

Application for Waiver from Construction Standards for Public Water Systems

Water System Name Portland Water Bureau PWS ID 00657
Project or Facility Cottrell Road Transmission Main County Multnomah
Need for waiver identified: Water System Survey Date of Survey
 Plan Review # Exempt

Construction standard requested to be waived: OAR 333-061-0050 (9)(b) water sewer separation

As provided under OAR 333-061-0055, the Department may grant waivers from the construction standards prescribed by these rules:

- (a) When it is demonstrated to the satisfaction of the Department that strict compliance with the rule would be highly burdensome or impractical due to special conditions or causes; and
- (b) When the public or private interest in the granting of the waiver is found by the Department to clearly outweigh the interest of the application of uniform rules; and
- (c) When alternate measures are provided which, in the opinion of the Department, will provide adequate protection to the health and safety of the public including the ability to produce water which does not exceed the maximum contaminant levels listed in rule 333-061-0030.

Describe situation that conflicts with the standard. A proposed 12-inch water line will cross perpendicularly underneath an existing 1.5-inch sewer service at 28+60. There is 11-feet of vertical separation between them.

Describe why meeting the standard is highly burdensome or impractical. Three possible pipeline alignments were evaluated for this water main, as documented in "Cottrell Road Transmission Main (Backfeed Line) Alignment Revision" by Jacobs Engineering dated September 28, 2022. Report available upon request. This selected alignment had the fewest utility conflicts. All other feasible alignments would have more sewer crossings.

Describe proposed alternate measure that provide adequate protection to public health and safety. OAR 333-061-0050(9)(b)(C) allows for a waterline to be installed underneath an existing sewer under certain conditions. First, the soil between the pipes must be thoroughly tamped to prevent settlement of the sewer. For this project, the water line will be installed via directional drilling, so the 11-feet of soil between the pipes will not be disturbed. The natural degree of compaction of the soil will be maintained, providing equivalent protection to tamping construction material. Second, one length of water pipe must be centered at the crossing. For this project, continuous HDPE pipe will be used so that there are no water line joints along the entire length of pipe and certainly none within 10-feet on either side of the sewer crossing. Third, the sewer pipe must be inspected and if in poor condition mitigation taken. In an abundance of caution, for this project it will be assumed that the sewer pipe is in poor condition. A 20-foot

sleeve will be installed centered over the water crossing. This is equivalent to replacing the sewer or encasing in concrete for 10-feet on either side of the crossing.

Mac Gifford

Signature

6-6-24

Date

Name Mac Gifford
Address 1900 N Interstate Ave
City/State/Zip Portland, OR 97227
Telephone Number 503-823-1507

Attach plans of proposed waiver request or additional supporting information and

- Email your regulator; or
- Email dws.planreview@dhsosha.state.or.us; or
- Mail:
Oregon Health Authority
Drinking Water Services #640
PO Box 14450
Portland, OR 97293-0450

- Comments:
 Attachments: Improvement Plans

OHA Use Only

Waiver ID 490-2024

Entered into waiver database

Plan Review Coordinator's notes: Proposed alternate measures appear to provide adequate protection to public health and safety.

After due consideration the above requested waiver from the construction standards of OAR 333-061-0050 is hereby:

- Approved Comments:
 Denied

Kari Salis

Signature

6/12/2024

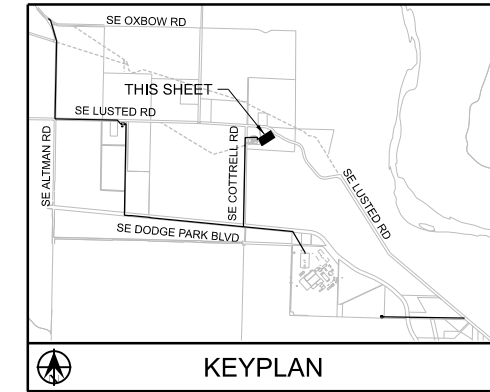
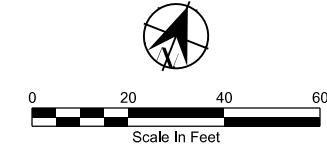
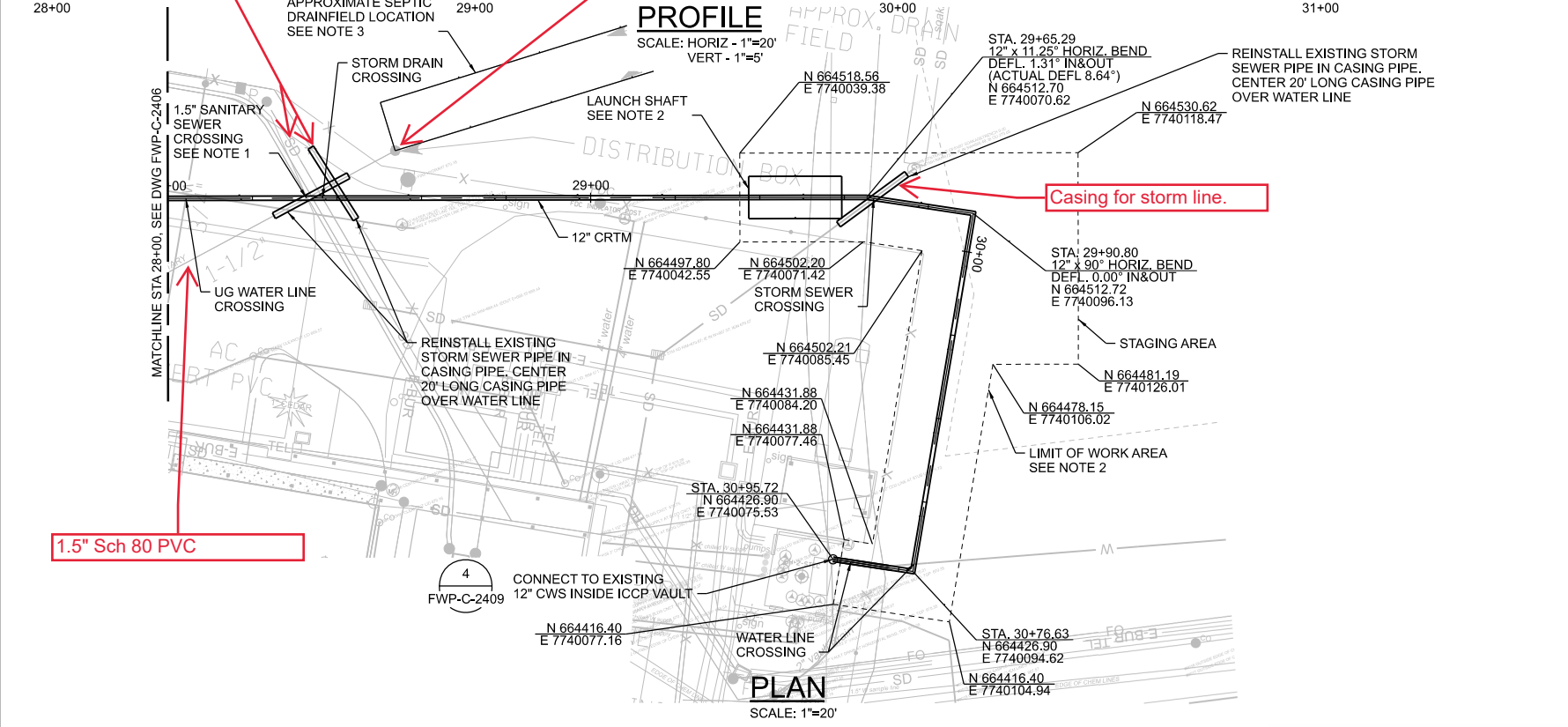
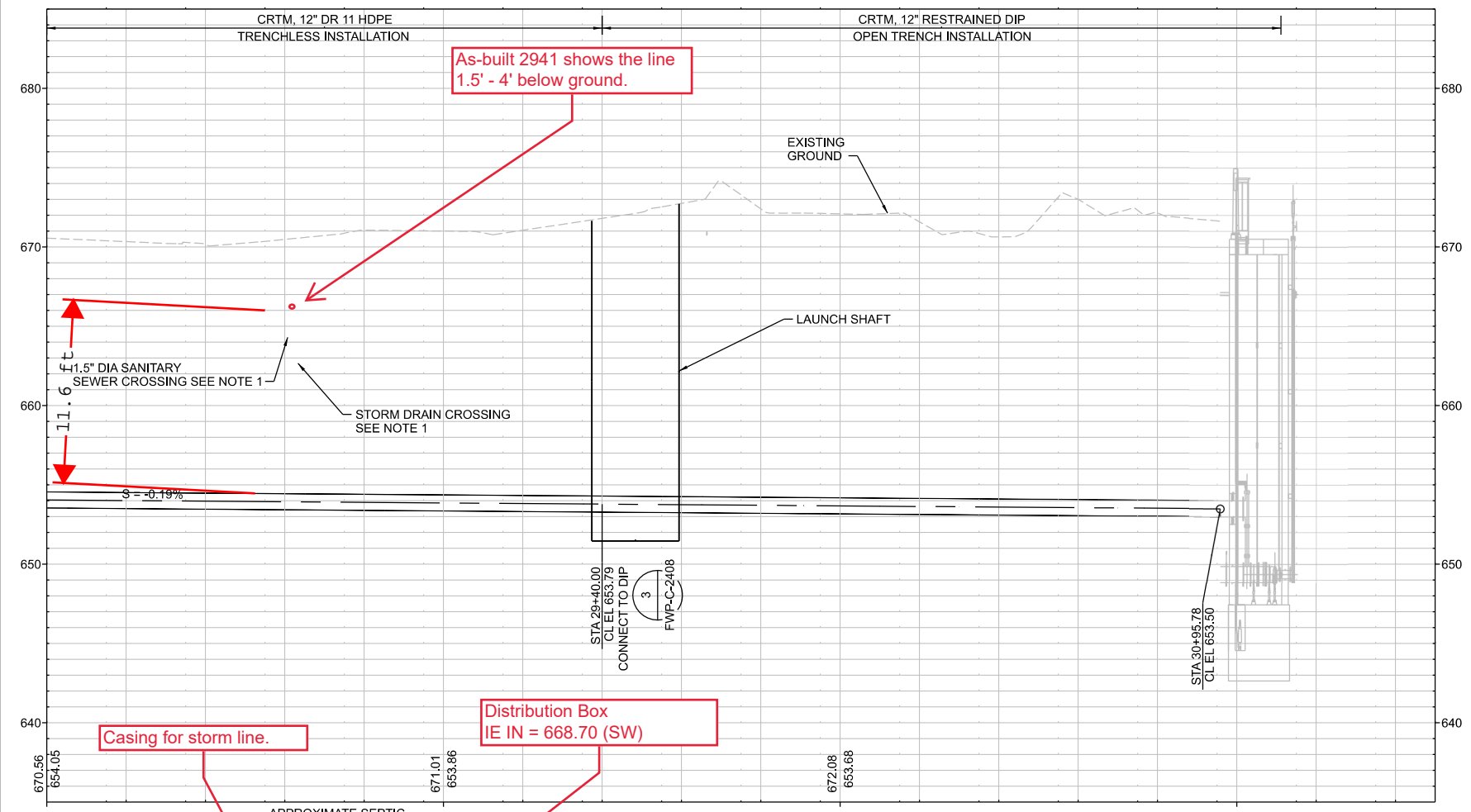
Date

Drinking Water Regional Manager Signature
Oregon Health Authority

Waiver database updated

GENERAL SHEET NOTES

- UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO CONFIRM LOCATION AND DEPTH OF ALL UTILITIES AND SERVICE CONNECTIONS PRIOR TO CONSTRUCTION ACTIVITIES. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES.
- CONTRACTOR IS RESPONSIBLE FOR DESIGN OF TEMPORARY LAUNCH AND RECEIVING SHAFTS AND GROUND SUPPORT. DIMENSIONS OF THE LAUNCH AND RECEIVING SHAFTS ARE TO BE SELECTED BY THE CONTRACTOR TO FACILITATE MEANS AND METHODS. SHAFTS AND WORK ACTIVITIES SHALL BE CONFINED TO THE WORK AREA AND EASEMENT SHOWN.
- CONTRACTOR SHALL INSTALL TEMPORARY FENCING AS NEEDED TO MAINTAIN A MINIMUM 5 FT. BUFFER BETWEEN WORK ZONE AND SEPTIC SYSTEM. EQUIPMENT SHALL NOT BE DRIVEN OVER SEPTIC SYSTEMS, AND NO MATERIAL OF ANY KIND (PIPE, SUPPLIES, BACKFILL, SPOILS, VEHICLES, EQUIPMENT, ETC.) SHALL BE PLACED OVER SEPTIC LINES.
- CONTRACTOR TO COORDINATE WORK WITH FACILITY OPERATIONS STAFF TO ENSURE THAT SITE ACCESS AND OPERATIONS ACTIVITIES REMAIN UNINTERRUPTED DURING CONSTRUCTION.
- REFER TO SPECIFICATION 02 41 19 "DEMOLITION AND RECONSTRUCTION."
- CONTRACTOR TO PROTECT AND MAINTAIN ACCESS TO ALL EXISTING DRIVEWAYS FOR THE DURATION OF CONSTRUCTION.
- DESIGN AS SHOWN IS FOR A GUIDED BORE INSTALLATION. IF AN AUGER BORE INSTALLATION IS CONDUCTED, AS ALLOWED BY SPECIFICATION 35 05 07, THEN THE LENGTH OF THE 12" CRTM FROM SE COTTRELL ROAD TO THE LAUNCH SHAFT SHALL BE IN A 16" STL PIPE AND THE SMALL DIAMETER ENCASMENTS ARE NOT REQUIRED.



CONFIDENTIAL

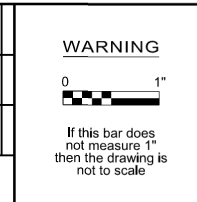
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No	Date	Description	Appd
1	6/7/23	ADDENDA NO. 1 - 100% REVIEW COMMENT UPDATE	BJP



ISSUED FOR CONFORMED SET ONLY
FOR STAMPED DESIGN PLEASE REFER TO JUNE 6, 2023 100% FINAL DESIGN PACKAGE

Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424
Date



Bull Run Filtration Pipelines
COTTRELL RD TRANSMISSION
PLAN AND PROFILE
STA 28+00 TO 31+50

SAP Project No
W02563
1/4 Section
3766
Sheet No
FWP-C-2407
222 of 623



Portland Water Bureau

From forest to faucet, we deliver the best drinking water in the world.

PWB DESIGN/POLICY EXCEPTION FORM

DESIGN EXCEPTION NO.

2024-0044

PROJECT (PERMIT) NAME: Bull Run Filtration Pipelines Project		PROJECT (PERMIT) NO.: W02563
APPLICANT NAME & TITLE: Brad Phelps PE, Design Manager, Jacobs Engineering Group		REQUEST DATE: 3/28/2024
STANDARD, GUIDELINE, CODE, OR POLICY THAT WILL NOT BE MET:		
<input checked="" type="checkbox"/> OAR 333-061/OAR 340-052-App A	<input type="checkbox"/> PWB Public Works Process Manual	
<input type="checkbox"/> Title 21	<input type="checkbox"/> PWB Standard Drawings	
<input type="checkbox"/> PWB Admin Rule	<input type="checkbox"/> PWB Policy	
<input type="checkbox"/> PWB Design Manual	<input type="checkbox"/> Other	
EXCEPTIONS - CONFLICTS WITH WATER SYSTEM:		
<input type="checkbox"/> Pipeline Layout	<input checked="" type="checkbox"/> Waterline/Sewer Line/Storm Line Separation	
<input type="checkbox"/> Vault and structure separation	<input type="checkbox"/> Separation to Other Utilities	
<input type="checkbox"/> Pipe Cover	<input type="checkbox"/> Meter box/small service location	
<input type="checkbox"/> Valve Locations	<input type="checkbox"/> Above Ground Clearance	
<input type="checkbox"/> Hydrants	<input type="checkbox"/> Connections	
<input type="checkbox"/> Other		
DESIGN/POLICY EXCEPTION DESCRIPTION (CITE THE STANDARD, GUIDELINE, OR POLICY THAT WILL NOT BE MET): 333-061-0050(9)(c)(A) Wherever possible, the bottom of the water line shall be 1.5 feet or more above the top of the sewer line and one full length of the water line shall be centered at the crossing.		
<i>SUPPORTING DOCUMENTATION SHALL BE SUBMITTED WITH APPLICATION THAT INCLUDES SITE PLAN, PROFILE, CROSS SECTIONS AND DETAILS.</i>		
PROJECT DESCRIPTION: A 12" DR 11 HDPE potable water transmission main is proposed to be located under an existing 1.5" pressured sanitary line. The 1.5" septic line delivers sanitary flow to an existing septic field at PWB's Lusted Hill Facility. The 12" pipeline is a new horizontally directionally drilled pipeline to supply water from the new Filtration Facility to the Lusted Road Distribution Main.		
LOCATION (STREET, STATIONING, AND OFFSET): Sheet FWP-C-2407 Lusted Hill Facility CRTM Stationing 28+60. 6704 SE Cottrell Road		

REASON(S) FOR DESIGN EXCEPTION (ATTACH BACKGROUND DOCUMENTS AS APPLICABLE):

The proposed 12" transmission main will be placed below an existing sanitary line at a crossing. Oregon Administrative Rules require that new water mains be placed 1.5' over sanitary lines at crossings.

DESCRIBE ALTERNATES & MITIGATION CONSIDERED AS APPLICABLE:

Multiple routes for the 12" transmission main have been proposed and rejected. Please review Lusted Road Distribution Main (Backfeed Line) Connection Alternative Rev 1 Technical Memo from Jacobs Engineering dated 9/14/21. Consistent with the memo, an alignment on the southside of the Lusted Hill property was proposed in the FPP 30% plans. The alignment of this new 12" main was directly adjacent to Conduit 3 and created potential hazard to C3.

The current proposal is described in CRTM (Backfeed Line) Alignment Revision Technical Memo dated 9/28/22. It shows a trenchless installation of 12" HDPE under the existing sanitary line at an approximate depth of 15'. Vertical separation between the water and sanitary line would be approximately 11'. The HDPE would be a continuous line from entry and receiving shaft therefore the connections with the 12" HDPE would be located at least 100' from the sanitary line.

PROPOSED MITIGATION (TO BE SHOWN ON PLANS FOR APPROVAL AS APPLICABLE):

Continuous HDPE piping installed using trenchless Horizontal Directional Drilling (HDD) with more than 10' vertical skin-to-skin clearance from the sanitary line.

Casing of the sanitary line is shown on the current design plans if the mitigation is deemed necessary during this review. The casing is proposed to be a continuous 20' long pipe centered over the sanitary line.