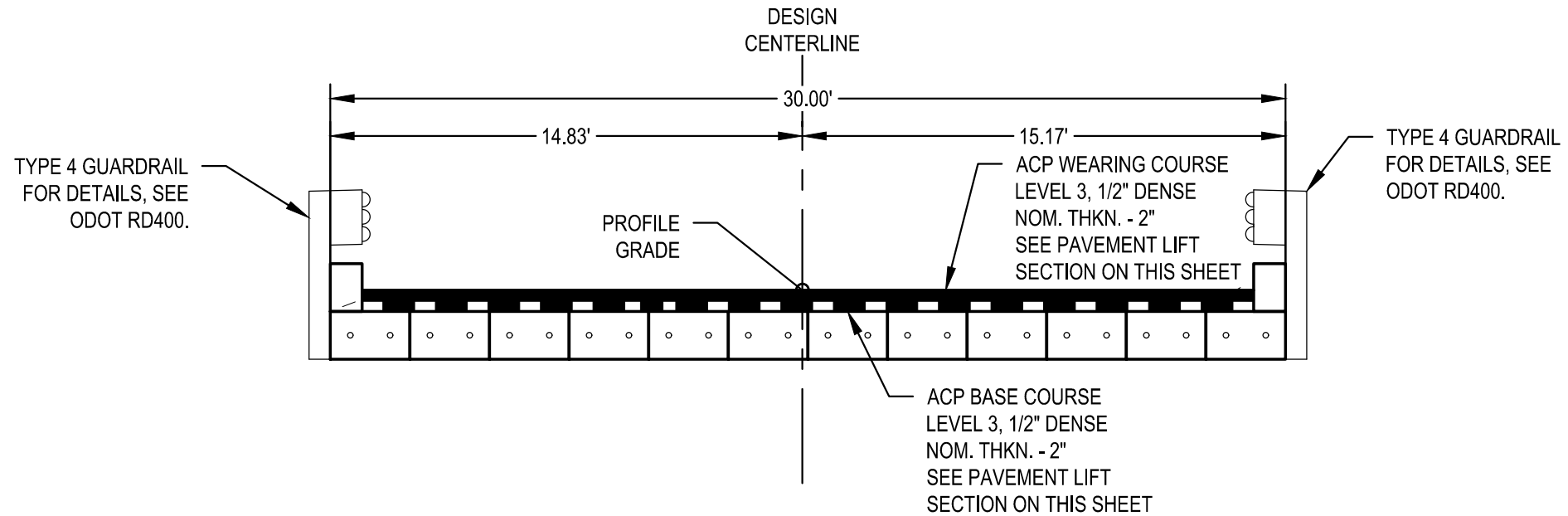
**PAVEMENT LIFT SECTION**

(NOT TO SCALE)



**WOODCOCK CREEK - BRIDGE ELEVATION**

(NOT TO SCALE)



**TYPICAL DECK SECTION**

(NOT TO SCALE)

**NOTE:**

1. ALL DIMENSIONS SHOW IN FEET UNLESS OTHERWISE NOTED
2. SIDE SLOPES ARE SHOWN AS HORIZ. TO VERT.
3. BRIDGE ABUTMENT TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS IN "REPORT OF GEOTECHNICAL SERVICES" PREPARED BY PALI CONSULTING, DATED AUGUST 28, 2019.

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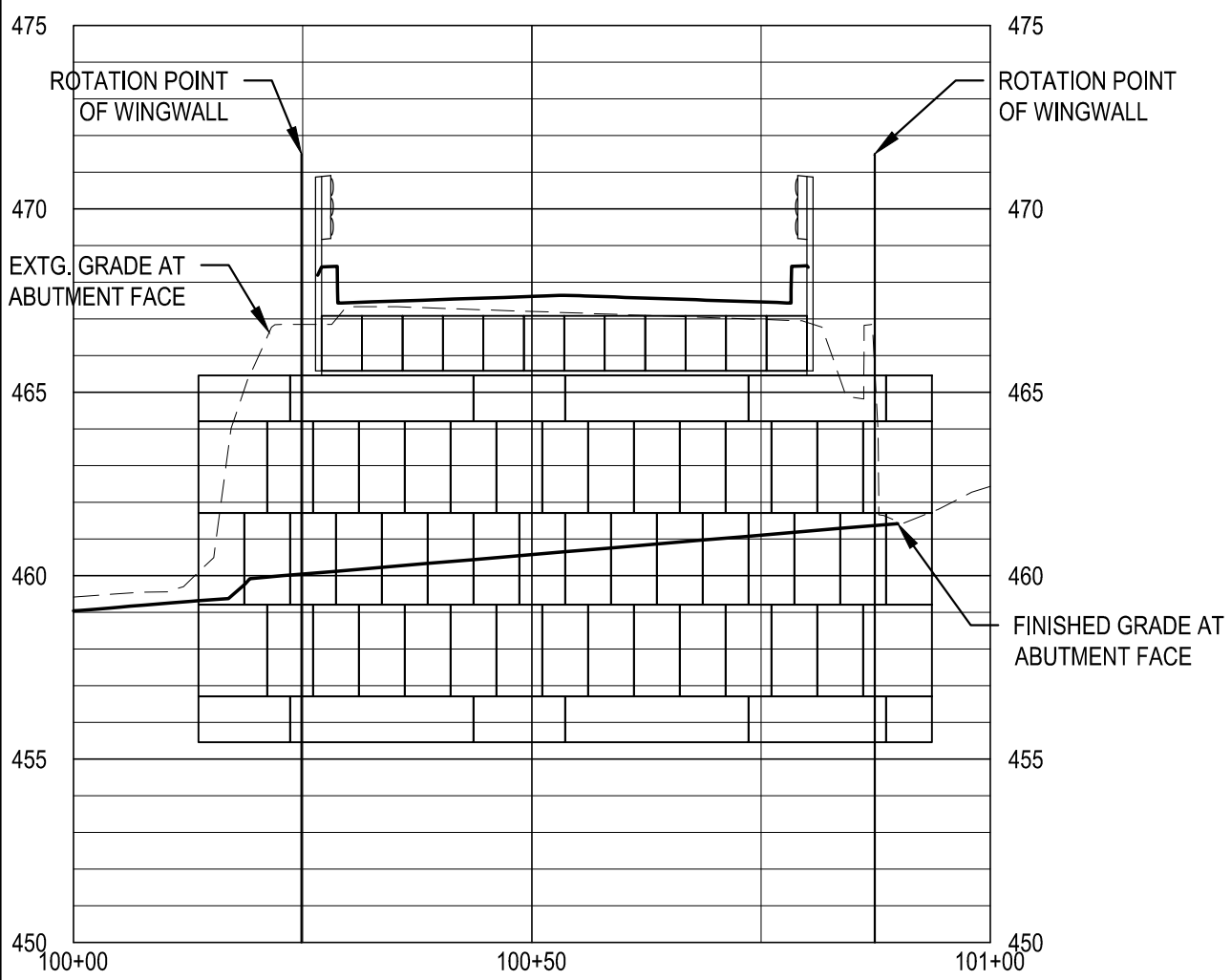
**BRIDGE SECTIONS**  
 WOODCOCK CREEK AT GRIMM ROAD  
 CULVERT REPLACEMENT  
 DATE: JANUARY 2020  
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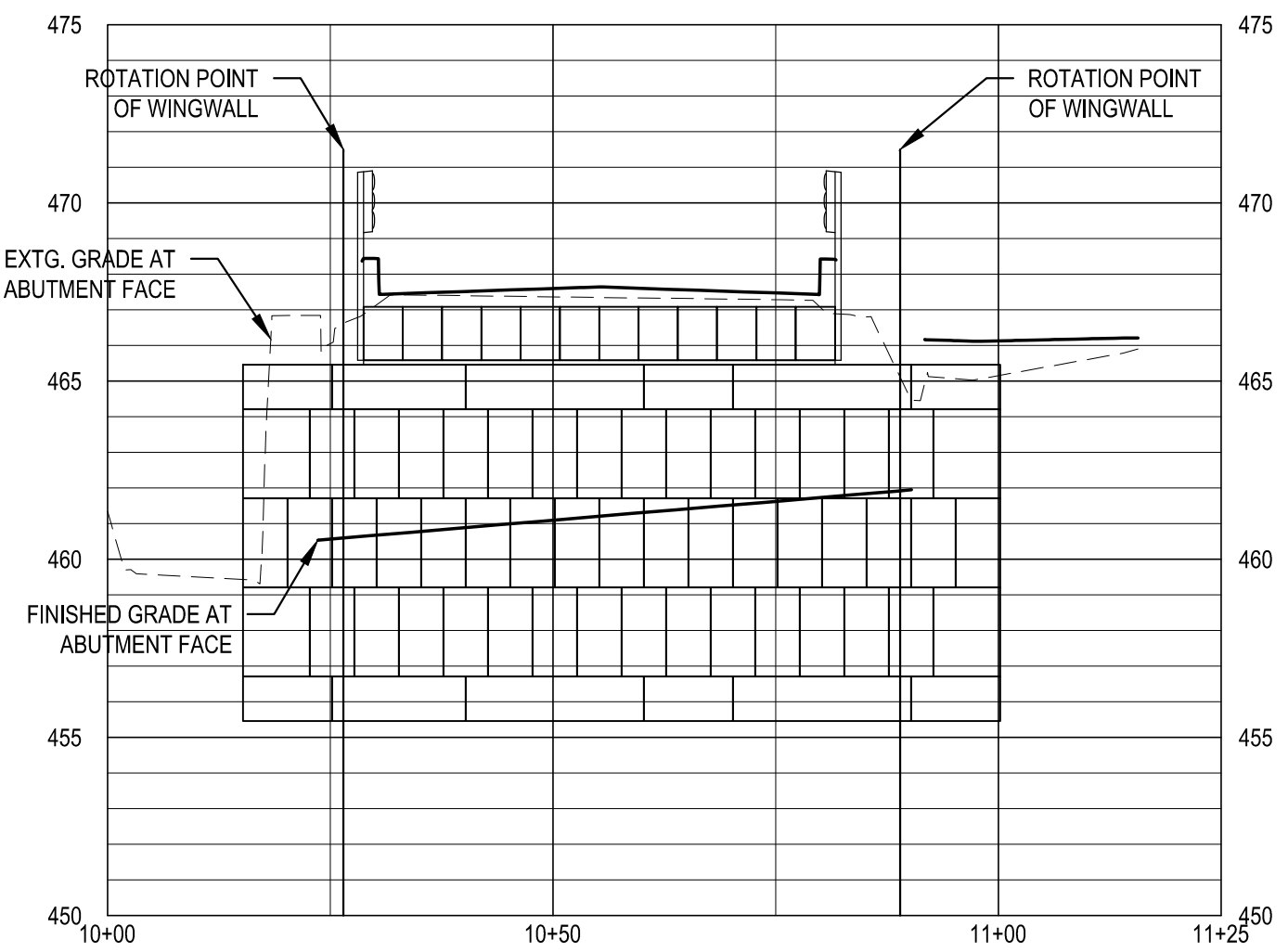
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NORTH ABUTMENT - PROFILE



SOUTH ABUTMENT - PROFILE

HORIZ: 1" = 20'  
VERT: 1" = 5'

ABUTMENT WALL PROFILES  
WOODCOCK CREEK AT GRIMM ROAD  
CULVERT REPLACEMENT

DATE: JANUARY 2020 PROJECT NO.: XX-XXXX

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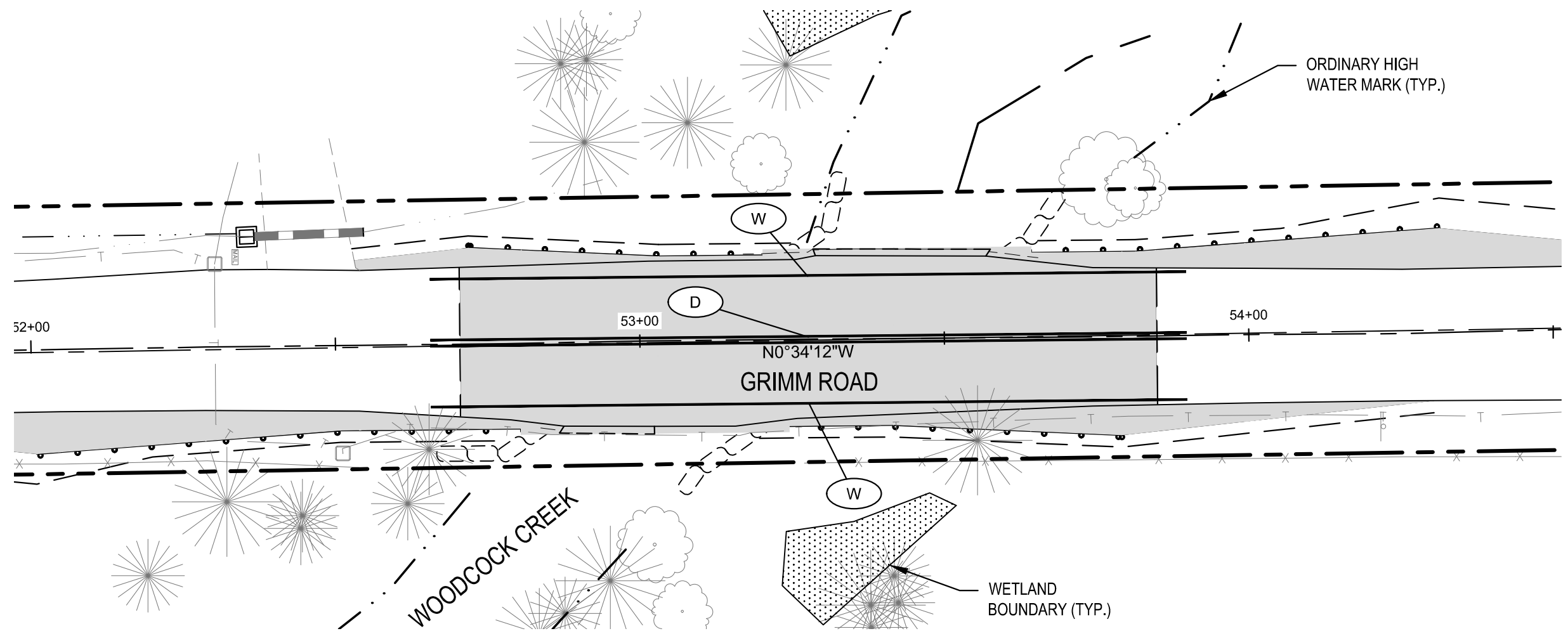
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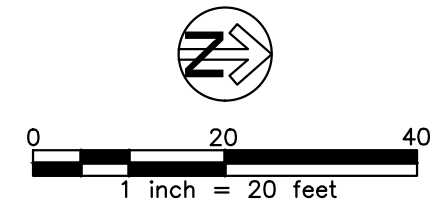


**STRIPING NOTES**

- (D) INSTALL DOUBLE NO-PASS 4" YELLOW LINES
- (W) INSTALL 4" WHITE LINE

**STRIPING GENERAL NOTES**

1. ALL PAVEMENT MARKINGS SHALL BE PER REQUIREMENTS AND SPECIFICATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION, THE OREGON SUPPLEMENT TO THE MUTCD 2009 EDITION, AND THE 2021 OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. ALL PAVEMENT MARKINGS AND STRIPING LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FINAL PLACEMENT.
3. PERMANENT STRIPING SHALL BE THERMOPLASTIC MATERIAL UNLESS OTHERWISE NOTED. LONGITUDINAL LINES SHALL BE METHOD "A" THERMOPLASTIC, EXTRUDED, SURFACE, NON-PROFILED.
4. EXISTING MARKINGS NOT SHOWN ARE TO REMAIN IN PLACE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. EXISTING STRIPING REMOVED DURING SCORING AND REPAVING TO BE INSTALLED AS SHOWN.
6. REFER TO ODOT STANDARD DRAWINGS TM500, TM501, AND TM503 FOR ALL PAVEMENT MARKING DETAILS ON PLANS.



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<b>PERMANENT SIGNING AND STRIPING PLAN</b>	
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 PORTLAND 6720 SW MACADAM AVE, STE 200, PORTLAND, OR 97219 TEL: (503) 419-2500 FAX: (503) 419-2600 www.cardno.com	DIRECTOR DAN JOHNSON
DESIGNED BY: RPM DRAFTED BY: RPM CHECKED BY: CJ	DATE: JANUARY 2020 PROJECT NO.: XX-XXXXX
NO. DATE:	REVISIONS:
Sheet No. <b>SS-1</b>	

# Riparian Planting for Woodcock Creek at Grimm Road Crossing

## Site Description

The targeted riparian area surrounding the Grimm Rd crossing on Woodcock Cr is 50 ft upstream and downstream of the new bridge installation and 10 ft beyond the ordinary high-water mark (0.05 acres). The current riparian buffers at the culvert box crossing on Grimm Rd on Woodcocks Cr provides canopy cover of native trees and shrubs. Native plant species present on the site include: bigleaf maple, western redcedar, Oregon ash, vine maple, snowberry, trailing blackberry, thimbleberry, and sword fern. There are a few invasive plant species on the site, English ivy (*Hedera helix*), Himalayan blackberry (*Rubis discolor*), and reed canary grass (*Phalaris arundinacea*). Removal of these invasive species will open areas to be revegetated.

## Riparian Disturbance During Construction

The bridge replacement can be done mostly from the roadway. It is not expected that equipment will need much access below the ordinary high-water (OHW) mark. However, minor channel grading and invasive removal may require access below OHW. A goal is to preserve as much native vegetation as possible, however one or more trees may need to be removed during construction. The modular bridge design alternative was selected partially due to being able to minimize riparian disturbance or bank reshaping.

## Tree & Shrub Planting

Native planting will enhance riparian function and wildlife habitat. Following construction, riparian grass seed mix will be hand broadcast to help with bank stabilization. Trees removed during construction will be replaced. Interplanting among existing natives, with a focus on willows, red-osier dogwood, and shrubs will help increase bank stability, stream shading, riparian diversity, and habitat complexity.

Type	Common Name	Latin Name	Height (ft)	Exposure Needs	Moisture Needs	# to Plant	Notes
grass	Riparian Grass Mix					2 lbs	
tree	Bigleaf Maple	<i>Acer macrophyllum</i>	100	sun-shade	dry-moist	5	
tree	Pacific Willow	<i>Salix lasiandra</i>	40	sun-part shade	moist-wet	30	plant closer to water
tree	Sitka Willow	<i>Salix sitchensis</i>	30	sun-part shade	moist-wet	30	plant closer to water
tree	Vine Maple	<i>Acer circinatum</i>	25	part shade-shade	dry-moist	20	plant in shady area
tree	Oregon Ash	<i>Fraxinus latifolia</i>	70	sun-part shade	moist-wet	5	plant closer to water
shrub	Snowberry	<i>Symphoricarpos albus</i>	5	sun-shade	dry-moist	20	
shrub	Red-Osier Dogwood	<i>Cornus sericea</i>	15	sun-shade	moist-wet	30	plant closer to water
shrub	Nootka Rose	<i>Rosa nutkana</i>	10	sun-part shade	moist-wet	20	
shrub	Tall Oregon Grape	<i>Mahonia aquifolium</i>	8	sun-shade	dry-wet	20	plant in drier area with sun
shrub	Thimbleberry	<i>Rubus parviflorus</i>	8	sun-shade	dry-moist	10	
shrub	Salmonberry	<i>Rubus spectabilis</i>	10	sun-shade	moist-wet	5	plant closer to water
shrub	Spiraea	<i>Spiraea douglasii</i>	12	sun-part shade	moist-wet	5	plant closer to water



# Match Funding Form

Document the match funding shown on the budget page of your grant application.

**OWEB accepts all non-OWEB funds as match.** An applicant may NOT use another OWEB grant to match an OWEB grant; this includes ODA Weed Board projects because they are funded through OWEB grants. However, an applicant who benefits from a pass-through OWEB agreement with another state agency, by receiving either staff expertise or a grant from that state agency, may use those benefits as match for an OWEB grant. (Example: A grantee **MAY** use as match the effort provided by ODFW restoration biologists because OWEB funding for those positions is the result of a pass-through agreement).

At the time of application, match funding for OWEB funds requested does not have to be secured, but you must show that **at least 25% of match funding has been sought**. On this form, you do not necessarily need to show authorized signatures (“secured match”), but the more match that is secured, the stronger the application. Identify the type of match (cash or in-kind), the status of the match (secured or pending), and either a dollar amount or a dollar value (based on local market rates) of the in-kind contribution.

If you have questions about whether your proposed match is eligible or not, see Allowable Match document in OGMS <https://apps.wrd.state.or.us/apps/oweb/fiscal/nologin.aspx> under Technical Assistance application or contact your local OWEB regional program representative (contact information available in the instructions to this application).

**Project Name: Woodcock Creek & Grimm Road Fish-Passage Improvement Project**

**Applicant: Molalla River Watch**

Match Funding Source	Type	Status*	Dollar Value	Match Funding Source Signature/Date*
Clackamas County Dept. of Transportation & Development (Design costs to-date)	Cash	Secured	\$76, 363.00	
Clackamas County Dept. of Transportation & Development (Construction)	Cash	Secured	\$330,000.00	See Letter of Support (attached)
Clackamas Soil & Water Conservation District	In-Kind	Secured	\$2,095.00	See Letter of Support (attached)
Oregon Dept. of Fish & Wildlife	In-Kind	Pending	undetermined	See Letter of Support (attached)

**\* IMPORTANT:** If you selected “secured” in the Status column for any match funding source, you must provide either the signature of an authorized representative of the match source in the Match Funding

## OREGON WATERSHED ENHANCEMENT BOARD FEDERAL RESTORATION GRANT AGREEMENT

**Grantee:** Molalla River Watch Inc

**Grant Number:** 221-3030-19609

**Grant Name:** Woodcock Creek & Grimm Road Fish-Passage Project

**Award Amount:** \$348,671.00

**Project Completion Date:** 12/31/2023

**Award Date:** 10/26/2021

**Progress Report Date :**

N/A

**Post-Implementation Status Reporting Period:** 5 ( )

**Post-Implementation Status Report (PISR) Schedule:**

Three PISRs will be required. Due Dates will be April 30 in one year, April 30 in three years and April 30 in five years following an approved Project Completion Report.

**Grantee**

Molalla River Watch Inc  
PO Box 867  
Molalla, OR 97038  
**Phone:** (503) 559-0885  
**Email:** molallariverwatch@gmail.com  
**Contact:** Asako Yamamuro

**Project Manager for the Grantee**

Devin Patterson/Joel Howie  
N/A  
150 Beaver Creek Road  
Oregon City, OR 97045  
**Phone:** 503-742-4666/503-919-0091  
**Email:** devinpat@clackamas.us

**Payee**

Molalla River Watch Inc  
Asako Yamamuro  
PO Box 867  
Molalla, OR 97038  
**Phone:** (503) 559-0885  
**Email :** molallariverwatch@gmail.com

**Project Manager for the Board**

Oregon Watershed Enhancement Board  
Liz Redon  
775 Summer St NE, Ste 360  
Salem, OR 97301-1290  
**Phone:** (971) 345-7020  
**Email:** liz.redon@oweb.oregon.gov

**Fund Source:**

The award amount of \$348,671.00 is funded from a federal source (Catalogue Federal Domestic Assistance Number listed in Exhibit I). If the Grantee expends more than \$750,000 in federal funds from all federal sources in one fiscal year, Grantee may be subject to the federal Single Audit Act requirements in 2 CFR 200.501 and additional federal requirements identified in Exhibit H (Federal Grant Requirements).

**This Grant Agreement is between the Oregon Watershed Enhancement Board, hereafter called "Board," and the Grantee as identified above, in consideration of the mutual covenants contained herein. This Agreement consists of the following, in descending order of precedence: modifications to this Agreement contained in Exhibit B, if applicable, this Agreement less all exhibits attached, Exhibits K (Grant Application selected for funding by the Board), H (Federal Grant Requirements), B (Conditions of Agreement), A (Schedule for Release of Funds), C (Project Completion Report Requirements), D (Post-Implementation Status Report Requirements), E (Permits and Licenses), F (Cooperative/Landowner Agreement(s)), G (Oregon Prevailing Wage Rate Law), I (Information Required for Federal Funding), and J (Insurance Requirements).**



**A. Authorization**

This grant is authorized by ORS 541.890 to 541.958, as amended by Oregon Laws 2011, chapter 643, and is subject to Oregon Administrative Rules 695-001-0000 to 695-050-0050, as such rules may periodically be amended by the Board.

**B. Grant Award**

The Grantee agrees to perform the Project described in the grant application (Exhibit K) and as specified in this Agreement. The Board will disburse Grant Funds in accordance with Exhibit A (Schedule for Release of Funds).

The Grantee agrees that funds provided by the Board will be used only for the Project.

“Payee” designated on page one (1) of this Agreement means the person or entity designated by Grantee to administer grant payments under this Agreement.

**C. Term of Agreement**

**Unless otherwise specified in Exhibit B, upon signature by all parties and approval as required by law, this Agreement is effective as of the Award Date specified on page one (1) of this Agreement, and expires on the Project Completion Date specified on page one (1) of this Agreement.**

**D. Funding Conditions**

The Board’s obligation to disburse funds to Grantee under this Agreement is subject to the Board having received, on the date of each disbursement, sufficient funding, appropriations, limitations, allotments, or other expenditure authority to allow the Board, in the exercise of its reasonable administrative discretion, to make each disbursement. Nothing in this Agreement entitles Grantee to receive payment under this Agreement from any part of Oregon state government other than the Board, and nothing in this Agreement is to be construed as permitting any violation of Article IX, section 7 of the Oregon Constitution or any other law regulating liabilities or monetary obligations of the State of Oregon.

As a condition for the disbursement of any Board funds, the Grantee agrees to do the following:

**1. Obtain Necessary Permits and Licenses**

Submit to the Board’s Project Manager, before release of any Board funds for the Project components requiring permits or licenses, or for activities dependent on portions of the Project for which a permit or license has yet to be issued, copies of all permits and licenses from local, state or federal agencies or governing bodies that have been obtained, or written evidence acceptable to the Board that permits and licenses are not needed (see Exhibit E, Permits and Licenses) as required by ORS 541.932(10).

This statute gives OWEB discretion in releasing funds for portions of projects that do not require a permit or license. In considering whether to release funds for portions of on-the-ground restoration activities that do not require permits or licenses, OWEB will consider whether the activities provide ecological benefit consistent with the project objectives, and are not dependent on the portion of the project for which a permit or license has yet to be issued. OWEB also has the discretion to condition its release of funds based on specific circumstances of a project. Grantee should review Exhibit B Conditions of Agreement for any related conditions with respect to permitting, licensing and fund release.

**2. Obtain Signed Landowner Agreements**

Unless otherwise specified in Exhibit B, the Board will not release any payments under this Agreement until Grantee has submitted to the Board’s Project Manager copies of signed Cooperative/Landowner Agreements for each Project site. Such Cooperative/Landowner Agreements shall at a minimum contain the agreements and certification outlined in Exhibit F.

**3. Comply With Implementation Conditions**

(a) Submit to the Board’s Project Manager, before release of any Board funds, documentation that non-Board match of at least 25% of the total amount of funding from the Board has been secured as required by OAR 695-005-0060(2), unless otherwise specified in Exhibit B, Conditions of Agreement, or;

For Focused Investment Partnership Projects, in accordance with OAR 695-047-0110(7), the matching funds requirement is reduced to a minimum of at least \$1.00. However, any cash or in-kind match funding utilized in the course of completing this grant must be documented in the Project Completion Report (Exhibit C). Submit to the Board’s Project Manager, before release of any Board funds, documentation that \$1.00 minimum match requirement will be met for the grant.

- (b) Comply with the applicable Oregon Aquatic Habitat Restoration Guidelines under the Oregon Plan for Salmon and Watersheds.  
See <https://www.oregon.gov/OWEB/> "Resources" then "Field & Technical Guide" then "Aquatic Habitat Guide".
- (c) Provide written notice to the Board's Project Manager of any Grantee address changes, Grantee Project Manager changes or Payee changes.

#### 4. Document and Report Project Completion; Board Approval

- (a) Submit to the Board's Project Manager all receipts, expenditure tracking sheets and other accounting records through the Project Completion Date, to document expenditure of grant fund installments, and to account for all other funding, in-kind contributions and donations in the Project Completion Report.
- (b) Submit to the Board's Project Manager within 60 days after the Project Completion Date, a Project Completion Report and the final Request for release of Funds that complies with Exhibit C, and includes any special reporting required in Exhibit B. Reports received after 60 days will be marked as "outstanding" until approved by the Board's designee. New grant agreements will not be released if Grantee has any outstanding reports.
- (c) Upon receipt of a Project Completion Report and the final Request for Release of Funds, the Board's designee has 90 days to either approve the report and release final funds, or notify Grantee of any concerns or missing information that must be submitted before the report is considered complete. If there are any unresolved issues 90 days after receipt of the Project Completion Report and the final Request for Release of Funds, then the grant will be marked "outstanding." New grant agreements will not be released if Grantee has any outstanding reports.
- (d) "Board approval" of the Project Completion Report means the report has been approved by the Board's Program Manager or delegate, and the final Request for Release of Funds has been approved by the Board's Fiscal Manager or delegate. The Project Completion Report will show as "outstanding" (i.e., overdue and not approved) on the Board's Grant Management System ("OGMS") until the report and Request for Release of Funds has been approved by the Board. New grant agreements will not be released to Grantee if Grantee has any outstanding reports.

#### E. Records Maintenance and Access

1. **Access to Records and Facilities.** The Board, the Secretary of State's Office of the State of Oregon and their duly authorized representatives will have access to the books, documents, papers and records of Grantee that are directly related to this Agreement, the grant moneys provided hereunder, or the Project for the purpose of making audits and examinations. In addition, the Board, the Secretary of State's Office of the State of Oregon and their duly authorized representatives may make and retain excerpts, copies and transcriptions of the foregoing books, documents, papers and records. Grantee will permit authorized representatives of the Board and the Secretary of State's Office of the State of Oregon to perform site reviews of all services delivered as part of the Project.
2. **Retention of Records.** Grantee will retain and keep accessible all books, documents, papers, and records that are directly related to this Agreement, the grant moneys or the Project for a minimum of six (6) years, or such longer period as may be required by other provisions of this Agreement or applicable law, following termination or expiration of this Agreement. If there are unresolved audit questions or litigation at the end of the six-year period, Grantee will retain the records until the questions or litigation is resolved.
3. **Expenditure Records.** Grantee will document the expenditure of all grant moneys disbursed by the Board under this Agreement. Grantee will create and maintain all expenditure records in accordance with generally accepted accounting principles and in sufficient detail to permit the Board to verify how the grant moneys were expended, including without limitation accounting for all other funds expended, as well as in-kind services and donated materials.

**F. Amendments; Changes in Project Approved by Board**

1. Except as provided in Section F(3), any modifications of this Agreement must be mutually agreed to in writing by all parties.
2. All amendments, such as award amendments, time extensions and reinstatements may proceed regardless of reporting obligation status.
3. Grantee agrees to complete the Project as approved by the Board unless proposed modifications to the Project are submitted in writing to, and approved in writing by, the Board's Project Manager or, if required by this Agreement, the Board's Program Manager, prior to the beginning of any work proposed in the modification. Modifications to the budget categories shown in Exhibit A may be approved for change upon signature of the Board's Project Manager.

**G. Assignment**

The Grantee will not assign or transfer its interest in this Agreement without prior written approval from the Board.

**H. Permission Required to Access Private Property; Access to Project Sites**

In carrying out this Agreement, Grantee will not access any private property without first obtaining written consent from the landowner of the private property. Grantee will direct its contractors not to access private property without first obtaining written consent from the landowner of the private property.

Upon Board request and consistent with the Cooperative/Landowner Agreement(s) meeting the requirements as specified in Exhibit F, Grantee will seek the landowner's permission for mutually convenient access

to the Project site by Board members and their representatives for the purposes of evaluating Project implementation, completion, post-implementation status or effectiveness.

**I. Public Domain Information**

Projects funded by this grant may be used in the collection of monitoring information on private lands about the effects of the Project on aquatic or terrestrial conditions. Grantee acknowledges that all monitoring information obtained from private lands may become public information subject to the requirements of ORS 192.311 to 192.478.

**J. Post-Implementation Maintenance and Post-Implementation Reports**

1. Projects funded by the Board are intended to provide long-term benefits to the watershed. The Grantee or landowner will provide necessary and normal maintenance to sustain the value of the Project once it is completed. Maintenance will be in accordance with the terms of the Cooperative/Landowner Agreement(s) (Exhibit F).
2. Grantee shall submit Post-Implementation Status Reports documenting the status of the Project that are satisfactory to the Board and comply with Exhibit D and any special reporting requirements in Exhibit B. Reporting shall be at a frequency and for the period specified on page one (1) of this Agreement.
3. Reports are not considered complete until Grantee has responded to the Board's concerns and questions in a manner satisfactory to the Board's Project Manager and Program Manager. "Board approval" means the report has been approved by the Board's Program Manager or delegate. A report will show as "outstanding" (i.e., overdue and not approved) on OGMS until the report has been approved by the Board. New grant agreements will not be released to Grantee if Grantee has any outstanding reports.

**K. Termination of Grant Agreement**

1. This Agreement may be terminated:
  - (a) At any time by mutual written consent of all parties;
  - (b) Upon written notice by the Board to Grantee for Grantee's failure to perform any provision of this Agreement;
  - (c) Upon 30 days written notice by the Board to Grantee for any other reason specified in writing; or
  - (d) At any time, upon written notice by the Board, if the Board lacks sufficient funding, appropriations, limitations, allotments, or other expenditure authority to allow the Board, in the exercise of its reasonable administrative discretion, to disburse the grant funds.
2. Within 30 days of termination, Grantee will return to the Board any unspent funds provided by the Board under this Agreement in accordance with Section P, Recovery of Grant Funds. The Board will reimburse the Grantee for authorized services performed and eligible expenses incurred before the termination under this Agreement.

**L. Compliance With Applicable Law**

Grantee shall comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to this Agreement or to the Project. Without limiting the generality of the foregoing, Grantee expressly agrees to comply with the following laws, regulations and executive orders to the extent they are applicable to the Agreement or the Project: (a) all applicable requirements of state civil rights and rehabilitation statutes, rules and regulations, (b) Titles VI and VII of the Civil Rights Act of 1964, as amended, (c) Sections 503 and 504 of the Rehabilitation Act of 1973, as amended, (d) the Americans with Disabilities Act of 1990, as amended, (e) Executive Order 11246, as amended, (f) the Health Insurance Portability and Accountability Act of 1996, (g) the Age Discrimination in Employment Act of 1967, as amended, and the Age Discrimination Act of 1975, as amended, (h) the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, (i) all regulations and administrative rules established pursuant to the foregoing laws, and (j) all other applicable requirements of federal civil rights and rehabilitation statutes, rules and regulations. These laws, regulations and executive orders are incorporated by reference herein to the extent that they are applicable to the Agreement or the Project and required by law to be so incorporated. Grantee shall not discriminate against any individual, who receives or applies for services as part of the Project, on the basis of actual or perceived age, race, creed, religion, color, national origin, gender, disability, marital status, sexual orientation, age or citizenship. All employers, including Grantee, that employ subject workers who provide services in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under state law.

**M. Grantee Authority**

The individual signing on behalf of the Grantee hereby certifies and swears under penalty of applicable law that s/he is authorized to act on behalf of Grantee, has authority and knowledge regarding Grantee's payment of taxes, and to the best of her/his knowledge, Grantee is not in violation of any Oregon tax laws.

**N. Indemnity**

**Subject to the limitations of the Oregon Tort Claims Act (ORS 30.260 - 30.300), Grantee will defend (subject to any limitation imposed by ORS Chapter 180), save, hold harmless, and indemnify the State of Oregon and the Board and their officers, employees and agents from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses of any nature resulting from or arising out of, or relating to the activities of Grantee or its officers, employees, contractors, or agents under this Agreement or in the implementation of the Project.**

**O. Designation of Forum**

Any party bringing a legal action or proceeding against any other party arising out of or relating to this Agreement shall bring the legal action or proceeding in the Circuit Court of the State of Oregon for Marion County. Each party hereby consents to the exclusive jurisdiction of such court, waives any objection to venue, and waives any claim that such forum is an inconvenient forum.

**P. Recovery of Grant Funds**

Any funds disbursed to Grantee under this Agreement that are expended in violation or contravention of one or more of the provisions of this Agreement or that remain unexpended on the earlier of termination of this Agreement or the Project Completion Date must be returned to the Board not later than 15 days after the Board's written demand.

**Q. Counterparts**

This Agreement may be executed in several counterparts, including by facsimile or by signature on a portable document format (pdf) delivered by email, all of which when taken together shall constitute one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart. Each copy of this Agreement so executed shall constitute an original.

**R. Insurance**

1. In addition to any insurance specified in Exhibit J, Grantee shall carry the insurance types and amounts described below and will continue this coverage through Project completion. In addition, the Grantee shall require that all contractors or consultants hired for construction, restoration, technical design, assessment or monitoring contracts carry the minimum insurance types and amounts described below. The minimum insurance requirements do not apply to contractors not engaged in these types of activities, for example, those engaged in facilitation, data analysis, or web design, etc.. Contractor insurance requirements do not apply to landowners with whom the Grantee is contracting to perform work on the landowner's property.

<b>Insurance Type</b>	<b>Minimum Amount</b>
General liability	\$1,000,000 per occurrence, \$2,000,000 annual aggregate
Auto liability	\$1,000,000 combined single limit

2. If requested by the Board, Grantee shall provide to the Board Certificate(s) of Insurance for all required insurance. As proof of insurance the Board has the right to request copies of insurance policies and endorsements relating to the insurance requirements in this Agreement.
3. Grantee or the insurer must provide at least 30 days' written notice to the Board before cancellation of, material change to, potential exhaustion of aggregate limits of, or non-renewal of the required insurance coverage(s).

**THIS AGREEMENT, INCLUDING ALL MATERIALS INCORPORATED BY REFERENCE, CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES ON THIS SUBJECT. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HERE REGARDING THIS AGREEMENT. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS AGREEMENT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THE FAILURE OF THE BOARD TO ENFORCE ANY PROVISION OF THIS AGREEMENT SHALL NOT CONSTITUTE A WAIVER BY THE BOARD OF THAT OR ANY OTHER PROVISION. GRANTEE, BY EXECUTING THIS AGREEMENT, HEREBY ACKNOWLEDGES THAT GRANTEE HAS READ THIS AGREEMENT, UNDERSTANDS IT AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.**

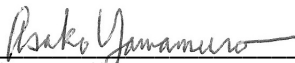
**CERTIFICATION**

**GRANTEE CERTIFIES THAT GRANTEE WILL NOT BEGIN WORK ON PROJECTS INVOLVING PRIVATE LANDS UNTIL GRANTEE HAS SECURED COOPERATIVE LANDOWNER AGREEMENTS (EXHIBIT F) WITH ALL PARTICIPATING PRIVATE LANDOWNERS THAT, AT A MINIMUM, COMPLY WITH SECTION H AND INCLUDE THE FOLLOWING:**

- (a) Identification of the party responsible for repairs and maintenance of the Project; and**
- (b) Acknowledgement that the landowner is aware of the application to OWEB and that information relating to the work, including effectiveness monitoring data, is a public record.**

**AGREED:**

**FOR THE GRANTEE:**

  
\_\_\_\_\_  
Grantee Signature

Asako Yamamuro  
\_\_\_\_\_  
Print Name

January 5, 2022  
\_\_\_\_\_  
Date

**FOR THE BOARD:**

\_\_\_\_\_  
OWEB Program Manager

\_\_\_\_\_  
Date

**EXHIBIT A**

**SCHEDULE FOR RELEASE OF FUNDS**

All fund requests shall comply with the Board’s Billing Instructions and Budget Categories Definitions and Policies, (see OWEB's website <https://www.oregon.gov/OWEB/> “manage your grant” and choose “payments & budget”) and be submitted using the most current Request for Release of Funds form signed by the Grantee, Payee, or other agent authorized by Grantee. Disbursement of funds is subject to the Board having sufficient funding on the date of each disbursement. The Board will not reimburse the Grantee for any expenditure incurred prior to the award date of the grant agreement except for fees charged by an affected city or county for processing the required Land Use Information Sheet. Payment requests will be processed after approval by the Board’s Project and Fiscal Managers or delegates.

Funds are released upon Board approval of receipts or invoices for amounts \$250 or more (excluding indirect cost grant administration) for purchases or work accomplished along with an expense tracking spreadsheet for all Board expenses.

Funds may also be released in advance on the basis of a detailed estimate of expenses. Copies of receipts, invoices or supporting documentation, for amounts \$250 or more (excluding indirect cost grant administration) must be submitted to document OWEB funds previously advanced for this grant within 120 days of the date of the payment. Also, an expense tracking spreadsheet for all OWEB expenses shall be submitted. Failure to comply may delay new grants from being issued, and other grant payment requests and amendments.

The grant budget consists of the elements listed below.

Budget Category	Amount
<b>OWEB Funds</b>	
Salaries, Wages and Benefits	\$5,776.00
Contracted Services	\$306,676.00
Travel and Training	\$78.00
Materials and Supplies	\$1,266.00
<b>Categories Subtotal</b>	\$313,796.00
Indirect Costs	\$31,380.00
Post Grant	\$3,495.00
<b>Grant Total</b>	<b>\$348,671.00</b>

Up to the final 10% of the grant (   \$34,867.00   ) will not be released for payment until the Board’s approval of the Project Completion Report including all grant expense documentation.  
OAR 695-005-0060(7).

If Federally Negotiated Indirect Cost Rate (FNICR) is selected as the indirect cost method, then an approved plan as of grant application due date or later must be on file at OWEB before funds for indirect costs will be released.

Submittal and Board approval of a Project Completion Report and final Request for Release of Funds will authorize the Board to retain any remaining unspent funds.

**EXHIBIT B**  
**CONDITIONS OF AGREEMENT**

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**1. First Payment: Map**

**OWEB will not release any funds for a Project site until Grantee has submitted to the Board's Project Manager a map that shows where the photo points have been established. Baseline criteria for the map include 8 ½ x 11 size and .pdf format. Minimum background layers include recent aerial imagery, Project boundary, streams, and roads/highways.**

**2. First Payment: Photo Points**

**OWEB will not release any funds for a Project site until Grantee has submitted to the Board's Project Manager pre-Project photos at photo points established to track visual change(s) resulting from restoration Project. Grantee should carefully consider photo point locations to ensure photos clearly show the same sites and perspective in future photos to meet reporting requirements (see Exhibits C and D) and demonstrate that completed restoration meets the scope of work described in the grant application.**

**3. Landowner Agreement: Project involving public lands**

**For any portion of the Project occurring on public lands, OWEB will not release any funds for a Project site until Grantee has submitted documentation to the Board's Project Manager from the appropriate agency indicating concurrence prior to beginning work.**



## EXHIBIT C

### PROJECT COMPLETION REPORT REQUIREMENTS

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Oregon Administrative Rule 695-010-0100(1) states that “Grantee must submit a report at completion of the Project describing the work done and placing it in its larger watershed context.” Therefore, **Grantee must submit a Project Completion Report within 60 days following the Project Completion Date**, that includes, but is not limited to, (1) through (7) below.

The Project Completion Report must be submitted electronically on the Board’s Grant Management System (OGMS). Electronic submission requires an OGMS User Identification and password. To request a User Identification and password, call (503) 986-0183.

1. **A final Project summary** that in 200 words or less, describes **what the Project accomplished and what problem(s) it addressed**. The information you provide will be used for accountability and reporting purposes, and displayed for the general public. Please make a clear and concise statement; avoid jargon and acronyms. For guidance see <https://www.oregon.gov/OWEB/> “manage your grant” and choose “reporting requirements”.
2. **A brief, narrative description of the Project including:**
  - (a) Background on the problem that generated the Project;
  - (b) A description of the work done, placing it in its larger watershed context;
  - (c) A description and explanation of any changes to the original proposal;
  - (d) A summary of any outreach activities related to the Project, including identification of any tours or presentations and copies of newspaper or other media coverage about the Project;
  - (e) Lessons learned, if any, from the Project; and
  - (f) Recommendations, if any, for more effective implementation of similar projects.
3. **See Exhibit B for any additional reporting requirements for the Project Completion Report.**
4. Documentation that the Project complies with the Oregon Aquatic Habitat Restoration and Enhancement Guide, if applicable. See <https://www.oregon.gov/OWEB/> "Resources" then Field & Technical Guide" then choose "Aquatic Habitat Guide".
5. Color photographs of the Project areas before and after the Project completion taken at pre-set photo points. Guidelines for photo point documentation are provided on the OWEB website at: <https://www.oregon.gov/OWEB/> "Resources" then "Field & Technical Guide" then "Photo Point Monitoring" .
6. Submit Oregon Watershed Restoration Inventory (OWRI) reports with the required map(s) and location information. Instructions for OWRI reporting and submittal are available on the OWEB website at: <https://www.oregon.gov/OWEB/> "Project Data & Reporting" then "OWRI".
7. Complete and submit the Federal Lobbying and Litigation Certificate to the Board’s Project Manager with the final request for funds. The forms are available on the OWEB website at <https://www.oregon.gov/OWEB/> “manage your grant” and choose “forms”.

## EXHIBIT D

### POST-IMPLEMENTATION STATUS REPORT REQUIREMENTS

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Oregon Administrative Rule 695-010-0100(2) states that “Grantee will track the status of the Project, and continue its maintenance, submitting periodic reports on a schedule set by the Board. All reports will be filed with the Board or at a location specified by the Board.”

A Post-Implementation Status Report (“Status Report”) must include:

1. An assessment of whether the Project continues to meet the goals specified in the Grant Agreement.
2. Information or materials required by the Grant Agreement Exhibit B Conditions of Agreement.
3. A description of any maintenance or modifications made since Project completion or since the last Status Report, whichever was last.
4. An accounting of any costs associated with Project maintenance and reporting to the Board.
5. A summary of any public awareness activities related to the Project undertaken since Project completion or since the last Status Report, whichever was last.
6. Lessons learned, if any, from the Project.
7. Unless otherwise specified, the Grantee will provide color photos of all Project elements (i.e., fencing, planting, or structures) to show compliance of the Project with the Board funding decision. Photo points will be set up, and the color photographs should be taken with the same focal-length lens at the same time of year, showing conditions before and after Project completion. Guidelines for photo point documentation are provided on the OWEB website at: <https://www.oregon.gov/OWEB/> "Resources" then "Field & Technical Guide" then choose "Photo Point Monitoring".

**EXHIBIT E**  
**PERMITS AND LICENSES**

Section D.1. of this Agreement outlines requirements for permits and licenses. Exhibit B Conditions of Agreement may contain additional conditions with respect to permitting, licensing and fund release.

Before the release of Board funds for activities requiring a permit or license, or for activities dependent on portions of the Project for which a permit or license has yet to be issued, the Grantee must submit to the Board’s Project Manager copies of all required permits or licenses, or submit written evidence acceptable to the Board that permits and licenses are not required.

OWEB may release funds for elements of the Project that do not require a permit or license. To be considered for release, Grantee must provide written documentation to the Board’s Project Manager requesting such consideration and affirming that the Project element(s) for which no permits or licenses are required will lead to ecological benefits consistent with the Project objectives, and are not dependent on the portion of the Project for which a permit or license has yet to be issued.

The following are often required for projects involving waterway alteration or watershed enhancement.

- Removal/Fill permit(s) – Dept. of State Lands
- Water Right Permit(s) – Water Resources Dept.
- Zone or Development Permit(s) – City or County Planning Department
- State, Federal and Tribal Cultural Resources Protection permits
- 401 Water Quality Certificate - Department of Environmental Quality
- Fill permit(s) – US Army Corps of Engineers
- City or County permit(s)

**The foregoing list of permits and licenses is not exhaustive. I understand that it is my responsibility to determine which permits, licenses and General Authorizations are required for the Project.**

**List the components of your Project requiring permits or licenses and the associated permit(s)/license(s).**

If necessary, list additional activities requiring a permit or license, the name of the permit or license and issuer on a separate page and attach to this Exhibit. By its signature on this Agreement, the Grantee certifies to OWEB that the following is a complete and accurate list of the Project components requiring permits or licenses and the associated required permits or licenses.

<b>Project Activity Requiring Permit/License</b>	<b>Permit/License Name and Entity Issuing</b>
Culvert replacement	Fish passage approval/OR Dept of Fish & Wildlife Land Use Compatibility Statement/Clackamas Co.
Instream work below OWH disturbing more than 50 CY	Joint Removal/Fill/ OR Dept of State Lands
Work in waters of the United States	Joint Removal/Fill/US Army Corps of Engineers
Component of JPA	SHPO below ground arch survey/SHPO review, USACE issues Section 404 permit
Dewatering channel for construction & fish salvage	Scientific Take Permit/OR Dept of Fish & Wildlife
Instream Work	401 Water Quality Certification/DEQ

     The work related to this project will not require permits or licenses.

**EXHIBIT F**

**COOPERATIVE/LANDOWNER AGREEMENT(S)**

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All Cooperative/Landowner Agreements for projects shall include, but is not limited to:

- Landowner's certification that the landowner owns the land where the work will be carried out;
- Landowner's agreement to allow Grantee to carry out the work, or a portion of the work on the Landowner's property;
- Landowner's agreement to maintain the Project, or allow maintenance of the Project, over a time period consistent with the grant application;
- Landowner's agreement to allow the OWEB Board and its representatives access to the site where the work is being carried out for inspection and evaluation; and
- Landowner's acknowledgment that he/she is aware of the application to OWEB and that information relating to the work, including effectiveness monitoring data, is a public record.

## EXHIBIT G

### OREGON PREVAILING WAGE RATE LAW

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Grantees may be required to comply with Oregon's prevailing wage rate law, ORS 279C.800-279C.870. This law requires that entities using public funds for public works must pay not less than the prevailing rate of wage for an hour's work, including fringe benefits, in the same trade in the locality where the work is performed. Contracts not exceeding \$50,000 are exempt from prevailing wage rate laws and nonprofit organizations are exempt for work other than construction. Public works is defined as including "roads, highways, buildings, structures and improvements of all types, the construction, reconstruction, major renovation or painting of which is carried on or contracted for by any public agency to serve the public interest . . ." ORS 279C.800(6)(a). Construction is defined as "the initial construction of buildings and other structures, or additions thereto, and of highways and roads." OAR 839-025-0004(5)

Failure to comply with prevailing wage rate laws could result in a Grantee being liable to the workers affected in the amount of their unpaid minimum wages, including all fringe benefits, and in an additional amount equal to unpaid wages as liquidated damages.

Information regarding prevailing wage rate law can be found on the Bureau of Labor and Industries website at [https://www.oregon.gov/BOLI/WHD/PWR/Pages/W\\_PWR\\_Pwrbk.aspx](https://www.oregon.gov/BOLI/WHD/PWR/Pages/W_PWR_Pwrbk.aspx).

## EXHIBIT H

### FEDERAL GRANT REQUIREMENTS

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**For the purposes of the federal granting agency, OWEB is the recipient of federal funds and in accordance with the State Controller's Oregon Accounting Manual, policy 30.40.00.102, and 2 CFR 200.330, OWEB's determination is that the grantee is the sub-recipient of federal funds. In the following requirements, the Grantee is also referred to as "Recipient".**

As a sub-recipient of Federal grant funds, pursuant to this Agreement with the state, Recipient assumes sole liability for that Recipient breach of the conditions of the grant, and will, upon Recipient breach of grant conditions that requires the state to return funds to the grantor, hold harmless and indemnify the state for an amount equal to the funds received under this Agreement; or if legal limitations apply to the indemnification ability of the Recipient grant funds, the indemnification amount will be the maximum amount of funds available for expenditure, including any available contingency funds or other available non-appropriated funds, up to the amount received under this Agreement.

1. All equipment and materials purchased with funds made available by this Agreement must be used only for purposes of the same general nature outlined in this Agreement.
2. Recipient will comply with the requirements in 2 CFR Part 200, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, including but not limited to the following:
  - (a) Property Standards. 2 CFR 200.313, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, which generally describes the required maintenance, documentation, and allowed disposition of equipment purchased with federal funds.
  - (b) Procurement Standards. When procuring goods or services (including professional consulting services), applicable state procurement regulations found in the Oregon Public Contracting Code, ORS chapters 279A, 279B and 279C or 2 CFR §§ 200.318 through 200.326, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, as applicable.
  - (c) Contract Provisions. Recipient shall include the contract provisions listed in 2 CFR Part 200, Appendix II, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, in its contracts with non-Federal entities.
3. The Recipient agrees to ensure that all conference, meeting, convention, or training space funded in whole or in part with Federal funds, complies with the Hotel and Motel Fire Safety Act of 1990.
4. The Recipient agrees to comply with the requirements of 2 CFR 200.501, "Audits of States, Local Governments, and Non-Profit Organizations, including, but not limited to, that Subrecipients receiving federal funds in excess of \$750,000 in the Subrecipient's fiscal year are subject to audit conducted in accordance with the provisions of 2 CFR part 200, subpart F. Subrecipient, if subject to this requirement, shall at Subrecipient's own expense submit to Agency a copy of, or electronic link to, its annual audit subject to this requirement covering the funds expended under this Agreement and shall submit or cause to be submitted to Agency the annual audit of any Subrecipient(s), contractor(s), or subcontractor(s) of Subrecipient responsible for the financial management of funds received under this Agreement. Audit costs for audits not required in accordance with 2 CFR part 200, subpart F are unallowable. If Subrecipient did not expend \$750,000 or more in Federal funds in its fiscal year, but contracted with a certified public accountant to perform an audit, costs for performance of that audit shall not be charged to the grant. Subrecipient shall save, protect and hold harmless Agency from the cost of any audits or special investigations performed by the Federal awarding agency or any federal agency with respect to the funds expended under this Agreement. Subrecipient acknowledges and agrees

that any audit costs incurred by Subrecipient as a result of allegations of fraud, waste or abuse are ineligible for reimbursement under this or any other agreement between Subrecipient and the State of Oregon.

5. Pursuant to Section 18 of the Lobbying Disclosure Act, the Recipient affirms that it is not a nonprofit organization described in Section 501(c) (4) of the Internal Revenue Code of 1986; or that it is a nonprofit organization described in Section 501(c) (4) of the Code but does not and will not engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act.
6. If Grant Agreement exceeds \$100,000, Recipient agrees to comply with Title 40 CFR Part 34, *New Restrictions on Lobbying* and to submit certification and disclosure forms accordingly. Any Recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure.
7. If Grant Agreement exceeds \$150,000, 41 U.S.C 4712, Enhancement of Recipient and Sub-recipient Employee Whistleblower Protection applies:
  - (a) This award, related sub-awards, and related contracts over the simplified acquisition threshold and all employees working on this award, related sub-awards, and related contracts over the simplified acquisition threshold are subject to the whistleblower rights and remedies established at 41 USC 4712.
  - (b) Recipients, their sub-recipients, and their contractors awarded contracts over the simplified acquisition threshold related to this award, shall inform their employees in writing, in the predominant language of the workforce, of the employee whistleblower rights and protections under 41 USC 4712.
  - (c) The recipient shall insert this clause, including this paragraph (3), in all sub-awards and in contracts over the simplified acquisition threshold related to this award.

**EXHIBIT I**

**Information Required by 2 CFR § 200.331(a)(1)**

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**For the purposes of the federal granting agency, OWEB is the recipient of federal funds and the grantee is the sub-recipient of federal funds.**

**Federal Award Identification:**

1. Grantee name (which must match registered name in DUNS): Molalla River Watch Inc (dba Molalla Riverwatch, Inc.)
2. Grantee's DUNS number: 15-584-1757
3. Federal Award Identification Number (FAIN): NA20NMF4380248
4. Federal Award Date: 7/1/20
5. Total Amount of Federal Funds Obligated by this Agreement: \$348,671.00
6. **Total Amount of Federal Funds** Obligated to the Subrecipient by the pass-through entity **including this Agreement:** \$348,671.00
7. Total Amount of Federal Award committed to the Subrecipient by the pass-through entity: \$348,671.00
8. Federal award project description: Pacific Coast Salmon Recovery Pacific Salmon Treaty Program
9. Name of Federal awarding agency, pass-through entity, and contact information for awarding official of the Pass-through entity:
  - (a) Name of Federal awarding agency: National Oceanic and Atmospheric Administration
  - (b) Name of pass-through entity: State of Oregon, Oregon Watershed Enhancement Board
  - (c) Contact information for awarding official of the pass-through entity:

Miriam Scharer  
775 Summer St. NE, Ste 360  
Salem, OR 97301
10. CFDA Number and Name: 11.438  
Federal Award Amount: \$15,000,000.00
11. Is Award R&D? No
12. Grantee's indirect cost rate for the Federal award: 10%



**EXHIBIT J**  
**INSURANCE REQUIREMENTS**

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**Section R of this Agreement specifies the base insurance requirements.** The Board considers some projects and project activities to have an increased risk to the organization, organization’s employees, volunteers, and the community and may require additional insurance. If required for the Project under this Agreement, the additional insurances types required, the amount, and who will carry the insurance are set forth below.

- The work related to this Project **will not** require additional insurance beyond base Agreement requirements.
- The work related to this Project **will** require additional insurance beyond base Agreement requirements.

If Grantee is completing the technical work, they shall carry the insurance types and amounts described below and will continue this coverage through Project completion. If Grantee is contracting out the technical work, they will only be required to meet the minimum OWEB insurance requirements of **Section R** of this Agreement. Additionally, the Grantee shall require that all contractors or consultants hired for construction, restoration, technical design, assessment or monitoring activities carry the minimum insurance types and amounts described below.

Insurance Type	Coverage Amount	Organization carrying insurance

**EXHIBIT K**  
**OWEB GRANT APPLICATION**  
**(In OWEB files)**