

**PORT OF TACOMA
TACOMA, WASHINGTON
EB1 PAVEMENT AND RESTROOM BUILDING**

**PROJECT NO. 201105.01
CONTRACT NO. 071907**

**Thais Howard, PE
Director, Engineering**

**Norman Gilbert, PE
Project Manager**

END OF SECTION

This page intentionally left blank

The undersigned Engineer of Record hereby certifies that the Technical Specifications for the following portions of this project were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington, and hereby affix my Professional Seal and signature.

Those Sections prepared under my direct supervision and being certified by my seal and signature below are as follows:

<u>SEAL & SIGNATURE</u>	<u>SECTION(S)</u>
Steve Kingsley, PE KPFF 	02 41 13 – Selective Site Demolition 03 30 00 – Cast-In-Place Concrete 05 50 00 – Metal Fabrication 09 96 00 – High Performance Coatings 31 00 00 – Earthwork 31 23 19 – Dewatering 31 23 33 – Trenching and Backfilling 31 41 00 – Shoring and Underpinning 32 12 16 – Asphalt Paving 32 17 00 – Paving Specialties 33 10 00 – Water Utilities 33 30 00 – Sanitary Sewer Utilities 33 40 00 – Storm Drainage Utilities
Scot Bartkoske, PE Elcon Associates  Digitally signed by Scot Bartkoske, PE DN: C=US, E=sbartkoske@elcon.com, O="ELCON Associates, Inc", CN="Scot Bartkoske, PE" Location: Tukwila Office Reason: I am approving this document Contact Info: 206-267-3046 Date: 2023.11.30 14:46:06-08'00'	26 05 00 – General Electrical Provisions 26 05 01 – Basic Materials and Methods 26 05 19 – Wires and Cables, Secondary Voltages 26 05 26 – Grounding 26 05 33 – Raceways 26 05 43 – Underground Ducts and Handholes 26 22 13 – Low Voltage Dry-Type Transformers 26 24 16 – Panelboards 26 28 16 – Disconnects and Fused Switches
Daniel J. Trisler, PE Hailey and Aldrich 	31 23 16 – Cement Treated Base

END OF SECTION

This page intentionally left blank

PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

- 00 01 01 - Project Title Page
- 00 01 07 - Seals Page
- 00 01 10 - Table of Contents
- 00 01 15 - List of Drawing Sheets
- 00 11 13 - Advertisement for Bids
- 00 21 00 - Instructions to Bidders
- 00 26 00 - Substitution Procedures
- 00 31 00 - Available Project Information
- 00 31 26 - Existing Hazardous Material Information
- 00 41 00 - Bid Form
- 00 43 13 - Bid Security Form
- 00 45 13 - Responsibility Detail Form
- 00 52 00 - Agreement Form
- 00 61 13.13 - Performance Bond
- 00 61 13.16 - Payment Bond
- 00 61 23 - Retainage Bond
- 00 72 00 - General Conditions
- 00 73 16 - Insurance Requirements
- 00 73 46 - Washington State Prevailing Wage Rates
- 00 73 63 - Security Requirements

SPECIFICATIONS

DIVISION 01 -- GENERAL REQUIREMENTS

- 01 10 00 - Summary
- 01 14 00 - Work Restrictions
- 01 20 00 - Price and Payment Procedures
- 01 26 00 - Change Management Procedures
- 01 29 73 - Schedule of Values
- 01 30 00 - Administrative Requirements
- 01 31 23 - Web-based Construction Management
- 01 32 16 - Construction Progress Schedule
- 01 33 00 - Submittal Procedures
- 01 35 29 - Health, Safety, and Emergency Response Procedures

- 01 35 43.13 - Hazardous Materials Handling Procedure
- 01 35 47 - Air and Noise Control Procedures
- 01 35 91 - Historic/Cultural Treatment Resources
- 01 41 00 - Regulatory Requirements
- 01 42 19 - Reference Standards
- 01 45 00 - Quality Control
- 01 50 00 - Temporary Facilities and Controls
- 01 55 00 - Vehicular Access and Parking
- 01 57 13 - TESC and Project SWPPP
- 01 60 00 - Product Requirements
- 01 64 00 - Owner-furnished Products
- 01 71 00 - Examination and Preparation
- 01 71 23 - Field Engineering
- 01 74 13 - Construction Cleaning
- 01 74 16 - Soil Characteristics and Waste Management
- 01 77 00 - Closeout Procedures
- 01 78 23 - Operation and Maintenance Manuals
- DIVISION 02 -- EXISTING CONDITIONS
 - 02 41 13 - Selective Site Demolition
- DIVISION 03 -- CONCRETE
 - 03 30 00 - Cast-in-Place Concrete
- DIVISION 05 -- METALS
 - 05 50 00 - Metal Fabrications
- DIVISION 09 -- FINISHES
 - 09 96 00 - High Performance Coatings
- DIVISION 26 -- ELECTRICAL
 - 26 05 00 - General Electrical Provisions
 - 26 05 01 - Basic Materials & Methods
 - 26 05 19 - Wire and Cables, Secondary Voltages
 - 26 05 26 - Grounding
 - 26 05 33 - Raceways
 - 26 05 43 - Underground Ducts and Handholes
 - 26 22 13 - Low-Voltage Dry-Type Transformers
 - 26 24 16 - Panelboards

26 28 16 - Disconnects & Fused Switches

DIVISION 31 -- EARTHWORK

31 00 00 - Earthwork

31 23 19 - Dewatering

31 23 33 - Trenching and Backfilling

31 32 13 - Cement Treated Base (CTB)

31 41 00 - Shoring and Underpinning

DIVISION 32 -- EXTERIOR IMPROVEMENTS

32 12 16 - Asphalt Paving

32 17 00 - Paving Specialties

DIVISION 33 -- UTILITIES

33 10 00 - Water Utilities

33 30 00 - Sanitary Sewage Utilities

33 40 00 - Storm Drainage Utilities

APPENDICES

Appendix A - Port of Tacoma Provided Construction SWPPP

Appendix B - Port of Tacoma Option SWPPP Short Form

Appendix C - State Environmental Policy Act (SEPA) - Determination of Nonsignificance

Appendix D - Construction Stormwater General Permit - WAR312679

Appendix E - City of Tacoma Building Permit - BLDCN23-0053

Appendix F - City of Tacoma/Tacoma Rail Right-of-Entry Permit Requirements

Appendix G - Port of Tacoma Archaeological Monitoring and Inadvertent Discovery Plan (ID

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

A. Contract Drawings: The following drawings are a part of the Contract Documents:

Sheet No.	Drawing Title
1	G1.0 COVER SHEET
2	G1.1 GENERAL NOTES AND ABBREVIATIONS
3	G1.2 GENERAL SITE AND PHASING PLAN
4	G1.3 SURVEY - AREA 1
5	G1.4 SURVEY - AREA 2
6	G1.5 SURVEY - AREA 3
7	D1.0 TESC AND DEMOLITION PLAN - AREA 1
8	D1.1 TESC AND DEMOLITION PLAN - AREA 2
9	D1.2 TESC AND DEMOLITION PLAN - AREA 3
10	D1.3 TESC AND DEMOLITION DETAILS AND NOTES
11	C1.0 SITE, GRADING, AND UTILITY PLANS - AREA 1
12	C1.1 SITE, GRADING, AND UTILITY PLANS - AREA 2
13	C1.2 SITE, GRADING, AND UTILITY PLANS - AREA 3
14	C1.3 RESTROOM BUILDING AND SEWER ROW WORK ENLARGED PLAN
15	C1.4 GRADING AND PAVING DETAILS
16	C1.5 SITE FEATURE DETAILS
17	C1.6 SITE SECTIONS
18	C1.7 UTILITY DETAILS
19	C1.8 UTILITY DETAILS
20	C1.9 UTILITY PROFILES
21	C2.0 RESTROOM BUILDING DETAILS
22	E1.0 ELECTRICAL SITE PLAN 1
23	E4.0 ONE LINE DIAGRAM
24	E4.1 PANEL SCHEDULE
25	E4.2 PANEL SCHEDULE
26	E5.0 ELECTRICAL DETAILS

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

EB1 PAVEMENT AND RESTROOM BUILDING

PROJECT NO. 201105.01 | CONTRACT NO. 071907

- Scope of Work:** The Work required for this Project includes but is not limited to: Selective removal of asphalt pavement; installation of water, sewer, power and stormwater utilities; jack and bore sewer lines under existing railroad tracks; concrete treated base of existing subgrade; grading; asphalt paving; concrete placement; preparation of gravel pad and final utility connections for Port provided pre-fabricated restroom building and miscellaneous metal fabrications.
- Bid Estimate:** Estimated cost range is \$2,500,000 to \$2,750,000, plus Washington State Sales Tax (WSST).
- In accordance with RCW 39.04.320, fifteen (15) percent apprenticeship participation is required for certain projects estimated to cost one million (\$1,000,000) dollars or more. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530, by phone (360) 902-5320, or e-mail at Apprentice@lni.wa.gov, to obtain information on available apprenticeship programs.
- Sealed Bid Date/Time/Location:** Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington 98421 until **10:00 A.M. on January 12, 2024**, at which time they will be publicly opened and read aloud and the apparent low bid will be determined.
- Pre-Bid Conference and Site Tour:** A pre-Bid conference and site visit have been set for January 3, 2024 at 11:30 A.M. The site visit will convene at the project site. Attendees shall park and meet in the employee parking lot at 2340 E. Alexander Ave, Tacoma, WA 98424. The following Personal Protective Equipment is required for the site visit: sturdy shoes and reflective vest.
- Attendees will be required to sign a Release and Acceptance of Responsibility and Acknowledgement of Risks Form prior to entering the site and shall provide their own Personal Protection Equipment (PPE) as required above.
- Bid Security:** Each Bid must be accompanied by a Bid security in an amount equal to five (5) percent of the Base Bid in a form allowed by the Instructions to Bidders.

Contact Information: Any questions to the Port may be submitted to the Procurement Department through the Procurement and Question Submission Portal (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

Questions will not be accepted after seven (7) days prior to the Bid Date.

Bidding Documents: Plans, Specifications, Addenda, and Plan Holders List for this Project are available on-line through The Port of Tacoma's Website portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number 071907. Bidders must subscribe to the Holder's List on the right hand side of the screen in order to receive automatic email notification of future addenda and to be placed on the Holder's List.

Written questions about the meaning or intent of the Solicitation Documents shall only be submitted to the Procurement Department through the Procurement and Question Submission Portal (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#).

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

When viewing the details page for this procurement on the Port's Website firms have the option of subscribing to the Holder's List. Holder's Lists will be updated regularly and posted to the specific procurements page. Additional Instructions available in Section 00 21 00 - Instructions to Bidders.

Public Works Training Requirements: Effective July 1, 2019, all businesses are required to have training before bidding on public works projects and prevailing wage under RCW 39.04.359 and RCW 39.12, or is on the list of exempt businesses maintained by the Department of Labor and Industries. The bidder must designate a person or persons to be trained on these requirements. The training will be provided by the Department of Labor and Industries or by a training provider whose curriculum is approved by the Department of Labor and Industries.

Please refer to Labor and Industries' web site
(https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp?utm_medium=email&utm_source=govdelivery) for more information and training dates, requirements, and exemptions. Failure to attend this training could result in a determination of "not responsible" and the bidder not being awarded a public works contract.

END OF SECTION

This page intentionally left blank

PART 1 - SUMMARY

1.01 DEFINITIONS

All definitions set forth in the Agreement, the General Conditions of the Contract for Construction, and in other Contract Documents are applicable to the Bidding Documents.

- A. "Addenda" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections. The contents of an Addendum are issued in no particular order and therefore should be carefully and completely reviewed.
- B. An "Apprentice" is a worker for whom an apprenticeship agreement has been registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).
- C. "Award" means the formal decision by the Port of Tacoma ("Port") notifying a Responsible Bidder with the lowest responsive Bid of the Port's acceptance of their Bid and intent to enter into a Contract with the Bidder.
- D. The "Award Requirements" include the statutory requirements as a condition precedent to Award.
- E. The "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- F. A "Bid" is a complete and properly signed proposal to do the Work, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- G. The "Bid Date" is the day and hour specified in the Bidding Documents, as may be changed through an Addendum, by which Bidders are required to submit Bids to the Port.
- H. The "Bid Form" is the form(s) included with the Bidding Documents, with Specification Section 00 41 00, through which a Bidder submits a Bid.
- I. A "Bidder" is a person or entity who submits a Bid.
- J. The "Bidding Documents" include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, including those provided by reference, the Bid security, and the proposed Contract Documents, including any Addenda issued prior to the Bid Date.
- K. The "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- L. A "Sub-Bidder" is a person or entity of any tier who submits a bid or proposal to or through the Bidder for materials, equipment or labor for a portion of the Work.

1.02 BIDDER'S REPRESENTATIONS

By making its Bid, each Bidder represents that:

- A. **BIDDING DOCUMENTS.** The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.

- B. PRE-BID MEETING. The Bidder has attended pre-Bid meeting(s) required by the Bidding Documents. Attendance at a mandatory meeting or training session means that, in the sole opinion of the Port, a Project representative of a Bidder has attended all or substantially all of such meeting or session.
- C. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, and is made without exception.
- D. EXAMINATION. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents including, but not limited to, any liquidated damages, insurance provisions, and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed, has correlated its observations with the requirements of the proposed Contract Documents, and it has satisfied itself as to the nature, location, character, quality, and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services, and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or that may affect performance of the Work or the cost or difficulty thereof, including, but not limited to, those conditions and matters affecting transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to, and at all times during, the performance of the Work. The failure of the Bidder to fully acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- E. PROJECT MANUAL. The Bidder has checked its copies of the Project Manual (if any) with the table of contents bound therein to ensure the Project Manual is complete.
- F. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications with any other contracts to be awarded separately from, but in connection with, the Work being Bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the Contract being Bid upon.
- G. LICENSE REQUIREMENTS. The Bidders and Sub-Bidders are registered and hold all licenses required by the laws of Washington, including a certificate of registration in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.
- H. CERTIFICATION. The Bidder verifies under penalty of perjury that the Bidder has not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three (3) year period immediately preceding the Bid Date.
- I. NO EXCEPTIONS. Bids must be based upon the materials, systems, and equipment described and required by the Bidding Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

1. Bidders may obtain complete sets of the Bidding Documents from The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts" then "Procurement."

2. Complete Sets. Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for obtaining updated information. The Port does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.
3. Conditions. The Port makes copies of the Bidding Documents available only for the purpose of obtaining Bids on the Work and does not confer a license or grant permission for any other use.
4. Legible Documents. To the extent any Drawings, Specifications, or other Bidding Documents are not legible, it is the Bidder's responsibility to obtain legible documents.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. Format. The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in, or phases of the Project.
2. Duty to Notify. Bidders shall promptly notify the Port in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions.
3. Products and Installation. All Bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Port any objections (in writing) no later than seven (7) days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.
4. Written Request. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Procurement Department through the Procurement and Question Submission Portal at least seven (7) days prior to the Bid Date (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

5. Request to Modify Responsibility Criteria. No later than seven (7) days prior to the Bid Date, a potential Bidder may request in writing that the Port modify the Responsibility Criteria. The Port will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the Criteria, the Port will issue an Addendum identifying the new Criteria.
6. Addenda. The Bidder shall not rely on oral information provided at any pre-Bid meetings or during site visits. Verbal statements made by representatives of the Port are for informational purposes only. Any interpretation, correction, or change of the Bidding Documents will be made solely by written Addendum. Interpretations, corrections, or changes of the Bidding Documents made in any manner other than by written Addendum, including but not limited to, oral statements will not be binding, and Bidders shall not rely upon such statements, interpretations, corrections, or changes. The Port is not responsible for explanations or interpretations of the Bidding Documents other than in a written Addendum.

7. Site Visits. Any site visits are provided as a courtesy to potential Bidders to assist them in becoming familiar with the Project site conditions. However, only the Bidding Documents, including any issued Addenda, may be relied upon by Bidders.
8. Singular References. Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
9. Utilities and Runs. The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. For substitutions during bidding, refer to Section 00 26 00 – Substitution Procedures.

D. ADDENDA

1. Distribution. All Addenda will be written and will be made available on the Port's website or any other source specified by the Port for the Project.
2. Copies. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. Verification and Acknowledgment of Receipt. Prior to submitting a Bid, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt and consideration of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. Form. Bids (including required attachments) shall be submitted on forms identical to the Bid Form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.
2. Entries on the Bid Form. All blanks on the Bid Form shall be filled in by typewriter, printer, or manually in ink.
3. Figures. All sums shall be expressed in figures, not words. Portions of the Bid Form may require the addition or multiplication of component bids to a total or the identification of component amounts within a total. In case of discrepancy between unit prices listed and their sum(s), the unit prices listed shall govern (rather than the sum).
4. Initial Changes. Any interlineation, alteration, or erasure shall be initialed by an authorized representative of the Bidder.
5. Bid Breakdown. The Bid Form may contain, for the Port's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.
 - a. For lump-sum Bids, the total Contract Sum shall be submitted.
 - b. For unit-price Bids, a price shall be submitted for each item of the Work, an extension thereof, and, if requested, the total Contract Sum.
6. No Conditions. The Bidder shall make no conditions or stipulations on the Bid Form, nor qualify its Bid in any manner.

7. Identity of Bidder. The Bidder shall include in the specified location on the Bid Form, the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. The Port verifies signature authority on the Labor and Industries website <https://fortress.wa.gov/lni/bbip/Search.aspx> under the contractor registration business owner information. If the business owner information is not current, the Bidder shall show proof of authority to sign at the request of the Port. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder
8. Bid Amounts Do Not Include Sales Tax. The Work to be performed constitutes a "retail sale" as this term is defined in RCW 82.04.050. Thus, the Base Bid amount shall include in the sum stated all taxes imposed by law, EXCEPT WASHINGTON STATE AND LOCAL SALES TAX due on the Base Bid. The engaged Contractor will pay retail sales tax on all consumables used during the performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Base Bid price and in any other prices set forth on the Bid Form. The Port will pay state and local retail sales tax due on each progress payment and final payment to the engaged Contractor for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local government.

B. POTENTIAL LISTING OF SUB-BIDDERS (SUBCONTRACTORS)

1. Procedure. On projects equal to or greater than \$1,000,000, the Bid Form includes a requirement that certain Sub-Bidders be listed, in which case the Bidder must complete the required list. In these circumstances, and regardless of the anticipated cost of the Project, the Bidder must name the Sub-Bidder or Sub-Bidders with whom the Bidder, if awarded the Contract, will subcontract directly (i.e., not lower-tier Sub-Bidders) for performance of the Work of:
 - a. HVAC (heating, ventilation, and air conditioning) Work;
 - b. Plumbing Work as described in RCW 18.106;
 - c. Electrical Work as described in RCW 19.28; and
 - d. Any other categories of Work listed on the Sub-Bidder listing form and/or Bid Form.
2. Self-Performance. If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.
3. Multiple Entries. The Bidder shall not list more than one (1) entity for a particular category of Work identified, unless a Sub-Bidder will vary based on an Alternate Bid, in which case the Bidder shall identify the Sub-Bidder to be used for the Alternate and the affected portion of the Work.
4. Failure to Submit. In accordance with RCW 39.30.060, failure of a Bidder to submit, as part of the Bid, the names of such proposed HVAC, plumbing, and electrical Sub-Bidders, or to name itself to perform such Work, or the naming of two (2) or more Sub-Bidders to perform the same Work, shall render the Bidder's Bid non-responsive and; therefore, void.
5. Requirement to Subcontract. The Bidder, if Awarded the Contract, will subcontract with the listed Sub-Bidders for performance of the portion of the Work designated on the Bid Form, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Sub-Bidder in furtherance of bid shopping or bid peddling.

6. Sub-Bidder Qualification. Listed Sub-Bidders may be required to provide evidence of their qualifications, including a statement of experience and references, prior to Award, or at any time during the Contract Time. Such information shall be provided within twenty-four (24) hours of request. This evidence shall demonstrate that the Sub-Bidder meets or exceeds all requirements for experience, qualifications, manufacturer's certifications, or any other requirements specified in any of the technical sections of the Contract Documents for which the Sub-Bidder proposes to perform Work.
7. Replacement. If a listed Sub-Bidder fails to provide adequate evidence of qualifications, is unable to comply with any bonding requirements of the Bidding Documents or with other requirements of the Contract or Bidding Documents, is not properly licensed, or fails to meet the Responsibility Criteria of the Bidding Documents, the Port may require the Bidder to replace the Sub-Bidder with another subcontractor reasonably acceptable to the Port at no change in the Contract Sum or Contract Time.
8. Sub-Bidder Standards. Sub-Bidders shall meet contractual and technical qualification standards, and provide specialized certification, licensing, and/or payment and performance bonding, if required.
9. MWBE, Veteran-owned, and small business participation encouraged. The Port's policy is to encourage the Contractor to solicit and document participation, and to provide and promote the maximum lawful, practicable opportunity for increased participation, by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE), Veteran-owned businesses (defined in RCW 43.60.010, and Small, Mini and Micro business enterprises (defined in RCW 39.26.010).

C. BID SECURITY

1. Purpose and Procedure. Each Bid shall be accompanied by Bid security payable to the Port in the form required by the Bidding Documents and equal to five (5) percent of the Base Bid only (i.e., not including any Alternates or Unit Prices). The Bid security constitutes a pledge by the Bidder to the Port that the Bidder will enter into the Contract with the Port in the form provided, in a timely manner, and on the terms stated in its Bid, and will furnish in a timely manner, the payment and performance bonds, certificates of insurance, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid security shall be forfeited to the Port as liquidated damages, not as a penalty. By submitting a Bid, each Bidder represents and agrees that the Bid security, if forfeited, is a reasonable prediction on the Bid Date of future damages to the Port. Failure of the Bidder to provide Bid Security as required shall render the bid non-responsive.
2. Form. The Bid security shall be in the form of a certified or bank cashier's check payable to the Port or a Bid bond executed by a bonding company reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, possess an A.M. Best rating of "A-," Fiscal Size Category (FSC) six (6) or better, and be authorized by the U.S. Department of the Treasury. The Bid security shall be signed by the person or persons legally authorized to bind the Bidder. Bid bonds shall be submitted using the form included with the Bidding Documents.
3. Retaining Bid Security. The Port will have the right to retain the Bid security of Bidders to whom an Award is being considered until the earliest of either: (a) mutual execution of the Contract, and the Port's receipt of payment and performance bonds, (b) the specified time has elapsed so that Bids may be withdrawn, or (c) when all Bids have been rejected.

4. Return of Bid Security. Within sixty (60) days after the Bid Date, the Port will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all un-forfeited Bid securities will be returned. Bid security may be returned in the form provided or by separate payment.

D. SUBMISSION OF BIDS

1. Procedure. The Bid, the Bid security, and other documents required to be submitted with the Bid, shall be enclosed in a sealed envelope identified with the Project name and number and the Bidder's name and address. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face of the mailing envelope.
 - a. If a Bid is mailed, it shall be addressed to the Port of Tacoma, Contracts Department, 1 Sitcum Plaza, Tacoma, WA 98421.
 - b. If a Bid is delivered, it shall be delivered to the Front Reception Desk, Port of Tacoma, 1 Sitcum Plaza, Tacoma, WA 98421.
 - c. The time stamp clock at the Front Reception Desk at 1 Sitcum Plaza is the Port's official clock.
2. Deposit. Bids shall be deposited at the designated location prior to the Bid Date indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the Bid Date and time specified shall be returned without consideration at the discretion of the Port, or rejected at the time of receipt.
3. Delivery. The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.
4. Form. Oral, facsimile, telephonic, electronic, or email Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. After the Bid Date. A Bid may not be modified, withdrawn, or canceled by the Bidder during a ninety (90) day period following the Bid Date, and each Bidder so agrees by virtue of submitting its Bid.
2. Before the Bid Date. Prior to the Bid Date, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing, with the signature of the Bidder, and shall be worded so as not to reveal the amount of the original Bid. Email notice will not be accepted. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Port in time to be withdrawn before the Bid opening.
3. Resubmittal. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids, provided that they are then fully in conformance with these Instructions to Bidders.
4. Bid Security with Resubmission. Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. COMMUNICATIONS

Communications from a Bidder related to these Instructions to Bidders must be in writing to the Procurement Department through the Procurement and Question Submission Portal (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). Communications, including but not limited to, notices and requests by Sub-Bidders shall be made through the Bidder and not directly by a Sub-Bidder to the Port. No oral responses will be binding by the Port.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

1.05 CONSIDERATION OF BIDS

- A. OPENING OF BIDS. Unless stated otherwise in the Advertisement or Invitation to Bid or an Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and any Alternate Bids will promptly (and generally within twenty-four (24) hours) be made available to Bidders and other interested parties.
- B. REJECTION OF BIDS. The Port shall have the right, but not the obligation, to reject any or all Bids for any reason, or for no reason, to reject a Bid not accompanied by the required Bid security, or to reject a Bid which is in any way incomplete or irregular.
- C. BIDDING MISTAKES. The Port will not be obligated to consider notice of claimed Bid mistakes received more than twenty-four (24) hours after the Bid Date. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from Bidding on the Project if a subsequent call for Bids is made for the Project.
- D. ACCEPTANCE OF BID (AWARD)
 - 1. Intent to Accept. The Port intends, but is not bound, to Award a Contract to the Responsible Bidder with the lowest responsive Bid, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Port has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.
 - 2. Requirements for Award. Before the Award, the lowest responsive Bidder must be deemed Responsible by the Port and must satisfy all Award Requirements.
- E. BID PROTEST PROCEDURES
 - 1. Procedure. A Bidder protesting, for any reason, the Bidding Documents, a Bidding procedure, the Port's objection to a Bidder or a person or entity proposed by the Bidder, including but not limited to, a finding of non-Responsibility, the Award of the Contract or any other aspect arising from, or relating in any way to, the Bidding, shall cause a written protest to be filed with the Port within two (2) business days of the event giving rise to the protest. (Intermediate Saturdays, Sundays, and legal holidays are not counted as business days.) The written protest shall include the name of the protesting Bidder, the bid solicitation number and title under which the protest is submitted, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, evidence that the apparent low bidder has been given notice of the protest, and the specific relief requested. The written protest shall be sent by email to procurement@portoftacoma.com.

2. Consideration. Upon receipt of the written protest, the Port will consider the protest. The Port may, within three (3) business days of the Port's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Port, the Contracts Director of the Port, or his or her designee, will review the issues and promptly furnish a final and binding written decision to the protesting Bidder, and any other affected Bidder(s), within six (6) business days of the Port's receipt of the protest. (If more than one (1) protest is filed, the Port's decision will be provided within six (6) business days of the Port's receipt of the last protest.) If no reply is received from the Port during the six (6) business-day period, the protest will be deemed rejected.
3. Waiver. Failure to comply with these protest procedures will render a protest waived.
4. Condition Precedent. Timely and proper compliance with, and exhaustion of, these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. THE LOWEST RESPONSIVE BIDDER SHALL:

1. Responsibility Detail Form. Within 24 hours of the Low Responsive Bidder Selection Notification, the apparent low Bidder shall submit to the Port the Responsibility Detail Form and other required documents (Section 00 45 13) executed by an authorized company officer. As requested from the Port, the low responsive Bidder shall provide written confirmation that the person signing the Bid on behalf of the Bidder was duly authorized at the time of bid, a detailed breakdown of the Bid in a form acceptable to the Port, and other information required by the Port.
2. The apparent low Bidder shall submit to the Port upon request:
 - a. Additional information regarding the use of the Bidder's own forces and the use of subcontractors and suppliers;
 - b. The names of the persons or entities (including a designation of the Work to be performed with the Bidder's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work (i.e., either a listed Sub-Bidder or a Sub-Bidder performing Work valued at least ten (10) percent of the Base Bid), consistent with the listing required with the Bid; and
 - c. The proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.
3. Failure to provide any of the above information in a timely manner will constitute an event of breach permitting forfeiture of the Bid security.
4. Bidder Responsibility. The Bidder will be required to establish, to the satisfaction of the Port, the reliability and responsibility of itself and the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. If requested, the Bidder shall meet with the Port to discuss the Bid, including any pricing, the Bid components, and any assumptions made by the Bidder.

5. Sub-Bidder Responsibility. The Responsibility of the Bidder may be judged in part by the Responsibility of Sub-Bidders. Bidders must verify the Responsibility Criteria for each first-tier Sub-Bidder. A Sub-Bidder of any tier that hires other Sub-Bidders must verify Responsibility Criteria for each of its lower-tier Sub-Bidders. The verification shall include a representation that each Sub-Bidder, at the time of subcontract execution, is Responsible and possesses required licenses.
6. Objection. Prior to an Award of the Contract, the Port will notify the Bidder in writing if the Port, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. Upon receiving such objection, the Bidder may, at Bidder's option: (a) withdraw their Bid, (b) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by such substitution, or (c) file a protest in accordance with the Bidding Documents.
7. Change. Persons and entities proposed by the Bidder to whom the Port has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed, except with the written consent of the Port.
8. Right to Terminate. The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. If a Bidder makes a material misrepresentation on a Qualification Statement, the Port has the right to terminate the Contract for cause and may then pursue any remedies that exist under the Contract or that are otherwise available.

- B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Port as under consideration for Award of a Contract shall also provide a properly executed Qualification Statement, if so requested by the Port.

1.07 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND, AND INSURANCE

- A. BOND REQUIREMENTS. Within ten (10) days after the Port's Notice of Award of the Contract, the successful Bidder shall obtain and furnish statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. Bonds shall be written for one hundred (100) percent of the contract award amount, plus Washington State Sales Tax and Change Orders. The cost of such bonds shall be included in the Base Bid.
1. On contracts of one hundred fifty thousand dollars (\$150,000) or less, at the option of the Contractor or the General Contractor/Construction Manager as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten (10) percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the employment security department, and the department of labor and industries and settlement of any liens filed under RCW 60.28, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.
 2. On contracts of one hundred fifty thousand dollars (\$150,000) or less, the Port may accept a full payment and performance bond from an individual surety or sureties.
- B. TIME OF DELIVERY AND FORM OF BONDS. The successful Bidder shall deliver an original copy of the required bonds to the Port, 1 Sitcum Plaza, Tacoma, WA 98421, within the time specified in the Contract Documents.
- C. INSURANCE. The successful Bidder shall deliver a certificate of insurance from the Bidder's insurance company that meets or exceeds all requirements of the Contract Documents.

- D. GOVERNMENTAL REQUIREMENTS. Notwithstanding anything in the Bidding or Contract Documents to the contrary, the Bidder shall provide all bonding, insurance, and permit documentation as required by governmental authorities having jurisdiction for any portions of the Project.

1.08 FORM OF AGREEMENT

- A. FORM TO BE USED. The Contract for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental, or Special Conditions, and the other Contract Documents included with the project manual.
- B. CONFLICTS. In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.
- C. CONTRACT DELIVERY. Within ten (10) days after Notice of Award, the Bidder shall submit a signed Contract to the Port in the form tendered to the Bidder and without modification.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS/CLARIFICATIONS

- A. Substitutions. Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. The Contract Documents include performance specifications for products and equipment which meet Project requirements. In those cases where a representative item or manufacturer is named in the specification, it is provided for the sole purpose of identifying a product meeting the required functional performance, and where the words "or equal" are used, a substitution request as further described, is not required.
- C. Where non-competitive or sole source products or manufacturers are explicitly specified with the words "or approved equal," or "Engineer approved equal," or "as approved by the Engineer" are used, they shall be taken to mean "or approved equal." In these cases a substitution request as further described in this Section, is required.

1.03 SUBMITTALS

- A. Substitution Request Form. Use copy of form located at the end of this Section.
- B. Pre-Bid Substitution Requests. Submit one (1) PDF of the Substitution Request Form along with all supporting documentation for consideration of each request. Identify product, fabrication, or installation method to be replaced. Include Drawing numbers and titles. Substitution requests prior to the Bid Date may originate directly from a prime Bidder, or from a prospective Sub-Bidder.
 - 1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product, fabrication, or installation cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Product Data, including drawings and descriptions of products, fabrication, and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. Research reports evidencing compliance with building code in effect for the Project.
 - 2. Engineer's Action. Engineer will review substitution requests if received through the Procurement and Question Submission Portal at least seven (7) days prior to the Bid Date (Portal link is accessible via this specific procurements website. See left side of page.) A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.
 - a. Forms of Acceptance. Substitution requests will be formally accepted via written addendum prior to the Bid Date. Bidders shall not rely upon approvals made in any other manner.

- b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
- c. The Port's decision of approval or disapproval of a proposed substitution shall be final.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

C. Post-Award Substitution Requests must be submitted by the Contractor and not a Subcontractor nor Supplier.

- 1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification Section. Significant qualities may include, but are not limited to, attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses. Also provide names and addresses of the applicable architect, engineer, and owner.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for the Project.
 - j. Comparison of the approved Baseline Project Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

2. Engineer's Action. If necessary, Engineer will request additional information or documentation for evaluation within seven (7) calendar days of receipt of a request for substitution. Engineer will notify Contractor through Port of acceptance or rejection of proposed substitution within fifteen (15) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.
 - a. Forms of Acceptance. Change Order or Minor Change in Work.
 - b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
3. Substitutions for Cause. Submit requests for substitution immediately upon discovery of need for change, but not later than fourteen (14) days prior to date required for preparation and review of related submittals.
 - a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - 1) Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 2) Requested substitution will not adversely affect the Baseline Project Schedule.
 - 3) Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 4) Requested substitution is compatible with other portions of the Work.
 - 5) Requested substitution has been coordinated with other portions of the Work.
 - 6) Requested substitution provides specified warranty.
 - 7) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
4. Substitutions for Convenience. Engineer will consider Contractor's requests for substitution if received within fourteen (14) days after the Notice of Award.
 - a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - 1) Requested substitution offers Port a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Port must assume. Port's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Port, and similar considerations.
 - 2) Requested substitution does not require extensive revisions to the Contract Documents.
 - 3) Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 4) Requested substitution will not adversely affect the Baseline Project Schedule.
 - 5) Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 6) Requested substitution is compatible with other portions of the Work.

- 7) Requested substitution has been coordinated with other portions of the Work.
- 8) Requested substitution provides specified warranty.
- 9) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

D. Substitutions will not be considered when:

1. Indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.
2. Acceptance will require substantial revision of Contract Documents or other items of the Work.
3. Submittal for substitution request does not include point-by-point comparison of proposed substitution with specified product.

1.04 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

PROJECT TITLE: EB1 Pavement and Restroom Building **PROJECT NO.:** 201105.01

SUBMITTED BY: _____ CONTRACT NO.: 071907

PRIME/SUB/SUPPLIER: _____ DATE: _____

Specification Title: _____ Section No.: _____

Description: _____ Paragraph: _____

Page No.: _____

Proposed Substitution: _____

Trade Name: _____ Model No.: _____

Manufacturer: _____

Address: _____ Phone No.: _____

Installer: _____

Address: _____ Phone No.: _____

Differences between proposed substitution and specified product: _____

☐ Point-by-Point comparative data attached - REQUIRED

Reason for not providing specified item: _____

Similar Installation:

Project: _____ A/E: _____

Address: _____

Owner: _____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Supporting Data Attached:

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other: _____

Applicable to Substitution Requests During Construction:

Proposed to Port for accepting substitution: \$ _____

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ # days.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.

- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay Baseline Project Schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted By: _____
Signed By: _____ Firm: _____
Address: _____
Telephone: _____ Email: _____
Attachments: _____

A/E's REVIEW AND RECOMMENDATION

- ☐ Approved Substitution
- ☐ Approved Substitution as Noted
- ☐ Reject Substitution - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

ENGINEER'S REVIEW AND ACTION

- ☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- ☐ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- ☐ Substitution Rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

END OF SECTION

PART 1 - GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to Bidders online at www.portoftacoma.com, but will not be part of the Contract Documents, as follows:
1. Site Drawings: Entitled East Blair One Wharf, dated June 24, 2010.
 2. Geotechnical Report: Entitled East Blair 1 Pavement and Restroom Building, dated January 21, 2021.
 - a. This report identifies properties of below grade conditions and offers recommendations for the design of foundations, prepared primarily for the use of Engineer.
 - b. The recommendations described shall not be construed as a requirement of this Contract, unless specifically referenced in the Contract Documents.
 - c. This report, by its nature, cannot reveal all conditions that exist on the site. Should subsurface conditions be found to vary substantially from this report, changes in the design and construction of foundations will be made, with resulting credits or expenditures to the Contract Price accruing to the Port.

1.02 AVAILABILITY

- A. Reference Documents are available online through the Port of Tacoma's Website www.portoftacoma.com. Click on "Buisness," "Contracting," "Procurement," and then the Procurement Number.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section provides the notification required for disclosure of asbestos, lead-containing or other hazardous materials.

1.02 HAZARDOUS MATERIALS NOTICE

- A. The Port is reasonably certain that asbestos and lead will not be disturbed by the project. If the Contractor encounters material suspected of containing lead or asbestos which will interfere with the execution of the work, the Contractor shall stop work and notify the Engineer.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

BIDDER'S NAME: _____

PROJECT TITLE: EB1 PAVEMENT AND RESTROOM BUILDING

The undersigned Bidder declares that it has read the Contract Documents (including documents provided by reference), understands the conditions under which the Work will be performed, has examined the Project site, and has determined for itself all situations affecting the Work herein Bid upon. Bidder proposes and agrees, if this Bid is accepted, to provide at Bidder's own expense, all labor, machinery, tools, materials, etc., including all Work incidental to, or described or implied as incidental to such items, according to the Contract Documents, and that the Bidder will complete the Work within the time stated, and that Bidder will accept in full the lump sum or unit price(s) set forth below:

ITEM NO.	DESCRIPTION OF ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE (QTY. x UNIT PRICE)
1	Mobilization and Demobilization	1	LS		
2	Field Engineering	1	LS		
3	Project Administration	1	LS		
4	Site Preparation and TESC	1	LS		
5	Earthwork	1	LS		
6	HMA	7,777	Ton		
7	Crushed Surfacing	1,117	Ton		
8	Portland Cement for CTB	341	Ton		
9	Cement Treatment for CTB	17,222	SY		
10	Surface Improvements	1	LS		
11	Storm Utilities	1	LS		
12	Sanitary Utilities	1	LS		
13	Water Utilities	1	LS		
14	Electrical	1	LS		
15	Dewatering	1	LS		
16	Unforeseen Conditions Allowance	1	LS	\$50,000.00	\$50,000.00

TOTAL BID AMOUNT	
10.3% WASHINGTON STATE SALES TAX (WSST) ON BASE BID SUBTOTAL	
BID TOTAL (WITH WSST)	

Note: Show prices in figures only.

Evaluation of Bids. In accordance with the provisions of the Contract Documents, Bids will be evaluated to determine the lowest Base Bid Subtotal offered by a responsible Bidder submitting a responsive Bid.

Schedule of Unit Prices. The unit prices are proposed to apply only in the event of additions to, or deletions from, the work required and ordered. All prices shall include complete installation without Washington State Sales Tax. The bidder shall propose a price for each item; failure to propose a price for each item may render the bid non-responsive. The Port reserves the right to accept or reject the unit prices proposed.

Trench Excavation Safety Provision. If the bid amount contains work which requires trenching exceeding a depth of four (4) feet, all costs for trench safety shall be included in the Base Bid and indicated below for adequate trench safety systems in compliance with RCW 39.04 and WAC 296-155-650. Bidder shall include a lump sum amount, excluding Washington State Sales Tax. If trench excavation safety provisions do not pertain to the Work, the Bidder should enter "N.A." or "Not Applicable" in the blank below.

Trench Excavation Safety: _____ (Total in Written Figures Only)

Principal Subcontractors/Suppliers. For Bids greater than one million (\$1,000,000) dollars, the Bidder shall list below the name of each subcontractor or supplier to whom the Bidder proposes to subcontract the portions of the work listed below, or name itself for the work.

Work to be Performed	License Number	Name of Firm
HVAC (Heating, Ventilation and Air Conditioning) Work		
Plumbing Work		
Electrical Work		
Structural Steel Installation		
Rebar Installation		

Non-Collusion Representation. The Bidder declares under penalty of perjury that the Bid submitted is genuine and not a sham or collusive bid, or made in the interest or on behalf of any person or firm not therein named; and further represents that the Bidder has not directly or indirectly induced or solicited any other bidder to submit a sham bid, or encouraged any other person or corporation to refrain from bidding; and that the Bidder has not in any manner sought by collusion to secure to the Bidder an advantage over any other bidder or bidders.

RCW 39.04.350 Certification. The Bidder represents and certifies, under penalty of perjury, that within the three- (3-) year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, nor through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, nor 49.52 RCW.

Addenda. Bidder acknowledges receipt and acceptance of all Addenda through No. ____ (Identify Last Addenda By Number)

Bid Security. A certified check, cashier's check, or other obligation of a bank, or a bid bond in substantially the form set forth in Section 00 43 13, Bid Security Form for at least five (5) percent of the Base Bid Subtotal, shall be submitted with this Bid.

Apprenticeship Requirements. For Bids greater than one million (\$1,000,000) dollars, the apprentice labor hours required for this project are fifteen (15) percent of the total labor hours. The Bidder agrees to utilize this level of apprentice participation.

Name of Firm

Date

Signature

By Title

Mailing Address

City, State Zip Code

Telephone Number

Email Address

WA State Contractor's License No.

Employment Security Department No.

Identification of Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity

END OF SECTION

This page intentionally left blank

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and
_____, as Surety, are held and firmly bound unto
the PORT OF TACOMA as Obligee, in the penal sum of _____
Dollars, for the payment of which the Principal and Surety bind themselves, their heirs, executors,
administrators, successors and assigned, jointly and severally, by these present.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for
_____, according to the terms of the proposal or bid
made by the Principal therefor, and the Principal shall duly make and enter into a contract with the
Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the
faithful performance thereof, with Surety or Sureties approved by the Obligee; or, if the principal shall, in
case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the
call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and
effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages,
the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20____

BY _____
PRINCIPAL

BY _____
SURETY

AGENT AND ADDRESS

Note: Bidder may submit Surety's bid bond form, provided it is similar in substance, made out in the
name of the Port of Tacoma, and that the agent's name and address appear as specified. Bonds
containing riders limiting responsibility for toxic waste or limiting the term of responsibility will be rejected.

END OF SECTION

This page intentionally left blank

THIS IS NOT TO BE SUBMITTED WITH A BID.

THE LOW RESPONSIVE BIDDER SHALL BE REQUIRED TO COMPLETE THIS RESPONSIBILITY DETAIL FORM AS SPECIFIED IN SECTION 00 21 00 - INSTRUCTIONS TO BIDDERS. **THIS COMPLETED RESPONSIBILITY DETAIL FORM SHALL BE SUBMITTED ELECTRONICALLY (PDF) VIA EMAIL TO THE CONTACT(S) IDENTIFIED IN THE LOW RESPONSIVE BIDDER SELECTION NOTIFICATION.**

BIDDER'S COMPANY NAME: _____

For the below Mandatory Bidder Responsibility Criteria, please mark the appropriate choice.

1.01 MANDATORY BIDDER RESPONSIBILITY CRITERIA

- A. The Bidder shall meet the following mandatory responsibility criteria as described in RCW 39.04.350(1). The Bidder shall be rejected as not responsible if any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes."
1. Does the Bidder have a Certificate of Registration in compliance with RCW 18.27?
☐ Yes ☐ No
 2. Does the Bidder have a current Washington State Unified Business Identifier number?
☐ Yes ☐ No
 3. Does the Bidder have Industrial Insurance Coverage for the Bidder's employees working in Washington State as required in RCW 51?
☐ Yes ☐ No
 4. Does the Bidder have an Employment Security Department number as required in RCW 50?

****Attach** letter dated within six (6) months of Bid Date.*
**Request a letter electronically by clicking on the following link
<https://fortress.wa.gov/esd/twt/pwcinternet/> or by emailing a request to
publicworks@esd.wa.gov.*
☐ Yes ☐ No
 5. Does the Bidder have a Washington State Excise Tax Registration number as required in RCW 82?
☐ Yes ☐ No
 6. Has the Bidder been disqualified from bidding on any public works project under RCW 39.06.010 or 39.12.065(3)?
☐ Yes ☐ No
 7. Has the Bidder violated RCW 39.04.370 more than one (1) time as determined by the Washington State Department of Labor and Industries?
☐ Yes ☐ No

8. Has the Bidder ever been found to be out of compliance with Apprenticeship Utilization requirements of RCW 39.04.320?
- ☐ Yes ☐ No
9. Has the Bidder ever been found to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three- (3-) year period immediately preceding the date of this bid solicitation?
- ☐ Yes ☐ No
10. Has the Bidder completed the training required by RCW 39.04.350, or is the Bidder on the list of exempt businesses maintained by the Department of Labor and Industries?
- ☐ Yes ☐ No

If any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes" - **STOP HERE** and contact the Contract Administrator. The Bidder is not responsible for this Work. Otherwise proceed to 1.02. **Provide attached to this completed form documentation to confirm responsibility criteria.**

For remaining criteria below, check or fill-out the appropriate item. Based upon the answer provided by the Bidder, the Port may request additional information or seek further explanation. As needed, provide backup documentation for any explanations listed below.

1.02 CONTRACT AND REGULATORY HISTORY

- A. The Port will evaluate whether the Bidder's contract and regulatory history demonstrates an acceptable record of past project performance and consistent responsibility. The Bidder shall answer the following questions. The Bidder may be rejected as not responsible if any answer to questions 1 through 5 below is "Yes."

1. Has the Bidder had a contract terminated for cause or default in the last five (5) years?
- ☐ Yes, **If YES, explain below.** ☐ No
-
2. Has the Bidder required a Surety to take over all, or a portion of, a project to cure or respond to an asserted default or material breach of contract on the part of the Bidder on any public works project in the last five (5) years?
- ☐ Yes, **If YES, explain below.** ☐ No
-
3. Have the Bidder and major Sub-Bidders been in bankruptcy, reorganization, and/or receivership on any public works project in the last five (5) years?
- ☐ Yes, **If YES, explain below.** ☐ No
-

4. Have the Bidder and major Sub-Bidders been disqualified by any state or local agency from being awarded and/or participating on any public works project in the last five (5) years?

☐ Yes, **If YES, explain below.** ☐ No

5. Are the Bidder and major Sub-Bidders currently a party to a formal dispute resolution process with the Port (i.e., a pending mediation, arbitration, or litigation)?

☐ Yes, **If YES, explain below.** ☐ No

1.03 ACCIDENT/INJURY EXPERIENCE

- A. The Port will evaluate the Bidder's accident/injury Experience Modification Factor ("EMF") from the Washington State Department of Labor and Industries to assess whether the Bidder has an acceptable safety record preventing personal injuries on projects.
- B. List the Bidder's accident/injury EMF for the last five (5) years. An experience factor is calculated annually by the Washington State Department of Labor and Industries.

Year	Effective Year	Experience Factor
1		
2		
3		
4		
5		

If the Bidder has received an EMF of greater than 1.0 for any year, explain the cause(s) of the designation and what remedial steps were taken to correct the EMF. The Bidder may be rejected as not responsible if the Bidder's EMF is greater than 1.0 and sufficient remedial steps have not been implemented.

1.04 WORK PERFORMED BY BIDDER

- A. The Bidder shall state the amount of the Work, as an equivalent to the Base Bid, excluding taxes, insurance, and bonding, the Bidder will execute with its own forces.

_____ %

1.05 ADDITIONAL CONTRACTOR INFORMATION

- A. As part of completing this Responsibility Detail Form, **submit the following information with the completed Responsibility Detail Form:**
1. Bidder's recent job resume, including a list of similar projects performed and contact information for the similar project owner(s), a brief description of work, start and end dates, and contract amount.
 2. Resumes of Bidder's proposed project manager and job superintendent.
- B. The Bidder's failure to provide the required project information may result in a determination of the Bidder being declared non-responsible by the Port.
-

- C. The Bidder shall submit this completed, **SIGNED** Responsibility Detail Form electronically (PDF), with all requested backup documentation, via email to the contact(s) noted on the Low Responsive Bidder Selection Notification.
- D. The Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and 39.04.350.
 - 1. Bidder shall verify major subcontractors meet the responsibility criteria required. Fill out one Port of Tacoma Public Works Project Bidder Evaluation Checklist for Subcontractors for each major subcontractor and submit to the Port with this form. Backup documentation is not required to be submitted.

PROJECT: EB1 Pavement and Restroom Building

PROJECT NO.: 201105.01

CONTRACT NO.: 071907

Responsibility Certification Form

The Low responsive Bidder shall complete the Responsibility Detail Form, attach all documentation, and submit to the Port within twenty-four (24) hours following receipt of the Low Responsive Bidder Selection Notification. All forms shall be submitted electronically (PDF) via email to the contact(s) listed on the Selection Notice. Note, the same project may be used to demonstrate experience across multiple categories if applicable.

By completing and signing this Responsibility Detail Form, the Bidder is certifying that the information contained within the Form, the backup documentation, and any additional information requested by the Port is true and complete. The Bidder's failure to disclose the required information or the submittal of false or misleading information may result in the rejection of the Bidder's Bid, revocation of award, or contract termination.

The information provided herein is true and complete.

Signature of Authorized Representative

Date

Print Name and Title

**PORT OF TACOMA PUBLIC WORKS PROJECT BIDDER EVALUATION CHECKLIST FOR
SUBCONTRACTORS**

PROJECT TITLE: EB1 Pavement and Restroom Building

BIDDER: _____

CONTRACT AND PROJECT NUMBER: 071907/ 201105.01

This checklist shall be completed by the Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and RCW 39.04.350.

This checklist should be submitted to the Port of Tacoma Contracts Administrator within twenty-four (24) hours of request.

Document verification information or backup data is not to be submitted to the Port, this information should remain on file with the Contractor and be presented to the Port if requested at a later date.

Item No.	Item	Initials/Comments
1.	At the time of Bid submittal, have a certificate of registration in compliance with RCW 18.27: Check the L&I site https://fortress.wa.gov/lni/bbip/ . Verify that a subcontractor has an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87.	
2.	While reviewing registration information above, also check contractor's Employer Liability Certificate to verify workers' comp (industrial insurance) premium status – current account. Complete a "Submit Contractor Tracking Request" to be notified if the contractor fails to pay workers' comp premiums or renew their contractor registration or if their electrical contractor license is suspended or revoked within one year.	
3.	State excise tax registration number (Department of Revenue). (contractor's Washington State Unified Business Identifier and tax registration number) http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/ .	
4.	Not disqualified from bidding on any public works contract under RCW 39.06.010 or RCW 39.12.065(3) . Check the Department of Labor and Industries http://www.lni.wa.gov/TradesLicensing/PrevWage/AwardingAgencies/DebarredContractors/ .	
5.	Verify subcontractors are registered with the Washington State Employment Security Department (ESD) and have an account number. Request a letter to be sent from the subcontractor electronically by clicking on the following link https://fortress.wa.gov/esd/twt/pwcinternet/ or by emailing a request to publicworks@esd.wa.gov . Include ESD#, UBI#, and business name in the email. Certificate of Coverage letter issued/dated within the last six (6) months.	

Item No.	Item	Initials/ Comments
	Document if subcontractor confirms in writing, under penalty of perjury, that it has no employees and this requirement does not apply.	

END OF SECTION

THIS AGREEMENT is made and entered into by and between the PORT OF TACOMA, a State of Washington municipal corporation, hereinafter designated as the "Port," and:

The "Contractor" is: _____ (Legal Name)

_____ (Address)

_____ (Address 2)

_____ (Phone No.)

The "Project" is: EB1 Pavement and Restroom Building (Title)

201105.01 | 071907 (Project/Contract No.)

2340 E Alexander Ave (Project Address)

Project Location Address 2 (Project Address 2)

The "Engineer" is: Thais Howard, PE (Engineer)

Director of Engineering (Title)

thoward@portoftacoma.com (Email)

(253) 888-4718 (Phone No.)

The "Contractor's Representative" is: _____ (Representative)

_____ (Title)

_____ (Email)

_____ (Phone No.)

BACKGROUND AND REPRESENTATIONS:

The Port publicly solicited bids on the Contract Documents. The Contractor submitted a Bid to the Port on the _____ day of _____, 20____ to perform the Work.

The Contractor represents that it has the personnel, experience, qualifications, capabilities, and means to accomplish the Work in strict accordance with the Contract Documents, within the Contract Time and for the Contract Price, and that it and its Subcontractors satisfy the responsibility criteria set forth in the Contract Documents, including any supplemental responsibility criteria.

The Contractor further represents that it has carefully examined, and is fully familiar with, all provisions of the Contract Documents, including any Addenda, that it has fully satisfied itself as to the nature, location, difficulty, character, quality, and quantity of the Work required by the Contract Documents and the conditions and other matters that may be encountered at or near the Project site(s), or that may affect performance of the Work or the cost or difficulty thereof, including all applicable safety and site responsibilities, and that it understands and can satisfy all scheduling and coordination requirements and interim milestones.

AGREEMENT:

The Port and the Contractor agree as follows:

1.0 CONTRACTOR TO FULLY PERFORM THE WORK

The Contractor shall fully execute and complete the entire Work for the Project described in the Contract Documents, except to the extent specifically indicated in the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

2.0 DATE OF COMMENCEMENT

The date of commencement of the Work, which is the date from which the Contract Time is measured, shall be fixed as the date of execution of the Contract.

3.0 CONTRACT TIME AND LIQUIDATED DAMAGES

The Contractor shall achieve all interim milestones as set forth in the Contract Documents and Substantial Completion of the entire Work not later than 120 calendar days from execution of the Contract, subject to adjustments of this Contract Time as provided in the Contract Documents. The Contractor shall achieve Final Completion of the entire Work within 30 calendar days of the date on which Substantial Completion is achieved.

Provisions for liquidated damages as a reasonable estimate of future loss, as of the date of this Agreement, are included in the Contract Documents. The parties agree that the stated liquidated damages are reasonable and not penalties individually nor cumulatively.

The liquidated damages for failure to achieve Substantial Completion by the required date shall be \$100 per calendar day. After the required Final Completion date, the liquidated damages for failure to achieve Final Completion shall be \$250 per calendar day.

Liquidated damages assessed by the Port will be deducted from monies due to the Contractor, or from monies that will become due to the Contractor. The liquidated damages, as specified and calculated herein, shall be levied, cumulatively if applicable, for each and every calendar day that Substantial Completion and/or Final Completion of the Work is delayed beyond the required completion dates, or the completion dates modified by the Port for extensions of the Contract Time.

4.0 CONTRACT PRICE

In accordance with the Contractor's Bid dated _____, the Port shall pay the Contractor in current funds for the Contractor's performance of the Contract, the Contract Price of _____ Dollars (\$_____), subject to additions and deductions as provided in the Contract Documents. State and local sales tax is not included in the Contract Price, but will be due and paid by the Port with each progress payment.

5.0 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Contract Documents.

This Agreement is entered into as of the day and year first written above:

CONTRACTOR

PORT OF TACOMA

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Execution _____

Date:

END OF SECTION

This page intentionally left blank

PERFORMANCE BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

PORT OF TACOMA
P.O. BOX 1837
TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, in the amount of _____ Dollars (\$ _____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for EB1 Pavement and Restroom Building, Project No. 201105.01/Contract No. 071907, a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, all alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed and issued pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

FURTHER:

- A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.
- C. Whenever Contractor has been declared by the Port to be in default, and the Port has given Surety notice of the Port's determination of such default, Surety shall promptly (in no event more than fifteen (15) days following receipt of such notice) advise the Port of its intended action to:
 1. Remedy the default within fifteen (15) days following its advice to the Port as set forth above, or
 2. Assume within fifteen (15) days, following its advice to the Port as set forth above, completion of the Contract in accordance with the Contract Documents and become entitled to payment of the balance of the Contract Sum, or

3. Pay the Port upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by the Port as a result of the Contractor's default, including but not limited to, those reasonable costs and expenses incurred by the Port in its efforts to mitigate its losses, which may include, but are not limited to, attorney's fees and efforts to complete the Work prior to the Surety exercising the options available to it as set forth herein.
- D. If the Port shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment, shall pay all costs and attorney's fees incurred by the Port in enforcement of its rights hereunder. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.
- E. No right or action shall accrue on this bond to, or for the use of, any person or corporation other than the Port of Tacoma.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

CONTRACTOR

Signature

Signature

Printed Name and Title

Printed Name and Title

Power of Attorney attached.

END OF SECTION

LABOR AND MATERIAL PAYMENT BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

PORT OF TACOMA
P.O. BOX 1837
TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Oblige, hereinafter called the Port, and all others entitled to recovery hereunder, in the amount of _____ Dollars (\$ _____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for EB1 Pavement and Restroom Building, Project No. 201105.01/Contract No. 071907, a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly make payment to all claimants, as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and shall indemnify and save the Port harmless from all cost and damage by reason of Contractor's default, then this obligation shall be null and void; otherwise, it shall remain in full force and effect, subject to the following conditions.

- A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.
- C. Surety hereby agrees that every person protected under the provisions of RCW 39.08.010 who has not been paid as provided under the Contract, and pursuant to RCW 39.08.010, less any amounts withheld pursuant to statute, and less retainage withheld pursuant to RCW 60.28, after the expiration of a period of thirty (30) days after the date on which the completion of the Contract in accordance with RCW 39.08, may sue on this bond, prosecute the suit to final judgment as may be due claimant, and have execution thereon including recovery of reasonable costs and attorney's fees as provided by RCW 39.08. The Port shall not be liable for the payment of any costs or expenses of any such suit.

- D. No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the Port, and where required, the Contractor, in accordance with RCW 39.08.030.
- E. The amount of this bond shall be reduced by, and to the extent of, any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.
- F. If any Claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the Port as a result of such suit. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

CONTRACTOR

Signature

Signature

Printed Name and Title

Printed Name and Title

Power of Attorney attached.

END OF SECTION

BOND NO.: _____

PROJECT TITLE: EB1 Pavement and Restroom Building

PROJECT NO.: 201105.01

CONTRACT NO.: 071907

KNOW ALL MEN BY THESE PRESENTS: That we, _____
_____ a corporation existing under and by virtue of the laws of the State of
Washington and authorized to do business in the State of Washington, as Principal, and
_____, a corporation organized and existing under the
laws of the State of _____ and authorized to transact the business of
surety in the State of Washington, as Surety, are jointly and severally held and bound unto the PORT OF
TACOMA, hereinafter called Port, as Obligee, and are similarly held and bound unto the beneficiaries of
the trust fund created by RCW 60.28 as their heirs, executors, administrators, successors, and assigns in
the penal sum of _____ (\$ _____)
plus five (5) percent of any increases in the Contract Price that have occurred or may occur, due to
change orders, increases in the quantities, or the addition of any new item of work.

WHEREAS, on the _____ day of _____, the said Principal herein executed Contract
No. 071907 with the Port for EB1 Pavement and Restroom Building, Project No. 201105.01.

WHEREAS, said Contract and RCW 60.28 require the Port to withhold from the Principal the sum of five
(5) percent from monies earned by the Principal on estimates during the progress of the work, hereinafter
referred to as earned retained funds.

WHEREAS, the Principal has requested that the Port accept a bond in lieu of earned retained funds as
allowed under RCW 60.28.

NOW THEREFORE, this obligation is such that the Surety, its successors, and assigns are held and
bound unto the Port and unto all beneficiaries of the trust fund created by RCW 60.28.011(1) in the
aforesaid sum. This bond, including any proceeds therefrom, is subject to all claims and liens and in the
same manner and priority as set forth for retained percentages in RCW 60.28. The condition of this
obligation is also that if the Principal shall satisfy all payment obligations to persons who may lawfully
claim under the trust fund created pursuant to RCW 60.28, to the Port, and indemnify and hold the Port
harmless from any and all loss, costs, and damages that the Port may sustain by release of said
retainage to Principal, then this obligation shall be null and void, provided the Surety is notified by the
Port that the requirements of RCW 60.28.021 have been satisfied and the obligation is duly released by
the Port.

IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable under this obligation as
Principal. The Surety will not be discharged or released from liability for any act, omission, or defenses of
any kind or nature that would not also discharge the Principal.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the Principal, the Surety, the Port, the beneficiaries of the trust fund created by RCW 60.28 and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, said Principal and said Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20____.

By: _____
Principal

Address: _____

City/ST/Zip: _____

Phone: _____

Surety Name: _____

By: _____
Attorney-In-Fact

Address: _____

City/ST/Zip: _____

Phone: _____

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, and be authorized to transact business in the State of Washington.

END OF SECTION

TABLE OF CONTENTS		PAGE
ARTICLE 1 - THE CONTRACT DOCUMENTS		3
1.01 GENERAL		3
1.02 DEFINITIONS		3
1.03 INTENT OF THE CONTRACT DOCUMENTS		4
1.04 CORRELATION OF THE CONTRACT DOCUMENTS		4
1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS		5
ARTICLE 2 - PORT OF TACOMA		5
2.01 AUTHORITY OF THE ENGINEER		5
2.02 ADMINISTRATION OF THE CONTRACT		5
2.03 INFORMATION PROVIDED BY THE PORT		6
2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION		6
2.05 PORT'S RIGHT TO REJECT, STOP, AND/OR CARRY-OUT THE WORK		6
2.06 SEPARATE CONTRACTORS		7
2.07 OFFICERS AND EMPLOYEES OF THE PORT		7
ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES		7
3.01 DUTY TO PERFORM THE ENTIRE WORK		7
3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS OR VARIANCES IN THE CONTRACT DOCUMENTS		7
3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS		8
3.04 MATERIALS AND EQUIPMENT		8
3.05 CONTRACTOR WARRANTIES		9
3.06 REQUIRED WAGES		9
3.07 STATE AND LOCAL TAXES		9
3.08 PERMITS, LICENSES, FEES, AND ROYALTIES		10
3.09 SAFETY		10
3.10 CORRECTION OF WORK		11
3.11 UNCOVERING OF WORK		11
3.12 RELOCATION OF UTILITIES		11
3.13 LABOR		12
3.14 INDEMNIFICATION		12
3.15 WAIVER OF CONSEQUENTIAL DAMAGES		13
ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS		14
4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS		14
4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS		14
4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS		14
ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS		15
5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS		15
5.02 MWBE, VETERAN-OWNED, AND SMALL BUSINESS ENTERPRISE PARTICIPATION ...		15
5.03 APPRENTICESHIP PARTICIPATION		15
ARTICLE 6 - CONTRACT TIME AND COMPLETION		16
6.01 CONTRACT TIME		16
6.02 PROGRESS AND COMPLETION		17
6.03 SUBSTANTIAL COMPLETION		17
6.04 COMPLETION OF PUNCH LIST		17

6.05	FINAL COMPLETION	18
6.06	FINAL ACCEPTANCE	18
6.07	PORT'S RIGHT TO USE THE PREMISES	18
ARTICLE 7 - PAYMENT		19
7.01	ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES.....	19
7.02	APPLICATIONS FOR PAYMENT	19
7.03	PROGRESS PAYMENTS	19
7.04	PAYMENT BY CONTRACTOR TO SUBCONTRACTORS	19
7.05	FINAL PAYMENT	20
7.06	RETAINAGE	20
7.07	DISPUTED AMOUNTS	21
7.08	EFFECT OF PAYMENT	21
7.09	LIENS	22
ARTICLE 8 - CHANGES IN THE WORK		22
8.01	CHANGES IN THE WORK	22
8.02	CHANGES IN THE CONTRACT SUM	24
8.03	CHANGES IN THE CONTRACT TIME	27
8.04	RESERVATION OF RIGHTS	28
8.05	UNIT PRICES	28
ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT		28
9.01	PORT'S RIGHT TO SUSPEND WORK	28
9.02	TERMINATION OF CONTRACT FOR CAUSE BY THE PORT	29
9.03	TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT	29
9.04	TERMINATION OF CONTRACT BY THE CONTRACTOR	29
9.05	SUBCONTRACT ASSIGNMENT UPON TERMINATION	30
ARTICLE 10 - BONDS		30
10.01	CONTRACTOR PERFORMANCE AND PAYMENT BONDS	30
ARTICLE 11 - DISPUTE RESOLUTION		31
11.01	NOTICE OF PROTEST AND CLAIM	31
11.02	MEDIATION	33
11.03	LITIGATION	33
ARTICLE 12 - MISCELLANEOUS		34
12.01	GENERAL	34
12.02	WAIVER	34
12.03	GOVERNING LAW	34
12.04	COMPLIANCE WITH LAW	34
12.05	ASSIGNMENT	34
12.06	TIME LIMIT ON CAUSES OF ACTION	35
12.07	SERVICE OF NOTICE	35
12.08	RECORDS	35
12.09	STATUTES	35

ARTICLE 1 - THE CONTRACT DOCUMENTS

1.01 GENERAL

- A. Contract Documents form the Contract. The Contract Documents are enumerated in the Agreement between the Port and Contractor ("Agreement"). Together, the Contract Documents form the Contract. The Contract represents the entire integrated agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only in writing and only as set forth in the Contract Documents.
- B. Headings only for convenience. The titles or headings of the sections, divisions, parts, articles, paragraphs, and subparagraphs of the Contract Documents are intended only for convenience.

1.02 DEFINITIONS

- A. "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- B. "Contractor" means the person or entity contracting to perform the Work under these Contract Documents. The term Contractor includes the Contractor's authorized representative for purposes of identifying obligations and responsibilities under the Contract Documents, including the ability to receive notice and direction from the Port.
- C. "Day" means a calendar day unless otherwise specifically designated.
- D. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, including plans, elevations, sections, details, and diagrams.
- E. "Engineer" is the Port employee generally tasked with administering the Project on the Port's behalf and the person with overall responsibility for managing, for the Port, the Project scope, budget, and schedule. To the extent empowered, the Engineer may delegate to others at the Port (such as a Project Manager or Inspector) the responsibility for performing delegated responsibilities of the Engineer's under this Contract.
- F. "Port" means the Port of Tacoma. The Port will designate in writing a representative (usually the Engineer) who shall have the authority to act on the Port's behalf related to the Project. The "Port" does not include staff, maintenance, or safety workers, or other Port employees or consultants that may contact the Contractor or be present at the Project site.
- G. "Project" is identified in the Agreement and is the total construction to be performed by or through the Port, of which the Work performed under the Contract Documents may be only a part.
- H. "Specifications" are those portions of the Contract Documents that specify the written requirements for materials, equipment, systems, standards, and workmanship for the Work and for the performance of related services.
- I. "Subcontractor" means a person or entity that contracts directly with the Contractor to perform any Work under the Contract Documents. "Subcontractor of any tier" includes Subcontractors as well as any other person or entity, including suppliers, that contracts with a Subcontractor or a lower-tier Subcontractor (also referred to as "Sub-subcontractors") to perform any of the Work.

- J. "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, tools, equipment, materials, services, and incidentals necessary to complete all obligations under the Contract Documents. The Work may constitute only a part of the Project, and may interface and need to be coordinated with the work of others.

1.03 INTENT OF THE CONTRACT DOCUMENTS

- A. Intent of Contract Documents. The intent of the Contract Documents is to describe the complete Work and to include all items and information necessary for the proper execution and completion of the Work by the Contractor.
- B. Contract Documents are complementary. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- C. No third party contract rights. The Contract Documents shall not create a contractual relationship of any kind (1) between the Port and a Subcontractor of any tier (although the Port does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors of any tier), (2) between the Contractor and the Engineer or other Port employees or consultants, or (3) between any persons or entities other than the Port and Contractor.

1.04 CORRELATION OF THE CONTRACT DOCUMENTS

- A. Precedence. In the event of a conflict or discrepancy between or among the Contract Documents, the conflict or discrepancy will be resolved by the following order of precedence: with an addendum or Change Order having precedence over an earlier document, and computed dimensions having precedence over scaled dimensions, and large scale drawings take precedence over small scale drawings:
1. The signed Agreement
 - a. Supplemental Conditions
 - b. Division 00 General Conditions
 - c. Division 01 General Requirements of Specifications
 - d. All other Specifications, including all remaining divisions, material and system schedules and attachments, and Drawings
 - e. All other sections in Division 00 not specifically identified herein by Section
- B. Inconsistency between or among Contract Documents. If there is any inconsistency between the Drawings, schedules, or Specifications, or any attachments, the Contractor will make an inquiry to the Engineer to determine how to proceed, and, unless otherwise directed, the Contractor will provide the better quality or greater quantity of any work or materials, as reasonably interpreted by the Port, at no change in the Contract Sum or Contract Time. Thus, if Work is shown on Drawings, but not contained in Specifications or schedules, or contained in Specifications or schedules, but not shown on the Drawings, the Work as shown or contained will be provided at no change in the Contract Sum or Contract Time, according to Specifications or Drawings to be issued by the Port.
- C. Inconsistency with law. In the event of a conflict between the Contract Documents and applicable laws, codes, ordinances, regulations, or orders of governmental authorities having jurisdiction over the Work, or in the event of any conflict between such laws, the most stringent requirements govern.

- D. Organization of Contract Documents. The organization of the Specifications and Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of the Work to be performed. The Port assumes no responsibility for the division and proper coordination of Work between particular Subcontractors.
- E. Bid quantities are estimates only. Any "bid quantities" set forth in the Contract Documents are estimates only. The Port does not warrant that the actual amount of Work will correspond to any estimates. The basis of payment will be the actual quantities performed in accordance with the Contract Documents.

1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS

- A. Port owns all Contract Documents. All Drawings, Specifications, and other Contract Documents furnished to the Contractor are Port property, and the Port retains all intellectual property rights, including copyrights. The Contract Documents are to be used only with respect to the Project.

ARTICLE 2 - PORT OF TACOMA

2.01 AUTHORITY OF THE ENGINEER

- A. Engineer will be Port's representative. The Engineer or the Engineer's designee will be the Port's representative during the Project and will administer the Project on the Port's behalf.
- B. Engineer may enforce all obligations. The Engineer has the authority to enforce all requirements imposed on the Contractor by the Contract Documents.
- C. Only Engineer is agent of Port. Other than the Engineer, no other Port employee or consultant is an agent of the Port, and none are authorized to agree on behalf of the Port to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time, nor to accept notice of protests or claims on behalf of the Port.

2.02 ADMINISTRATION OF THE CONTRACT

- A. Port will administer Contract. The Port will provide administration of the Contract through the Engineer or the Engineer's designee. All communications with the Port or its consultants related to the Contract will be through the designated representative.
- B. Port not responsible for means and methods. The Port is not responsible for, and will have no control or charge of, the means, methods, techniques, sequences, or procedures of construction, or for safety precautions or programs incidental thereto, because these are the sole responsibility of the Contractor. If the Port makes any suggestion of means, methods, techniques, sequences, or procedures, the Contractor will exercise its independent judgment in deciding whether to adopt the suggestion, except as otherwise provided in the Contract Documents.
- C. Port not responsible for acts or omissions of Contractor or Subcontractors. The Port is not responsible for, and will have no control or charge of, the acts or omissions of the Contractor, Subcontractors of any tier, suppliers, or any of their agents or employees, or any other persons performing a portion of the Work.
- D. Port not responsible for the Work. The Port is not responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The presence of the Engineer or others at the Project site at any time does not relieve the Contractor from its responsibility for non-conforming Work.

- E. Port will have access to the Work. The Port and its representatives will at all times have access to the Work in progress, and the Contractor will provide proper facilities for such access and for inspection.

2.03 INFORMATION PROVIDED BY THE PORT

- A. Port to furnish information with reasonable promptness. The Port shall furnish information and services required of the Port by the Contract Documents with reasonable promptness.
- B. Subsurface investigation. The Port may have undertaken a limited investigation of the soil and other subsurface conditions at the Project site for design purposes only. The results of these investigations will be available for the convenience of the Contractor, but they are not Contract Documents. There is no warranty or guarantee, express or implied, that the conditions indicated are representative of those existing at the site or that unforeseen developments may not occur. The Contractor is solely responsible for interpreting the information.

2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION

- A. Contractor to familiarize itself with site and conditions of Work. Prior to executing the Contract, the Contractor shall visit the site, become generally familiar with local conditions under which the Work is to be performed, and correlate personal observations with the requirements of the Contract Documents and all information provided with the Bid Documents. By signing the Contract, the Contractor confirms that the Contract Sum is reasonable compensation for the Work; that the Contract Time is adequate; that it has carefully examined the Contract Documents and the Project site; and that it has satisfied itself as to the nature, location, and character of the Work, the labor, materials, equipment, and other items required and all other requirements of the Contract Documents. The Contractor's failure fully to acquaint itself with any such condition does not relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents, within the Contract Time, and for the Contract Sum.
- B. Contractor to review Contract Documents. Because the Contract Documents are complementary, the Contractor will, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents, as well as all information furnished by the Port.
- C. Contractor to confirm field conditions. Before starting each portion of the Work, the Contractor shall take field measurements of and verify any existing conditions, including all Work in place, and all general reference points; shall observe any conditions at the site affecting the Contractor; and shall carefully compare field measurements, conditions and other information known to the Contractor with the Contract Documents.

2.05 PORT'S RIGHT TO REJECT, STOP, AND/OR CARRY-OUT THE WORK

- A. Port may reject Work. The Port has the authority, but not the obligation, to reject work, materials, and equipment that is defective or that otherwise does not conform to the Contract Documents, and to decide questions concerning the Contract Documents. However, the failure to so reject, or the presence of the Port at the site, shall not be construed as assurance that the Work is acceptable or being completed in compliance with the Contract Documents.
- B. Port may stop Work. If the Contractor fails to correct Work that does not comply with the requirements of the Contract Documents, or repeatedly or materially fails to properly carry out the Work, the Port may issue an order to stop all or a portion of the Work until the cause for the order has been eliminated. The Port's right to stop the Work shall not impose a duty on the Port to exercise this right for the benefit of the Contractor or any third party.

- C. Port may carry-out Work. If the Contractor fails to perform the Work properly, fails to perform any provision of this Contract, or fails to maintain the Baseline Project Schedule, or if the Port reasonably concludes that the Work will not be completed in the specified manner or within the Contract Time, then the Port may, after three (3) days' written notice to the Contractor and without prejudice to any other remedy the Port may have, perform itself or have performed any or all of the Work and may deduct the cost thereof from any payment then or later due the Contractor.

2.06 SEPARATE CONTRACTORS

- A. Port may engage separate contractors or perform work with its own forces. The Port may contract with other contractors ("Separate Contractor") in connection with the Project or perform work with its own forces. The Contractor shall coordinate and cooperate with any Port forces or Separate Contractors, as applicable. The Contractor shall provide reasonable opportunity for the introduction and storage of materials and the execution of work by others.
- B. Contractor to inspect work of others. If any part of the Contractor's Work depends on the work of the Port or any Separate Contractor, the Contractor shall inspect and promptly report to the Port, in writing, any defects that impact the Contractor. Failure of the Contractor to so inspect and report defects in writing shall constitute an acceptance by Contractor of the work of the Port or Separate Contractor.
- C. Contractor to resolve claims of others. Should the Contractor, or any of its Subcontractors of any tier, cause damage of any kind, including but not limited to delay, to any Separate Contractor, the Contractor shall promptly, and using its best efforts, settle or otherwise resolve the dispute with the Separate Contractor. The Contractor shall also promptly remedy damage caused to completed or partially completed construction.

2.07 OFFICERS AND EMPLOYEES OF THE PORT

- A. No personal liability. Officers, employees, and representatives of the Port, including the Commissioners, acting within the scope of their employment, shall not be personally liable to Contractor for any acts or omissions arising out of the Project.

ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES

3.01 DUTY TO PERFORM THE ENTIRE WORK

- A. Contractor must perform entire Work in accordance with Contract Documents. The Contractor shall perform the entire Work required by the Contract in accordance with the Contract Documents. Unless otherwise specifically provided, the Contractor shall provide and pay for all labor, tools, equipment, materials, electricity, power, water, other utilities, transportation, and other facilities necessary for the execution and completion of the Work.
- B. Contractor shall be independent contractor. The Contractor shall be, and operate as, an independent contractor in the performance of the Work. The Contractor is not authorized to enter into any agreements or undertakings for, or on behalf of, the Port and is not an agent or employee of the Port.

3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS, OR VARIANCES IN THE CONTRACT DOCUMENTS

- A. Contractor to notify Port of any discrepancy. The Contractor's obligations to review and carefully study the Contract Documents and field conditions are for the purpose of facilitating coordination and construction. If the Contractor at any time observes that the Contract Documents, including Drawings and Specifications, vary from the conditions of the Project site, are in error, or omit any necessary detail, the Contractor shall promptly notify the Engineer in writing through a Request for Information. Any Work done after such observation, until authorized by the Engineer, shall be at Contractor's risk. The Contractor shall also promptly report to the Engineer any observed error, inconsistency, omission, or variance with applicable laws through a Request for Information. If the Contractor fails either to carefully study and compare the Contract Documents, or to promptly report any observed error, inconsistency, omission, or variance, the Contractor shall assume full responsibility and shall bear all costs, liabilities, and damages attributable to the error, inconsistency, omission, or variance.
- B. Requests for Information. The Contractor shall submit Requests for Information concerning the Contract Documents by following the procedure and using such form as the Port may require. The Contractor shall minimize Requests for Information by thoroughly studying the Contract Documents and reviewing all Subcontractor requests. The Contractor shall allow adequate time in its planning and scheduling for a response from the Port to a Request for Information.
- C. Port may provide information to supplement Drawings and Specifications. Minor items of work or detail that are omitted from the Drawings and Specifications, but inferable from the information presented and normally provided by accepted good practice, shall be provided and/or performed by the Contractor as part of the Contract Sum and within the Contract Time. Similarly, the Engineer may furnish to the Contractor additional Drawings and clarifications, consistent with the Contract Documents, as necessary to detail and illustrate the Work. The Contractor shall conform its Work to such additional Drawings and clarifications at no increase in the Contract Sum or Contract Time.

3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS

- A. Contractor responsible for Work and workers. The Contractor shall have complete control of the means, methods, techniques, sequences, or procedures related to the Work, and for all safety precautions or programs. The Contractor shall have complete control over, and responsibility for, all personnel performing the Work. The Contractor is also responsible for the acts and omissions of the Contractor's principals, employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors of any tier.
- B. Contractor to supervise the Work. The Contractor shall continuously supervise and direct the Work using competent and skilled personnel and the Contractor's best skill and attention.
- C. Contractor to enforce discipline and good order. The Contractor shall enforce strict discipline and good order among all workers on the Project, and shall not employ any unfit person or anyone not skilled in the work to which they are assigned. Incompetent, careless, or negligent workers shall immediately be removed from the Work. The Port may, but is not obligated to, require the Contractor to remove from the Work, at no change in the Contract Sum or Contract Time, anyone whom the Port considers objectionable.

3.04 MATERIALS AND EQUIPMENT

- A. Material and equipment to be new. All materials and equipment to be incorporated into the Work shall be new, unless specifically provided otherwise in the Contract Documents. The Contractor shall, if required in writing by the Port, furnish satisfactory evidence regarding the kind and quality of any materials, identify the source, and warrant compliance with the Contract Documents. The Contractor shall ensure that all materials and equipment are protected, kept dry, and stored under cover in a manner to protect such materials and equipment.

- B. Material and equipment shall conform to manufacturer instructions. All materials and equipment shall conform, and shall be applied, installed, used, maintained, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processor, unless otherwise specifically provided by the Engineer.

3.05 CONTRACTOR WARRANTIES

- A. Work will be of good quality and performed in workmanlike manner. In addition to any specific warranties set forth in the Contract Documents, the Contractor warrants that the Work, including all materials and equipment furnished under the Contract, will be of good quality and new, will be performed in a skillful and workmanlike manner, and will conform to the requirements of the Contract Documents. Any Work not conforming to this warranty, including unapproved or unauthorized substitutions, shall be considered defective.
- B. Work will be free from defects. The Contractor warrants that the Work will be free from defects for a period of one (1) year from the date of Substantial Completion of the Project.
- C. Contractor to collect and deliver warranties to Port. The Contractor shall collect and deliver to the Port any written warranties required by the Contract Documents. These warranties shall be obtained and enforced by the Contractor for the benefit of the Port without the necessity of separate assignment. These warranties shall extend to the Port all rights, claims, benefits, and interests that the Contractor may have under express or implied warranties or guarantees against a Subcontractor of any tier, supplier, or manufacturer for defective or non-conforming Work. Warranty provisions that purport to limit or alter the Port's rights under the Contract Documents, or the laws of the State of Washington, are null and void.
- D. General requirements. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance, and final payment.

3.06 REQUIRED WAGES

- A. Contractor will pay required wages. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project. See Specification Section 00 73 46.
- B. The Contractor shall defend (at Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct or indirect, and including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses of litigation, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or Chapter 51 RCW ("Industrial Insurance").

3.07 STATE AND LOCAL TAXES

- A. Contractor will pay taxes on consumables. The Contractor will pay the retail sales tax on all consumables used during performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Contract Sum.
- B. Port will pay taxes on the Contract Sum. The Port will pay state and local retail sales tax on the Contract Sum with each progress payment, and on final payment, for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local taxing authority. Rule 170: WAC 458-20-170.

- C. Direct all tax questions to the Department of Revenue. The Contractor should direct all questions concerning taxes on any portion of the Work to the State of Washington Department of Revenue or to the local taxing authority.
- D. State Sales Tax - Rule 171: WAC 458-20-171. For work performed related to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used, primarily, for foot or vehicular traffic, the Contractor shall include Washington State Retail Sales Taxes in the various schedule prices, or other contract amounts, including those that the Contractor pays on the purchase of materials, equipment, or supplies used or consumed in doing the Work.
 - 1. The bid form will indicate which bid items are subject to Rule 171. Any such identification by the Port is not binding upon the Department of Revenue.

3.08 PERMITS, LICENSES, FEES, AND ROYALTIES

- A. Contractor to provide and pay for permits unless otherwise specified. Unless otherwise specified, the Contractor shall procure and pay for all permits, licenses, and governmental inspection fees necessary or incidental to the performance of the Work. All costs related to these permits, licenses, and inspections shall be included in the Contract Sum. Any action taken by the Port to assist the Contractor in obtaining permits or licenses shall not relieve the Contractor of its sole responsibility to obtain and pay for permits, licenses, and inspections as part of the Contract Sum.
- B. Contractor's obligations when permit must be in Port's name. When applicable law or agency requires a permit to be issued to a public agency, the Port will support the Contractor's request for the permit and accept the permit in the Port's name, if:
 - 1. The Contractor takes all necessary steps required for the permit to be issued;
 - 2. The permit applies to Work performed in connection with the Project; and
 - 3. The Contractor agrees in writing to abide by all requirements of the permit and to defend and hold harmless the Port from any liability in connection with the permit.
- C. Contractor to pay royalties. The Contractor shall pay all royalties and license fees required for the Work unless otherwise specified in the Contract Documents.

3.09 SAFETY

- A. Contractor solely responsible for safety. The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work and the performance of the Contract.
- B. Port not responsible for safety. The Port may identify safety concerns to the Contractor; however, no action or inaction of the Port or any third party relating to safety will: (1) relieve the Contractor of its sole and complete responsibility for safety and sole liability for any consequences, (2) impose any obligation on the Port or a third party to inspect or review the Contractor's safety program or precautions, (3) impose any continuing obligation on the Port or a third party to ensure the Contractor performs the Work safely, or (4) affect the Contractor's responsibility for the protection of property, workers, and the general public.
- C. Contractor to maintain a safe Work site. The Project site may be occupied during performance of the Work. The safety of these site occupants is of paramount importance to the Port. The Contractor shall maintain the Work site and perform the Work in a safe manner and in accordance with the Washington Industrial Safety and Health Act (WISHA) and all other applicable safety laws, rules, and regulations. This requirement shall apply continuously and not be limited to working hours.

- D. Contractor to protect Work site and adjacent property until Final Completion. The Contractor shall continuously protect the Work and adjacent property from damage. At all times until Final Completion, the Contractor shall be responsible for, and protect from damage, weather, deterioration, theft, and vandalism, the Work and all materials, equipment, tools, and other items incorporated or to be incorporated in the Work, and shall repair any damage, injury, or loss.

3.10 CORRECTION OF WORK

- A. Contractor to correct defective Work. The Contractor shall, at no cost to the Port, promptly correct Work that is defective or that otherwise fails to conform to the requirements of the Contract Documents. Such Work shall be corrected, whether before or after Substantial Completion, and even if it was previously inspected or observed by the Port.
- B. One-year correction period. The Contractor shall correct all defects in the Work appearing within one (1) year of Substantial Completion or within any longer period prescribed by law or by the Contract Documents. The Contractor shall initiate remedial action within fourteen (14) days of receipt of notice from the Port and shall complete remedial work within a reasonable time. Work corrected by the Contractor shall be subject to the provisions of this Section 3.10 for an additional one-year period following the Port's acceptance of the corrected Work.
- C. Contractor responsible for defects and failures to correct. The Contractor shall be responsible for any expenses incurred by the Port resulting from defects in the Work. If the Contractor refuses or neglects to correct the defects, or does not timely accomplish corrections, the Port may correct the Work and charge the Contractor the cost of the corrections. If damage or loss of service may result from a delay in correction, the corrections may be made by the Port and reimbursed by the Contractor.
- D. Port may accept defective work. The Port may, at its sole option, elect to retain defective or nonconforming Work. In such a case, the Port shall reduce the Contract Sum by a reasonable amount to account for the defect or non-conformance.
- E. No period of limitation established. Nothing contained in this Section 3.10 establishes a period of limitation with respect to any obligations under the Contract Documents or law. The establishment of the one (1) year correction period relates only to the specific obligation of the Contractor to correct defective or non-conforming Work.

3.11 UNCOVERING OF WORK

- A. Contractor to uncover work covered prior to inspection. If any portion of the Work is covered prior to inspection and approval, the Contractor shall, at its expense, uncover or remove the Work for inspection by the Port or others, and replace the Work to the standard required by the Contract Documents.
- B. Contractor to uncover work at Port's request. After initial inspection and observation, the Port may order a reexamination of Work, and the Work must be uncovered by the Contractor. If the uncovered Work complies with the Contract Documents, the Port shall pay the cost of reexamination and replacement. If the Work is found not to comply with the Contract Documents, the Contractor shall pay the cost of replacement, unless the Contractor demonstrates that it did not cause the defect in the Work.

3.12 RELOCATION OF UTILITIES

- A. Contractor should assume underground utilities are in approximate locations. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks, and plumbing or electrical runs indicated in surveys or the Contract Documents are shown in approximate locations. The accuracy of this information is not guaranteed by the Port and shall be verified by the Contractor. The Contractor shall comply with RCW 19.122.030 and utilize a utility locator service to locate utilities on Port property. The Contractor shall bear the risk of loss if any of its Work directly or indirectly damages or interrupts any utility service or causes or contributes to damages of any nature.
- B. Utility relocation or removal. Where relocation or removal of utilities is necessary or required, it shall be performed at the Contractor's sole expense, unless the Contract Documents specify otherwise. If a utility owner is identified as being responsible for relocating or removing utilities, the work will be accomplished at the utility owner's convenience, either during, or in advance of, construction. Unless otherwise specified, it shall be the Contractor's sole responsibility to coordinate, schedule, and pay for work performed by a utility owner.
- C. Contractor to notify Port of unknown utilities. If the Contractor discovers the presence of any unknown utilities, it shall immediately notify the Engineer in writing.

3.13 LABOR

- A. Contractor responsible for labor peace. The Contractor is responsible for labor peace relating to the Work and shall cooperate in maintaining Project-wide labor harmony. The Contractor shall use its best efforts as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes, or strikes.
- B. Contractor to minimize impact of labor disputes. The Contractor will take all necessary steps to prevent labor disputes from disrupting or otherwise interfering with access to Port property. If a labor dispute disrupts the progress of the Work or interferes with access, the Contractor shall promptly and expeditiously take all necessary action to eliminate or minimize the disruption or interference.

3.14 INDEMNIFICATION

- A. Duty to defend, indemnify, and hold harmless. To the fullest extent permitted by law and subject to this Section 3.14, the Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port and the Northwest Seaport Alliance, including their respective Commissions, officers, managers, and employees, the Engineer, any consultants, and the agents and employees, successors and assigns of any of them (the "Indemnified Parties") from and against claims, damages, lawsuits, losses (including loss of use), disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct and indirect or consequential, including but not limited to, consultants' fees, and attorneys' fees incurred on such claims and in proving the right to indemnification ("Claims"), arising out of, or resulting from, the acts or omissions of the Contractor, a Subcontractor of any tier, their agents, and anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable (individually and collectively, the "Indemnitor").
- B. Duty to defend, indemnify, and hold harmless for sole negligence. The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence or willful misconduct of the Indemnitor.
- C. Duty to defend, indemnify, and hold harmless for concurrent negligence. Where Claims arise from the concurrent negligence of (1) the Port; and (2) the Indemnitor, the Contractor's obligations to indemnify and defend the Indemnified Parties under this Section 3.14 shall be effective only to the extent of the Indemnitor's negligence.

- D. Duty to indemnify not limited by workers' compensation or similar employee benefit acts. In claims against any of the Indemnified Parties by an employee of the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under this Section 3.14 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable under workers' compensation acts, disability benefit acts, or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Indemnified Parties under Title 51 RCW, "Industrial Insurance."
- E. Intellectual property indemnification. The Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Indemnified Parties harmless for Claims for infringement by the Contractor of copyrights or patent rights arising out of, or relating to, the Project.
- F. Labor peace indemnification. If the Contractor fails to satisfy its labor peace obligations under the Contract, the Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Indemnified Parties for Claims brought against the Port by third parties (including but not limited to lessees, tenants, contractors, customers, licensees, and invitees of the Port) for injunctive relief or monetary loss.
- G. Cyber risk indemnification. Contractor shall defend, indemnify, and hold harmless the Indemnified Parties from and against any liability, expense, fines, penalties, cost, demand, or other obligation, resulting from or out of any cyber-related risk that includes theft, loss or misuse of data, release of private information as result of a network breach, penetration, compromise, or loss of IT systems control.
- H. Joinder. The Contractor agrees to being added by the Port as a party to any arbitration or litigation with third parties in which the Port alleges indemnification or seeks contribution from the Indemnitor. The Contractor shall cause each of its Subcontractors of any tier to similarly stipulate in their subcontracts; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier.
- I. Other. To the extent that any portion of this Section 3.14 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The obligations of the Contractor under this Section 3.14 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist. To the extent the wording of this Section 3.14 would reduce or eliminate an available insurance coverage, it shall be considered modified to the extent necessary so that the insurance coverage is not affected. This Section 3.14 shall survive completion, acceptance, final payment, and termination of the Contract.

3.15 WAIVER OF CONSEQUENTIAL DAMAGES

- A. Mutual waiver of consequential damages. The Contractor and Port waive claims against each other for consequential damages arising out of, or relating to, this Contract. This mutual waiver includes, but is not limited to: (1) damages incurred by the Port for rental expenses, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons, and (2) damages incurred by the Contractor for principal and home office overhead and expenses including, but not limited to, the compensation of personnel stationed there, for losses of financing, business, and reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver includes, but is not limited to, all consequential damages due to either party's termination.

- B. Limitation. Nothing contained in this Section 3.15; however, shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents, to preclude damages specified in the Agreement, or to affect the Contractor's obligation to indemnify the Port for direct, indirect, or consequential damages alleged by a third party.

ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS

4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS.

- A. Contractor responsible for Subcontractors. The Contractor is fully responsible to the Port for the acts and omissions of its Subcontractors of any tier and all persons either directly or indirectly employed by the Contractor or its Subcontractors.

4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS

- A. Contractor to provide proposed Subcontractor information. The Contractor, within ten (10) days after the Port's notice of award of the Contract, shall provide the Engineer with the names of the persons or entities proposed to perform each of the principal portions of the Work (i.e., either a Subcontractor listed in a bid or proposal or a Subcontractor performing Work valued at least ten percent (10%) of the Contract Sum) and the proprietary names, and the suppliers of, the principal items or systems of materials and equipment proposed for the Work. No progress payment will become due until after this information has been furnished.
- B. Port to respond promptly with objections. The Port may respond promptly to the Contractor in writing stating: (1) whether the Port has reasonable objection to any proposed person or entity, or (2) whether the Port requires additional time for review. If the Port makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.
- C. Reasonable objection defined. "Reasonable objection" as used in this Section 4.02 includes, but is not limited to: (1) a proposed Subcontractor of any tier different from the entity listed with the bid, (2) lack of "responsibility" of the proposed Subcontractor, as defined by Washington law and the Bidding Documents, or lack of qualification or responsibility of the proposed Subcontractor based on the Contract or Bidding Documents, or (3) failure of the Subcontractor to perform satisfactorily in the Port's opinion (such as causing a material delay or submitting a claim that the Port considers inappropriate) on one or more projects for the Port within five (5) years of the bid date.
- D. No substitution allowed without permission. The Contractor shall not substitute a Subcontractor, person, or organization without the Engineer's written consent.

4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS

- A. Contractor to schedule, supervise, and coordinate Subcontractors. The Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors of any tier, including suppliers. The Contractor shall ensure that appropriate Subcontractors coordinate the Work of lower-tier Subcontractors.

- B. Subcontractors to be bound to Contract Documents. By appropriate agreement, the Contractor shall require each Subcontractor and supplier to be bound to the terms of the Contract Documents and to assume toward the Contractor, to the extent of their Work, all of the obligations that the Contractor assumes toward the Port under the Contract Documents. Each subcontract shall preserve and protect the rights of the Port and shall allow to the Subcontractor, unless specifically provided in the subcontract, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Port. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with lower-tier Subcontractors.
- C. Contractor to correct deficiencies in Subcontractor performance. When a portion of the Work subcontracted by the Contractor is not being prosecuted in accordance with the Contract Documents, or if such subcontracted Work is otherwise being performed in an unsatisfactory manner in the Port's opinion, the Contractor shall, on its own initiative or upon the written request of the Port, take immediate steps to correct the deficiency or remove the non-performing party from the Project. The Contractor shall replace inadequately performing Subcontractors upon request of the Port at no change in the Contract Sum or Contract Time.
- D. Contractor to provide subcontracts. Upon request, the Contractor will provide the Port copies of written agreements between the Contractor and any Subcontractor.

ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS

5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS

- A. Contractor to comply with non-discrimination laws. The Contractor shall fully comply with all applicable laws, regulations, and ordinances pertaining to non-discrimination.

5.02 MWBE, VETERAN-OWNED, AND SMALL BUSINESS ENTERPRISE PARTICIPATION.

- A. In accordance with the legislative findings and policies set forth in RCW 39.19, the Port encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a Bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the Contract Documents, no preference will be included in the evaluation of Bids, no minimum level of MWBE participation shall be required as a condition for receiving an award, and Bids will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the Contract Documents will apply.

The Port encourages participation in all of its contracts by Veteran-owned businesses (defined in RCW 43.60.010) and located at <http://www.dva.wa.gov/program/certified-veteran--and-servicemember-owned-businesses> and Small, Mini, and Micro businesses (defined in RCW 39.26.010)

5.03 APPRENTICESHIP PARTICIPATION

- A. In accordance with RCW 39.04.320, fifteen (15) percent Apprenticeship Participation is required for all projects estimated to cost one million (\$1,000,000) dollars or more.
- B. Apprentice participation, under this contract, may be counted towards the required percentage (%) only if the apprentices are from an apprenticeship program registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).

- C. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530 by phone at (360) 902-5320, or e-mail at Apprentice@lni.wa.gov, to obtain information on available apprenticeship programs.
- D. For each project that has apprentice requirements, the contractor shall submit a "Statement of Apprentice and Journeyman Participation" on forms provided by the Port of Tacoma, with every request for project payment. The Contractor shall submit consolidated and cumulative data collected by the Contractor and collected from all subcontractors by the Contractor. The data to be collected and submitted includes the following:
 - 1. Contractor name and address
 - 2. Contract number
 - 3. Project name
 - 4. Contract value
 - 5. Reporting period "Beginning Date" through "End Date"
 - 6. Name and registration number of each apprentice by contractor
 - 7. Total number of apprentices and labor hours worked by them, categorized by trade or craft.
 - 8. Total number of journeymen and labor hours worked by them, categorized by trade or craft
 - 9. Cumulative combined total of apprentice and journeymen labor hours
 - 10. Total percentage of apprentice hours worked
- E. No changes to the required percentage (%) of apprentice participation shall be allowed without written approval of the Port. In any request for the change, the Contractor shall clearly demonstrate a good faith effort to comply with the requirements for apprentice participation.

ARTICLE 6 - CONTRACT TIME AND COMPLETION

6.01 CONTRACT TIME

- A. Contract Time is measured from Contract execution. Unless otherwise provided in the Agreement, the Contract Time is the period of time, including authorized adjustments, specified in the Contract Documents from the date the Contract is executed to the date Substantial Completion of the Work is achieved.
- B. Commencement of the Work. The Contractor shall begin Work in accordance with the notice of award and the notice to proceed and shall complete all Work within the Contract Time. When the Contractor's signed Agreement, required insurance certificate with endorsements, bonds, and other submittals required by the notice of award have been accepted by the Port, the Port will execute the Contract and, following receipt of other required pre-work submittals, will issue a notice to proceed to allow the Contractor to mobilize and commence physical Work at the Project site, as further described in these contract documents. No Work at the Project site may commence until the Port issues a notice to proceed.
- C. Contractor shall achieve specified completion dates. The Contractor shall achieve Substantial Completion within the Contract Time and shall achieve Final Completion within the time period thereafter stated in the Contract Documents.

- D. Time is of the essence. Time limits stated in the Contract Documents, including any interim milestones, are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

6.02 PROGRESS AND COMPLETION

- A. Contractor to maintain schedule. The Contractor's sequence and method of operations, application of effort, and work force shall at all times be created and implemented to ensure the orderly, expeditious, and timely completion of the Work and performance of the Contract. The Contractor shall furnish sufficient forces and shall work such hours, including extra shifts, overtime operations, and weekend and holiday work as may be necessary to ensure completion of the Work within the Contract Time and the approved Baseline Project Schedule.
- B. Contractor to take necessary steps to meet schedule. If the Contractor fails substantially to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier, fails to meet the Baseline Project Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations, or days of work, or by other means and methods, all without additional cost to the Port. If the Contractor believes that any action or inaction of the Port constitutes acceleration, the Contractor shall immediately notify the Port in writing and shall not accelerate the Work until the Port either directs the acceleration in writing or denies the constructive acceleration.
- C. Liquidated damages not exclusive. Any provisions in the Contract Documents for liquidated damages shall not preclude other damages due to breaches of Contract of the Contractor.

6.03 SUBSTANTIAL COMPLETION

- A. Substantial Completion defined. Substantial Completion is the stage in the progress of the Work, or portion or phase thereof, when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Port can fully occupy or utilize the Work, or the designated portion thereof, for its intended use, all requirements in the Contract Documents for Substantial Completion have been achieved, and all required documentation has been properly submitted to the Port in accordance with the Contract Documents. All Work, other than incidental corrective or punch list Work and final cleaning, must be completed. The fact that the Port may occupy the Work or a designated portion thereof does not indicate that Substantial Completion has occurred or that the Work is acceptable in whole or in part.
- B. Work not Substantially Complete unless Final Completion attainable. The Work is not Substantially Complete unless the Port reasonably judges that the Work can achieve Final Completion within the period of time specified in the Contract Documents.
- C. Notice of Substantial Completion. When the Work or designated portion has achieved Substantial Completion, the Port will provide a notice to establish the date of Substantial Completion. The notice shall establish responsibilities of the Port and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall finish all remaining Work. If the notice of Substantial Completion does not so state, all responsibility for the foregoing items shall remain with the Contractor until Final Completion.

6.04 COMPLETION OF PUNCH LIST

- A. Contractor shall complete punch list items prior to Final Completion. The Contractor shall cause punch list items to be completed prior to Final Completion. If, after Substantial Completion, the Contractor does not expeditiously proceed to correct punch list items or if the Port considers that the punch list items, are unlikely to be completed prior to the date established for Final Completion (or such other period of time as is specified in the Contract Documents), the Port may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. The Port may also take over and complete any portion of the Work at any time following Substantial Completion and deduct the actual cost of performing the Work (including direct and indirect costs) from the Contract Sum. The Port's rights under this Section 6.04 are not obligations and shall not relieve the Contractor of its responsibilities under any other provisions of the Contract Documents.

6.05 FINAL COMPLETION

- A. Final Completion. Upon receipt of written notice from the Contractor that all punch list items and other Contract requirements are completed, the Contractor will notify the Port, and the Port will perform a final inspection. If the Port determines that some or all of the punch list items have not been addressed, the Contractor shall be responsible to the Port for all costs, including re-inspection fees, for any subsequent reviews to determine completion of the punch list. When the Port determines that all punch list items have been satisfactorily addressed, that the Work is acceptable under the Contract Documents, and that the Work has fully been performed, the Port will promptly notify the Contractor of Final Completion.
- B. Contractor responsible for costs if Final Completion is not timely achieved. In addition to any liquidated damages, the Contractor is liable for, and the Port may deduct from any amounts due the Contractor, all costs incurred by the Port for services performed after the contractual date of Final Completion, whether or not those services would have been performed prior to that date had Final Completion been timely achieved.
- C. Final Completion submittals. The Port is not obligated to accept the Project as complete until the Contractor has submitted all required submittals to the Port.
- D. Contractor responsible for the Work until Final Completion. The Contractor shall assume the sole risk of loss and responsibility for all Work under the Contract, and all materials to be incorporated in the Work, whether in storage or at the Project site, until Final Completion. Damage from any cause to either permanent or temporary Work, utilities, materials, equipment, existing structures, the site, or other property owned by the Port or others, shall be repaired by the Contractor to the reasonable satisfaction of the Port at no change in the Contract Sum.

6.06 FINAL ACCEPTANCE

- A. Final Acceptance. Final Acceptance is the formal action of the Port accepting the Project as complete. Public notification of Final Acceptance will be posted on the Port's external website (<http://www.portoftacoma.com/final-acceptance>).
- B. Final Acceptance not an acceptance of defective Work. Final Acceptance shall not constitute acceptance by the Port of unauthorized or defective Work, and the Port shall not be prevented from requiring the Contractor to remove, replace, repair, or dispose of unauthorized or defective Work or recovering damages due to the same.
- C. Completion of Work under RCW 60.28. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

6.07 PORT'S RIGHT TO USE THE PREMISES

- A. Port has right to use and occupy Work. The Port reserves the right to occupy or use any part of the Work before or after Substantial Completion of some or all of the Work without relieving the Contractor of any of its obligations under the Contract. Such occupancy or use shall not constitute acceptance by the Port of any of the Work, and shall not cause any insurance to be canceled or lapse.
- B. No compensation due if Port elects to use and occupy Work. No additional compensation shall be due to the Contractor as a result of the Port's use or occupancy of the Work or a designated portion.

ARTICLE 7 - PAYMENT

7.01 ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES

- A. Payment of the Contract Sum. The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Port to the Contractor for performance of the Work under the Contract Documents. Payments made to the Contractor are subject to all laws applicable to the Port and the Contractor. Payment of the Contract Sum constitutes full compensation to the Contractor for performance of the Work, including all risk, loss, damages, or expense of whatever character arising out of the nature or prosecution of the Work. The Port is not obligated to pay for extra work or materials furnished without prior written approval of the Port.
- B. Schedule of Values. All payments will be based upon an approved Schedule of Values. Prior to submitting its first Application for Payment, the Contractor shall submit a Schedule of Values to the Port allocating the entire Contract Sum to the various portions of the Work. The Schedule of Values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Port may require. This schedule, unless objected to by the Port, shall be used as a basis for reviewing the Contractor's applications for payment.

7.02 APPLICATIONS FOR PAYMENT

- A. Applications for Payment. Progress payments will be made monthly for Work duly certified, approved by the Engineer, and performed (based on the Schedule of Values and actual quantities of Work performed) during the calendar month preceding the Application for Payment. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent, and in accordance with, the approved Application for Payment.

7.03 PROGRESS PAYMENTS

- A. Progress payments. Following receipt of a complete Application for Payment, the Engineer will either authorize payment or indicate in writing to the Contractor the specific reasons why the payment request is being denied, in whole or in part, and the remedial action the Contractor must take to receive the withheld amount. After a complete Application for Payment has been received and approved by the Port, payment will be made within thirty (30) days. Any payments made by, or through, or following receipt of, payment from third parties will be made in accordance with the third party's policies and procedures.
- B. Port may withhold payment. The Port may withhold payment in whole or in part as provided in the Contract Documents or to the extent reasonably necessary to protect the Port from loss or potential loss for which the Contractor is responsible, including loss resulting from the Contractor's acts and omissions.

7.04 PAYMENT BY CONTRACTOR TO SUBCONTRACTORS

- A. Payment to Subcontractors. With each Application for Payment, the Contractor shall provide a list of Subcontractors to be paid by the Contractor. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, however, after submitting an Application for Payment, but before paying a Subcontractor, the Contractor discovers that part or all of a payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of lower-tier Subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the Port written notice of the remedial actions that must be taken and pay the Subcontractor within eight (8) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.
- B. Payment certification to be provided upon request. The Contractor shall provide, with each Application for Payment, a certification signed by Contractor attesting that all payments by the Contractor to Subcontractors from the last Application for Payment were made within ten (10) days of the Contractor's receipt of payment. The certification will also attest that the Contractor will make payment to Subcontractors for the current Application for Payment within ten (10) days of receipt of payment from the Port.

7.05 FINAL PAYMENT

- A. Final payment. Final applications for payment are due within seven (7) days following Final Completion. Final payment of the unpaid balance of the Contract Sum, except retainage, will be made following Final Completion and within thirty (30) days of the Contractor's submission of an approved final Application for Payment.
- B. Releases required for final payment. The final payment shall not become due until the Contractor delivers to the Port a complete release of all liens arising out of the Contract, as well as an affidavit stating that, to the best of Contractor's knowledge, its release includes all labor and materials for which a lien could be filed. If a Subcontractor of any tier refuses to furnish a release or waiver required by the Port, the Port may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Port, to indemnify the Port against the lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Port all moneys that the Port may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
- C. Contractor to hold Port harmless from liens. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port from any liens, claims, demands, lawsuits, losses, damages, disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct or indirect, including but not limited to, attorneys' fees and consultants' fees and other costs and expenses, except to the extent a lien has been filed because of the failure of the Port to make a contractually required payment.

7.06 RETAINAGE

- A. Retainage to be withheld. In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. Prior to submitting its first Application for Payment, the Contractor shall exercise one of the options listed below:
 - 1. Retained percentages will be retained by the Port in a fund; or

2. Deposited by the Port in an interest-bearing account or escrow account in a bank, mutual savings bank, or savings and loan association designated by the Contractor, not subject to withdrawal until after the final acceptance of said improvement or work as completed, or until agreed to by both parties; provided that interest on such account shall be paid to the Contractor. Contractor to complete and submit Port provided Retainage Escrow Agreement (Section 00 61 23.13); or
 3. If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus Change Orders. The retainage bond shall be based on the form furnished in Section 00 61 23 or otherwise acceptable to the Port and duly completed and signed by a licensed surety or sureties registered with the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner. The surety or sureties must be rated at least "A-, FSC(6)" or higher by A.M. Best Rating Guide and be authorized by the Federal Department of the Treasury. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective Power of Attorney statement.
- B. Contractor may withhold retainage from Subcontractors. The Contractor or a Subcontractor may withhold not more than five percent (5%) retainage from the monies earned by any Subcontractor or lower-tier Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Port, the Contractor shall specify the amount of retainage and interest due a Subcontractor.
- C. Release of retainage. Retainage will be withheld and applied by the Port in a manner required by RCW 60.28 and released in accordance with the Contract Documents and statutory requirements. Release of the retainage will be processed in the ordinary course of business within sixty (60) days following Final Acceptance of the Work by the Port provided that no notice of lien has been given as provided in RCW 60.28, that no claims have been brought to the attention of the Port, that the Port has no claims under this Contract, and that release of retention has been duly authorized by the State. The following items must also be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries including approved affidavits of wages paid for the Contractor and each subcontractor.

7.07 DISPUTED AMOUNTS

- A. Disputed amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may submit to the Port, along with the approved Application for Payment, a separate written payment request specifying the exact additional amount claimed to be due, the category in the Schedule of Values to which the payment would apply, the specific Work for which additional payment is sought, and an explanation of why the Contractor believes additional payment is due.

7.08 EFFECT OF PAYMENT

- A. Payment does not relieve Contractor of obligations. Payment to the Contractor of progress payments or final payment does not relieve the Contractor from its responsibility for the Work or its responsibility to repair, replace, or otherwise make good defective Work, materials, or equipment. Likewise, the making of a payment does not constitute a waiver of the Port's right to reject defective or non-conforming Work, materials, or equipment (even though they are covered by the payment), nor is it a waiver of any other rights of the Port.

- B. Acceptance of final payment waives claims. Acceptance of final payment by the Contractor, a Subcontractor of any tier, or a supplier shall constitute a waiver of claims except those previously made in writing and identified as unsettled in Contractor's final Application for Payment.
- C. Execution of Change Order waives claims. The execution of a Change Order shall constitute a waiver of claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order.

7.09 LIENS

- A. Contractor to discharge liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials, or other items in connection with the performance of the Work including, but not limited to, any Subcontractors of any tier.

ARTICLE 8 - CHANGES IN THE WORK

8.01 CHANGES IN THE WORK

- A. Changes in the Work authorized. Without invalidating the Contract and without notice to the Contractor's surety, the Port may authorize changes in the Work after execution of the Contract, including changes in the Contract Sum or Contract Time. Changes shall occur solely by Change Order, Unilateral Change Directive, or Minor Change in Work. All changes in the Work are effective immediately, and the Contractor shall proceed promptly to perform the change, unless otherwise provided in the Change Order or Directive.
- B. Changes in the Work Defined.
 - 1. A Change Order is a written instrument signed by the Port and Contractor stating their agreement to a change in the Work and the adjustment, if any, in the Contract Sum and/or Contract Time.
 - 2. A Unilateral Change Directive is a written instrument issued by the Port to transmit new or revised Drawings, issue additions or modifications to the Contract, furnish other direction and documents adjustment, if any, to the Contract Sum and/or Contract Time. A Unilateral Change Directive is signed only by the Port, without requiring the consent or signature of the Contractor.
 - 3. A Minor Change in the Work is a written order from the Port directing a change that does not involve an adjustment to the Contract Sum or the Contract Time.
- C. Request for Proposal: At any time, the Port may issue a Proposal Request directing the Contractor to propose a change to the Contract Sum and/or Contract Time, if any, based on a proposed change in the Work. The Contractor shall submit a responsive Change Order proposal as soon as possible, and no later than fourteen (14) days after receipt, in which the Contractor specifies in good faith the extent to which the Contract Sum and/or Contract Time would change. All cost components shall be limited to the manner described in Section 8.02(B). If the Contractor fails to timely respond to a Proposal Request, the Port may issue the change as a Unilateral Change Directive.

1. Fixed price method is default for Contractor Change Order proposal. When the Port has requested that the Contractor submit a Change Order proposal, the Port may specify the basis on which the Contract Sum will be adjusted by the Contractor. The Engineer's preference, unless otherwise indicated, is for changes in the Work to be priced using Lump Sums or Unit Prices or on a time and material (Force Account) basis if unit pricing or lump sums cannot be negotiated or determined. In all instances, however, proposed changes shall include a not-to-exceed price for the change and shall be itemized for evaluation purposes in accordance with Section 8.02(B), as requested by the Engineer.
 2. The Port may accept or reject the Contractor's Change Order proposal, request further documentation, or negotiate acceptable terms with the Contractor. If The Port and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order.
 3. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment. The Port may reject a proposal, in which case the Port may either not effectuate the change or issue a Unilateral Change Directive. The Port will not make payment to the Contractor for any work until that work has been incorporated into an executed Change Order.
- D. Unforeseen Conditions: If the Contractor encounters conditions at the site that are: (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or any soils reports made available by the Port to the Contractor, or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall immediately provide oral notice to the Engineer before conditions are disturbed, followed within 24 hours by an initial written notice. The Contractor shall submit a detailed proposal no later than seven (7) days following discovery of differing site conditions. The Engineer will promptly investigate these conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost or time required for performance of any part of the Work, will establish a change in the Contract Sum or Contract Time, or both, consistent with the requirements of the Contract Documents. If the Contractor disputes the Engineer's determination, the Contractor may proceed as provided in the dispute resolution procedure (Article 11). No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor does not comply with the contractual requirements or if the Contractor knew, or reasonably should have known, of the concealed conditions prior to executing the Contract.
- E. Proceed Immediately: Pending agreement on the terms of the Change Order or upon determination of a differing site condition as defined in 8.01(D), the Engineer may direct Contractor to proceed immediately with the change in the Work. Contractor shall not proceed with any change in the Work until it has obtained the Engineer's written approval and documentation of the following:
1. The scope of work
 2. An agreed upon maximum not-to-exceed amount
 3. The method of final cost determination
 4. Estimated time to complete the changed work

5. As a change in the Work is performed, unless the parties have signed a written Change Order to establish the cost of the change, the Contractor shall maintain an itemized accounting of all costs related to the change based on the categories in Section 8.02(B) and provide such data to the Port upon request. This includes, without limitation, invoices, including freight and express bills, and other support for all material, equipment, Subcontractor, and other charges related to the change and, for material furnished from the Contractor's own inventory, a sworn affidavit certifying the actual cost of such material. Failure to provide data to the Port within seven (7) days of a request constitutes a waiver of any claim. The Port may furnish any material or equipment to the Contractor that it deems advisable, and the Contractor shall have no claim for any costs or fee on such material or equipment.
- F. Procedure for Unilateral Change Directive. Whether or not the Port has rejected a Contractor's proposal, the Port may issue a Unilateral Change Directive and the Contractor shall promptly proceed with the specified Work. If the Contractor disagrees with a Unilateral Change Directive, the Contractor shall advise the Port in writing through a Change Order proposal within seven (7) days of receipt. The Contractor's Change Order proposal shall reasonably specify the reasons for any disagreement and the adjustment it proposes. Without this timely Change Order proposal, the Contractor shall conclusively be deemed to have accepted the Port's proposal.
- G. Payment pending final determination of Force Account work. Pending final determination of the total cost of Force Account Work, and provided that the Work to be performed under Force Account is complete and any reservations of rights have been signed by the Port, the Contractor may request payment for amounts not in dispute in the next Application for Payment accompanied by documentation indicating the parties' agreement. Work done on a Force Account basis must be approved in writing on a daily basis by the Engineer or the Engineer's designee and invoices shall be submitted with an Application for Payment within sixty (60) days of performance of the Work.

8.02 CHANGES IN THE CONTRACT SUM

- A. Port to Decide How Changes are Measured. The Port may elect, in its sole discretion, how changes in the Work will be measured for payment. Change in the Work may be priced on a lump sum basis, through Unit Prices, as Force Account, or by another method documented in the executed Change Order, Unilateral Change Directive, or Minor Change in the Work.
- B. Determination of Cost of Change. The total cost of any change in the Work, including a claim under Article 11, shall not exceed the prevailing cost for the Work in the locality of the Project. In all circumstances, the change in the Work shall be limited to the reasonable, actual cost of the following components:
 1. Direct labor costs: These are the actual labor costs determined by the number of additional craft hours at their normal hourly rate necessary to perform a change in the Work. The hourly cost of labor will be based upon the following:

- a. Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage," for the laborers, apprentices, journeymen, and foremen performing or directly supervising the change in the Work on site. These wages do not include the cost of Contractor's project manager or superintendent or above, and the premium portion of overtime wages is not included unless pre-approved in writing by the Port. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide to the Port copies of payroll records, including certified payroll statements for itself and Subcontractors of any tier, upon the Port's request.
 - b. Workers' insurance: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.
 - c. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).
2. Direct material costs: This is an itemization, including material invoices, of the quantity and actual cost of additional materials necessary to perform the change in the Work. The cost will be the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed unless approved in advance by the Port.
3. Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment necessary and appropriate for the Work is used solely on the changed Work times the applicable rental cost as established by the lower of the local prevailing rates published in www.equipmentwatch.com, as modified by the AGC/WSDOT agreement, or the actual rate paid to an unrelated third party. If more than one rate is applicable, the lowest available rate will be utilized. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Port's prior written approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the site solely for the change in the Work. Mobilization and standby costs shall not be charged for equipment already present on the site.

The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design, and in good working condition, and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance. No gas surcharges are payable. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly, and/or monthly rates, as appropriate, will be applied to yield the lowest total cost.
4. Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02 and, among other things, shall not include consultant costs, attorneys' fees, or claim preparation expenses.

5. Service provider costs: These are payments the Contractor makes to service providers for changed Work performed by service providers. The service providers' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02.
6. Markup: This is the maximum total amount for overhead, profit, and other costs, including office, home office and site overhead (including purchasing, project manager, superintendent, project engineer, estimator, and their vehicles and clerical assistants), taxes (except for sales tax on the Contract Sum), warranty, safety costs, printing and copying, layout and control, quality control/assurance, small or hand tools (a tool that costs \$500 or less and is normally furnished by the performing contractor), preparation of as-built drawings, impact on unchanged Work, Change Order and/or claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise), added to the total cost to the Port of any Change Order work. No markup shall be due, however, for direct settlements of Subcontractor claims by the Port after Substantial Completion. The markup shall be limited in all cases to the following schedule:
 - a. Direct labor costs -- 20% markup on the direct cost of labor for the party (Contractor or Subcontractor) providing labor related to the change in the Work;
 - b. Direct material costs -- 20% markup on the direct cost of material for the party (Contractor or Subcontractor) providing material related to the change in the Work;
 - c. Construction equipment usage costs -- 10% markup on the direct cost of equipment for the party (Contractor or Subcontractor) providing equipment related to the change in the Work;
 - d. Contractor markup on Subcontractor costs -- 10% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by Subcontractors (and for Subcontractors, for a change in the Work performed by lower-tier Subcontractors); and
 - e. Service provider costs -- 5% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by service providers.

The total summed markup of the Contractor and all Subcontractors of any tier shall not exceed 30% of the direct costs of the change in the Work. If the markup would otherwise exceed 30%, the Contractor shall proportionately reduce the markup for the Contractor and all Subcontractors of any tier.

7. Cost of change in insurance or bond premium. This is defined as:
 - a. Contractor's liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under the Contract Documents and subject to audit) of the Contractor's liability insurance arising directly from the changed Work; and
 - b. Public works bond: The actual cost (expressed as a percentage submitted under the Contract Documents and subject to audit) of the Contractor's performance and payment bond arising directly from the changed Work.

Upon request, the Contractor shall provide the Port with supporting documentation from its insurer or surety of any associated cost incurred. The cost of the insurance or bond premium together shall not exceed 2.0% of the cost of the changed Work.

8. Unit Prices. If Unit Prices are specified in the Contract Documents or established by agreement of the parties for certain Work, the Port may apply them to the changed Work. Unit Prices shall include pre-agreed rates for material quantities and shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs arising out of, or related to, the Unit Priced item. Quantities must be supported by field measurement statements signed by the Port, and the Port shall have access as necessary for quantity measurement. The Port shall not be responsible for not-to-exceed limit(s) without its prior written approval.

8.03 CHANGES IN THE CONTRACT TIME

- A. Extension of the Contract Time. If the Contractor is delayed at any time in the commencement or progress of the Work by events for which the Port is responsible, by unanticipated abnormal weather (subject to Section 8.03(E) below), or by other causes not the fault or responsibility of the Contractor that the Port determines may justify a delay in the Contract Time, then the Contract Time shall be extended by Change Order for such reasonable time as the Port may determine. In no event, however, shall the Contractor be entitled to any extension of time absent proof of: (1) delay to an activity on the critical path of the Project, or (2) delay transforming an activity to the critical path, so as to actually delay the anticipated date of Substantial Completion.
- B. Allocation of responsibility for delay not caused by Port or Contractor. If a delay was not caused by the Port, the Contractor, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time but not an increase in the Contract Sum.
- C. Allocation of responsibility for delay caused by Port. If a delay was caused by the Port or someone acting on behalf of the Port and affected the critical path, the Contractor shall be entitled to a change in the Contract Time and Contract Sum in accordance with Section 8.02. The Contractor shall not recover damages, an equitable adjustment, or an increase in the Contract Sum or Contract Time from the Port; however, where the Contractor could reasonably have avoided the delay. The Port is not obligated directly or indirectly for damages for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.
- D. Allocation of responsibility for delay caused by Contractor. If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.
- E. Adverse weather. If adverse weather is identified as the basis for a claim for additional time, the claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not reasonably have been anticipated and had an adverse effect on the critical path of construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. For a claim based on adverse weather, the Contractor shall be eligible only for a change in the Contract Time (but not a change in the Contract Sum) if the Contractor can substantiate that there was significantly greater than normal inclement weather considering the full term of the Contract Time.
- F. Damages for delay. In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Port for delay beyond the amount permitted in Section 8.02(B), the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall be limited to the reasonable, actual costs of the delay for which the Port is wholly responsible. The limitation on damages set forth in this Section does not apply to any damages arising exclusively from delay to which the Contractor is entitled to recover under Section 8.03(F).

- G. Limitation on damages. The Contractor shall not be entitled to damages arising out of loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant under run; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or increased overhead or general conditions; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the markup on Change Orders paid through Section 8.02(B).

8.04 RESERVATION OF RIGHTS

- A. Reservations of rights void unless signed by Port. Reservations of rights will be deemed waived and are void unless any reserved rights are described in detail and are signed by the Contractor and the Port.
- B. Procedure for unsigned reservations of rights. If the Contractor adds a reservation of rights not signed by the Port to any Change Order, Unilateral Change Directive, Change Order proposal, Application for Payment, or any other document, all amounts and all Work therein shall be considered disputed and not payable until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to, and signed by, the Port. If the Port makes payment based on a document that contains a reservation of rights not signed by the Port, and if the Contractor cashes such payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

8.05 UNIT PRICES

- A. Adjustment to Unit Prices. If Unit Prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (less than eighty percent (80%) or more than one hundred and twenty percent (120%) of the quantity estimated) so that application of a Unit Price would be substantially unfair, the applicable Unit Price but not the Contract Time, shall be adjusted if the Port prospectively approves a Change Order revising the Unit Price.
- B. Procedure to change Unit Prices. The Contractor or Port may request a Change Order revising a Unit Price by submitting information to support the change. A proposed change to a Unit Price will be evaluated by the Port based on the change in cost resulting solely from the change in quantity, any change in production rate or method as compared to the original plan, and the share, if any, of fixed expenses properly chargeable to the item. If the Port and Contractor agree on the change, a Change Order will be executed. If the parties cannot agree, the Contractor shall comply with the dispute resolution procedures (Article 11).

ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT

9.01 PORT'S RIGHT TO SUSPEND WORK

- A. Port may suspend the Work. The Port may at any time suspend the Work, or any part thereof, by giving notice to the Contractor. The Work shall be resumed by the Contractor as soon as possible, but no later than fourteen (14) days after the date fixed in a notice to resume the Work. The Port shall reimburse the Contractor for appropriate and reasonable expenses consistent with Section 8.02 incurred by the Contractor as a result of the suspension, except where a suspension is the result of the Contractor repeatedly or materially failing to carry out or correct the Work in accordance with the Contract Documents, and the Contractor shall take all necessary steps to minimize expenses.

- B. Contractor obligations. During any suspension of Work, the Contractor shall take every precaution to prevent damage to, or deterioration of, the Work. The Contractor shall be responsible for all damage or deterioration to the Work during the period of suspension and shall, at its sole expense, correct or restore the Work to a condition acceptable to the Port prior to resuming Work.

9.02 TERMINATION OF CONTRACT FOR CAUSE BY THE PORT

- A. Port may terminate for cause. If the Contractor is adjudged bankrupt or makes a general assignment for the benefit of the Contractor's creditors, if a receiver is appointed due to the Contractor's insolvency, or if the Contractor, in the opinion of the Port, persistently or materially refuses or fails to supply enough properly skilled workmen or materials for proper completion of the Contract, fails to make prompt payment to Subcontractors or suppliers for material or labor, disregards laws, ordinances, or the instructions of the Port, fails to prosecute the Work continuously with promptness and diligence, or otherwise materially violates any provision of the Contract, then the Port, without prejudice to any other right or remedy, may terminate the Contractor after giving the Contractor seven (7) days' written notice (during which period the Contractor shall have the right to cure).
- B. Procedure following termination for cause. Following a termination for cause, the Port may take possession of the Project site and all materials and equipment, and utilize such materials and equipment to finish the Work. The Port may also exclude the Contractor from the Project site(s). If the Port elects to complete all or a portion of the Work, it may do so as it sees fit. The Port shall not be required to accept the lowest bid for completion of the Work and may choose to complete all or a portion of the Work using its own work force. If the Port elects to complete all or a portion of the Work, the Contractor shall not be entitled to any further payment until the Work is finished. If the expense of finishing the Work, including compensation for additional managerial and administrative services of the Port, exceeds the unpaid balance of the Contract Sum, the excess shall be paid by the Contractor.
- C. Port's remedies following termination for cause. The Port may exercise any rights, claims, or demands that the Contractor may have against third persons in connection with the Contract, and for this purpose the Contractor assigns and transfers to the Port all such rights, claims, and demands.
- D. Inadequate termination for cause converted to termination for convenience. If, after the Contractor has been terminated for cause, it is determined that inadequate "cause" for such termination exists, then the termination shall be considered a termination for convenience pursuant to Section 9.03.

9.03 TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT

- A. Port may terminate for convenience. The Port may, at any time (without prejudice to any right or remedy of the Port), terminate all, or any portion of, the Contract for the Port's convenience and without cause. The Contractor shall be entitled to receive payment consistent with the Contract Documents only for Work properly executed through the date of termination, and costs necessarily incurred by reason of the termination (such as the cost of settling and paying claims arising out of the termination under subcontracts or orders), along with a fee of one percent (1%) of the Contract Sum not yet earned on the whole or part of the Work. The total amount to be paid to the Contractor shall not exceed the Contract Sum as reduced by the amount of payments otherwise made. The Port shall have title to all Work performed through the date of termination.

9.04 TERMINATION OF CONTRACT BY THE CONTRACTOR

- A. Contractor may terminate for cause. The Contractor may terminate the Contract if the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor of any tier, for either of the following reasons:
 - 1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or
 - 2. An act of government, such as a declaration of national emergency, that requires all Work to be stopped.
- B. Procedure for Contractor termination. If one of the reasons described in Section 9.04A exists, the Contractor may, upon seven (7) days' written notice to the Port (during which period the Port has the opportunity to cure), terminate the Contract and recover from the Port payment for Work executed through the date of termination in accordance with the Contract Documents and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed and direct costs incurred by reason of such termination. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.
- C. Contractor may stop the Work for failure of Port to pay undisputed amounts. The Contractor may stop Work under the Contract if the Port does not pay undisputed amounts due and owing to the Contractor within fifteen (15) days of the date established in the Contract Documents. If the Port fails to pay undisputed amounts, the Contractor may, upon fifteen (15) additional days' written notice to the Port, during which the Port can cure, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately, and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay, and start-up.

9.05 SUBCONTRACT ASSIGNMENT UPON TERMINATION

- A. Subcontracts assigned upon termination. Each subcontract is hereby assigned by the Contractor to the Port provided that:
 - 1. The Port requests that the subcontract be assigned.
 - 2. The assignment is effective only after termination by the Port and only for those subcontracts that the Port accepts in writing.
 - 3. The assignment is subject to the prior rights of the surety, if any, under any bond issued in accordance with the Contract Documents.

When the Port accepts the assignment of a subcontract, the Port assumes the Contractor's rights and obligations under the subcontract, but only for events and payment obligations that arise after the date of the assignment.

ARTICLE 10 - BONDS

10.01 CONTRACTOR PERFORMANCE AND PAYMENT BONDS

- A. Contractor to furnish performance and payment bonds. Within ten (10) days following its receipt of a notice of award, and as part of the Contract Sum, the Contractor shall secure and furnish duly executed performance and payment bonds using the forms furnished by the Port. The bonds shall be executed by a surety (or sureties) reasonably acceptable to the Port, admitted and licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC (6)" or better and be authorized by the U.S. Department of the Treasury. Pursuant to RCW 39.08, the bonds shall be in an amount equal to the Contract Sum, and shall be conditioned only upon the faithful performance of the Contract by the Contractor within the Contract Time and upon the payment by the Contractor of all taxes, fees, and penalties to the State of Washington and all laborers, Subcontractors, and suppliers, and others who supply provisions, equipment, or supplies for the performance of the Work covered by this Contract. The bonds shall be signed by the person or persons legally authorized to bind the Contractor.
- B. On contracts of one hundred fifty thousand dollars or less, at the option of the contractor as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the Employment Security Department, and the Department of Labor and Industries and settlement of any liens filed under chapter 60.28 RCW, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.

For contracts of one hundred fifty thousand dollars or less, the Port may accept a full payment and performance bond from an individual surety or sureties.
- C. Port may notify surety. If the Port makes or receives a claim against the Contractor, the Port may, but is not obligated to, notify the Contractor's surety of the nature and amount of the claim. If the claim relates to a possibility of a Contractor's default, the Port may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

ARTICLE 11 - DISPUTE RESOLUTION

11.01 NOTICE OF PROTEST AND CLAIM

- A. Dispute resolution procedure mandatory. All claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, shall be decided exclusively by the following alternative dispute resolution procedure, unless the parties mutually agree otherwise. If the Port and Contractor agree to a partnering process to assist in the resolution of disputes, the partnering process shall occur prior to, and not be in place of, the mandatory dispute resolution procedures set forth below.
- B. Notice of protest defined. Except for claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall provide immediate oral notice of protest to the Engineer prior to performing any disputed Work and shall submit a written notice of protest to the Port within seven (7) days of the occurrence of the event giving rise to the protest that includes a clear description of the event(s). The protest shall identify any point of disagreement, those portions of the Contract Documents believed to be applicable, and an estimate of quantities and costs involved. When a protest relates to cost, the Contractor shall keep full and complete records and shall permit the Port to have access to those records at any time as requested by the Port.

- C. Claim defined. A claim is a demand by one of the parties seeking adjustment or interpretation of the Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract Documents. The term "claim" also includes all disputes and matters in question between the Port and Contractor arising out of, or relating to, the Contract Documents. Claims must be initiated in writing and include a detailed factual statement and clear description of the claim providing all necessary dates, locations, and items of Work, the date or dates on which the events occurred that give rise to the claim, the names of employees or representatives knowledgeable about the claim, the specific provisions of the Contract Documents that support the claim, any documents or oral communications that support the claim, any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path), and all other data supporting the claim. Claims shall also be submitted with a statement certifying, under penalty of perjury, that the claim as submitted is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the claim is fully supported, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes the Port is liable. A claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor and Subcontractors of any tier are entitled and may not contain reservations of rights without the Port's written approval; any unapproved reservations of rights shall be without effect.
- D. Claim procedure. The Contractor shall submit a written claim within thirty (30) days of providing written notice of protest. The Contractor may delay submitting supporting data by an additional thirty (30) days if it notifies the Port in its claim that substantial data must be assembled. Any claim of a Subcontractor of any tier may be brought only through, and after review by and concurrence of, the Contractor.
- E. Failure to comply with notice of protest and claim requirements waives claims. Any notice of protest by the Contractor and any claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to, and in strict accordance with, the applicable provisions of the Contract. Failure to properly and timely submit a notice of protest or to timely submit a claim shall waive the claim. No act, omission, or knowledge, actual or constructive, of the Port shall waive the requirement for timely written notice of protest and a timely written claim, unless the Port and the Contractor sign an explicit, unequivocal written waiver approved by the Port. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices of protest and/or timely submit claims has a substantial impact upon, and prejudices, the Port. For the purpose of calculating time periods, an "event giving rise to a claim," among other things, is not a Request for Information, but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time.
- F. False claims. The Contractor shall not make any fraudulent misrepresentations, concealments, errors, omissions, or inducements to the Port in the formation or performance of the Contract. If the Contractor or a Subcontractor of any tier submits a false or frivolous claim to the Port, which for purposes of this Section 11.01(F) is defined as a claim based in whole or in part on a materially incorrect fact, statement, representation, assertion, or record, the Port shall be entitled to collect from the Contractor by offset or otherwise (without prejudice to any right or remedy of the Port) any and all costs and expenses, including investigation and consultant costs, incurred by the Port in investigating, responding to, and defending against the false or frivolous claim.

- G. Compliance with lien and retainage statutes required. If a claim relates to, or is the subject of, a lien or retainage claim, the party asserting the claim may proceed in accordance with applicable law to comply with the notice and filing deadlines prior to resolution of the claim by mediation or by litigation.
- H. Performance required pending claim resolution. Pending final resolution of a claim, the Contractor shall continue to perform the Contract and maintain the Baseline Project Schedule, and the Port shall continue to make payments of undisputed amounts due in accordance with the Contract Documents.

11.02 MEDIATION

- A. Claims must be subject to mediation. At any time following the Port's receipt of a written claim, the Port may require that an officer of the Contractor and the Port's designee (all with authority to settle) meet, confer, and attempt to resolve a claim. If the claim is not resolved during this meeting, the claim shall be subject to mandatory mediation as a condition precedent to the initiation of litigation. This requirement can be waived only by an explicit, written waiver signed by the Port and the Contractor.
- B. Mediation procedure. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to agree upon a mediator. If the parties have not reached agreement within thirty (30) days of the request, either party may file the request with the American Arbitration Association, or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service). The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in Pierce County, Washington, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. Unless the Port and the Contractor mutually agree in writing otherwise, all claims shall be considered at a mediation session that shall occur prior to Final Completion.

11.03 LITIGATION

- A. Claims not resolved by mediation are subject to litigation. Claims not resolved through mediation shall be resolved by litigation, unless the parties mutually agree otherwise. The venue for any litigation shall be Pierce County, Washington. The Contractor may bring no litigation on claims, unless such claims have been properly raised and considered in the procedures of this Article 11. The Contractor must demonstrate in any litigation that it complied with all requirements of this Article.
- B. Litigation must be commenced promptly. All unresolved claims of the Contractor shall be waived and released, unless the Contractor has complied with the requirements of the Contract Documents, and litigation is served and filed within 180 days of the date of Substantial Completion approved in writing by the Port or termination of the Contract. The pendency of mediation (the time period between receipt by the non-requesting party of a written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse, or thirty (30) days after the date of the mediation session.
- C. Port not responsible for attorneys' fees. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Port (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).

- D. Port may join Contractor in dispute. The Port may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

ARTICLE 12 - MISCELLANEOUS

12.01 GENERAL

- A. Rights and remedies are cumulative. The rights and remedies of the Port set forth in the Contract Documents are cumulative, and in addition to and not in limitation of, any rights and remedies otherwise available to the Port. The pursuit of any remedy by the Port shall not be construed to bar the Port from the pursuit of any other remedy in the event of similar, different, or subsequent breaches of this Contract. All such rights of the Port shall survive completion of the Project or termination of the Contractor.
- B. Reserved rights do not give rise to duty. The rights reserved or possessed by the Port to take any action shall not give rise to a duty for the Port to exercise any such right.

12.02 WAIVER

- A. Waiver must be in writing and authorized by Port. Waiver of any provisions of the Contract Documents must be in writing and authorized by the Port. No other waiver is valid on behalf of the Port.
- B. Inaction or delay not a waiver. No action, delay in acting, or failure to act by the Port shall constitute a waiver of any right or remedy of the Port, or constitute an approval or acquiescence of any breach or defect in the Work, nor shall any delay or failure of the Port to act waive or otherwise prejudice the right of the Port to enforce a right or remedy at any subsequent time.
- C. Claim negotiation not a waiver. The fact that the Port and the Contractor may consider, discuss, or negotiate a claim that has or may have been defective or untimely under the Contract, shall not constitute a waiver of the provisions of the Contract Documents, unless the Port and the Contractor sign an explicit, unequivocal waiver.

12.03 GOVERNING LAW

- A. Washington law governs. This Contract and the rights and duties of the parties hereunder shall be governed by the internal laws of the State of Washington, without regard to its conflict of law principles.

12.04 COMPLIANCE WITH LAW

- A. Contractor to comply with applicable laws. The Contractor shall at all times comply with all applicable Federal, State and local laws, ordinances, and regulations. This compliance shall include, but is not limited to, the payment of all applicable taxes, royalties, license fees, penalties, and duties.
- B. Contractor to provide required notices. The Contractor shall give notices required by all applicable Federal, State and local laws, ordinances, and regulations bearing on the Work.
- C. Contractor to confine operations at site to permitted areas. The Contractor shall confine operations at the Project site to areas permitted by applicable laws, ordinances, permits, rules and regulations, and lawful orders of public authorities and the Contract Documents.

12.05 ASSIGNMENT

- A. Assignment. The Port and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party and to the partners, successors, assigns, and legal representatives of such other party. The Contractor may not assign, transfer, or novate all or any portion of the Contract, including but not limited to, any claim or right to the Contract Sum, without the Port's prior written consent. If the Contractor attempts to make an assignment, transfer, or novation without the Port's consent, the assignment shall be of no effect, and Contractor shall nevertheless remain legally responsible for all obligations under the Contract. The Contractor also shall not assign or transfer, to any third party, any claims it may have against the Port arising under the Contract or otherwise related to the Project.

12.06 TIME LIMIT ON CAUSES OF ACTION

- A. Time limit on causes of action. The Port and Contractor shall commence all causes of action, whether in contract, tort, breach of warranty, or otherwise, against the other arising out of, or related to, the Contract in accordance with the requirements of the dispute resolution procedure set forth in Article 11 of these General Conditions, within the time period specified by applicable law, and within the time limits identified in the Contract Documents. The Contractor waives all claims and causes of action not commenced in accordance with this Section 12.06.

12.07 SERVICE OF NOTICE

- A. Notice. Written notice under the Contract Documents by either the Contractor or Port may be served on the other party by personal service, electronic or facsimile transmission, or delivery service to the last address provided in writing to the other party. For the purpose of measuring time, notice shall be deemed to be received by the other party on the next business day following the sender's electronic or facsimile transmittal or delivery by delivery service.

12.08 RECORDS

- A. Contractor and Subcontractors to maintain records and cooperate with Port audit. The Contractor and Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and evidence relating or pertaining to costs and/or performance of the Contract ("records") to such extent, and in such detail, as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges, and other amounts of whatever nature. The Contractor shall preserve these records for a period of six (6) years following the date of Final Acceptance under the Contract. Within seven (7) days of the Port's request, both during the Project and for six (6) years following Final Acceptance, the Contractor and Subcontractors of any tier shall make available, at their office during normal business hours, all records for inspection, audit, and reproduction (including electronic reproduction) by the Port or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract and a waiver of all claims by the Contractor and Subcontractors of any tier.
- B. Rights under RCW 42.56. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under Chapter 42.56 RCW will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Port.

12.09 STATUTES

- A. Contractor to comply with Washington statutes. The Contractor shall abide by the provisions of all applicable statutes, regulations, and other laws. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be, and are not, a complete list.

1. Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors," and shall satisfy all State of Washington bonding and insurance requirements. The Contractor shall also have a current state Unified Business Identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required by Title 51 RCW; have an Employment Security Department number as required by Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; and not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
2. The Contractor shall comply with all applicable provisions of RCW 49.28, "Hours of Labor."
3. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."
4. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.
5. Pursuant to RCW 50.24, "Contributions by Employers," in general, and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for an acceptable bond.
6. The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."
7. Pursuant to RCW 49.70, "Worker and Community Right to Know Act," and WAC 296-62-054 et seq., the Contractor shall provide to the Port, and have copies available at the Project site, a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor of any tier.
8. All products and materials incorporated into the Project as part of the Work shall be certified as "asbestos-free" and "lead-free" by United States standards, and shall also be free of all hazardous materials or substances. At the completion of the Project, the Contractor shall submit certifications of asbestos-free and of lead-free materials certifying that all materials and products incorporated into the Work meet the requirements of this Section, and shall also certify that materials and products incorporated into the Work are free of hazardous materials and substances.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes requirements for the Contractor's insurance.

1.02 SUBMITTAL REQUIREMENTS

- A. Evidence of the required insurance within ten (10) days of the issued Notice of Award to the Contractor.
- B. Updated evidence of insurance as required until final completion.

1.03 COMMERCIAL GENERAL LIABILITY (CGL) INSURANCE

- A. The Contractor shall secure and maintain until Final Completion, at its sole cost and expense, the following insurance in carriers reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC six (6)" or better.
- B. The Port of Tacoma (Port) and the Northwest Seaport Alliance (NWSA) will be included as additional insureds for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 04 13 and CG 20 37 04 13 (or equivalent coverage endorsements). The inclusion of the Port and the NWSA as additional insureds shall not create premium liability for either the Port nor the NWSA.

Also, by endorsement to the policy, there shall be:

- 1. An express waiver of subrogation in favor of the Port;
 - 2. A cross liabilities clause; and
 - 3. An endorsement stating that the Contractor's policy is primary and not contributory with any insurance carried by the Port.
- C. If the Contractor, Supplier, or Subcontractors will perform any work requiring the use of a licensed professional, per RCW 18, the Contractor shall provide evidence to the Port of professional liability insurance in amounts not less than \$1,000,000.
 - D. This insurance shall cover all of the Contractor's operations, of whatever nature, connected in any way with the Contract, including any operations performed by the Contractor's Subcontractors of any tier. **It is the obligation of the Contractor to ensure that all Subcontractors (at whatever level) carry a similar program that provides the identified types of coverage, limits of liability, inclusion of the Port and the NWSA as additional insured(s), waiver of subrogation and cross liabilities clause.** The Port reserves the right to reject any insurance policy as to company, form, or substance. Contractor's failure to provide, or the Port's acceptance of, the Contractor's certificate of insurance does not waive the Contractor's obligation to comply with the insurance requirements of the Contract as specifically described below:
 - 1. Commercial General Liability Insurance on an Occurrence Form Basis including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Contractual Liability;
 - d. Products - Completed Operations Liability;

- e. Personal Injury Liability;
Alternatively, a Commercial General Liability (CGL) policy is acceptable if all of the above coverages are incorporated in the policy and there are no marine exclusions that will remove coverage for either vessels or work done by or above or around the water.
- 2. Comprehensive Automobile Liability including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Personal Injury Liability;
 - d. Owned and Non-Owned Automobile Liability; and
 - e. Hired and Borrowed Automobile Liability.
- 3. Railroad protective liability insurance naming the Port and Tacoma Rail as Insureds with coverage of at least \$2,000,000 per occurrence and \$6,000,000 in the aggregate. The policy must be issued on a standard ISO form CG 00 35 10 93 and include the following:
 - a. Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93);
 - b. Endorsed to include the Limited Seepage and Pollution Endorsement;
 - c. Endorsed to include Evacuation Expense Coverage Endorsement;
 - d. No other endorsements restricting coverage may be added; and
 - e. The original policy must be provided to the Port prior to execution of the Contract; within ten (10) days of Notice of Award.
- 4. Contractor's Pollution Liability (CPL) covering claims for bodily injury, property damage and cleanup costs, and environmental damages from pollution conditions arising from the performance of covered operations.
 - a. If the Work involves remediation or abatement of regulated waste to include, but not limited to asbestos containing materials, lead containing products, mercury, PCB, underground storage tanks, or other hazardous materials or substances, the CPL policy shall not exclude such coverage, or a specific policy covering such exposure shall be required from the Contractor and all Subcontractors performing such Work.
 - b. If the Work involves transporting regulated materials or substances or waste, a separate policy or endorsement to the CPL policy specifically providing coverage for liability and cleanup arising from an upset or collision during transportation of hazardous materials or substances shall be required from the Contractor and all Subcontractors performing such Work.
 - c. It is preferred that CPL insurance shall be on a true occurrence form without a sunset clause. However, if CPL insurance is provided on a Claims Made basis, the policy shall have a retroactive date prior to the start of this project, and this insurance shall be kept in force for at least three years after the final completion of this project. Alternatively, the contractor, at its option, may provide evidence of extended reporting period of not less than three (3) years in its place. The Contractor shall be responsible for providing the Port with certificates of insurance each year evidencing this coverage.
 - d. The Port and the NWSA shall be named as an additional insured(s) on the CPL policy.

5. Technology Professional Liability Errors and Omissions Insurance appropriate to the Consultant's profession and work hereunder, with limits not less than \$2,000,000 per occurrence. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by the Vendor in this agreement and shall include, but not be limited to, claims involving infringement of intellectual property, copyright, trademark, invasion of privacy violations, information theft, release of private information, extortion and network security. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties as well as credit monitoring expenses with limits sufficient to respond to these obligations.

The policy shall include, or be endorsed to include, **property damage liability coverage** for damage to, alteration of, loss of, or destruction of electronic data and/or information "property" of the Agency in the care, custody, or control of the Vendor.

- E. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence. If the coverage is aggregated, the coverage shall be no less than two times the per occurrence or per claim limit. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. Any additional insured endorsement shall NOT be limited to the amounts specified by this Contract, unless expressly waived in writing by the Port.
- F. Contractor shall certify that its operations are covered by the Washington State Worker's Compensation Fund. The Contractor shall provide its Account Number or, if self-insured, its Certificate of Qualification Number. The Contractor shall also provide evidence of Stop-Gap Employers' Liability Insurance.
- G. The Contractor shall furnish, within ten (10) days following issuance of the Notice of Award, a certificate of insurance satisfactory to the Port evidencing that insurance in the types and minimum amounts required by the Contract Documents has been secured. The Certificate of Insurance shall be signed by an authorized representative of the insurer together with a copy of the endorsement, which shows that the Port and the NWSA are named as additional insured(s).
- H. Contractor shall provide at least forty-five (45) days prior written notice to the Port of any termination or material change, or ten (10) day's-notice in the case of non-payment of premium(s).
- I. If the Contractor is required to make corrections to the Work after Final Completion, the Contractor shall obtain at its own expense, prior to the commencement of any corrective work, insurance coverage as required by the Contract Documents, which coverage shall be maintained until the corrections to the Work have been completed and accepted by the Port.

1.04 BUILDER'S RISK INSURANCE

- A. Until Final Completion of the Work, the construction Work is at the risk of the Contractor and no partial payment shall constitute acceptance of the Work or relieve the Contractor of responsibility of completing the Work under the Contract.

- B. To the extent the Work provided under this Contract does not include the construction, rehabilitation or repair of any dam, road or bridge, and whenever the estimated cost of the Work is less than \$25,000,000, the Port and Contractor acknowledge that the Port will purchase, or has purchased, from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (including Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Without further endorsement, the coverage afforded by this insurance includes the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation (including but not limited to Contractor's equipment and tools) will NOT be covered by the policy.

To the extent the Work provided under this Contract involves any dam, roadway or bridge, the value of which exceeds \$250,000, or whenever the estimated cost of the Work is equal to or greater than \$25,000,000, Contractor will purchase from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (excluding Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This Builder's Risk insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Contractor shall provide evidence satisfactory to the Port confirming the coverage afforded by this insurance shall include the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy purchased by the Contractor. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor.

In all instances, the Contractor shall obtain property insurance for all Contractor-owned equipment and tools and, in the event of loss, payment of any deductible amount shall be the responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - PRODUCTS - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 PREVAILING AND OTHER REQUIRED WAGES

- A. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project.
- B. Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" in effect as of the date that bids are due.
 - 1. Based on the Bid Date, the applicable effective date for prevailing wages for this Project is January 12, 2024.
- C. The State of Washington prevailing wage rates applicable for this public works Project, which is located in Pierce County, may be found at the following website address of the Department of Labor and Industries:

<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>
- D. The schedule of the prevailing wage rates is made a part of the Contract Documents by reference as though fully set forth herein, and a printed copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at 1 Sitcum Plaza, Tacoma, WA 98421 (253-383-5841). Upon request to the Procurement Department at procurement@portoftacoma.com, the Port will email or mail a hard copy of the applicable Journey Level prevailing wages for this Project.
- E. Questions relating to prevailing wage data should be addressed to the Industrial Statistician.

Mailing Address: Washington State Department of Labor and Industries
Prevailing Wage Office
P.O. Box 44540
Olympia, WA 98504

Telephone: (360) 902-5335

Facsimile: (360) 902-5300

 - 1. If there is any discrepancy between the provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid.
- F. Statement to Pay Prevailing Wages
 - 1. Prior to any payment being made by the Port under this Contract, the Contractor, and each Subcontractor of any tier, shall file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries for approval.
 - 2. The statement shall include the hourly wage rate to be paid to each classification of workers entitled to prevailing wages, which shall not be less than the prevailing rate of wage, and the estimated number of workers in each classification employed on the Project by the Contractor or a Subcontractor of any tier, as well as the Contractor's contractor registration number and other information required by the Department of Labor and Industries.
 - 3. The statement, and any supplemental statements, shall be filed in accordance with the requirements of the Department of Labor and Industries. No progress payment shall be made until the Port receives such certified statement.

- G. The Contractor shall post, in a location readily visible to workers, at the Project site: (i) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries and (ii) the address and telephone number of the Industrial Statistician of the Department of Labor and Industries to whom a complaint or inquiry concerning prevailing wages may be directed.
- H. If a State of Washington prevailing wage rate conflicts with another applicable wage rate (such as Davis-Bacon Act wage rate) for the same labor classification, the higher of the two shall govern.
- I. Pursuant to RCW 39.12.060, if any dispute arises concerning the appropriate prevailing wage rate for work of a similar nature, and the dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries, and his or her decision shall be final and conclusive and binding on all parties involved in the dispute.
- J. Immediately following the end of all Work completed under this Contract, the Contractor and each Subcontractor of any tier, shall file an approved Affidavit of Wages Paid with the Department of Labor and Industries.
- K. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct, indirect, including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or RCW Title 51 ("Industrial Insurance"), including, but not limited to, RCW 51.12.050.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 REQUIREMENTS APPLICABLE PORT-WIDE

- A. The Contractor shall submit, prior to the start of Work, a list of emergency contact numbers for itself and its Subcontractors, Suppliers, and manufacturer representatives. Each person on the Project site shall have a valid identification card that is tamper proof with laminated photo identification, such as one (1) of the following:
 - 1. State-issued Driver's license (also required if driving a vehicle)
 - 2. Card issued by a governmental agency
 - 3. Passport
 - 4. Pacific Maritime Association card
 - 5. Labor organization identification card
- B. Identification cards shall be visible while on the Project site or easily displayed when requested.

1.02 TRANSPORTATION WORKER IDENTIFICATION CARD (TWIC) SUMMARY

- A. TWIC is required for all personnel needing unescorted access to secure and restricted areas of Port facilities subject to 33 CFR 105, including truckers, surveyors, construction personnel, and delivery personnel. Secure areas are those areas with security measures for access control in accordance with a Coast Guard approved security plan. Restricted areas are those areas within a secure area that require increased limited access and a higher degree of security protection. New terminals under construction prior to terminal operations may not be designated secure areas. Construction on existing maritime transportation facilities and punchlist or other type of work requirements on facilities that have been certified under 33 CFR will require a TWIC.
- B. Contractors should allow for application and enrollment for the security threat assessment and issuance of TWIC when submitting a bid.

1.03 ESCORTING

- A. To access restricted Port facilities, all un-credentialed individuals must be accompanied by a person who has been issued a TWIC and trained as an escort at that specific facility. Each restricted facility has their own guidelines for escorting. Having escort training at one facility does not qualify you to escort at other facilities. Prior to conducting escort services for non-TWIC personnel, the escorts are required to contact the Facility Security Officer at the gate for verification they are on the escort list and to document who is being escorted. For required documentation, upon completion of escorting, the escort is to inform the Security officer that the escort is complete. It is the Contractor's responsibility to schedule escort training with the Facility Security Officer.
- B. For more information, refer to the Port Security website at:
<http://www.portoftacoma.com/shipping/security>
- C. For Project specific information, refer to Section 01 14 00 - Work Restrictions.

1.04 ELIGIBILITY FOR TWIC

- A. Refer to the Transportation Worker Identification Credential website at: <https://www.tsa.gov/for-industry/twic> for information on eligibility and applying for TWIC.

1.05 TWIC USE AND DISPLAY

- A. Each worker granted unescorted access to secure areas of a facility or vessel must present their cards to authorized personnel, who will compare the holder to his or her photo, inspect security features on the TWIC, and evaluate the card for signs of tampering. The Coast Guard will verify TWIC's when conducting vessel and facility inspections and during spot checks using hand-held scanners, ensuring credentials are valid.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The accompanying Drawings and Specifications show and describe the location and type of Work to be performed under this project. Work is more specifically defined on the drawings listed in Section 00 01 15.
 - 1. The Work under this contract is to provide, furnish and install all labor, materials and equipment required to complete the work, installed, tested, and ready for use, and as described in these documents.
 - 2. The EB1 Pavement and Restroom Building generally consists of but is not limited to: selective removal of asphalt pavement; installation of water, sewer, power and stormwater utilities; jack and bore sewer lines under existing railroad track; concrete treated base for existing subgrade; grading; asphalt paving; concrete placement; preparation of gravel pad and final utility connections for Port provided pre-fabricated restroom building and miscellaneous metal fabrications.

1.02 LOCATION

- A. The work is located at:
2340 E Alexander Ave
Tacoma, WA 98424

1.03 WORK PERFORMED BY OTHERS

- A. The following described work is to be accomplished by others.
 - 1. CXT Inc. will be manufacturing, delivering and setting a prefabricated restroom building as indicated on the drawings. Contractor shall be responsible for connecting sewer, water and power within the building after it is placed. The Contractor and CXT Inc. are required to coordinate with each other in the completion of their individual work components.
 - 2. Port Maintenance Electricians will assist with de-energizing and re-energizing the electrical gear to facilitate the demolition and installation of the electrical work on this project.

1.04 PORT PROVIDED MATERIALS

- A. Port of Tacoma will furnish and place the following material:
 - 1. CXT Inc. Santiago Prefabricated Restroom Building
- B. Reference Section 01 64 00 - Owner Provided Materials for coordination.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies work sequence and constraints.
- B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.
- C. Sequence of construction. Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

1.02 CONTRACTOR ACCESS AND USE OF PREMISES

- A. Activity Regulations
 - 1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.
- B. Working Facility
 - 1. The Facility will remain in operation for the duration of construction. The Contractor shall conduct all items of the Work in such a manner as to prevent interference with the normal operations of the Facility.
 - 2. EB1 Terminal is an active shipping terminal. Terminal operations shall not be impacted by construction activities; terminal operator equipment, trucks and vehicles shall have the right-of-way at all times.
 - 3. The project work area is phased such that impacts to terminal operations are minimized. Contractor is to complete work in the previous phase prior to moving to the next phase of work. The following items shall be performed outside of their respective phased work areas: installation of electrical cabling from north substation to electrical service panel to be done during phase 2 and installation of jack and bore sewer line under railroad tracks at both locations to occur during phase 1. Work, listed above, performed outside of specified phase shall be coordinated with the Engineer.
- C. Work Site Regulations
 - 1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:
 - a. Restore all common areas to a clean and useable condition that permits the resumption of Tenant operations after the Contractor ceases daily work.
 - b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.
 - c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

1.03 CONSTRAINTS - GENERAL

- A. Constraints for Work at Site

1. Electrical Work Constraints:
 - a. Work to de-energize and re-energize the electrical gear to facilitate the demolition and installation of electrical scope of work will be performed by Port of Tacoma Maintenance staff.
 - b. Port Maintenance staff hours are Mon-Fri 7:00am to 3:00pm.
 - c. The Contractor is to notify in writing to the Port at least 48 hours prior to the need to de-energize or re-energize the electrical gear to provide time to schedule Port staff.
2. Other:
 - a. There are no work hour restrictions associated with this location, although the Contractor shall comply with local ordinances with regard to noise and work hour restrictions. In the event that the Contractor is planning to work outside of typical work hours (Monday - Friday 0800-1630) the Contractor is to notify the Engineer at least 4 days in advance to arrange for necessary inspection, testing and security as may be necessary.
 - b. EB1 Terminal is open for operations Monday - Friday 0800 - 1630.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Procedures for preparation and submittal of applications for progress payments.

1.02 PAYMENT PROCEDURES

- A. Monthly pay estimates shall clearly identify the work performed for the given time period based on the approved Schedule of Values.
 - 1. At the Pre-construction meeting, the Engineer and the Contractor shall agree upon a date each month when payment applications shall be submitted.
- B. For each pay estimate the Contractor shall submit the following:
 - 1. Completed Contractor invoice and updated Schedule of Values tracking sheet as required by Division 01 or as established by the Engineer.
 - 2. Baseline Project Schedule and narrative updated as required by Section 01 32 16 of the Project Manual.
 - 3. Completed "Amounts Paid to Subcontracts and Suppliers" showing total contract amount, amount paid this estimate, total paid to date, and balance owing.
 - 4. Completed "Conditional Release and Waiver of Liens and Claims."
 - 5. An estimated cashflow statement projecting the Contractor's monthly billings on the project shall be submitted with each payment application.
- C. Prior to submitting a payment application, the Contractor and Engineer shall meet each month to review the work accomplished to determine the actual quantities including labor, materials and equipment charges to be billed.
 - 1. Prior to the payment application meeting, the Contractor shall submit to the Engineer all measurement documentation as referenced in these contract documents; to include all measurement by weight, volume or field.
 - 2. For all change work being done on a force account basis, the Contractor shall submit prior to meeting with Engineer all Force Account back-up documentation as required to process the payment application where Force Account work is being billed. The Engineer and the Contractor shall review the documentation at the payment application meeting to verify quantities and review the work accomplished.
 - 3. The Contractor shall bring a copy of all documentation to the pay application meeting with the Engineer.
 - 4. The Contractor shall submit the updated baseline project schedule for review prior to submitting the payment application to ensure the payment processing is not held up due to necessary schedule revisions.
- D. Following the Engineers' review, the Contractor shall submit the agreed upon pay estimate electronically, with complete supporting documentation, using e-Builder®.

1.03 PAYMENT PRICING

- A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.

- B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.
- D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.
- E. The Port of Tacoma reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes shall govern the compensation.

1.04 LUMP SUM MEASUREMENT

- A. Lump sum measurement will be for the entire item, unit of Work, structure, or combination thereof, as specified and as indicated in the Contractor's submitted bid.
 - 1. If the Contractor requests progress payments for lump sum items, such progress payments will be made in accordance with an approved Schedule of Values. The quantity for payment for completed work shall be an estimated percentage of the lump sum amount, agreed to between the Engineer and Contractor, payable in monthly progress payments in increments proportional to the work performed in amounts as agreed between the Engineer and the Contractor.

1.05 MEASUREMENT OF QUANTITIES FOR UNIT PRICES

- A. Measurement Standards:
 - 1. All Work to be paid for at a contract price per unit measurement, as indicated in the Contractor's submitted bid, will be measured by the Engineer in accordance with United States Standard Measures.
- B. Measurement by Weight:
 - 1. Reinforcing steel, steel shapes, castings, miscellaneous metal, metal fabrications, and similar items to be paid for by weight shall be measured by scale or by handbook weights for the type and quantity of material actually furnished and incorporated into the Work.
 - 2. Unless shipped by rail, material to be measured and paid for by weight shall be weighed on sealed scales regularly inspected by the Washington State Department of Agriculture's Weights and Measures Section or its designated representative. Measurement shall be furnished by and at the expense of the Contractor. All weighing, measuring, and metering devices shall be suitable for the purpose intended and shall conform to the tolerances and specifications as outlined in Washington State Department of Transportation Standard Specifications, Division 1, General Requirements, Article 1-09.2, Weighing Equipment.
 - 3. Provide or utilize platform scales of sufficient size and capacity to permit the entire vehicle or combination of vehicles to rest on the scale platform while being weighed. Combination vehicles may be weighed as separate units provided they are disconnected while being weighed. Scales shall be inspected and certified as often as the Engineer may deem necessary to ascertain accuracy. Costs incurred as a result of regulating, adjusting, testing, inspecting, and certifying scales shall be borne by the Contractor.

4. A licensed weighmaster shall weigh all Contractor-furnished materials. The Engineer may be present to witness the weighing and to check and compile the daily record of such scale weights. However, in any case, the Engineer will require that the Contractor furnish weight slips and daily summary weigh sheets. In such cases, furnish a duplicate weight slip or a load slip for each vehicle weighed, and deliver the slip to the Engineer at the point of delivery of the material.
 5. If the material is shipped by rail, the certified car weights will be accepted, provided only actual weight of material will be paid for and not minimum car weights used for assessing freight tariff. Car weights will not be acceptable for material to be passed through mixing plants. Material to be measured by weight shall be weighed separately for each bid item under which it is to be paid.
 6. Trucks used to haul material being paid for by weight shall be weighed empty daily and at such additional times as the Engineer may require. Each truck shall bear a plainly legible identification mark. The Engineer may require the weight of the material be verified by weighing empty and loaded trucks on such other scales as the Engineer may designate.
- C. Measurement by Volume:
1. Measurement by volume will be by the cubic dimension indicated in the Contractor's submitted bid. Method of volume measurement will be by the unit volume in place or removed as shown on the Contract Drawings or as specified.
 2. When material is to be measured and paid for on a volume basis and it is impractical to determine the volume by the specified method of measurement, or when requested by the Contractor in writing and accepted by the Engineer in writing, the material may be weighed in accordance with the requirements specified for weight measurement. Such weights will be converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Resident Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities will be accepted.
- D. Measurement by Area: Measurement by area will be by the square dimension shown on the Contract Drawings or as specified. Method of square measurement will be as specified.
- E. Linear Measurement: Linear measurement will be by the linear dimension listed or indicated in the Contractor's submitted bid. Unless otherwise indicated, items, components, or Work to be measured on a linear basis will be measured at the centerline of the item in place.
- F. Field Measurement for Payment:
1. The Contractor shall take all measurements by providing equipment, workers, and survey crews as required to measure quantities in accordance with the provisions for measurement specified herein. No allowance will be made for specified tolerances.
 2. The Engineer will verify all quantities of Work performed by the Contractor on a unit-price basis, for progress payment purposes.

1.06 REJECTED, EXCESS, OR WASTED MATERIALS

- A. Quantities of material wasted or disposed of in a manner not called for under the Contract; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the provisions of the Contract; material not unloaded from the transporting vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities. No additional compensation will be permitted for loading, hauling, and disposing of rejected material.

1.07 MEASUREMENT AND PAYMENT

A. Item #1: Mobilization and Demobilization

1. Payment for Mobilization and Demobilization shall be for preparatory work and operations performed by the Contractor including, but not limited to, those necessary for the movement of its personnel, equipment, supplies and incidentals to and from the project site; temporary facilities and controls; for the establishment and removal of its offices, buildings and other facilities necessary for work on the project; for other work and operations which it must perform or costs it must incur before beginning production work on the various items on the project site, and for removal of personnel, equipment, supplies, offices, building facilities, sheds, fencing, and other incidentals from the site.
2. Mobilization and Demobilization shall be paid at the lump sum price listed in the Contractor's submitted bid. Incremental payment shall be made for each location as follows:
 - a. 40% after completion of 5% of the total contract amount of other bid items have been earned.
 - b. 40% after completion of 20% of the total contract amount of other bid items have been earned.
 - c. 20% after completion of all work on the project has been completed, including cleanup and acceptance of the project by the Port.

B. Item #2: Field Engineering

1. Item Description: The Work of this item includes all work necessary for Field Engineering, verifying survey reference points, completion of pre and post-construction surveys, and installation and removal of temporary control as described in these Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

C. Item #3: Project Administration

1. Item Description: The Work of this item includes all administrative costs associated with administering and supervising the project including, but not limited to supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, for premiums on bonds and insurance for the project, and project overhead.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

D. Item #4: Site Preparation and TESC

1. Item Description: The Work of this item includes selective site demolition and temporary erosion and sediment control as indicated in the Drawings and Specifications. Work includes but is not limited to providing temporary erosion control facilities including but not limited to inlet protection, straw wattles, and the monitoring and maintenance of erosion control facilities; the removal of ecology blocks, removal of fence, sawcutting of pavement, removal and disposal of asphalt and asphalt treated base pavements, excavation and stockpiling of crushed surfacing.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

E. Item #5: Earthwork.

1. Item Description: The Work of this item includes excavation and filling related to, subgrade preparation, grading, and compaction unless otherwise noted and as indicated on the Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

F. Item #6: HMA

1. Item Description: The Work of this item includes furnishing all labor, materials, equipment, and necessary services to construct asphalt pavements to the sections and at the locations as indicated in the Drawings and Specifications.
2. Measurement: This item will be measured by the ton.
3. Payment: This item will be paid for based on actual quantities for the period being billed.

G. Item #7: Crushed Surfacing

1. Item Description: The Work of this item includes furnishing, transporting, and delivering crushed surfacing as indicated on the Drawings and Specifications.
2. Measurement: This item will be measured by ton.
3. Payment: This item will be paid for based on actual quantities for the period being billed.

H. Item #8: Portland Cement for CTB

1. Item Description: The Work of this item includes procuring, transporting, storing and handling of Portland Cement required to perform cement treatment of on-site soils.
2. Measurement: This item will be measured by the ton (dry weight) to the nearest 0.01 ton of Portland Cement incorporated in the work at the rate determined in these specifications or by the Engineer. Measurement will be based on deposits and withdrawals from storage tanks located exclusively for this project, or by a metering or weighing device approved by the Engineer. The Contractor may submit alternate proposals in writing to the Engineer for consideration. The Engineer will determine the method of measurement.

3. Payment: This item will be paid for based on material incorporated into the job. Payment will not be made for the quantity of Portland Cement that exceeds the specified mixture rate by more than 1 percentage point when the total cement quantity is averaged over the total project volume.

I. Item #9: Cement Treatment for CTB

1. Item Description: The Work of this item includes performing "Cement Treatment" including all costs for labor, equipment, and materials (exclusive of "Portland Cement" paid under Item #8), processing the subgrade, pulverizing the subgrade, moisture conditioning the subgrade, spreading the admixture, mixing the soil and the admixture, compacting and curing the mixed soil, protecting the completed surface, and performing quality control testing.
2. Measurement: This item will be measured by square yard of actual treated area where both subgrade was prepared and then stabilized with Portland cement. Measurement shall be on the finished surface of the treatment within the neat lines shown on the plans or established by the Engineer, completed as specified, and will be computed to the nearest square yard.
3. Payment: This item will be paid for based on actual quantities for the period being billed. Asphalt curing seal will be considered incidental to this item.

J. Item #10: Surface Improvements

1. Item Description: The Work of this item includes furnishing all labor, materials, equipment, and necessary services to construct concrete fuel pad and berm, bollards and railing, fencing, and adjusting utility lids as indicated in the Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

K. Item #11: Storm Utilities

1. Item Description: The Work of this item includes all requirements for providing the storm drainage utilities complete and in place, including bedding, backfill, compaction, installation of storm drain piping, and storm drain structures and appurtenances as indicated in the Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

L. Item #12: Sanitary Utilities

1. Item Description: The Work of this item includes all requirements for providing the sanitary sewer system complete and in place, including bedding, backfill, compaction, installation of casing, sanitary sewer piping, connection to the restroom building, and sanitary sewer structures and appurtenances as indicated in the Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

M. Item #13: Water Utilities

1. Item Description: The Work of this item includes all requirements for providing the water system complete and in place, including bedding, backfill, compaction, installation of pipe sleeves, thrust blocking, valves and valve boxes, backflow preventers and enclosures, connection to the restroom building, and coordination with electrical work, as indicated in the Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

N. Item #14: Electrical

1. Item Description: The Work of this item includes all requirements for furnishing, installing, testing, and placing in satisfactory operation all equipment, materials, devices, and appurtenances, and connection to the restroom building, necessary to provide complete systems according to the intent of the Drawings and Specifications.
2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

O. Item #16: Dewatering

1. Item Description: The Work of this item includes all necessary measures to keep excavations and pipe trenches dry during construction as indicated in the Drawings and Specifications.
2. Measurement: This item will be measured as a lump sum unit.
3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid.

P. Item #17: Unforeseen Conditions Allowance

1. Item Description: This allowance will be for Unforeseen Conditions for work unidentified at the time of bid and will be paid as negotiated unit price(s) or lump sum(s). If unit prices or lump sums cannot be established, work will be paid on a time and materials basis per Section 00 72 00 General Conditions Article 8.0. Work under this bid item shall be accomplished upon written direction from the Engineer as a Minor Change in Work. The entire bid item may or may not be used.
2. Measurement: This item will be measured based upon the method agreed upon for each Minor Change issued.
3. Payment: This item will be paid for at the price agreed upon for each Change in Work issued by the Engineer in accordance with procedures noted in Section 01 26 00 – Change Management Procedures.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXEUCION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.02 SUBMITTALS

- A. The Contractor shall submit for approval the following documentation to the Port for force account change orders:
 - 1. List of Labor Rates
 - a. For the Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance, and medical aid premiums as stated in the General Conditions. The rates shall not contain any travel time, safety, loss efficiency factors, overhead, or profit. Rates shall be submitted for straight time, overtime, and double time in a form acceptable to the Engineer. Contractor shall provide proof of all labor rate costs as required by the Engineer, including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment Security Department.
 - 1) If labor rates change during the course of the project or additional labor rates become required to complete the work, the Contractor shall submit new rates for approval.
 - 2. List of Equipment.
 - a. Submit for the Contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown on Equipment Watch. A separate page from equipment watch detailing the hourly rate shall be submitted as backup documentation for each piece of equipment.
 - 1) If the list of equipment and/or equipment rates changes during the course of the project or additional equipment becomes required to complete the work, the Contractor shall submit a new list and rates for approval.

1.03 METHOD TO CALCULATE ADJUSTMENTS TO CONTRACT PRICE

- A. One of the following methods shall be used:
 - 1. Unit Price Method;
 - 2. Firm Fixed Price Method (Lump Sum); or,
 - 3. Time and Materials Method (Force Account).
- B. The Port preferred methods are firm fixed price or unit prices.

1.04 MINOR CHANGES IN THE WORK

- A. Engineer will issue a written directive authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.05 PROPOSAL REQUESTS

- A. Port-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
 2. Contractor shall submit a written proposal within the time specified in the General Conditions. The proposal shall represent the Contractor's offer to perform the requested work, and the pricing set forth within the proposal shall represent full, complete, and final compensation for the proposed change and any impacts to any other Contract Work, including any adjustments in the Contract Time.
 - a. Include a breakdown of the changed work in sufficient detail that permits the Engineer to substantiate the costs.
 - 1) Generally, the cost breakdown should be divided into the time and materials categories listed in the General Conditions under Article 8.02.B for either Lump Sum Proposals or Force Account Proposals.
 - 2) For Unit Price Proposals, include the quantity and description of all work involved in the unit pricing being proposed, along with a not to exceed total cost.
 - b. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or differing site conditions require modifications to the Contract, the Contractor may initiate a claim by submitting a request for a change to the Engineer.
1. Notify the Engineer immediately upon finding differing conditions prior to disturbing the site.
 2. Provide follow-up written notification and differing site conditions proposal within the time frames set forth in the General Conditions.
 3. Provide the differing site condition change proposal in the same or similar manner as described above under 1.05.A.
 4. Comply with requirements in Section 00 26 00 Substitution Procedures if the proposed change requires substitution of one product or system for product or system specified.
 5. Proposal Request Form: Use form acceptable to Engineer.

1.06 PROCEEDING WITH CHANGED WORK

- A. The Engineer may issue a directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order per the General Conditions, Article 8.01.E.
1. The directive will contain a description of change in the Work and a not-to-exceed amount. It will designate the method to be followed to determine the change in the Contract Sum or the Contract Time.

1.07 CHANGE ORDER PROCEDURES

- A. Issuance of Change Order

1. On approval of the Contractor's proposal, and following successful negotiations, the Engineer will issue a Change Order for signature by the Contractor and execution by the Engineer.
 - a. The Contractor shall sign and return the Change Order to the Engineer within **four (4) days** following receipt of the Change Order from the Engineer. If the Contractor fails to return the signed Change Order within the allotted time, the Engineer may issue a Unilateral Change Directive.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes specifications for preparation, format, and submittal of Schedule of Values.
- B. The Schedule of Values will establish unit prices for individual items of work.
- C. The Schedule of Values will be the basis for payment of contract work.

1.02 PREPARATION

- A. To facilitate monthly pay requests, develop the Schedule of Values based on the Contractor's submitted Bid Items. The Schedule of Values shall be used to provide an allocation of the Work for measurement and payment to a level of detail to ensure accurate payment for the Work accomplished. The Schedule of Values is based on unit priced bid items and a breakdown of each lump-sum bid item. The total dollars for the Schedule of Values shall total the bid amount.
- B. Obtain the agreement of the Engineer on the Schedule of Values. No payment will be made prior to an agreed upon Schedule of Values.
- C. Include an updated version of the Schedule of Values as changes occur. Update the Schedule of Values to include:
 - 1. Dollars earned and percent complete for the current progress payment period,
 - 2. Dollars earned and percent complete to-date, excluding the current progress payment period,
 - 3. Total dollars earned and percent complete to-date,
 - 4. Total dollars remaining, and
 - 5. Changes resulting from Change Orders.
- D. The total value of the line items in the Schedule of Values plus any approved Change Orders shall be equal to the current approved contract price.
- E. The value of stored material shall be identified in the Schedule of Values with both a material-purchase activity and a separate corresponding installation activity in the Construction Schedule(s).
- F. Include as exhibits, drawings or sketches as necessary, to better define the limits of pay items that are in close proximity and that have no clear boundary in the Contract Drawings.

1.03 SUBMITTAL

- A. Submit preliminary Schedule of Values within 10 days of the effective date of the Notice to Proceed.
- B. Submit corrected Schedule of Values within 10 days upon receipt of reviewed Schedule of Values.
- C. At the Engineer's request, submit documentation substantiating the cost allocations for line items within the Schedule of Values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SCHEDULE OF VALUES

- A. Submit the Schedule of Values in a form acceptable to the Engineer.
- B. Provide updated Schedule of Values as required by the Engineer and as indicated in the Contract Documents.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The purpose of this section is to provide the framework for communication between the Port and the Contractor by defining the types and timing of administrative tasks, including meetings and other items related to communications.

1.02 NOTICE TO PROCEED

- A. Contract execution will be made per the requirements of the Contract Documents. Once the contract has been executed and all pre-work submittals have been received, the Engineer will issue a Notice to Proceed (NTP).
 - 1. In certain instances, the Engineer may issue to the Contractor a Limited NTP for specified elements of the work described in these Contract Documents.
- B. The Contractor shall submit all pre-work submittals within 10 days of contract execution.
 - 1. No contract time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required by the Contract Documents.

1.03 COORDINATION

- A. The Contractor shall coordinate all its activities through the Engineer.
- B. The Contractor shall coordinate construction operations as required to execute the Work efficiently, to obtain the best results where installation of one part of the Work depends on other portions.

1.04 PROJECT MEETINGS

- A. Pre-Construction Meeting
 - 1. After execution of the contract, but prior to commencement of any work at the site, a mandatory one time meeting will be scheduled by the Engineer to discuss and develop a mutual understanding relative to the administration of the safety program, preparation of the Schedule of Values, change orders, RFI's, submittals, scheduling prosecution of the work. Major subcontractors who will engage in the work shall attend.
 - 2. Suggested Agenda: The agenda will include items of significance to the project.
 - 3. Location of the Pre-Construction Meeting will be held at the Port of Tacoma Administration Building located at One Sitcum Plaza.
- B. Weekly Progress Meetings – Progress meetings include the Contractor, Engineer, consultants and others affected by decisions made.
 - 1. The Engineer will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, record minutes and distribute copies within ten working days to the Contractor, meeting participants, and others affected by decisions made.
 - a. The Engineer will approve submitted meeting minutes in writing within 10 working days.
 - 2. Attendance is required for the Contractor's job superintendent, major subcontractors and suppliers, Engineer, and representatives of the Port as appropriate to the agenda topics for each meeting.
 - 3. Standard Agenda

- a. Review minutes of previous meeting
- b. Review of work progress
- c. Field observations, problems, and decisions
- d. Identification of problems that impede planned progress
- e. Maintenance of Progress Schedule (3 weeks ahead; 1 week back)
- f. Corrective measures to regain projected schedules
- g. Planned progress during succeeding work period
- h. Coordination of projected progress
- i. Maintenance of quality and work standards
- j. Effect of proposed changes on progress schedule and coordination
- k. Demonstration that the project record drawings are up-to-date
- l. Other business relating to the work

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. The Port and Contractor shall use the Port Contract Management application (e-Builder®) for electronic information exchange throughout the duration of the Contract, as later described.
 - 1. e-Builder® is a web-based application accessed via the web.
 - 2. The Contractor will receive up to two separate user accounts for access to e-Builder®.
 - 3. The joint use of this system is to facilitate and coordinate the electronic exchange of Requests for Information, Submittals, Change Order Proposals, Pay Applications, and project specific correspondence.

1.02 USER ACCESS LIMITATIONS

- A. Contractor's access to e-Builder® is granted and controlled by the Engineer.
 - 1. The users assigned by the Contractor to use e-Builder® shall be competent and experienced with the practices commonly employed in the industry for electronically submitting requests for information, submittals, product data, shop drawings and related items as required by the contract and the methods commonly used for project correspondence transmission and filing.
 - 2. Any users assigned by the Contractor whom the Engineer determines is incapable of performing the prescribed tasks in an accurate, competent and efficient manner will be removed upon request from the Engineer. The qualifications and identity of a replacement user shall be submitted within 24 hours for consideration by the Engineer. Once accepted by the Engineer, the user account will be modified accordingly.

1.03 CONTRACTOR TECHNOLOGY REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining web enabled devices capable of running the desktop version of the e-Builder® website effectively.

1.04 CONTRACTOR SOFTWARE REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining the following:
 - 1. An office suite that is Microsoft Office 2013 compatible for generation and manipulation of correspondence.
 - 2. A program capable of editing, annotating and manipulating Adobe pdf files for inserting the Contractor's review stamp, clouding and adding notation to the files as necessary for review by the Engineer.

1.05 CONTRACTOR RESPONSIBILITY

- A. Provide all the equipment, internet connections, software, personnel and expertise required to support the use of e-Builder® as described in the Contract documents.

1.06 PORT RESPONSIBILITY

- A. Provide the Contractor with the following:
 - 1. All forms necessary for application to obtain permissions to access e-Builder® as described above.
 - 2. Information, basic user guides and requirements on methods for using e-Builder®.
 - 3. Instruction for the Contractor's staff utilizing e-Builder®.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 UTILIZATION OF E-BUILDER®

- A. The Contractor shall provide required information in a timely manner that also supports the project schedule and meets the requirements of the Contract.
- B. The Contractor shall provide and maintain competent and qualified personnel to perform the various tasks required to support the work within e-Builder®.
- C. The Port will not be liable for any delays associated from the usage of e-Builder® including, but not limited to: slow response time, Port maintenance and off-line periods, connectivity problems or loss of information. Under no circumstances shall the usage of e-Builder® software be grounds for a time extension or cost adjustment to the contract.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide a preliminary schedule and construction progress schedule, bar chart type.

1.02 SUBMITTALS

- A. Within 10 days following execution of the contract, submit a baseline project schedule defining planned operations.
- B. If the baseline project schedule requires revision after review, submit revised baseline project schedule within 10 days.
- C. Within 20 days after review of baseline project schedule, submit draft of proposed complete baseline project schedule for review.
- D. Submit updated progress schedule monthly to the Engineer with each pay application as required in Section 01 20 00 Price and Payment Procedures.

1.03 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or Consultant specializing in Critical Path Method (CPM) scheduling with one year's minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.04 SCHEDULE FORMAT

- A. The baseline project schedule shall be produced using the CPM format.
- B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- C. Sheet Size: Multiples of 11 x 17 (280 x 432 mm).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 BASELINE SCHEDULE

- A. Prepare baseline project schedule in the form of a horizontal bar chart.
- B. The baseline project schedule shall include all the activities listed in the Schedule of Values and be directly related to items listed in the Bid Form. The Contractor is encouraged to add sufficient activities to facilitate a clear understanding of the means and methods planned for the various work items.
- C. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction and critical path. At a minimum it shall include and show the following:
 - 1. A time scale showing the elementary work items needed to complete the work;
 - 2. Estimated time durations for each activity, defined as any single identifiable work step within the project;
 - 3. A graphical network diagram showing the logical sequence of activities, their precedence relationships, and estimated float or leeway available for each;

4. The different categories of work as distinguished by crew requirements, equipment requirements, and construction materials; and
 5. The different areas of responsibility, such as distinctly separate or subcontracted work, and identifiable subdivisions of work.
- D. It shall be maintained and updated as necessary to accurately reflect past progress and the most probable future progress.
- E. Activities shown shall include submittals, milestones, and sufficient task breakdown for major components of work.
- F. Identify work of separate stages and other logically grouped activities.
- G. Provide sub-schedules to define critical portions of the entire schedule.
- H. Provide separate schedule of submittal dates for shop drawings, product data, samples, owner-furnished products, products identified, and dates reviewed submittals will be required from the Engineer. Indicate decision dates for selection of finishes.

3.02 PROGRESS SCHEDULE

- A. From the regularly-maintained baseline project schedule, progress schedules showing a three-week look-ahead, one-week look-back, shall be submitted and distributed at the weekly progress meetings. The progress schedule shall represent a practical plan to complete the work shown within the contract work window presented. At a minimum, the presentation, typically a Gantt-style chart, shall convey the task durations, a logical work sequence, task interdependencies, and identify important or critical constraints.
- B. Submittal and distribution of progress schedules will be understood to be the Contractor's representation that the scheduled work meets the requirements of the contract documents and that the work will be executed in the manner and sequence presented, and over the durations indicated.
- C. The scheduling, coordination, and execution of construction in accordance with the contract documents are the responsibility of the Contractor. The Contractor shall involve, coordinate, and resolve scheduling with all subcontractors, material suppliers, or others affected in development of the progress schedules.
- D. The progress schedule shall be used for coordination purposes for inspection and testing purposes as well as validation of work progress against the baseline schedule.

3.03 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Indicate changes required to maintain Date of Substantial Completion.
- E. Submit reports required to support recommended changes.
- F. Contractor shall submit an updated progress schedule with each pay application and include a written narrative describing the overall progress of the work. The narrative shall include the following key aspects:
1. Progress in the last period.

2. Critical Path progress and schedule concerns.
3. Changes to schedule logic or sequencing of the work.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide a submittal log and project submittals.

1.02 SUBMITTAL LOG

- A. Contractor shall, within 14 days of contract execution prepare and submit for Engineer approval a detailed log of all the submittals required under this Contract, along with any other submittals identified by the Port or Contractor. The log shall include, but not be limited to, schedules, required construction Work plans, equipment and material cut sheets, shop drawings, project record documents, test results, survey records, record drawings, results of QC testing, and all other items for which a submittal is required. The submittal log shall be organized by CSI Specification Division, and Section number and include the following information:
1. Item Description
 2. Category
 3. Specification Section information of the applicable section
 4. After the submittal log is reviewed and approved by the Engineer, it shall become the basis for the submittal of all items by Contractor.

1.03 COMPLIANCE

- A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS AND MANUFACTURERS' LITERATURE

- A. The Port will not accept shop drawings that prohibit the Port from making copies for its own use.
- B. Shop drawings shall be prepared accurately and to a scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work.
- C. All drawings submitted to the Engineer for approval shall be drawn to scale as ANSI D.
- D. Required electronic formats for these drawings are as follows:
1. AutoCad DWG
 2. PDF - Formatted to print to half-scale using 11x17 paper
- E. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. General catalogs or partial lists will not be accepted. Manufacturers' original electronic files are required for submitting.

1.05 SUBMITTAL REVIEW

- A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:
1. No Exceptions Taken - Means, accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. But it does not constitute approval or deletion of specified or required items not shown in the partial submittal.

2. Make Corrections Noted - Same as Item 1, except that minor corrections as noted shall be made by Contractor.
 3. Reviewed - Submittal has been reviewed by the Port, does not constitute approval, and the Contractor is responsible for requirements in submittal.
 4. Review as Noted - Submittal has to be reviewed by the Port with comments as noted.
 5. Revise and Resubmit - Means, rejected because of major inconsistencies or errors. Resolve or correct before next submittal.
 6. Rejected - Means, submitted material does not conform to the Contract Documents in a major respect (e.g., wrong material, size, capacity, model, etc.).
- B. Submittals marked "No Exceptions Taken," "Make Corrections Noted," or "Reviewed as Noted" authorizes Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.
- C. When submittals or prints of shop drawings have been marked "Revise and Resubmit" or "Rejected," Contractor shall make the necessary corrections and submit required copies. Every revision shall be shown by number, date, and subject in a revision block, and each revised shop drawing shall have its latest revision numbers and items clearly indicated by clouding around the revised areas on the shop drawing.
- D. Submittals authorized by the Engineer do not in any case supersede the Contract Documents. The approval by the Engineer shall not relieve the Contractor from responsibility to conform to the Drawings or Specifications, or correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Port of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Port or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Port has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.
- E. It is considered reasonable that the Contractor's submittals shall be complete and acceptable by at least the second submission of each submittal. The Port reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION OF SUBMITTALS

- A. The Contractor shall submit all shop drawings, catalog cuts, brochures and physical samples using e-Builder® (a web based construction management software). All post-document-generated notations such as notes, arrows, stamps, clouding, or other items, are required to be shown directly on the submittal document. **Each submittal shall be accompanied by a transmittal developed within the e-Builder® software.**
- B. A separate submittal shall be prepared for each product or procedure and shall be further identified by referencing the Specification Section and paragraph number and each submittal shall be numbered consecutively.

- C. Product submittals that cannot be accomplished electronically shall be submitted electronically without attachments, marked as being hand delivered, and accompanied by a printed version of a transmittal.
- D. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent, or are related in any way, must be submitted indicating the complete installation. Submittals shall not be altered once marked "No Exceptions Taken" Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.
- E. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work.
- F. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- G. All submittal packages including, but not limited to, product data sheets, mix designs, shop drawings and other required information for submittal must be submitted, reviewed and approved before the relevant scheduled task may commence. It is the responsibility of the Contractor to provide the submittal information which may drive a task on the construction schedule to submit items well enough in advance as to provide adequate time for review and comment from the Engineer without adversely impacting the construction schedule.
- H. When completing the e-Builder® submittal form, a Date Due field is required to be completed. This field is intended to inform the Port of the urgency of the submittal. Failure of the Port to return the submittal by the date provided by the Contractor will not be considered grounds for a contract time extension.

3.02 PRE-WORK SUBMITTALS

- A. Prior to issuance of Notice to Proceed, the following submittals must be submitted and returned to the Contractor as No Exceptions Taken, Make Corrections Noted, Reviewed, or Reviewed as Noted.
 - 1. Per 00 72 00 and 01 32 16, Baseline Project Schedule
 - 2. Per 00 73 63, Emergency Contact Numbers
 - 3. Per 01 35 29, Health and Safety Plan (HASP)
 - 4. Per 01 35 29, Spill Prevention and Countermeasures Plan (SPCC)
 - 5. Per 01 35 47, List of equipment and written certification

3.03 MAINTENANCE OF SUBMITTAL LOG

- A. Prepare and submit for Port review a detailed submittal log conforming to the requirements of paragraph 1.02 of this section. When approved by the Engineer, use the submittal log to track the transmittal of submittals to the Engineer, the receipt of submittal comments from the Engineer, and all subsequent action with respect to each submittal. Provide an updated copy of the submittal log to the Engineer during each weekly progress meeting, unless otherwise approved by the Engineer.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. The work includes the requirements for health and safety provisions necessary for all work at the site for this project. The work also includes compliance with all laws, regulations and ordinances with respect to safety, noise, dust, fire and police action, civil disobedience, security or traffic.
- B. The Contractor shall monitor site conditions for indications of identified and other potentially hazardous, dangerous, and/or regulated materials (suspicious material). Indicators of suspicious material include, but are not limited to, refuse, oily sheen or coloring on soil or water, or oily or chemical odors. If suspicious materials are encountered, the Contractor shall stop all work in that area and notify the Engineer immediately.

1.02 SUBMITTALS

- A. Prior to Notice to Proceed, the Contractor shall provide a site specific Health and Safety Plan (HASP), which meets all the requirements of local, state and federal laws, rules and regulations. The HASP shall address all requirements for general health and safety and shall include, but not be limited to:
 - 1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work;
 - 2. Map of the site(s) illustrating the location of the anticipated hazards and areas of control for those hazards (including containments, exclusion/work zones, and contaminant reduction/decontamination zones);
 - 3. Hazardous material inventory and safety data sheets (SDSs) for all chemicals which will be brought on site;
 - 4. Signage appropriate to warn site personnel and visitors of anticipated site hazards;
 - 5. Documentation that the necessary workers have completed the required Hazardous Waste Operations and Emergency Response (HAZWOPER) training;
 - 6. Engineering controls/equipment to be used to protect against anticipated hazards;
 - 7. Personal protective equipment and clothing including head, foot, skin, eye, and respiratory protection;
 - 8. Procedures which will be used for:
 - a. Lockout/Tagout,
 - b. Fall protection,
 - c. Trenching and shoring,
 - d. Oxygen deficient conditions,
 - e. Suspicious materials and/or unidentified materials,
 - f. Confined-space entry (could include dewatering storage tanks, manholes, or other items),
 - g. Confined-space rescue, and
 - h. Odorous conditions and toxic gases;
 - 9. Site housekeeping procedures and personal hygiene practices;

10. Railroad safety procedures;
 11. Administrative controls;
 12. Emergency plan including locations of and route to nearest hospital;
 13. Recordkeeping including:
 - a. Documentation of appropriate employee training (e.g., Hazardous Waste Operations and Emergency Response [HAZWOPER] 40-hour training for staff involved with excavation and handling of soil),
 14. Name and qualification of person preparing the HASP and person designated to implement and enforce the HASP;
 15. Excavation, stockpiling, and truck loading procedures;
 16. Lighting and sanitation; and
 17. Signatory page for site personnel to acknowledge receipt, understanding, and agreement to comply with the HASP.
- B. Prior to the start of any Work, the Contractor shall provide a site specific Spill Prevention, Control and Countermeasures (SPCC) Plan, which meets all the requirements of local, state and federal laws, rules and regulations.
- C. Contractor may submit the HASP and SPCC Plan as one comprehensive document or may submit the plans as separate documents.

1.03 POTENTIAL CHEMICAL HAZARDS

- A. Site Contaminants
1. The Contractor must provide site workers with Hazard Communication standard information for potential site contaminants (in accordance with WAC 296-843). The Contractor shall ensure that all site workers are aware of and understand this information. Additional information shall also be provided by the Contractor, as necessary, to meet the Hazard Communication Standard and HASP requirements as noted in WAC 296-901-14010 and 296-843. Workers shall be instructed on basic methods or techniques to assist in detecting suspicious material.
- B. Potential Exposures Routes
1. Inhalation: Airborne dusts, fibers, particulates, or vapors may be released during site activities. Inhalation of airborne inorganic arsenic may occur.
 2. Skin and Eye Contact: Dusts generated during site work activities may settle on the skin or clothing of site workers. Also, workers may contact potentially regulated sediments, or water, in the normal course of their work. Precautions to prevent skin or eye contact with hazardous materials will be included in the HASP. Arsenic exposure may cause skin irritation.
 3. Ingestion: Inadvertent transfer of site contaminants from hands or other objects to the mouth could occur if site workers eat, drink, smoke, chew tobacco, or engage in similar activities in work areas. This could result in ingestion of site contaminants. Precautions to prevent accidental or inadvertent ingestion of hazardous materials will be included in the HASP.
- C. Chemical hazards may also result from Contractor operations resulting in inadvertent release of fuel, oil, or other chemicals in a manner that would expose workers.

1.04 POTENTIAL PHYSICAL AND OTHER HAZARDS

- A. The Work of the Contractor is described elsewhere in these specifications. Precautions to prevent all anticipated physical and other hazards, including heavy equipment, shall be addressed in the HASP.
- B. Specific aspects of construction resulting in physical hazards anticipated for this project include, but are not limited to the following:
 - 1. Major hazards associated with earthwork impacts from moving construction vehicles and trucks, noise, thermal stress, contact with unguarded machines, excavation hazards (i.e., cave-in, utility, etc.), strains from heavy lifting, and reduced visibility and communications difficulties in work area; and
 - 2. Operation of equipment, including excavators, loaders, and related equipment, presenting hazards of entrapment, ensnarement, and being struck by moving parts.
- C. Other anticipated physical hazards:
 - 1. Heat stress, such as that potentially caused by impermeable clothing (may reduce the cooling ability of the body due to evaporation reduction);
 - 2. Cold stress, such as that potentially caused during times when temperatures are low, winds are high, especially when precipitation occurs during these conditions;
 - 3. Biological hazards, such as mold, insect stings, or bites, poisonous plants (i.e., poison oak, sumac, etc.); and
 - 4. Trips and falls.

PART 2 - PRODUCTS

2.01 SAFETY SIGNAGE

- A. The Contractor shall provide signage at strategic locations within the project site to alert jobsite workers and visitors of the remediation work, associated hazards, and required precautions.

2.02 PRODUCTS SPECIFIED FOR HEALTH AND SAFETY

- A. Provide the equipment and supplies necessary to support the work as described in the site-specific HASP. Equipment and supplies may include, but are not limited to:
 - 1. All chemicals to be used on site;
 - 2. A hazardous materials inventory and SDSs for the chemicals brought on site;
 - 3. Fencing and barriers;
 - 4. Warning signs and labels;
 - 5. Trenching equipment;
 - 6. Fire extinguishers;
 - 7. Equipment to support lockout/tagout procedures;
 - 8. Fall protection equipment;
 - 9. Personal protective equipment (hard hats, foot gear, skin, eye, and respiratory protection);
 - 10. Demolition equipment and supplies;
 - 11. First aid equipment;

12. Spill response and spill prevention equipment; and
13. Field documentation logs/supplies.

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION

- A. Contractor shall comply with health and safety rules, regulations, ordinances promulgated by the local, state, and federal government, the various construction permits, and other sections of the Contract Documents. Such compliance shall include, but not be specifically limited to: any and all protective devices, equipment and clothing; guards; restraints; locks; latches; switches; and other safety provisions that may be required or necessitated by state and federal safety regulations. The Contractor shall determine the specific requirements for safety provisions and shall have inspections and reports by the appropriate safety authorities to be conducted to ensure compliance with the intent of the regulations.
- B. Contractor shall inform employees, subcontractors and their employees of the potential danger in working with any potentially regulated materials, equipment, soils and groundwater at the project site.
 1. The Contractor shall not proceed with jobsite activities that might result in exposure of employees to hazardous materials until the HASP is reviewed by the Engineer.
- C. All Contractor employees expected to work at the jobsite or individuals entering the jobsite shall read the Contractor HASP before they enter the jobsite, and will sign a statement provided by the Contractor that they have read and understand the HASP. A copy of the Contractor's HASP shall be readily available at the site at all times the work is being performed.
- D. The Contractor's HASP shall be amended as needed by the CSP to include special work practices warranted by jobsite conditions actually encountered. Special practices could include provisions for decontamination of personnel and equipment, and the use of special equipment not covered in the initial plan.
- E. Contractor shall perform whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees of the Engineer, Engineer's Representative, and Contractor) and property during the Contract period. This requirement applies continuously and is not limited to normal working hours.
- F. The Engineer's review of the Contractor's performance does not include an opinion regarding the adequacy of, or approval of, the Contractor's safety supervisor, the site-specific HASP, safety program or safety measures taken in, on, or near the job site.
- G. Accidents causing death, injury, or damage must be reported immediately to the Engineer and the Port Security Department in person or by telephone or messenger. In addition, promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- H. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing within 24 hours after occurrence, to the Engineer, giving full details of the claim.

3.02 SITE SAFETY AND HEALTH OFFICER

- A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, has a current 40-hour HAZWOPER certification (minimum), and trained to use all necessary safety equipment, air monitoring equipment, and gas detectors. The person must be available and/or present at all times while work is being performed, and conduct testing, as necessary.
- B. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- C. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

3.03 GENERAL SAFETY GUIDELINES FOR HAZARDOUS GASES

- A. The generally accepted procedure to protect the worker from the effects of the dangers from hazardous gases is through the use of four safeguard measures:
 - 1. Test the atmosphere: Before entering a trench, underground vault, or any other excavation, the atmosphere shall be tested to detect any adverse environmental conditions with a gas detector instrument. Test instruments shall be properly maintained and calibrated. The test shall be conducted from top to bottom of the excavation or every four (4) feet.
 - 2. Ventilate all confined spaces: Before entry and during the entire time workers are in the confined space. Forced ventilation is the generally accepted procedure.
 - 3. Use appropriate safety equipment: All personnel shall be trained to operate the appropriate safety equipment that are to be utilized during the course of their work. It is the responsibility of the Contractor's Site Safety and Health Officer to ascertain that all safety equipment is being used when appropriate.
 - 4. Provide backup safety personnel: Prior to any personnel entering an excavation or confined space, a separate individual shall be positioned outside the space.
- B. Safety Monitoring Instrumentation: The Safety and Health Officer shall have appropriate instruments (detector[s]) to test for oxygen deficiency and for the presence of methane gas, hydrogen sulfide, and/or other known or suspected vapors and gases. The Site Safety and Health Officer shall periodically calibrate the instruments, regularly test the excavation or space areas and other work areas for safe working conditions, and ensure that appropriate safety equipment is available.

3.04 SUPPLEMENTAL SAFETY PROGRAM FOR GASES

- A. Recommended Precautions: In addition to conforming to safety rules and regulations of governmental authorities having jurisdiction, the Contractor shall conform to the following minimum precautionary measures:
 - 1. Frequently monitor for all possible hazardous gases, oxygen deficiency and other known or suspected vapors and gases.
 - 2. Prohibit smoking in or near open excavations and in the vicinity of underground pipe laying activities. Smoking will be permitted only in those areas designated by the Site Safety and Health Officer.

3. In the event toxic gas is present in sufficient quantities to trigger a gas detection alarm, the Contractor shall immediately evacuate all personnel from the area until determined safe by the Site Safety and Health Officer.
 4. Do not use explosives.
 5. Do not weld in trenches or enclosed areas unless performed in areas tested and approved by the Site Safety and Health Officer.
- B. Suggested Measures: If not already included in the Contractor's standard safety practices, the Contractor shall add the following measures to their safety program:
1. Workers shall be cautioned on the possibility of collapsing excavations during construction operations near and in open excavations. Anyone working near the edge of deep excavations should be secured with a safety belt, harness, or limit line to preclude the possibility of falling into the opening.
 2. Safe and suitable ladders that project 2 feet above the top of the trench shall be provided for all trenches over 4 feet in depth. A minimum of one ladder shall be provided for each 25 feet of open trench, and be so located that workers in the trench need not move more than 25 feet to a ladder.
 3. No worker shall be allowed to work alone in an excavation. An individual shall be positioned outside the excavation, but within eyesight of the workers in the excavation, and assist them should an emergency develop.
 4. Work upwind of an excavation where possible, unless the excavation is constantly monitored and declared safe.
 5. No excavation or drilled hole greater than 2 feet deep shall be left unattended or open overnight unless it is securely covered in a manner acceptable to the Engineer.
 6. Fire extinguishers with a rating of at least A, B, and C shall be available onsite.
 7. Personnel in an open excavation shall be fully clothed with appropriate personal protection equipment. Workers shall immediately vacate the excavation if gases are detected therein, and shall not be permitted to re-enter the excavation unless satisfactory precautionary measures are implemented.

3.05 SPILL PREVENTION AND CONTROL

- A. The Contractor shall be responsible for prevention, containment and cleanup of spilling petroleum and other chemicals/hazardous materials used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
- B. The Contractor is advised that discharge of oil, fuel, other petroleum, or any chemicals/hazardous materials from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.
- C. In the event of a discharge of oil, fuel or chemicals/hazardous materials into waters, or onto land with a potential for entry into waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of all spilled material and used cleanup materials.
- D. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment and cleanup:

1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums and other equipment and facilities shall be inspected regularly for drips, leaks or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
 2. All land-based chemical, oil and products' storage tanks shall be diked, contained and/or located so as to prevent spills from escaping into the water. Dikes and containment area surfaces shall be lined with impervious material to prevent chemicals or oil from seeping through the ground and dikes.
 3. All visible floating sheen shall be immediately contained with booms, dikes or other appropriate means and removed from the water prior to discharge into state waters. All visible spills on land shall be immediately contained using dikes, straw bales or other appropriate means and removed using sand, sawdust or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed offsite in accordance with applicable local, state and federal regulations.
 4. In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, the Contractor shall immediately notify the Port Security at their listed 24-hour response number:
 - a. Port Security: 253-383-9472
- E. The Contractor shall maintain the following materials (as a minimum) at each of the project sites:
1. Oil-absorbent booms: 100 feet;
 2. Oil-absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area;
 3. Oil-skimming system; and
 4. Oil dry-all, gloves, and plastic bags.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section discloses procedures to follow if unknown regulated materials are encountered.

1.02 NOTIFICATION AND SUSPENSION

- A. In the event the Contractor detects the presence of potentially regulated materials not previously identified in this specification, the Contractor shall stop work and immediately notify the Port. Following such notification by the Contractor, the Port shall in turn notify the various governmental and regulatory agencies concerned with the presence of regulated materials, if warranted. Depending upon the type of materials identified, the Port may suspend work in the vicinity of the discovery under the provisions of General Conditions.
1. Following completion of any further testing necessary to determine the nature of the materials involved, the Port will determine how the material shall be managed. Although the actual procedures used in resuming the work shall depend upon the nature and extent of the regulated material, the following alternate methods of operation are foreseen as possible:
 - a. Contractor to resume work as before the suspension.
 - b. Contractor to move its operations to another portion of the work until measures to eliminate any hazardous conditions can be developed and approved by the appropriate regulatory agencies.
 - c. The Port to direct the Contractor to dispose or treat the material in an approved manner.
 - d. The Port to terminate or modify the Contract accordingly, for unforeseen conditions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. The Work includes the requirements to provide air and noise control measures until Final Completion of the Work.

1.02 SUBMITTALS

- A. Prior to Notice to Proceed, the Contractor shall submit a list of equipment to be used on the project and written certification that all equipment on the list and any additional equipment, including Contractor's, subcontractors or supplier's equipment, shall meet the requirements of 3.01 below.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

- A. The Contractor shall meet or exceed EPA Tier 2 off-road diesel engine emission standards for off-road equipment $\geq$ 25hp and meet or exceed EPA 1994 on-road diesel engine emission standards for on-road equipment except as follows:
 - 1. Equipment being used in an emergency or public safety capacity
- B. The Contractor shall not discharge smoke, dust, and other hazardous materials into the atmosphere that violate local, state or federal regulations.
- C. No vehicles can idle for more than 5 consecutive minutes, except as follows:
 - 1. Idling is required to bring or maintain the equipment to operating temperature;
 - 2. Engine idling is necessary to accomplish work for which the equipment was designed (i.e. operating a crane); or
 - 3. Idling vehicles being used in an emergency or public safety capacity.
- D. The Contractor shall minimize nuisance dust by cleaning, sweeping, vacuum sweeping, sprinkling with water, or other means. Equipment for this operation shall be on the job site or available at all times.

3.02 NOISE CONTROL

- A. The Contractor shall comply with all local controls and noise level rules, regulations and ordinances which apply to work performed pursuant to the Contract.
- B. All internal combustion engines used on the job shall be equipped with a muffler of a type recommended by the manufacturer.

END OF SECTION

This page intentionally left blank

PART 1 – GENERAL

1.01 SUMMARY

- A. The Work shall consist of the procedures to be followed in the event that cultural and/or historical resources are inadvertently discovered during the projects activities.
- B. The project is located in an area previously inventoried for cultural and historical resources; however it is possible that additional, previously unidentified archaeological resources and/or skeletal remains could be inadvertently discovered during project activities. In the event that prehistoric, historic-era archaeological materials or skeletal remains are discovered, the appropriate protection measures and protocols described in this section must be followed.
- C. The Port will provide archaeological monitoring by or under the guidance of a professional archaeologist (archaeologist).
 - 1. All ground disturbing activities 4 feet below ground surface (bgs) must be observed by the archaeologist. Contractor must notify Engineer a minimum of 48 hours prior to ground disturbing activities that would require monitoring.

1.02 REFERENCES

- A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:
 - 1. Port of Tacoma "Archaeological Monitoring and Inadvertent Discovery Plan," located in Appendix G.

1.03 AUTHORITY OF ARCHAEOLOGIST

- A. At any time, when the archaeologist determines that possible cultural resources or skeletal remains might be present, they have the authority to stop work, secure the area of the find and determine a work stoppage zone. This area shall remain protected until further decisions can be made regarding the work site.
- B. The archaeologist will stand in close proximity of the construction equipment to view subsurface deposits as they are exposed and will be in close communication with the equipment operators to ensure adequate opportunity for observation and documentation. The monitor will coordinate the depths of the lifts with the Port and the Contractor.
- C. The archaeologist will be provided the opportunity to screen excavated sediments and matrix samples when this is judged to be useful.
- D. Archaeological monitoring will proceed until it can be determined by the archaeologists that skeletal remains or other cultural resources are not likely to be impacted by construction activities.

PART 2 – PRODUCTS – NOT USED.

PART 3 – EXECUTION

3.01 PROTOCOLS FOR DISCOVERY OF ARCHAEOLOGICAL RESOURCES

- A. In the event that archaeological resources are encountered within the project, the following actions will be taken:
 - 1. All ground disturbing and construction activity at the specific location will stop and the area will be protected via temporary fencing or other appropriate measures.
 - 2. The Contractor's work supervisor will be notified immediately.

3. Contact the Port's Engineer and Environmental Project Manager immediately.
4. A work stoppage zone, as determined by the Archaeologist and PORT, will be established.
5. The Port's Environmental Project Manager will contact the appropriate agencies where the discovery is located as well as the Washington State Department of Archaeology and Historic Preservation (DAHP) the Puyallup Tribe (TRIBE) and the U.S. Army Corps of Engineers (Corp).
6. The Work Stoppage Zone will remain protected until further decisions can be made regarding the area.
7. The Contractor will be allowed to continue ground disturbing and other construction activities outside of the established work stoppage zone.

3.02 PROTOCOLS FOR DISCOVERY OF HUMAN REMAINS

- A. In the event of that human remains are encountered within the project, the following actions, consistent with RCWs 68.50.645, 27.44.055 and 68.60.055 will be taken:
 1. All ground disturbing and construction activity at the specific location will stop and the area will be protected via temporary fencing or other appropriate measures. The remains will not be touched, moved or further disturbed.
 2. The Contractor's work supervisor will be notified immediately.
 3. Contact the Port's Engineer and Environmental Project Manager immediately.
 4. The Environmental Project Manager will notify the county medical examiner / coroner and local law enforcement.
 5. A Work Stoppage Zone will be determined and remain protected until further decisions can be made regarding the area.
 6. The Contractor will be allowed to continue ground disturbing and other construction activities outside of the established work stoppage zone.

3.03 PROTOCOLS FOR CONFIDENTIALITY

- A. In the event of that human remains or cultural resources are discovered within the project area, the Port and the Contractor shall keep and maintain all information regarding any discovery confidential.
 1. At no time shall the Contractor contact the media, any third party or otherwise share information regarding the discovery with any member of the public.
 2. If the Contractor is contacted by the media or the public regarding any discovery, they shall refrain from comment, and contact the Port's Environmental Project Manager immediately.

END OF SECTION

PART 1 - GENERAL

1.01 PERMITS, CODES, AND REGULATIONS

- A. The following permits/approvals have been applied for (or are on file) and incorporated into the Contract:
 - 1. State Environmental Policy Act (SEPA) Compliance, located in Appendix C
 - 2. Construction Stormwater General Permit - WAR312679, located in Appendix D
 - 3. City of Tacoma Site Development Permit - SDEV23-0067 is ready to issue pending preconstruction meeting between the City of Tacoma, Contractor and Port of Tacoma
 - 4. City of Tacoma Work Order Permit - WO23-0093 is ready to issue pending approval of Contractor provided traffic control plan and preconstruction meeting between the City of Tacoma, Contractor and Port of Tacoma
 - 5. City of Tacoma Building Permit - BLD23-0053, located in Appendix E
 - 6. City of Tacoma/Tacoma Rail Right-of-Entry Permit to be applied for after Contract award, permit requirements are located in Appendix F
- B. Conform with the requirements of listed permits and additional or other applicable permits, codes, and regulations as may govern the Work.
- C. Obtain and pay fees for licenses, permits, inspections, and approvals required by laws ordinances, and rules of appropriate governing or approving agencies necessary for proper completion of Work (other than those listed under item 1.01.A above and Special Inspections called for by the International Building Code).
- D. Conform with current applicable codes, regulations and standards, which is the minimum standard of quality for material and workmanship. Provide labor, materials, and equipment necessary for compliance with code requirements or interpretations, although not specifically detailed in Drawings or specifications. Be familiar with applicable codes and standards prior to bidding.
- E. Process through Engineer, request to extend, modify, revise, or renew any of the permits (listed in 1.01.A above). Furnish requests in writing and include a narrative description and adequate Drawings to clearly describe and depict proposed action. Do not contact regulatory agency with requests for permit extensions, modifications, revisions, or renewals without the prior written consent of the Engineer.

1.02 VARIATIONS WITH CODES, REGULATIONS AND STANDARDS

- A. Nothing in the Drawings and specifications permits Work not conforming to codes, permits, or regulations. Promptly submit written notice to the Engineer of observed variations or discrepancies between the Contract Documents and governing codes and regulations.
- B. Appropriate modifications to the Contract Documents will be made by Change Order to incorporate changes to Work resulting from code and/or regulatory requirements. Contractor assumes responsibility for Work contrary to such requirements if Work proceeds without notice.
- C. Contractor is not relieved from complying with requirements of Contract Documents which may exceed, but not conflict with requirements of governing codes.

1.03 COORDINATION WITH REGULATORY AGENCIES

- A. Coordinate Work with appropriate governing or regulating authorities and agencies.

- B. Provide advance notification to proper officials of Project schedule and schedule revisions throughout Project duration, in order to allow proper scheduling of inspection visits at proper stages of Work completion.
- C. Regulation coordination is in addition to inspections conducted by Engineer. Notify Engineer at least 48 hours in advance of scheduled inspections involving outside regulating officials, to allow Engineer to be present for inspections.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to referenced standards.

1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue specified in this section, except where a specific date is established by applicable code.
- C. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 QUALITY CONTROL FOR COMPLIANCE:

- A. The Contractor shall perform such detailed examination, inspection, quality control and assurance of the Work as to ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents. The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all Work without delay or revision. The Contractor shall be responsible for inspection of portions of the Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no conditions shall a portion of Work proceed prior to preparatory work having been satisfactorily completed. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work and has notified the Contractor (who shall promptly notify the Port in writing) of any defects or imperfections in preparatory work that will, in any way, affect completion of the Work.

1.02 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop Drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.04 TESTING SERVICES

- A. Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities.
 - 1. Neither observations by an inspector retained by the Port, the presence or absence of such inspector at the site, nor inspections, tests, or approvals by others, shall relieve the Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.

- B. Necessary materials testing shall be performed by an independent testing laboratory during the execution of the Work and paid for by the Port of Tacoma, unless otherwise specified. Access to the area necessary to perform the testing and/or to secure the material for testing, shall be provided by the Contractor.
- C. Testing does not relieve Contractor from performing work to contract requirements.
- D. Re-testing required because of non-conformance to specified requirements will be charged to the Contractor by deducting testing charges from the Contract Sum via Change Order.
- E. Material testing for initial material approval will be performed by an independent, certified laboratory and paid for by the Contractor. These tests must be dated within six (6) months of the submittal date.
- F. Subsequent sampling and testing, required as the work progresses to ensure continual control of materials and compliance with all requirements of the Contract documents, shall be the responsibility of the Port, except as required by other sections of these Specifications.

1.05 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up equipment, test, and adjust and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Temporary utilities,
 - 2. Temporary telecommunications services,
 - 3. Temporary sanitary facilities,
 - 4. Temporary Controls: Barriers, enclosures, and fencing, and
 - 5. Field offices.

1.02 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes. Contractor is responsible for getting required permits and meters from the City of Tacoma.
- B. Existing facilities may not be used.
- C. New permanent facilities may not be used.
- D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services for field personnel at time of project mobilization. It is the Contractor's responsibility to be able to receive phone calls and emails at the job site.

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.
- C. At end of construction, return facilities to same or better condition as originally found.

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for Port's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING

- A. Construction: Contractor's option.
- B. Provide 6 ft. (1.8 m) high fence around construction site; equip with vehicular gates with locks.

1.07 FIELD OFFICES (IF USED)

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.

1.08 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to final inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.
- D. Restore new permanent facilities used during construction to specified condition.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Access roads
 - 2. Parking
 - 3. Construction parking controls
 - 4. Traffic Control
 - 5. Lights
 - 6. Haul routes
 - 7. Maintenance
 - 8. Removal, repair
 - 9. Mud from site vehicles

PART 2 - PRODUCTS

2.01 SIGNS, SIGNALS, AND DEVICES

- A. Post Mounted and Wall Mounted Traffic Control and Informational Signs, as specified.
- B. Traffic Cones, Drums, and Lights: As approved by local jurisdictions.
- C. Flag Person Equipment: As required by local jurisdictions.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Clear areas, provide surface and storm drainage of road, parking, area premises, and adjacent areas.

3.02 ACCESS TO SITE

- A. Contractor shall conduct all business through the gate assigned by the Engineer.
 - 1. The Contractor may be required to relocate entry and related work areas as required by Port Operations.
- B. Provide unimpeded access for emergency vehicles. Maintain 20 foot (6 m) width driveways with turning space between and around combustible materials.
- C. Provide and maintain access to fire hydrants free of obstructions.

3.03 PARKING

- A. All Contractor's employee cars and work vehicles will be parked on-site as designated by the Engineer.

3.04 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Port operations.
- B. Prevent parking on or adjacent to access roads or in non-designated areas.

3.05 TRAFFIC CONTROL

- A. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
- B. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, flaggers and other traffic control devices necessary for the safe ingress and egress of the Project Site. Traffic control shall include but is not limited to:
 - 1. Flaggers to direct traffic as required by Tacoma Rail to accommodate the Contractor's work.
 - 2. The Contractor shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or any negligence in connection therewith.
 - 3. Flagging, signs, and all other traffic control devices furnished or provided shall conform to established WSDOT and City of Tacoma standards. No work shall be done on or adjacent to the above locations until all necessary signs and traffic control devices are in place. During the course of the work, the Contractor shall be responsible for providing and maintaining adequate traffic control measures for the protection of the Contractor's work and the public.

3.06 LIGHTS

- A. Use lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.07 HAUL ROUTES

- A. Confine construction traffic to designated haul routes.
- B. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.08 MAINTENANCE

- A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, Products, mud, snow, and ice.
- B. Maintain existing paved areas used for construction. Promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

3.09 REMOVAL, REPAIR

- A. Repair existing facilities damaged by use, to original condition.
- B. Repair damage caused by installation.

3.10 PUBLIC STREET AND ONSITE ROADWAY CLEANING

- A. The Contractor shall be responsible for preventing dirt and dust escaping from trucks and other vehicles operating on or departing the project site by sweeping, covering dusty loads, washing truck tires, and all other reasonable methods.
- B. When trucks and other equipment are operating on paved public streets and site roadways/paved surfaces, the Contractor will be required to clean said streets, roadways, and other paved surfaces as needed, and at other times if required by the Engineer.

- C. In the event that the above requirements are violated and no action is taken by the Contractor after notification of infraction by the Engineer, the Port reserves the right to have the streets, roadways, and other paved surfaces in question cleaned by others and have the expense of the operation charged to the Contractor.

END OF SECTION

This page intentionally left blank

PART 1 – GENERAL

1.01 SUMMARY

- A. The Work shall consist of planning, installing, inspecting, maintaining and removing Temporary Erosion and Sediment Control (TESC) Best Management Practices (BMPs) to prevent pollution of air and water; and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.
- B. Construction Stormwater Pollution Prevention Plan (SWPPP) has been prepared by the Port as part of the National Pollution Discharge Elimination System (NPDES) stormwater permit requirements for the project site. The SWPPP is included in the Project Manual Appendix. The Contractor shall use a project-specific SWPPP to meet or exceed the control measures required by the Washington Department of Ecology (Ecology). The SWPPP describes the proposed construction activities and all Temporary and Permanent Erosion and Sediment Control (ESC) measures, pollution prevention measures, inspection/monitoring activities, and recordkeeping that will be implemented during the proposed construction project. The Contractor shall have an individual who is a Certified Erosion and Sediment Control Lead (CESCL) on site or on-call at all times.
 - 1. The SWPPP consists of planning, installing, inspecting, maintaining, and removing TESC BMPs per Volume II of the Stormwater Management Manual for Western Washington (current version). The BMPs are designed to prevent pollution of air and water, to control peak volumetric flow rates and velocity of stormwater, and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.
 - 2. The Contractor may submit an alternative SWPPP than the one provided by the Port; however, the alternative SWPPP shall address all elements required in the applicable stormwater permit. The Contractor will be responsible for updating the SWPPP to reflect changes to BMPs, as needed, to comply with the Construction Stormwater General Permit at no additional cost to the Port.
- C. These TESC requirements shall apply to all areas associated with the Work, including but not limited to the following:
 - 1. Work areas;
 - 2. Equipment and material storage areas;
 - 3. Staging areas;
 - 4. Stockpiles; and
 - 5. Discharge points within or adjacent to the work areas that are impacted by stormwater runoff from the site.
- D. Acceptance of TESC plans does not constitute an approval of permanent Work or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
- E. Contractor shall read and conform to all requirements set forth in Washington Department of Ecology's (Ecology) NPDES General Permit for Discharges Associated with Construction Activities (CSGP).

1.02 REFERENCES

- A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:

1. Washington Department of Ecology, "Stormwater Management Manual for Western Washington," current version.
2. Washington Department of Ecology NPDES General Permit for Discharges Associated with Construction Activities (CSGP), current version.
3. Washington State Department of Transportation, current version, Standard Specification M41-10, Division 8-01 Erosion Control and Water Pollution Control.
4. Pierce County Stormwater and Site Development Manual, current version (if applicable).

1.03 SUBMITTALS

- A. Prior to the start of any construction activities, a Construction Stormwater Pollution Prevention Plan (SWPPP), as required by the CSGP or acceptance of Port provided SWPPP. The Port's short form can be found in the Appendix.
 1. Contractor must adopt and comply with either a Port project SWPPP, or provide an alternative project SWPPP.
 2. Contractor shall be responsible for updating the project SWPPP during construction to reflect the required changes to BMPs and personnel, as needed, to comply with the CSGP at no additional cost to the Port.
- B. Safety Data Sheet (SDS) for any dust palliative product, if used.
- C. A copy of all Contractor site inspection logs and monthly Discharge Monitoring Reports (DMRs).
- D. The name and contact number of the Certified Erosion and Sediment Control Lead (CESCL).

1.04 AUTHORITY OF ENGINEER

- A. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations, as determined by analysis of project conditions; and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize impacts to adjacent streams or other watercourses, lakes, ponds, and other areas of water impoundment.
- B. In the event that areas adjacent to the work area are suffering degradation due to erosion, sediment deposit, water flows, or other causes, the Engineer may stop construction activities until the Contractor rectifies the situation.

PART 2 – PRODUCTS

2.01 DUST CONTROL

- A. Dust palliative for dust control proposed by the Contractor and approved by the Engineer.

PART 3 – EXECUTION

3.01 GENERAL

- A. The Port is subject to a NPDES General Permit for Discharges Associated with Construction Activities (CSGP). The permit shall be transferred to the Contractor prior to ground disturbing activities. The Contractor shall be the responsible Operator/Permittee for the duration of the project.
- B. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply as determined by the Engineer.

- C. No project discharge of water shall be allowed that exceeds the regulated pollutant levels in Ecology's NPDES permit associated with the Project.
- D. Contractor shall be solely responsible for all BMP modifications and upgrades to comply with the CSGP and the requirements of this Section, at no additional cost to the Port.
- E. Contractor shall be solely responsible for any damages and fines incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.
- F. The Contractor shall be solely responsible for schedule impacts incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.

3.02 TEMPORARY EROSION AND SEDIMENT CONTROL DEVELOPMENT

- A. The Contractor is responsible for developing the TESC BMPs and incorporating them into the SWPPP. The Contractor shall address the following issues as part of developing and implementing the BMPs.
 - 1. The TESC notes and details shown in the Drawings and the information in this Section of these Specifications are minimum requirements for the anticipated site conditions during the construction period. During the construction period the Contractor shall, at no additional cost to the Port, upgrade the TESC measures as needed for unexpected storm events and modify these measures for changing site conditions (such as relocation of ditches and silt fences, etc.) and update the SWPPP to document the modifications made.
 - 2. The Contractor shall inspect the TESC measures daily and maintain these measures to ensure continued proper functioning during the construction period. The Contractor will keep written records on site of inspections on a weekly basis during the wet season (October 1 through April 30) and on a monthly basis during the dry season (May 1 through September 30). The Contractor shall provide the Port with copies of the TESC inspections, as stated in Section 1.03 above.
 - 3. Any areas needing TESC measures not requiring immediate attention shall be addressed by the Contractor at the Port's discretion.
 - 4. The TESC measures in an inactive site shall be inspected and maintained by the Contractor at a frequency described in the Project Construction Stormwater NPDES General Permit.
 - 5. The Contractor shall be responsible for implementing the SWPPP and shall modify the SWPPP as required to reflect on-site activities and personnel.
- B. Contractor shall inspect the existing system and report to the Engineer the levels of existing material prior to installation of TESC BMPs.

3.03 TEMPORARY EROSION AND SEDIMENT CONTROL IMPLEMENTATION

- A. Contractor is responsible for implementing and updating the SWPPP including TESC BMPs.
 - 1. Contractor shall inspect the TESC measures daily and maintain these measures to ensure continued proper functioning for the duration of the Project.
 - 2. Contractor will be responsible for documenting TESC site inspections on a weekly basis in areas of active construction and on a monthly basis in areas that have undergone stabilization. Contractor shall keep records of the inspections on site.

3. During the construction period the Contractor shall, at no additional cost to the Port, upgrade and/or maintain TESC measures as needed, based on Contractor means and methods, work sequencing, and changing site conditions (e.g., changes to impervious surface coverage, proximity of work to storm conveyance systems, storm events, etc.). Contractor shall modify these measures for changing site conditions and update the SWPPP to document all modifications made.
- B. Contractor shall clean all stormwater components affected by construction debris prior to Work completion, per TESC BMPs for catch basin maintenance. The cleaning process shall not flush sediment-laden water into a downstream system.
- C. Contractor shall ensure that water, or a dust palliative and a dispensing subcontractor, if needed, is available for project use. It is the responsibility of the Contractor to develop and adhere to appropriate safety measures pertaining to the palliative use. This also includes ensuring the dispensing subcontractor develops and adheres to the appropriate safety measures, if a dispensing subcontractor is used. Water used for dust suppression shall not be applied at such a rate or in a location that it will generate runoff from the site.
- D. Areas of exposed soils, including embankments, which will not be disturbed for two days during the wet season (October 1 through April 30) or seven days during the dry season (May 1 through September 30), shall immediately be stabilized by the Contractor with an Ecology-approved TESC measure (e.g., seeding, mulching, plastic covering, etc.).
- E. TESC measures in an inactive area shall be inspected and maintained by the Contractor until the area is permanently stabilized.
- F. In the event that additional temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the Work as scheduled or as ordered by the Engineer, such work shall be performed by the Contractor at its own expense.
- G. Contractor shall remove all TESC facilities, install permanent site surfacing improvements and permanent BMPs with minimal disturbance, and shall clean stormwater facilities prior to Work completion.
- H. Contractor shall terminate the CSGP upon final stabilization of the site.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide product data under the applicable specification section.

1.02 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

PART 2 - PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 - EXECUTION

3.01 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.02 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.

- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Prevent contact with material that may cause corrosion, discoloration, or staining.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The purpose of this section is to provide the framework for transferring Port provided equipment and materials to the Contractor in a safe, timely and effective manner.

1.02 SUBMITTALS

- A. Submit an inspection report or log to the Engineer of the inspection performed on the materials before acceptance by the Contractor. Flag any equipment or materials identified as being in unsatisfactory condition. Document unsatisfactory condition of equipment photographically, using digital media.

1.03 COORDINATION

- A. The materials will be available by March 18, 2024 .

1.04 LOCATION

- A. The pre-fabricated restroom building will be placed by the building manufacture on the Contractor's prepared pad.

PART 2 - PRODUCTS

2.01 ITEMS

- A. Assume all items are in satisfactory condition unless otherwise indicated. Report in writing to the Engineer equipment found to be in unsatisfactory condition.

No.	Description	Quantity	Manufacturer/Supplier
1	Pre-fabricated Restroom Building	1	CXT Incorporated

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Equipment Inspection
1. Examine each piece or component for visual defects.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Examination, preparation, and general installation procedures
 - 2. Cutting and patching

1.02 SUBMITTALS

- A. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project;
 - 2. Integrity of weather exposed or moisture resistant element;
 - 3. Efficiency, maintenance, or safety of any operational element;
 - 4. Visual qualities of sight exposed elements; and
 - 5. Work of the Port or separate Contractor.
- B. Project As-Built Documents: Accurately record actual locations of capped and active utilities.

PART 2 - PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work;
 - 2. Fit products together to integrate with other work;
 - 3. Provide openings for penetration of mechanical, electrical, and other services;
 - 4. Match work that has been cut to adjacent work;
 - 5. Repair areas adjacent to cuts to required condition;
 - 6. Repair new work damaged by subsequent work;
 - 7. Remove samples of installed work for testing when requested; and
 - 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.06 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes field engineering and land surveying services by Contractor.

1.02 DESCRIPTION OF SERVICES

- A. Specific services listed in this section are in addition to, and do not supersede, general Execution and Closeout Requirements.
- B. Sole responsibility for establishing all locations, dimensions and levels of items of work.
- C. Sole responsibility for provision of all materials required to establish and maintain benchmarks and control points, including batter boards, grade stakes, structure elevation stakes, and other items.
- D. Having a skilled instrument person(s) available on short notice when necessary for laying out the work.
- E. Provision of facilities and assistance necessary for Engineer to check lines and grade points placed by Contractor.
- F. Preparation and maintenance of professional-quality, accurate, well organized, legible notes of all measurements and calculations made while surveying and laying out the work.
- G. Prior to backfilling operations, surveying - locating, and recording on a copy of the Contract Documents - an accurate representation of buried work and Underground Facilities encountered.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks. Notify Port's Representative and Engineer of any discrepancies immediately in writing before proceeding to lay out the work. Locate and protect existing benchmarks and base line. Preserve permanent reference points during construction.
- B. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify existing conditions.

3.02 FIELD ENGINEERING

- A. Maintain field files, drawings, specifications, and record documents.
- B. Coordinate field engineering services with Contractor's subcontractors, installers, and suppliers as appropriate.
- C. Prepare layout and coordination drawings for construction operations.
- D. Check and coordinate the work for conflicts and interferences, and immediately advise Engineer and Port of all discrepancies of which Contractor is aware.
- E. Cooperate as required with Engineer and Port in observing the work and performing field inspections.
- F. Review and coordinate work on a regular basis with shop drawings and Contractor's other submittals.

- G. In general, match existing adjacent grades and maintain existing flow lines.
- H. Check the location, line and grade of every major element as the work progresses. Notify the Engineer when deviations from required lines or grades exceed allowable tolerances. Include in such notifications a thorough explanation of the problem, and a proposed plan and schedule for remedying the deviation. Do not proceed with remedial work without Port's concurrence of the remediation plan.

3.03 LAND SURVEYING

- A. General: Follow standards for geospatial positioning accuracy.
 - 1. FGDC-STD-007.1as amended by Authority Having Jurisdiction.
 - 2. FGDC-STD-007.2as amended by Authority Having Jurisdiction.
 - 3. FGDC-STD-007.4as amended by Authority Having Jurisdiction.
- B. Coordinate survey data with the State Plane Coordinate System of the State in which the Project is located.
- C. Contractor is responsible for the restoration of all property corners and control monuments damaged or destroyed by construction-related activities. Any disturbed monuments must be replaced at Contractor's expense by a surveyor licensed in the State in which the Project is located, and approved by the Engineer.
 - 1. Temporarily suspend work at such points and for such reasonable times as the Port may require for resetting monuments. The Contractor will not be entitled to any additional compensation or extension of time.

3.04 CONSTRUCTION SURVEYING

- A. General: Perform surveying as applicable to specific items necessary for proper execution of work.
 - 1. Alignment Staking: Provide alignment stakes at 50 foot (15.24 m) intervals on tangent, and at 25 foot (7.62 m) intervals on curves.
 - 2. Slope Staking: Provide slope staking at 50 foot (15.24 m) intervals on tangent, and at 25 foot (7.62 m) intervals on curves. Re-stake at every ten-foot difference in elevation.
 - 3. Structure: Stake out structures, including elevations, and check prior to and during construction.
 - 4. Pipelines: Stake out pipelines including elevations, and check prior to and during construction.
 - 5. Site Utilities: Stake out utility lines including elevations, and check prior to and during construction.
 - 6. Cross-sections: Provide original, intermediate, and final staking as required, for site work and other locations as necessary for quantity surveys.
 - 7. Record Staking: Provide permanent stake at each blind flange and each utility cap is provided for future connections. Use stakes for record staking of material(s) acceptable to Engineer.
- B. Surveying to Determine Quantities for Payment.

1. For each application for progress payment, perform such surveys and computations necessary to determine quantities of work performed or placed. Perform surveys necessary for Engineer to determine final quantities of work in place.
 2. Notify Engineer at least 24 hours before performing survey services for determining quantities. Unless waived in writing by Engineer, perform quantity surveys in presence of Engineer.
- C. Record Log: Maintain a log of layout control work. Record any deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used.
- D. Accuracy:
1. Establish Contractor's temporary survey references points for Contractor's use to at least second-order accuracy (e.g., 1:10000). Set construction staking used as a guide for the work to at least third-order accuracy (e.g., 1:5000). Provide the absolute margin for error specified below on the basis established by such orders.
 - a. Accuracy of other staking shall be plus or minus 0.04 feet (12.2 mm) horizontally and plus or minus 0.02 feet (6.1 mm) vertically.
 - b. Include an error analysis sufficient to demonstrate required accuracy in survey calculations.
 2. Port reserves the right to check the Contractor's survey, measurements, and calculations. The requirement for accuracy will not be waived, whether this right is exercised or not.

3.05 RECORDS

- A. Maintain at the Site a complete and accurate log of control and survey work as it progresses.
1. Organize and record survey data in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in the State in which the Project is located. Record Contractor's surveyor's original field notes, computations, and other surveying data in Contractor-furnished hard-bound field books. Contractor is solely responsible for completeness and accuracy of survey work, and completeness and accuracy of survey records, including field books. Survey records, (including field books) may be rejected by Port due to failure to organize and maintain survey records in a manner that allows reasonable and independent verification of calculations, and/or allows identification of elevations, dimensions, and grades of the work.
 2. Illegible notes or data, and erasures on any page of field books, are unacceptable. Do not submit copied notes or data. Corrections by ruling or lining out errors will be unacceptable unless initialed by the surveyor. Violation of these requirements may require re-surveying the data questioned by Engineer.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes information for progress and final cleaning and restoration of damaged work prior to final inspection.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.01 PROGRESS CLEAN-UP

- A. The Contractor shall clean the project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with all requirements for removal of combustible waste materials and debris.
 - 2. Containerize unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials for the type of material to be stored.
 - 3. Coordinate progress cleaning for joint use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free from waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 16 Soil Characteristics and Waste Management.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration until Substantial Completion.

- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - f. Sweep concrete floors broom clean in unoccupied spaces.
 - g. Remove labels that are not permanent.
 - h. Leave Project clean and ready for occupancy.

3.03 REPAIR OF WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surface and touching up with matching materials. Where damaged or worn items cannot be repaired or restored, provide replacements. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes construction waste management requirements.

1.02 DESCRIPTION OF WORK

- A. The work includes demolition and removal within the project areas as shown on the drawings. The work also includes waste generated by construction activities, materials, packaging, scraps, and garbage.
- B. Soils excavated within the projects areas, as shown on the drawings, are anticipated to be free of contamination, however, should the Contractor, using visual and olfactory methods, identify potentially contaminated soil, the Contractor shall notify the Engineer to determine if the soil requires special handling. This material shall be segregated from other excavated material. It shall be stockpiled on plastic and covered with plastic until such time as appropriate testing and analysis can be completed by the Engineer. Upon completion of the testing and analysis the Engineer will direct the Contractor concerning the disposition of the material. Soil beyond construction excavation limits will not require excavation unless free draining product is observed or other special conditions exist in which case the Engineer will direct the Contractor in additional excavation. Soils determined to be contaminated will be hauled and disposed of at a locations designated in the following paragraphs.

1.03 DEFINITIONS

- A. Co-mingled or Off-site Separation: Collecting all material types into a single bin or mixed collection system and separating the waste materials into recyclable material types at an off-site facility.
- B. Construction, Demolition and Land-Clearing (CDL) Waste: Includes all nonhazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition, and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage.
- C. Hazardous/Dangerous Waste: As defined by Chapter 70.105.010 Revised Code of Washington and 40 Code of Federal Register 261 and by Washington Administrative Code 173-303.
- D. Proper Disposal: As defined by the jurisdiction receiving the waste.
- E. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- F. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on-site (as in the grinding of concrete).
- G. Recycling Facility: An operation that is permitted to accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
- H. Salvage for Reuse: Existing usable product or material that can be saved and reused in some manner on the project site or other projects off-site.
- I. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
- J. Source-Separated Materials: Materials that are sorted at the site into separate containers for the purpose of reuse or recycling.
- K. Sources Separation: Sorting the recovered materials into specific material types with no, or a minimum amount of, contamination on site.

- L. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.
- M. Garbage: Product or material typically considered to be trash or debris that is unable to be salvaged for resale, salvaged and reused, returned, or recycled.
- N. Olfactory Indications (methods): Of or relating to the sense of smell. Soils contaminated with petroleum and other volatile constituents typically exhibit characteristic odors that can be detected (and sometimes identified) by smell.
- O. PID: Photo Ionization Detector. A field instrument that is used to detect the presence of and give a relative indication of the concentration of vapors emitted from volatile constituents (contamination) in environmental media (soil and water).
- P. Soil (waste) Profile: A characterization of the chemical and physical properties of a waste material including the types of contaminants and their concentrations as measured by approved laboratory analytical methods. A profile is required by the receiving permitted disposal or recycling facility.
- Q. Special Handling: Refers to hauling and disposal of soils that, because they are contaminated, cannot be reused in place as backfill or as general fill at another location. Such soils must be hauled to and managed at a permitted disposal or recycling facility.
- R. Type A Contaminated Soil: Soil that must be removed from the Project site and has been determined by the Engineer to contain petroleum hydrocarbons in concentrations exceeding state or federal cleanup standards or special Port determined criteria. Type A soil requires disposal at an approved facility.
- S. Type B Contaminated Soil: Soil that must be removed from the Project site and has been determined by the Engineer to contain petroleum hydrocarbons or other contaminants in concentrations that will require disposal or recycling at one of the approved facility.
- T. Type C Contaminated Soil: Soil determined by Engineer to contain unknown constituent(s) and requires further testing and classification. Type C soil requires disposal at one of the approved facility.
- U. Type D Material: Material including soil, determined by the Engineer not to require special handling with regard to this Contract. Classification of material as Type D material by the Port is not a certification nor does it release the Contractor of liability or obligation to meet any disposal or storage facility acceptance or testing requirements.
- V. Unanticipated Contamination: Contamination unexpectedly found in an excavation or in other locations where there is no prior knowledge, information, or history to indicate possible spills or releases of contamination.
- W. Visual Indications (methods): A preliminary evaluation of the potential presence of contamination based on visual observation. For example, fuel contaminated soils are frequently discolored or stained relative to non-petroleum impacted native soils or clean fill.

1.04 SUBMITTALS

- A. Waste Management Plan
- B. Waste Management Final Report
- C. Soils Management Plan
- D. Soils Hauling Receipts

1.05 PERFORMANCE GOALS

- A. General: Divert CDL waste to the maximum extent practicable from the landfill by one or a combination of the following activities:
 - 1. Salvage
 - 2. Reuse
 - 3. Source separated CDL recycling
 - 4. Co-mingled CDL recycling
- B. CDL waste materials that can be salvaged, resold, reused or recycled, include, but are not limited to the following:
 - 1. Clean dimensional wood, pallet wood, plywood, OSB, and particleboard
 - 2. Asphalt
 - 3. Concrete and concrete masonry units
 - 4. Ferrous and non-ferrous metals
 - 5. Field office waste paper, aluminum cans, glass, plastic, and cardboard
- C. Hazardous/Dangerous Wastes, contaminated soils and other hazardous materials such as paints, solvents, adhesives, batteries, and fluorescent light bulbs and ballasts shall be disposed of at applicable permitted facilities.

1.06 WASTE MANAGEMENT PLAN

- A. Submit a Waste Management Plan within 10 days after the notice to proceed and not less than 5 days before any demolition activities in accordance with these specifications. Provide a Waste Management Plan in a format as approved by the Engineer.
- B. The Waste Management Plan shall include the following:
 - 1. Name of designated Waste Management Coordinator.
 - 2. A list of waste materials, including estimated types and quantities, of the waste that will be generated. Indicate salvaged for resale, salvaged for reuse, recycled, or disposed for each item.
 - 3. Identify waste handling methods to be used, including one or more of the following:
 - a. Method 1 - Contractor or subcontractor(s) hauls recyclable materials to an approved recycling facility.
 - b. Method 2 - Contracting with diversion/recycling hauler to haul recyclable material to an approved recycling or material recovery facility.
 - c. Method 3 - Recyclable material reuse on-site.
 - d. Method 4 - Recyclable material salvage for resale.
 - e. Method 5 - Contractor or subcontractor hauls waste to an approved disposal facility.
 - 4. Identification of each recycling, disposal, or material recovery facility to be utilized, including name, address and types of materials being recycled at each facility.
 - 5. Description of the method to be employed in collecting, and handling, waste materials.

6. Description of methods to communicate Waste Management Plan to personnel and subcontractors.
 7. Actions that will be taken to reduce solid waste generation.
- C. Revise and resubmit Waste Management plan as required by the Engineer. Approval of the Contractor's Plan does not relieve the Contractor of responsibility for compliance with all applicable laws and regulations. Distribute copies of the Waste Management Plan to each subcontractor.

1.07 WASTE MANAGEMENT FINAL REPORT

- A. Provide a Waste Management Final Report, in a format approved by the Engineer. The Waste Management Final Report shall list the following for the project:
1. A record of each waste material type and quantity recycled, reused, salvaged, or disposed from the Project. Include total quantity of waste material removed from the site and hauled to a landfill.
 2. Percentage of total waste material generated that was recycled, reused, or salvaged.
- B. Quantities shall be reported by weight (tons) unless otherwise approved by the Engineer.
- C. Submit copies of manifests, weight tickets, recycling/disposal receipts or invoices, which validate the calculations or a signed certification of completeness and accuracy of the final quantities reported.

1.08 SOILS MANAGEMENT PLAN

- A. A minimum of 10 days prior to excavation of any subsurface materials, submit a Soils Management Plan to the Engineer. The Soils Management Plan must be approved by the Engineer prior to any excavation of subsurface materials. Include the following in the Soils Management Plan:
1. Identification of all soil disposal/recycling facilities to be used on the project for Type A and B Contaminated Soil.
 2. Identification of all fill sites, disposal facilities and/or end uses of material determined to be Type D Material.
 3. Contingency for delivery and placement of Type C Contaminated Soil at an onsite Soil Stockpile area.
 4. Contingency for managing debris encountered during excavation that may disqualify soil for disposal or recycle at the approved facilities.
 5. General description of how equipment operators, safety personnel and other applicable Contractor shall coordinate with the Engineer to facilitate handling of contaminated soil in accordance with this specification.
 6. Description of all haul routes to be used on the project.
- B. Include in the Two Week Look Ahead Schedule specific time frames for excavation. Each excavation activity shall be given an individual line item description, time frame and duration.
- C. Notify the Engineer prior to hauling contaminated soil to the soil disposal facility. The notification shall include:
1. An estimate of the number of truck-trips, the haul destination, and the period in which these trips will be made (e.g., 20 truck-trips to the Waste Management Facility over the two-week period beginning on March 1, 2023).

1.09 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor shall maintain compliance with all applicable Federal, State, or Local laws that apply to Construction Waste Management and material salvage, reuse, recycling and disposal.
- B. Disposal Sites, Recyclers and Waste Materials Processors: All facilities utilized for management of any materials covered under this specification must maintain all necessary permits as required by federal, state and local jurisdictions.

1.10 HEALTH AND SAFETY

- A. The Contractor is required to implement all health and safety provisions as required by Specification 01 35 29 - Health, Safety and Emergency Response Procedures.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 WASTE DISPOSAL

- A. Source-Separated CDL Recycling: Provide individual containers for separate types of CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.
- B. Co-Mingled CDL Recycling: Provide containers for co-mingled CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.
- C. Landfill: Provide containers for CDL waste that is to be disposed of in a landfill clearly labeled as such.
- D. Removal of CDL Waste from Project Site: Transport CDL waste off Port's property and provide legal disposal.

3.02 SOIL DISPOSAL

- A. Excavation/Testing: The field-testing for contaminated soil will be performed by the Port and will result in the following classification of material as defined in paragraph DEFINITIONS of this section:
 - 1. Type A Contaminated Soil.
 - 2. Type B Contaminated Soil.
 - 3. Type C Contaminated Soil.
 - 4. Type D Material.
- B. Disposition of Material
 - 1. Type A and B Contaminated Soil: Material determined to be Type A or B Contaminated Soil shall be hauled by the Contractor to an approved facility for disposal.
 - 2. Type C Material: Material determined to be Type C is of unknown origin or special circumstances. Material determined to be Type C contaminated soils shall be hauled to an onsite Soil Stockpile Site area. The Contractor shall protect the material once stockpiled. The Port will direct the Contractor on the disposition of the material following the analysis of the suspect material.

3. Type D Material: Material determined not to require special handling (Type D) shall be hauled by the Contractor to a site determined by the Contractor. If testing or certification of this material is required by the receiving site, the Contractor shall complete these requirements. The Port will not certify or declare the material suitable for unrestricted use.
- C. Other Requirements
1. Cover all soil stockpiles and maintain stockpile areas in accordance with SECTION 01 57 13 - Temporary Erosion and Sediment Control and Construction Stormwater Pollution Prevention.
 2. Material determined to be Type A, Type B or Type C contaminated material may be, upon approval of the Engineer, temporarily stockpiled within the construction area. Provide an impervious liner beneath this soil and securely cover with a waterproof covering. Remove the material prior to completion of work in the work area.
 3. Submit all hauling receipts (or copies of receipts) from the receiving facility for all Type A, Type B or Type C Contaminated soil at least weekly.
 4. The Engineer may require shut down of excavation should unforeseen condition warrant.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures
 - 2. Final completion procedures
 - 3. Warranties
 - 4. As-Built Drawings

1.02 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

1.03 PROJECT SUBMITTALS

- A. Submittal of Project Warranties
- B. Record Drawings
 - 1. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous recordkeeping requirements and submittals in connection with various construction activities.
- C. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.04 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request:
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Port unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in individual Sections, including specific warranties, operation and maintenance manuals, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 3. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by the Contract Document or Engineer. Label with manufacturer's name and model number where applicable.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request:
 - 1. Terminate and remove temporary facilities from Project site
 - 2. Complete final cleaning requirements

- D. Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to the date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Notice of Substantial Completion after inspection or will notify Contractor of items, either on the Contractor's list or additional items identified by the Engineer, that must be completed or corrected before notice will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for final completion.

1.05 PUNCH LIST (LIST OF INCOMPLETE ITEMS)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of Construction.
 - 1. Organize list of spaces in sequential order.
 - 2. Organize items applying to each space by major elements.

1.06 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete and submit the following:
 - 1. Submittal of all remaining items, including as-built documents, final completion construction photographic documentation, damage or settlement surveys, surveys, and similar final record information and all other submittals defined in the Contract Documents.
 - 2. List of Incomplete Items: Submit copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List). Copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be complete and ready for final inspection and tests. On receipt of request, the Engineer will either proceed with inspection or notify contractor of unfulfilled requirements.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
- C. Execution of all Change Orders.

1.07 FINAL ACCEPTANCE PROCEDURES

- A. Submittals Prior to Final Acceptance:
 - 1. Receipt and approval of application for final payment; due within seven (7) days of receipt of Final Completion by the Engineer;
 - 2. Contractor's signed waiver and release of claims on the Engineer provided form;
 - 3. Contractor's submittal of list of all suppliers and subcontractors and the total amounts paid to each on the Engineer provided form; and
 - 4. Contractor's submittal of a list of all subcontractors and suppliers requiring Affidavits of Wages paid on the Contract and certify that each of companies will submit an approved Affidavit of Wages paid to the Port within 30 days.

- B. The Engineer will issue the Final Acceptance Memo upon receipt of the required submittals.

PART 2 - PRODUCTS

2.01 CONTRACTOR'S WARRANTY

- A. The Contractor warrants the labor, materials and equipment delivered under the contract to be free from defects in design, material, or workmanship, and against damage caused prior to final inspection. Unless otherwise specified, this warranty extends for a period of one (1) year from the date of Substantial Completion.
1. Time of Submittal: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit the Port's rights under warranty.
 2. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Port or Port tenants during construction.
 3. Submit Warranties to the Engineer as a submittal, as described in 01 33 00 – Submittal Procedures.
 4. Provide additional copies of each warranty in Operation and Maintenance Manuals as described in 01 78 23 – Operation and Maintenance Manuals.

2.02 AS-BUILT DRAWINGS

- A. Project As-Built Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
- B. Project As-Built Drawings shall be compiled by the Contractor and submitted to the Engineer for translation to the Record Drawings on a monthly basis.
1. The Project As-Built Drawings will be submitted on paper full-sized (ANSI D) copy.
 2. Drawings shall be kept current and shall be done at the time the material and equipment is installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:
 - a. Additions – Red
 - b. Deletions – Green
 - c. Comments – Blue
 - d. Dimensions – Graphite
 3. Project As-Built Drawings must be complete and accepted by the Engineer before Final Completion is issued.
 4. As-Built Drawings shall be in accordance with horizontal and vertical control as shown on the drawings.

PART 3 – EXECUTION

3.01 MAINTENANCE OF AS-BUILT DRAWINGS

- A. The Contractor shall maintain at the Project site, in good order for ready reference by the Engineer, one complete copy of the Contract Documents, including Addenda, Change Orders, other documents issued by the Port, a current Progress Schedule, and approved Submittals. The Contractor shall also generate and keep on site all documents and reports required by applicable permits.
- B. The Contractor's As-Built Drawings shall be updated to record all changes made during construction. The location of all existing or new underground piping, valves and utilities, and obstructions located during the Work shall be appropriately marked until the Contractor incorporates the actual field dimensions and coordinates into the as-built drawings. The as-built drawings shall be updated at least weekly and before elements of the Work are covered or hidden from view. After the completion of the Work, the as-built drawings shall be provided to the Port.

END OF SECTION

PART 1 – GENERAL

1.01 SUMMARY

- A. Operation and Maintenance Manual Submittal

1.02 SUBMITTALS

- A. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by the Port, submit completed documents within ten days after acceptance.
 - 2. Submit 1 electronic copy of completed documents 10 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit 2 hard copy and 1 electronic sets of revised final documents in final form by Final Completion.

PART 2 - PRODUCTS

2.01 OPERATION AND MAINTENANCE MANUALS

- A. For small equipment and products (such as furnishings or equipment not requiring routine maintenance), the following information (minimum of 2 printed copies, plus one electronic copy) shall be furnished for all items on the Project requiring operational and/or maintenance procedures and for any additional items indicated by the Engineer. Printed information shall be organized by the Contractor into appropriately sized 3-ring binders (no larger than 3"). The binders shall be sized for material approximately 8-1/2 by 11 inches, and the material in the binders shall not protrude beyond the covers. The binder(s) shall be divided with coversheets for each major item of equipment. The cover sheets shall be typewritten to indicate the name, type of equipment, and location(s) within the Project where installed. A neatly typewritten index shall be provided. Electronic information shall be in PDF format (additional formats where specified) and shall be organized with folders and appropriate file names so as to make the information easily accessible:
 - 1. Product Summary:
 - a. Provide the following information (as applicable, indicate 'N/A' where an item does not apply) in Excel spreadsheet format:
 - 1) Description
 - 2) Plan Sheet Number
 - 3) Vendor
 - 4) Manufacturer
 - 5) Model Year
 - 6) Serial Number
 - 7) Warranty – Start Date; Finish Date
 - 2. Operating Procedures: These instructions consist of the manufacturer's recommended step-by-step procedures for use of the product.
 - 3. Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the product.

4. Specific Information: Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.
5. Complete identification, including model and serial numbers.
6. Submittal information, as specified in Section 01 33 00 Submittal Procedures.
7. Warranty Information: This information consists of the name, address, and telephone number of the manufacturer's representative to be contacted for warranty, parts, or service information.
8. All operation and maintenance information shall be comprehensive and detailed and shall contain information adequately covering all normal operation and maintenance procedures.
9. All information shall be specific for the items of equipment installed on the project. Material not directly applicable shall be removed, omitted, or clearly marked as inapplicable.
10. If manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project.
11. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated. It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project final acceptance.

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The extent and location of the demolition work is indicated on the Drawings and in the specifications. The work includes, but is not limited to:
 - 1. The requirements for the removal, wholly or in part, and satisfactory disposal of pavements, fencing, storm drainage and utility pipelines and structures, miscellaneous site debris, and other obstructions which are designated to be demolished on the Drawings or within these Specifications. Tent structures and site trailers are to be removed by the Port prior to construction.
 - 2. Payment of all costs required for disposal of items at legal disposal sites, including all permit fees and related costs.
 - 3. Salvaging items as indicated on the Drawings and in the specifications.
 - 4. Backfilling and compaction of holes, voids, trenches or pits that result from such removal.
- B. All demolition items not identified for salvage by the Engineer shall become the property of the Contractor. Disposal of all demolition items shall be in accordance with the specifications, local, state and federal requirements.

1.02 SUBMITTALS

- A. Demolition Management Plan (DMP)
 - 1. The DMP shall provide the procedures proposed for the complete accomplishment of the demolition work and management of the demolition wastes and documentation. The procedures shall provide for safe conduct of the work, careful removal and disposition of materials specified to be salvaged or disposed, protection of property to remain undisturbed, and coordination with other work in progress. The procedures shall include a detailed description of the methods, staff, and equipment to be used for each operation, the sequence of operations, and quality control measures to ensure compliance with the Contract and regulatory requirements.
 - 2. Submittal requirements in 01 74 16 Soil Characteristics and Waste Management may be included as part of DMP plan or submitted separately.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION

- A. Utility locates shall be performed prior to start of demolition. Coordinate and resolve with the Engineer to turn off or de-energize affected services before starting demolition.
- B. Verify all items for demolition, disposal, and salvage as early as practicable prior to start of the work. Notify the Engineer immediately if observed conditions differ from anticipated conditions.
- C. All existing utilities and structures that are not identified to be demolished, removed, and replaced, shall be protected in place. Repair of damage to existing utilities and structures shall be the responsibility of the Contractor.
- D. Pothole investigations:
 - 1. Perform pothole investigations to determine the alignment and horizontal and vertical position of utilities at the locations indicated on the Drawings.

2. Potholes shall be 12-inch diameter air vacuum excavations.
3. Survey utilities located by potholing and provide survey data to the Engineer within 5 days of completing pothole investigations.
4. Backfill pothole excavations with Gravel Backfill for Pipe Zone Bedding.

3.02 DISPOSAL AND DISPOSITION OF MATERIALS

A. Disposition of Materials

1. Excavated soil and aggregate shall be stockpiled onsite and reused as fill, subgrade, and base course. No soil or aggregate material shall be hauled offsite unless deemed unsuitable by the Engineer.
2. All materials and equipment removed, and not used for relay or reinstallation within the project, shall become the property of the Contractor and shall be removed from Port property.
3. The Contractor assumes full responsibility for the proper disposal of all demolition materials under this Contract in a manner that meets the requirements of federal, state and local regulations for protecting the health and safety of employees, the public, and for protecting the environment.

B. Cleanup:

1. Haul route and paved site areas will be swept to remove any construction debris or soil tracked out by construction equipment and vehicles.
2. There shall be no debris, rubble or litter left at the site from any of the demolition operations and the site shall be clean.

END OF SECTION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Concrete Formwork
- B. Cast-in-Place Concrete elements

1.02 REFERENCES

- A. General: Publications listed below form a part of this Specification to the extent indicated by references thereto.
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM A82 – Specification for Steel Wire, Plain, for Concrete Reinforcement
 - 2. ASTM A615 - Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
 - 3. ASTM C33 - Specification for Concrete Aggregate
 - 4. ASTM C94 - Specification for Ready-Mixed Concrete
 - 5. ASTM C150 - Specification for Portland Cement
 - 6. ASTM C156 - Test Method for Water Retention by Concrete Curing Materials
 - 7. ASTM C171 - Specification for Sheet Material for Curing Concrete
 - 8. ASTM C260 – Specification for Air Entraining Admixtures for Concrete
 - 9. ASTM C309 - Specification for Liquid Membrane-Forming Compounds for Curing Concrete
 - 10. ASTM C494 - Specification for Chemical Admixtures for Concrete
 - 11. ASTM C1107 – Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
 - 12. ASTM D1751 - Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Type)
 - 13. ASTM D4832 - Standard Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders
 - 14. ASTM E96 - Test Methods for Water Vapor Transmission of Materials
- C. American Concrete Institute (ACI)
 - 1. ACI 301 – Specifications for Structural Concrete
 - 2. ACI 305 – Hot Weather Concreting
 - 3. ACI 306 – Cold Weather Concreting
 - 4. ACI 308 - Standard Practice for Curing Concrete
 - 5. ACI 315 - Details and Detailing of Concrete Reinforcement
 - 6. ACI 318 - Building Code Requirements for Reinforced Concrete
- D. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. M 284 – Standard Specification for Epoxy-Coated Reinforcing Bars
- E. Washington State Department of Transportation (WSDOT)

1. Standard Specifications for Road, Bridge, and Municipal Construction

1.03 SUBMITTALS

- A. Submit the following documents to, and obtain written approval from, the Port before placing any concrete on the job:
 - 1. Certificates of Specification compliance for materials to be used.
 - 2. Proposed concrete mix design indicating constituent material contents per cubic yard of concrete.
 - 3. Mix design test certificates for compressive strength, yield, air content, and slump of the proposed concrete mix. As a minimum, compressive strength test results at 3, 7, 14, and 28-days shall be provided in accordance with ACI 318 5.3 unless otherwise specified.
 - 4. Manufacturer's name and certificates of compliance with applicable standards shall be provided for all admixtures, concrete bonding agents, curing compounds, etc., proposed for use on the job.
- B. Product Data: Submit data on the following products
 - 1. Concrete admixtures
 - 2. Curing compounds
 - 3. Joint sealant
 - 4. Accessories

1.04 VERIFICATION OF ELEVATIONS AND DIMENSIONS

- A. Field verify existing surface elevations.

1.05 QUALITY ASSURANCE

- A. Inspection and Testing as follows:
 - 1. Port will provide necessary inspection and testing as required.
 - 2. Provide all necessary assistance and access in carrying out such inspections and tests, including sufficient mixed concrete and constituent materials required for testing and inspection, at no additional cost to the Port.
- B. Qualification of Workmen as follows:
 - 1. Provide at least one person who shall be present at all times during execution of this portion of the work. They shall be thoroughly trained and experienced in concrete work, and shall direct all work performed under this section.
 - 2. Trained and experienced journeyman concrete finishers shall be responsible for finishing of exposed surfaces.

PART 2 – PRODUCTS

2.01 GENERAL

- A. All concrete shall be normal weight concrete and ready-mix. Batching, mixing, transportation, and delivery of ready-mix concrete shall conform to ASTM C94.
- B. Obtain cementitious materials from same source throughout.

2.02 MATERIALS

A. Forms

1. Forms shall be wood or metal. Metal forms shall have all bolt and rivet heads countersunk so that a plane, smooth surface of the desired contour is obtained.
2. Wood forms shall be sheathed or lined with plywood or tempered masonite so as to form even and uniform surfaces. Plywood forms shall not be used with the second ply exposed. Plywood panels shall be as large as possible.

B. Aggregate

1. Conform to ASTM C 33.
2. All coarse and fine aggregate shall consist of hard, tough, durable, particles free from foreign materials, and shall be stored in such a manner as to prevent segregation, excessive breakage, and the introduction of foreign material.
3. Coarse aggregates shall be size 57 per ASTM C 33.

C. Water-reducing admixtures: Conform to the requirements of ASTM C 494. Dosage rates in accordance with the manufacturer's recommendations.

D. Air-entraining admixtures: Conform to ASTM C 260. Dosage rates in accordance with the manufacturer's recommendations to meet the air content specified herein. The air-entraining admixture shall be added directly to the concrete materials either before or during mixing.

E. Dowel bars shall meet the requirements of WSDOT Standard Plan A-40.10-04.

2.03 CONCRETE MIX DESIGN

A. Concrete for foundations may contain fly ash as a mineral admixture.

B. The proportions of aggregate to cement for any concrete shall be such as to produce a mixture which will work readily into the corners and angles of the forms, around reinforcement and embedded items, with the least possible segregation of the material and preventing excess free water to collect on the surface

C. Concrete shall be ready mixed concrete conforming to ASTM C94 and the following:

1. 3-day compressive strength: 4000 psi minimum
28-day compressive strength: 6000 psi minimum
2. Slump: (3) inches, plus or minus one (1) inch. Slump may be increased by the addition of a water reducing admixture if approved by the Engineer.
3. Aggregate: Per ASTM C33. Specific gravity of 2.60 minimum required.
4. Cement: Cement shall conform to ASTM C150, Type I/II.
5. Admixtures
 - a. All admixtures shall be supplied by one manufacturer approved by the Engineer.
 - b. Chemical admixtures shall conform to ASTM C494.
 - c. Air-Entraining Agents: Shall meet the requirements of ASTM C260 and shall be added to the mixer in the amount necessary to produce (5-1/2%) entrained air; plus or minus 1-1/2%.

- d. Water-Reducing Agents: Shall be Master Builders' Pozzolith," or approved equal, conforming to ASTM C494, Type A for water-reducing, Type D for water-reducing and retarding, and Type E for water-reducing accelerating.
- e. Accelerators: Shall be approved by the Engineer prior to use and shall not include chlorides.
- f. Retarders: Shall be approved by the Engineer prior to their use.

D. Non-shrink Grout

- 1. ASTM C1107. For setting dowels and other reinforcing bars; anchor bolts; and grouting pipes, Master Builders Masterflow 928, or approved equal. The use of powdered aluminum will not be permitted.

E. Curing Materials

- 1. Curing materials and methods shall conform to ACI 308.
- 2. Curing and Sealing Compound shall conform to ASTM C309. Compound must be compatible with all applied finishes designated for use. Materials shall provide water retention not exceeding loss of .055 kg per square meter of surface in 72 hours when used at a coverage of 200 square feet per gallon and tested in accordance with ASTM C156.
- 3. Non-staining Waterproof Paper Covering: ASTM C171.
- 4. Polyethylene Film: Permeance not to exceed 0.20 perms when tested according to ASTM E96, Procedure B.

F. Expansion Joint Material

- 1. Pre-molded filler, bituminous fiber type, ASTM D1751.

G. Joint Sealant

- 1. Pecora DynaTred Traffic Grade Fuel Resistant Sealant or approved equal.

H. Bonding Agent

- 1. Two component epoxy suitable for bonding new concrete to existing in an exterior application.

2.04 CONCRETE JOINT SEALANT

- A. Sand: ASTM D 1073, Grade Nos. 2 or 3.
- B. Joint Sealant: Pecora DynaTred Traffic Grade Fuel Resistant Sealant or approved equal.

PART 3 – EXECUTION

3.01 FORMWORK

- A. Forms shall be used to confine the concrete to the shape, line and dimensions of the members, and shall be substantial and sufficiently tight to prevent leakage of mortar. Forms shall be adequate in strength, securely anchored and properly braced and/or tied together to maintain position, shape and alignment within the specified tolerances during all concrete placement and consolidation of operations.
- B. The inside of forms shall be clean, free of encrusted grout and coated with a form release compound appropriate for the form surface and concrete finish required. Forms shall be thoroughly wetted before placing concrete. Under no circumstances shall form release compound be allowed to contact reinforcing steel or construction joint surfaces.

3.02 CONCRETE

A. Placement

1. Concrete shall not be placed without adequate cover during expected rainy periods. Cover materials shall be at the job site, ready for installation before concreting is started and shall remain in place until the concrete has set sufficiently to resist any damage to the finish from rainfall.
2. Water shall be removed from within forms and excavation before and during placement of concrete.
3. Concrete shall be deposited in all cases as near as practicable directly in its final position and shall not be caused to flow in the mass in a manner to permit or cause segregation. Dropping concrete a distance of more than 5 feet vertically without proper confinement or depositing a large quantity at any point and running or working it along the forms will not be permitted.
4. Concrete shall be consolidated with the aid of mechanical vibrating equipment supplemented by hand spading and tamping. Vibrating equipment shall be of the internal type and shall at all times be adequate to properly consolidate all concrete.

B. Cold and Hot Weather Concreting

1. Do not place concrete when the atmospheric temperature drops below 40°F or rises above 90°F, unless special procedures are followed. The temperature of the concrete at time of placement shall not be over 80 degrees Fahrenheit.
2. Production, delivery, placing, curing, inspection and testing of concrete under hot or cold weather conditions shall comply with ACI 305, "Hot Weather Concreting" or ACI 306, "Cold Weather Concreting".

C. Finishing

1. Spreading dry cement for finishing is not permitted.
2. Finishing operations of all formed surfaces shall begin immediately upon removal of the forms and shall be completed within 8 hours following form removal. Immediately after form removal, all fins, unsightly ridges and projections, and exposed lips and edges shall be removed with a sharp tool or stone to make smooth and flush with adjoining surfaces. All tie rod holes shall be mortar packed. Honeycomb areas shall be patched or cut- out and replaced as directed by the Engineer.
3. Float Finish: All concrete slabs shall be float finished and sloped to indicated grades. Floating may be performed by use of hand or power driven equipment. Floating shall be started as soon as the screeded surface has stiffened sufficiently to produce a uniform surface free from screed marks.
4. Broom Finish: Concrete surfaces shall have a broom finish. The broom strip shall be approximately 1/16-inch.

D. Concrete Pavement Joints

1. Concrete pavement joints and dowel bars shall be constructed and spaced in accordance with WSDOT Standard Plan A-40.10-04.

E. Control Joint Saw Cutting

1. Concrete control joints shall be saw cut while the concrete is green, as soon as practical after placement.

F. Curing

1. Protect concrete from premature drying. Provide temporary housing, covering, heating, cooling, or other protection as needed. Follow finishing operations with curing measures within 2 hours.
2. Keep concrete continuously moist for 7 days. Prevent rapid drying at the end of the curing period. Accomplish cure by one of the following methods:
 - a. Absorbent mats or fabrics kept continuously wet.
 - b. Use curing compounds as specified. Remove compound film from all exposed surfaces at the end of curing period. Obtain Engineer's approval for all curing compounds used on vertical surfaces.
 - c. Non-staining waterproof paper as specified. Keep all joints airtight and weighted in place.
 - d. Non-staining polyethylene film as specified. Keep all joints weighted to prevent wind penetration.

G. Tolerances

1. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
2. Maximum Variation From True Position: 1/4 inch.

H. Protection

1. Immediately after placement, protect concrete from premature drying, excessive hot or cold temperatures, and mechanical injury.
2. Do not permit vehicular traffic over concrete until strength of concrete has reached 4000 psi.

I. Testing

1. Testing of concrete material will be done by the Port. Methods of sampling, testing, evaluation, and acceptance will conform to ACI 301. All fresh concrete samples intended for testing will be taken at the point of deposit into the formwork.
2. Testing, as described above, will be at Engineer's discretion and in no way relieves the Contractor of any obligations.
3. Additional tests by the Port may include the following:
 - a. Additional testing and inspection required because of changes in materials, proportions, and procedures.
 - b. Additional testing of materials or concrete occasioned by their failure by test or inspection to meet Specification requirements.
4. If any delivered load of concrete is rejected, dispose of completely off-site.

J. Rejected Concrete

1. Concrete not conforming with any portion of the specifications or concrete damaged from any cause and any concrete which shall be found defective at any time before the completion and acceptance of the work shall be removed and replaced.

3.03 CONCRETE/ASPHALT JOINT SEALANT

- A. Cracks between new concrete slab and asphalt shall be sealed with an approved fuel resistant sealant. Top of sealant shall be recessed 1/2 inch below finished pavement surface.
- B. The depth and width of joint sealant shall be per the manufacturer's requirements.

END OF SECTION

This page intentionally left blank

PART 1 – GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- 1. Section 09 96 00 – High Performance Coatings

1.02 DESCRIPTION OF WORK

- A. All metal fabrications are indicated on the Drawings and in the specifications. The work shall consist of furnishing all materials, labor, and equipment for fabricating, and erecting metal fabrications in accordance with the Drawings, notes, and this specification.

1.03 REFERENCE STANDARDS

- A. American Galvanizers Association (AGA), Quality Assurance Manual.
- B. American Institute of Steel Construction (AISC), Specification for Structural Steel Buildings, 2010.
- C. American Institute of Steel Construction (AISC), Code of Standard Practice for Steel Buildings and Bridges, 2010.
- D. American Society for Testing Materials (ASTM), Standard Specifications and Standard Test Methods, designated by basic reference in this section (use the most current edition at the time of bid unless otherwise indicated).
- E. American Welding Society (AWS) D1.1 – 2010, Structural Welding Code – Steel.
- F. American Welding Society (AWS) A2.4 – 2012, Standard Symbols for Welding, Brazing, and Nondestructive Examination.
- G. Society for Protective Coatings (SSPC), Surface Preparation Specifications.
- H. Washington Association of Building Officials (WABO) Standard No. 27-13, WABO Welder and Welding Operator Performance Qualification Standard for Structural Steel, Sheet Steel, and Reinforcing Steel.

1.04 QUALITY ASSURANCE

- A. A. Demonstrate that the fabricator has a minimum of five (5) years of experience fabricating and working similar metals and configurations, including cutting, bending, forming, welding, and finishing.
- B. B. Welders shall be currently certified by the Washington Association of Building Officials (WABO) for structural welding.
- C. C. Welding procedures, operations, welders, and tackers shall be qualified in accordance with AWS D1.1.
- D. D. Nondestructive testing (NDT) and inspection of all shop and field welds may be performed in accordance with AWS D1.1 by an independent testing agency retained by the Port. Welds failing to comply shall be repaired or replaced at the Contractor's expense.

1.05 SUBMITTALS

- A. Detailed and coordinated shop drawings indicating all shop and erection details, including cuts, copes, connections, holes, fasteners, material specifications, welds, surface preparations, and finishes.
- B. Documentation that the fabricator has the qualifications and experience described above.
- C. Welder qualifications and certifications.
- D. Weld Procedure Specifications (WPS's) proposed for use on the project. Submit supporting Procedure Qualification Records (PQR's) for all WPS's not prequalified by AWS.
- E. Mill certificates for each heat number of structural and miscellaneous steel.

PART 2 – PRODUCTS

2.01 GENERAL

- A. All products shall be new, free from oxidation, corrosion, and defects, and shall be of the specified quality.
- B. Protect all materials and fabrications before, during, and after installation from damage. Protect the installed work of other trades from damage.
- C. Protect galvanized finishes and painted coatings from damage by use of padded slings and straps.
- D. In the event of damage, immediately make all repairs and replacements as per the manufacturer's written recommendations and as approved by the Engineer at no additional cost to the Port.

2.02 STRUCTURAL STEEL

- A. Plates and bars: ASTM A 572, Grade 50, unless noted otherwise.
- B. Angles and channels: ASTM A 36.
- C. HSS sections: ASTM A 500, Grade B.
- D. Pipe: ASTM A 53, Grade B, ASTM A 106, Grade B or C.

2.03 BOLTS, NUTS, AND WASHERS

- A. Anchor bolts or anchor rods: ASTM F 1554, Grade 55, headed, unless noted otherwise.
- B. Economy bolts, hex head bolts, and other bolts not specified as high-strength: ASTM A 307, Grade A.
- C. Nuts and washers for economy bolts, hex head bolts, and other bolts not specified as high-strength: ASTM A 563, suitable for grade of bolt, ASTM F 844, wide series, maximum thickness, respectively.
- D. High-Strength bolts, nuts, and washers: ASTM A 325-X, Type 3, ASTM A 563-DH, hot-dip zinc coated, and ASTM F 436, hot-dip zinc coated, respectively.

2.04 OTHER MATERIALS

- A. Traffic Bollards: ASTM A 53 Grade B
- B. All other materials not specifically described but required shall be proposed by the Contractor, new, free of corrosion, and subject to the approval of the Engineer.

PART 3 – EXECUTION

3.01 PREPARATORY REVIEW

- A. Prior to all work of this section, inspect the installed work of all other trades affecting this work and verify that all such work is complete to the point where this installation may commence.
- B. Coordinate and furnish placement drawings, templates, instructions, and directions for installation of embedded anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items.
- C. Verify that the work can be fabricated and installed in accordance with the Drawings, specifications, and reference standards. Immediately report discrepancies to the Engineer and do not proceed with fabrication or installation until discrepancies are resolved and direction is provided.

3.02 FABRICATION

- A. All structural steel shall be fabricated in accordance with the approved shop drawings and reference standards.
- B. Shop-fabricate and preassemble all items complete for installation to the extent practicable to minimize field assembly. Disassemble units only as necessary for shipping and handling limitations.
- C. Weld all shop connections unless otherwise directed on the Drawings. All joints shall be tightly fitting, securely fastened, square, plumb, straight, and true.
- D. Drill or punch all holes required for attachments and bolted connections including those of other trades. Burned holes are not acceptable.
- E. Welding of all metal fabrications shall conform to AWS D1.1.
- F. Install and erect all miscellaneous metal and metal fabrications in accordance with the design drawings, shop drawings, and reference standards.

3.03 PROTECTIVE COATINGS

- A. The following metal fabrications shall be coated only as specified in Section 09 96 00 – High Performance Coatings (not galvanized).
 - 1. Traffic bollards
 - 2. Traffic bollard guardrails

END OF SECTION

This page intentionally left blank

PART 1 – GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in:
 - 1. Section 05 55 00 – Metal Fabrications

1.02 DESCRIPTION OF WORK

- A. The work includes furnishing all materials, labor, equipment, and accessories for preparing and providing the required finished painting and protective coatings on the fabrications and items identified on the drawings and in the specifications. See Section 05 50 00 for list of project components to receive high performance coating.

1.03 REFERENCE STANDARDS

- A. Society for Protective Coatings (SSPC), SSPC Painting Manual, Volume I, 4th Edition, “Good Painting Practice”.
- B. SSPC Painting Manual, Volume II, 2008 Edition, “Systems and Specifications”.
- C. SSPC, “The Fundamentals of Cleaning and Coating Concrete”.
- D. SSPC, “Procedure for Determining Conformance to Dry Coating Thickness Requirements”, SSPC-PA2.

1.04 QUALITY ASSURANCE

- A. Coating application shall be by qualified and experienced personnel having demonstrated at least five (5) years of experience in coating applications for marine structures.
- B. Conform to all manufacturers’ specifications and recommendations for achieving published results with each product, application, and condition. If manufacturers’ specifications or recommendations differ from those in these specifications, report the discrepancy to the Engineer and obtain further direction before proceeding.
- C. The Engineer may inspect coating preparation, application, or touchup at its discretion. Provide access to the Engineer for these inspections and at no additional cost to the Port.

1.05 SUBMITTALS

- A. A complete list of products and product descriptions proposed for use as coating systems.
 - 1. Provide manufacturer product data and accessories, including specifications, physical characteristics, and performance data.
 - 2. Manufacturer instructions and directions for application of the coating systems.
 - 3. Manufacturer instructions and procedures for use in performing field repairs and touch-ups to the coating systems.
 - 4. Use the same manufacturer’s products for all coats unless otherwise approved by the Engineer.
- B. Documentation that key personnel of the coating applicator have at least the minimum experience and certifications described above and below. Demonstrate consistent experience applying the proposed coating systems under similar conditions. List information by individual and include the following.

1. Position or responsibility
 2. Employer (if other than the Contractor)
 3. Name of facility owner
 4. Mailing address and telephone number of facility owner
 5. Name of contact reference in facility owner's organization
 6. Location, size, and description of structure
 7. Dates work was performed
 8. Description of work performed on structure
- C. Samples of all paints and finishes proposed for use.
- D. Schedule of coating operations with dates and items listed.
- E. Measurement reports of dry paint thickness on metal surfaces according to SSPC-PA2.

1.06 PRODUCT HANDLING

- A. Deliver paint and associated materials in undamaged and unopened containers bearing labels of the manufacturer, which indicate the contents and directions for use, storage, and handling. Store materials in a location where the ambient temperature and humidity is not outside the ranges recommended by the manufacturer.
- B. Prevent fire. Open containers of inflammable materials only as needed. Keep rubbing cloths, oily rags, etc., in tightly closed metal containers, or remove from the job site daily. Benzene, gasoline, or distillates shall not be stored on the job site.
- C. Do not damage the coating materials before, during, or after installation and prevent damage to the installed work and materials of other trades.
- D. In the event of damage, immediately make all repairs and replacements as directed by the Engineer according to the manufacturer's recommendations and procedures at no additional cost to the Port.

PART 2 – PRODUCTS

2.01 COATING SYSTEMS

- A. Manufacturers who have provided acceptable coating systems for past marine projects include the following. This does not imply that products from any manufacturer listed below will be acceptable.
1. Carboline Protective Coatings (1-206-243-6494)
 2. International Marine Coatings of AkzoNobel (1-206-763-8003),
 3. Sherwin Williams Co Industrial and Marine Coatings (1-360-931-4645)
 4. Tnemec Company (1-206-762-5755)
 5. Wasser High-Tech Coatings (1-253-218-2222)
 6. Fields Company LLC (1-253-627-4098)
- B. Coating systems selected for each type of finish surface shall be products of a single manufacturer. Coating materials shall be suitable for corrosion protection in an aggressive marine environment.

- C. Materials not specifically noted but required for the work, such as thinners, or other materials, shall be products of the approved paint manufacturer or compatible products accepted by the coating manufacturer.
- D. Paint products for coating systems shall be mixed according to the manufacturer's directions. Do not deviate except with written approval of the Engineer.

2.02 SUBSTITUTIONS

- A. Manufacturer-specific coating systems are referenced in this specification. The manufacturer's product identification numbers indicate the product type, quality, and performance required for a specific application. Bids shall be based upon the manufacturer-specific coating systems referenced herein or approved equal.
- B. Submit in writing a request to the Engineer for review and approval prior to material procurement and in accordance with Section 00 26 00 – Substitution Procedures. Substantiating technical data and documentation are required as described above for all submittals.
- C. Proposed coating system substitutions will be reviewed and evaluated, subject to the approval of the Engineer, based on equivalency to the coating systems referenced in this herein. Substitute coating system data and documentation that does not demonstrate equivalency will not be approved.
- D. Approved substitutions shall be at no additional cost to the Port.

2.03 COLOR SCHEDULE

- A. OSHA safety yellow: traffic bollards, and traffic bollard guardrails.

2.04 COATING SCHEDULE

- A. Non-galvanized metal surfaces that are indicated in Section 05 50 00 – Metal Fabrications to be coated (painted) and that are above MHHW shall be coated as follows:
 - 1. Surfaces shall be "white metal blast cleaned," conforming to SSPC-SP5.
 - 2. Primer: Interzinc 52, zinc-rich epoxy primer by International Marine Coatings of AkzoNobel, applied to a minimum dry film thickness of 2.5 mils for all surfaces.
 - 3. Top coat: Intergard 345 epoxy by International Marine Coatings of AkzoNobel, applied to a minimum dry film thickness of 5 mils on all surfaces.

PART 3 – EXECUTION

3.01 GENERAL

- A. Apply paints and coatings in accordance with the manufacturer's recommendations for each application. Adhere to the manufacturer's provisions, directions, and procedures for the following.
 - 1. Surface preparation
 - 2. Ambient temperature and humidity monitoring
 - 3. Mixing techniques
 - 4. Method of product application
 - 5. Minimum and maximum thickness per coat to achieve total thickness
 - 6. Minimum time between coats

- B. Use clean equipment and brushes. Spread materials evenly without runs, drips, sags, laps, brush marks, variations in color, texture, or sheen, and without "holidays".
- C. Vary color or sheens between coats and apply all coats to uniform thicknesses. Refinish any work determined defective or damaged, and repair all defective or damaged work at no additional cost to the Port. Leave finished surfaces clean, completely covered, and uniform in appearance.

3.02 APPLICATION

- A. The location shall be as indicated on the drawings and in the specifications.
- B. Number of coats as specified herein.
- C. Thickness of coats: Use ample undiluted materials; apply in uniform thickness over entire areas; do not exceed manufacturer's recommended spreading rate per gallon.
- D. Tint prime coats if necessary to obtain uniform finish coats.

3.03 TOUCHUP PAINTING

- A. Paint film damaged due to field welding or other Contractor activities shall be immediately restored to its original thickness after thorough cleaning and necessary surface preparation according to the written manufacturer's recommendations.
- B. Touchup painting shall be at the Contractor's expense.

3.04 INSPECTION

- A. The Contractor shall perform measurements of dry paint thickness on all metal surfaces by means of magnetic gages as described in SSPC-PA2.
- B. Copies of the measurement reports shall be provided to the Engineer prior to delivery.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Electrical work consists of furnishing, installing, testing and placing in satisfactory operation all equipment, materials, devices and appurtenances, necessary to provide complete systems according to the intent of the Drawings and Specifications. In general, this includes all labor, materials, electrical equipment, tools, and other incidental equipment to complete the work.
- B. Provide all ductbanks, vaults, and wires for power as shown on the drawings.
- C. Provide all ductbanks, and vaults for the communications system as shown on the drawings.
- D. Provide additional equipment and materials to provide complete and functional systems as shown on the drawings.
- E. Coordinate with other trades to provide complete and functional systems as shown on the drawings.

1.02 INTENT OF DRAWINGS

- A. The drawings are intended to serve as working drawings for general layout. Equipment, receptacles, switches, panels, lights, disconnects and raceways are partially diagrammatic and do not necessarily indicate actual routings or all appurtenances required for a complete installation.
- B. Minor changes in the locations of raceways, devices and the like, from those shown on the plans, shall be made without extra charge if, so directed by the Port of Tacoma/ Engineer before installation.

1.03 MANUFACTURERS' RECOMMENDATIONS

- A. Make all installations in strict accordance with manufacturers' published recommendations and details. All equipment and materials recommended by them shall be considered as part of this contract.

1.04 SUPERVISION AND COORDINATION

- A. Contact Electrical Inspection and obtain permit before starting work.
- B. Maintain adequate supervision of the Division 26 work and have a responsible person in charge at the site any time work is in progress or when necessary for coordination with other trades.
- C. Schedule work to best serve the interests of the Engineer. Lay out work by referring to Civil and other Contractors to anticipate their movements. Cooperate with the other contractors on the job and coordinate work to avoid interference with them.
- D. Determine a satisfactory space allocation arrangement where electrical material is installed in proximity to work of other trades. No extra payments will be allowed to relocate work that interferes with that of other trades.

1.05 CODES AND REGULATIONS

- A. All work shall conform to current applicable National, State and local Codes; these shall be regarded as the minimum standard of quality for material and workmanship. Contractor shall provide all Labor and Material that may be required for compliance with Code Requirements or Code Interpretations, although not specifically detailed on the Drawings or in the Specifications. Contractor shall become familiar with all the following codes prior to bidding.

ASTM American Society for Testing and Materials

NBFU	National Board of Fire Underwriters
NEC	National Electrical Code
---	State Electrical Code
NESC	National Electrical Safety Code
NEMA	National Electric Manufacturers Association
NFPA	National Fire Protection Association
UL	Underwriters Laboratories, Inc.
ICEA	Insulated Cable Engineers Associations
CBM	Certified Ballast Manufacturers
---	Federal, State and Local Building Codes
ETL	Electrical Testing Laboratories
---	Local Electrical Code
---	Service Policies of the Serving Electrical Utility

- B. Nothing in these Drawings and Specifications shall be construed as permitting work not conforming with governing codes.
- C. The Contractor shall not be relieved from complying with any requirements of these contract documents which may exceed, but not conflict with, requirements of the governing codes.
- D. Contractor should include in the bid all costs to have a Department of Labor & Industries approved firm evaluate the installation safety, and compliance with code as required per 296-40-100 for any equipment specified or furnished that is not UL labeled.

1.06 PERMITS & FEES

- A. Obtain and pay all fees for licenses, permits and inspections required by laws, ordinances and rules governing work specified herein. Arrange for inspection of work and provide inspectors with all necessary assistance.

1.07 WORKMANSHIP

- A. All work shall be done by competent craftsmen skilled in the specific work to be done. Equipment shall be installed in a neat and workmanlike manner following the best practice of the trade.

1.08 OPERATING INSTRUCTIONS

- A. Fully instruct the Engineer's designated representatives in the operation and maintenance of all components of the electrical system upon completion of the work and after all tests and final inspection(s) by the Authority(s) Having Jurisdiction.
- B. All costs for contractor's instruction are to be included in the bid proposal.
- C. Instructors shall be contractor's superintendents or foreman knowledgeable in each system and equipment suppliers' representatives for special systems.

1.09 AS-BUILT RECORD DRAWINGS

- A. Continuously maintain a set of As-Built Drawings to indicate all significant deviations from the original design and the actual placement of equipment and underground conduits. Location of conduit stub-outs shall be dimensioned from accepted reference lines.
- B. Refer to Section 01 77 00 for final As-Built Drawings requirements.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. General requirements for materials and installation methods.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All materials shall be new, free from defects, of the quality specified herein and on the drawings. Materials shall be designed to insure satisfactory operation and rated life in the prevailing environmental conditions where they are being installed. They shall be listed by Underwriter's Laboratories or a recognized testing laboratory for use under these conditions.
- B. Each type of material shall be of the same make and quality throughout the job. The materials furnished shall be the latest standard design products of manufacturers regularly engaged in their production.

2.02 TECHNICAL DATA

- A. Technical information contained herein relies entirely on tests and ratings provided by manufacturers who are solely responsible for their accuracy. The Engineer, by use of this information in no way implies the results of published manufacturer's information has been verified.

2.03 AS SPECIFIED EQUIPMENT

- A. This specification generally lists only one make and model number for each item of equipment or material required for the project. This is not intended to be restrictive but is intended to indicate the standard of quality, design and features required. In addition, the listed product is the basis of the design regarding physical size, electrical power requirements and performance. The product so identified is designated "as specified or equal."

2.04 COMPLETE SYSTEMS

- A. All systems specified herein and shown on the drawings shall be complete and operational in every detail. Mention of certain materials in bidding documents shall not be construed as releasing the Contractor from furnishing such additional materials and performing all labor required to provide a complete and operable system.

2.05 ELECTRICAL EQUIPMENT IDENTIFICATION

- A. General: These items shall be provided with nameplates:
 - 1. Disconnect switches, panelboards, lighting control panels, circuit breakers, contactors, and relays in separate enclosures.
 - 2. Special systems shall be properly identified at outlets, junction and pull boxes, terminal cabinets and equipment racks.
- B. Nameplate Inscription
 - 1. All nameplates shall adequately describe the function or operation of the identified equipment as required.
 - 2. Panelboard nameplates shall include equipment designation, voltage and phase of supply, i.e., Panel A, 208/120V, 3 phase, 4 wire.
 - 3. Nameplate designations shall be consistent for all components of a particular piece of equipment, such as starter, disconnect switch, Push Button control station(s) and the like.

4. Contractor shall submit a complete list of nameplates for approval.
- C. Nameplate Construction
1. Nameplates shall be laminated phenolic plastic with minimum 3/16" high black engraved characters on white background.
 2. Nameplates shall be securely fastened to the equipment with No. 4 round-head philips, cadmium plated steel, self-tapping screws. Contact cement adhesive only is not acceptable.

PART 3 - EXECUTION

3.01 PROTECTION OF WORK

- A. Protect all work, wire, cable, materials and equipment installed under this division against damage by other trades, weather conditions or any other causes.
- Equipment found damaged or in other than new condition will be rejected as defective.
- B. Transformers, panels, light fixtures and electrical equipment shall be kept covered or enclosed to exclude moisture, dust, dirt, cement, or paint and shall be free of all such contamination before acceptance. Enclosures and trims shall be in new condition, free of rust, scratches or other finish defects. Properly refinish in a manner acceptable to the Engineer if damaged.
- C. Keep conduit and raceways closed with suitable plugs or caps during construction to prevent entrance of dirt, moisture, concrete or foreign objects. Raceways shall be clean and dry before installation of wire and at the time of acceptance.
- D. Make up and insulate wiring promptly after installation of conductors. Wire shall not be pulled-in until raceways are complete, all bushings are installed, and raceway terminations are completed. Wire shall not be pulled into conduit embedded in concrete until after the concrete is placed and forms are removed.

3.02 LABELING

- A. Clearly and properly label the complete electrical system, as specified herein, to indicate the loads served or the function of each item of equipment connected under this contract.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all wire, cable and terminations for a complete installation.

1.02 SUBMITTALS

- A. All wire types and cables.
- B. Splices
- C. Terminations
- D. Plastic Cable Ties

PART 2 - PRODUCTS

2.01 PACKAGING

- A. Conductors shall be delivered to the job site in approved original cartons, or on reels as recommended by the manufacturer, and shall bear the Underwriter's Laboratory (UL) Label. Reels shall be provided with suitable protection to prevent fork-lift damage to conductors during shipment or storage prior to use.

2.02 SPECIALIZED CONDUCTORS

- A. Conductors for specialized systems shall be as recommended by the equipment manufacturer.

2.03 CONDUCTORS - 600 VOLTS

- A. Stranded Copper, insulated for 600 volts.
- B. Insulation type XHHW-2.

2.04 CONNECTORS - 600 VOLTS

- A. Branch circuit conductor splices:
Pre-insulated "twist-on" type or "crimped-on" type as approved (Scotch-lok, Ideal or equal).
- B. Cable Splices:
Split-bolt or tool applied sleeves with pre-formed insulated cover, heat shrinkable tubing or approved plastic insulating tape.
- C. Terminator lugs of No. 12 wire and smaller:
Spade, insulated type to be tool applied.
- D. Terminator lugs for No. 10 wire or larger:
Two-bolt (or approved positive restraint), tool applied compression type (Burndy or equal).

2.05 INSULATING MATERIALS

- A. Insulating tape or heat shrink tubing shall have the equivalent rating of the applicable conductor insulation (Scotch 3M, RAYCHEM or equal).

2.06 PLASTIC CABLE TIES

- A. Nylon, or equivalent, locking type (T&B or equal).

PART 3 - EXECUTION

3.01 GENERAL

- A. Install all wiring in raceway.

3.02 MINIMUM WIRE SIZE

Lighting and Power Syatem	No. 12 AWG
Wiring in Lighting Fixtures	No. 12 AWG
Control Circuits for Motors, etc.	No. 14 AWG

3.03 CONDUCTOR TYPES, REFERENCED ON PLAN

- A. Conductors shall be stranded copper.

3.04 CONDUCTOR COLORING CODE

CONDUCTOR COLOR CODING SHALL BE AS FOLLOWS:

- A. 208/120 volt system
 - A Phase - Black
 - B Phase - Red
 - C Phase - Blue
 - Neutral – White
 - Grounding – Green
 - Switched wires – Other colors
- B. 480/277 volt system
 - A Phase - Brown
 - B Phase - Orange
 - C Phase - Yellow
 - Neutral -Gray
 - Grounding – Green with yellow strip
 - Other Colors - Switched Wires
- C. Conductors shall have colored insulation except wires larger than #8 may be black with colored tape identification at all terminations and splices.
- D. Additional colors may be used where such colors will help in identifying wires and different systems.

3.05 CONDUCTOR INSTALLATION

- A. Raceways shall be complete, clean and free of burrs before pulling conductors.
- B. U.L. approved pulling compounds may be used with the residue cleaned from the conductors and raceway entrances after the pull is made.

- C. Contractor shall obtain the manufacturer's published recommendations for the handling, pulling and terminating of the cable. Contractor shall perform work in accord with manufacturer's recommendations and accept all responsibility for work not in accord with manufacturer's recommendations.
- D. Pulleys or blocks shall be used for alignment of the conductors when pulling. Pulling shall be in accordance with manufacturer's specifications regarding pulling tensions, bending radius of the cable and compounds.
- E. No mechanical pulling means shall be used for wires No. 8 AWG and smaller. Cables shall be pulled by the conductor, not by the insulation or shielding.

3.06 MOISTURE PROTECTION

- A. Cable ends shall be protected at all times from moisture. Provide approved heat-shrink end caps or equivalent for all unterminated cable ends.

3.07 CONDUCTORS IN PANELS

- A. Conductors in panels and terminal cabinets shall be neatly grouped and formed in a manner to "fan" into terminals with regular spacing.

3.08 CABLE SUPPORTS

- A. Provide conductor support devices as required by code in vertical cable runs.

3.09 INSULATION REMOVAL

- A. Insulation shall be removed with approved wire stripping tools. Conductors that are nicked or ringed are unacceptable and shall be cut off and re-stripped.

3.10 INSULATION OF ENERGIZED TERMINATIONS

- A. Insulate all exposed energized connections and splices with approved tape or heat shrink tubing. Tape, if used, shall be half-lapped in two directions.

3.11 TERMINATIONS - COPPER CONDUCTORS 600 VOLTS

- A. Control and special systems wires shall be terminated with a crimped-on lug when terminating at a screw connection.
- B. All screw and bolt type connectors shall be made up tight and retightened after an eight-hour period. Tighten all bolted connections with a ratcheting type torque wrench per manufacturer's standards.
- C. All tool applied crimped connectors shall be applied per manufacturer's recommendations and physically checked for tightness.

3.12 IDENTIFICATION

- A. Tag and label each conductor at each end with stamped metal tags.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide a complete grounding system that complies with the current edition of the National Electrical Code (NEC), and all applicable regulatory codes.

1.02 SUBMITTALS

- A. Grounding Conductors

PART 2 - PRODUCTS

2.01 GROUND RODS

- A. Minimum size: 3/4" diameter by 8'-0" long, copper-clad steel rods, or as noted on the drawings.

2.02 GROUND CONDUCTORS

- A. Grounding conductors shall be soft drawn, bare, stranded copper unless otherwise noted. Size as shown on the plans and per the National Electrical Code (NEC) Article 250.

1. GROUNDING ELECTRODE CONDUCTORS FOR A.C. SYSTEMS:

See NEC table 250-94

2. EQUIPMENT GROUNDING CONDUCTORS:

See NEC table 250-95

Equipment grounding conductors may be insulated; provide green insulation and/or approved permanent identification for conductors larger than No. 6 AWG.

2.03 GROUND ELECTRODE CONNECTORS

- A. Connectors for grounding electrode conductor to ground rod shall be of the thermal fusion type; conductor-to-conductor connections may be either thermal fusion or approved hydraulically applied compression type.

2.04 GROUNDING BUSHINGS

- A. Grounding bushings shall be matched to the ampacity of the grounding conductor and shall have approved set-screw type grounding lug connectors.

2.05 GROUNDING CONNECTORS

- A. Shall meet the requirements of ground bushings, cast, set-screw or bolted type.

2.06 GROUNDING CLAMPS

- A. Clamps shall be matched to the ampacity of the grounding conductor. Provide approved raceway hub where grounding conductor is shown protected by conduit or armored cable. Clamps shall be U-bolt type for connection to waterpipes.

PART 3 - EXECUTION

3.01 GROUND CONTINUITY

- A. Maintain ground continuity throughout the entire electrical system.
- B. Ground per NEC.
- C. Provide approved grounding bushings or locknuts on all conduits terminating in panelboards, pullboxes or other enclosures to insure continuity of conduit grounding connections.

- D. Provide a separate grounding conductor in all conduits.
- E. All plug-in receptacles shall be bonded to the box and ground system.

3.02 GROUNDING CONNECTIONS

- A. All grounding connections shall be carefully made to insure low system impedance. Locate grounding connections to allow future servicing and expansion.

3.03 PREPARATION

- A. Prior to making mechanical or thermal connections, all conductors shall be clean, dry and bright with the bonding surface thoroughly cleaned of any oxides, mill, scale or other foreign matter.

3.04 PROTECTION

- A. Ground conductors shall be protected from damage during construction. Provide protective coverings or rigid non-ferrous conduit.

3.05 GROUND RODS

- A. Ground rods shall be driven into undisturbed soil to full depth. Provide additional rods, ionic salt solutions and the like where special low-resistant grounds are encountered.

3.06 CONCEALED GROUND ELECTRODE SYSTEM

- A. Concealed ground electrode systems, shall be installed, inspected, tested and certified for low resistance connections and low resistance to earth ground prior to being covered.

3.07 THROUGH-SLAB GROUND PENETRATIONS

- A. Ground conductors extending through the slab shall be protected by a rigid PVC conduit sleeve; the void portion of the sleeve shall be packed with a non-hardening type duct seal.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all raceways for a complete electrical system. Include all fittings, hangers and appurtenances required for a complete installation.

1.02 SUBMITTALS

- A. All proposed conduit type to be utilize for this project.
- B. Flexible Metal Conduit

PART 2 - PRODUCTS

2.01 CONDUITS

- A. Galvanized Rigid Steel, thick wall (GRS)
- B. Flexible Metal Conduit with polyvinyl chloride jacket
- C. Non-metallic, polyvinyl chloride (PVC), schedule 80
- D. Polyvinyl chloride (PVC) coated Galvanized Rigid Steel conduit

2.02 FITTINGS

- A. GRS couplings and connectors shall have threaded connections. Galvanized malleable iron or non-corrosive alloy compatible with galvanized conduit. Running thread or set screw type fittings are not permitted.
- B. Flexible Metal Conduit shall be Thomas & Betts "Super Liquid-Tight" with external ground lug or equal.
- C. PVC fittings shall be solvent welded.
- D. Conduit fittings must match conduit construction and type.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install PVC Schedule 80 raceways concealed below grade. For above grade raceways use PVC coated galvanized rigid steel.
- B. Cut conduit ends square, ream smooth and extend maximum distance into all couplings and connectors.
- C. Provide and install manufactured end caps on all conduit ends during construction to prevent the entrance of water or dirt. Tape, as a cover, is not acceptable.
- D. Pull a properly sized mandrel through each conduit prior to installation of conductors or pull-lines to remove any materials trapped within the conduit run.
- E. All PVC elbows shall be factory made.
- F. Field made elbows are acceptable for steel conduits when made with approved bending tools. Bends that show conduit flattened or deformation are unacceptable and shall be replaced.
- G. Conduits shall maintain a minimum 12" clearance from any high temperature surface.
- H. The conduit layout shall be carefully planned by the contractor to ensure neat and workmanlike installation.

- I. Any work showing inadequate planning may be ordered removed by the Engineer and shall be replaced in a neat and proper manner at no additional cost to the engineer.

3.02 CONDUIT SIZING

- A. Conduits shall be sized as shown on the drawings. Minimum conduit size shall be $\frac{3}{4}$ " trade diameter.

3.03 GRS

- A. Install GRS for all conduits in wet locations, concrete, exposed to weather, hazardous locations, where subject to physical damage and as noted on drawings.
- B. Connections shall be watertight in damp locations.

3.04 FLEXIBLE CONDUIT

- A. Provide liquid tight flexible conduit connection to equipment with at least a 60-degree loop to allow for isolation and flexibility. Provide bonding jumper as required by N.E.C.

3.05 PVC CONDUIT SCHEDULE 80

- A. PVC schedule 80 conduit shall be used underground. Field bends, less than 45 degrees, when necessary, shall be formed with factory recommended heater. PVC bends 45 degrees or greater shall be factory made of rigid steel conduit.

3.06 UNDERGROUND RACEWAYS

- A. Burial depth of underground raceways shall be not less than indicated on drawings and shall be deeper where so noted herein or required to avoid conflicts.

3.07 STUBUPS THROUGH CONCRETE SLABS

- A. Conduits through concrete slabs shall be steel. Install at such depth that the exposed conduit is vertical and curved section of the elbow is not visible.

3.08 PULL-LINES

- A. Provide 150-pound plastic pull-lines in conduit-only systems and spare conduits to facilitate future conductor installation. Tag and label each end with stamped metal tags.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes the requirements for trenching, backfilling and installation of underground conduits, ducts and ductbanks, and the design, fabrication, delivery and installation of pull boxes, and handholes.
- B. Related Documents: The provisions and intent of the Contract, the General and Supplementary Conditions, and Division 1 Specification Sections, apply to the Work as if specified in this Section.

1.02 SUBMITTALS

- A. Pull boxes and handholes.

1.03 REFERENCES

- A. ASTM (American Society for Testing and Materials).
- B. NFPA 70 (National Fire Protection Association) - National Electrical Code.

1.04 QUALITY ASSURANCE

- A. Listing and Labeling: Provide products that are Listed and Labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to the Authority Having Jurisdiction and marked for intended use for the location and environment in which they are installed.
- B. Comply with NFPA 70, as adopted and administered by the Authority Having Jurisdiction.
- C. ANSI C2 "National Electrical Safety Code" for components and installation.

1.05 DEFINITIONS

- A. Duct: Electrical conduit and other raceway, either metallic or nonmetallic, used underground, embedded in earth or concrete.
- B. Ductbank: 2 or more conduits or another raceway installed underground in the same trench or concrete envelope.
- C. Handhole: An underground junction box in a duct or duct bank.
- D. Vault: An underground utility structure, large enough for a person to enter, with facilities for installing, operating, and maintaining equipment and wiring.

1.06 COORDINATION

- A. Coordinate layout and installation of ducts, and handholes with final arrangement of other utilities as determined by field verification. Revise locations and elevations from those indicated as required to suit field conditions and ensure that duct runs drain to handholes.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver ducts to site with ends capped. Store nonmetallic ducts with supports to prevent bending, warping, and deforming.
- B. Store precast concrete units at site as recommended by manufacturer to prevent physical damage. Arrange so identification markings are visible.
- C. Lift and support precast concrete units only at designated lifting or supporting points.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manholes, Handholes and Vaults: Subject to compliance with requirements, provide products by one of the following or approved equal:
 - 1. Utility Vault Company
 - 2. PIPE

2.02 CONDUIT AND DUCTS

- A. Metallic Conduit: Galvanized Rigid Steel Conduit (GRC): ANSI C80.1.
- B. Nonmetallic conduit:
 - 1. Rigid Plastic Conduit: NEMA TC 2, UL 651A, Schedule 80 PVC, rated for use with 90°C conductors under all installation conditions and labeled for underground use.

2.03 CONDUIT FITTINGS

- A. Steel Fittings: Zinc-coated, cast malleable, ferrous metal, threaded fittings, with neoprene cover gasket on each fitting installed outdoors.
- B. PVC Conduit and Tubing Fittings: NEMA TC 3.
- C. "Mogul Fittings": Provide "Mogul" size fittings for all conduit.
- D. Seal Bushings: O.Z. compound bushing on each conduit entering a building from outside underground and on each conduit passing from one space into another, which is normally at a lower temperature.
- E. Hubs: Appleton "Hub" or "Hub-U" series or Thomas & Betts "370" series hub, or engineer approved equal, on each conduit terminating in a box where a hub was not previously provided.
- F. Unions: Appleton Type "EC" or Thomas & Betts "Erickson Coupling", or engineer approved equal, conduit unions where necessary.

2.04 DUCT SUPPORTS

- A. Rigid PVC spacers selected to provide 3" minimum duct spacings.

2.05 HANDHOLES

- A. General: Precast concrete as indicated on Drawings, with the following standard features:
 - 1. Cover with insert or other device to facilitate lifting.
 - 2. Cover with locking devices similar to REA or FARGO.
 - 3. Drain hole in base, 2-inch minimum diameter.
 - 4. Knockouts in sides of adequate number and spacing to accommodate ductbank shown.

2.06 ACCESSORIES

- A. Cable Stanchions: Hot-rolled, hot-dipped galvanized "T" section steel, 2-1/4-inch size, punched with 14 holes on 1-1/2-inch centers for cable arm attachment.
- B. Cable Arms: 3/16-inch thick hot-rolled, hot-dipped galvanized sheet steel pressed to channel shape, arranged for secure mounting in horizontal position at any position on cable stanchions.

- C. Cable Support Insulators: High glaze, wet-process porcelain arranged for mounting on cable arms.
- D. Ground Rods: Solid copper clad steel, 3/4-inch diameter by 8-feet length.
- E. Ground Wire: Stranded bare copper, #2 AWG minimum.
- F. Duct Sealing Compound: Non-hardening, safe for human skin contact, not deleterious to cable insulation, workable at temperatures as low as 35°F withstands temperature of 300°F without slump, and adheres to clean surfaces of plastic ducts, metallic conduits, conduit coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and the common metals.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine site to receive ducts and handholes for compliance with installation tolerances and other conditions affecting performance of the underground ducts and handholes. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Existing Utilities: Locate all existing utilities in the area prior to performing any excavation.

3.02 RACEWAY APPLICATIONS

- A. Refer to Specifications and Drawings for raceway materials. Where not specified otherwise, use metallic conduit above and underground.
- B. Metallic Conduit: Only use as specified in this section.
- C. Nonmetallic conduit: Use underground only.
 - 1. Underground Direct-Burial: Schedule 80 Rigid Plastic Conduit.
- D. Use PVC Schedule 80 fittings for PVC conduit and suitable water-tight connections where PVC conduit connects to galvanized steel conduit.

3.03 CONDUIT AND DUCT INSTALLATION

- A. Install all conduits as indicated on Drawings and according to manufacturer's written instructions.
- B. Slope: Pitch ducts minimum of 4 inches per 100 feet to drain toward handholes and away from buildings and equipment.
- C. Make joints in ducts and fittings watertight according to manufacturer's instructions. Stagger couplings so those of adjacent ducts do not lie in the same plane.
- D. Stub-Ups: Use rigid steel conduit for stub-ups through concrete to equipment. Install insulated grounding bushings at the conduit terminations. For equipment mounted on outdoor concrete pads, extend steel conduit a minimum of 2 feet beyond the edge of the pad. Couple steel conduits to the ducts with adapters designed for the purpose and then encase the coupling with 3 inches of concrete.
- E. Sealing: Provide temporary closure at all duct terminations in handholes installed in this Project. Use sealing compound and plugs to withstand a minimum of 15 psi hydrostatic pressure.
- F. Pulling Cord: Install 150-pound- test nylon cord in installed ducts, including spares.

3.04 BACKFILLING

- A. Backfill only after all necessary inspections and tests have been performed.

- B. Remove all debris, rocks, broken concrete, and formwork before backfilling trenches.
- C. Use Controlled Density Fill under pavement areas or wherever non-settling backfill is required.
- D. Deposit backfill in layers with materials described in Article 2.07, "Backfill Material." Uniformly spread and compact backfill with suitable power tampers to the density of the adjacent soil and in such a manner so as not to disturb the alignment of the conduit. If settlement occurs, refill, compact and smooth off to conform to the surface of the ground.
- E. Restore surface features at areas disturbed by excavation, and reestablish original grades.
 - 1. Restore all areas disturbed by trenching, storing of dirt, cable laying, and other work.
 - 2. Replace disturbed paving.

3.05 HANDHOLE INSTALLATION

- A. Install as indicated on Drawings according to manufacturer's written instructions and ASTM C 891.
 - 1. Install units plumb and level and with orientation and depth coordinated with arrangement of connecting ducts to minimize bends and deflections required for proper entrances.
 - 2. Support units on a level bed of crushed stone or gravel, graded from the 1-inch sieve to the No. 4 sieve and compacted to the same density as the adjacent undisturbed earth.
 - 3. Drainage: Where handholes have drain holes in the bottom, provide two feet minimum of gravel below the drain hole or provide a drain line to the nearest storm drain.
- B. Grounding:
 - 1. Provide ground rod through floor in handholes with the top protruding 6 inches above the floor.
 - 2. Ground exposed metal components and hardware with #2 AWG bare copper ground conductor.
- C. Hardware: Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cable and conductors and as indicated on Drawings.
 - 1. Field-Installed Bolting Anchors: Do not drill deeper than 3-7/8 inches for field-installed anchor bolts. Use a minimum of 2 anchors for each cable stanchion.
- D. Train cables neatly around corners and secure to walls or ceiling using cable clamps with expansion anchors.

3.06 IDENTIFICATION

- A. Identify raceways, cables and equipment.
- B. Provide warning and caution signs as required by the Authority Having Jurisdiction and these specifications.
- C. Label raceways entering concealed locations from exposed locations as to the destination via the concealed area.

3.07 TESTING AND CLEANING

- A. Pull brush through full length of ducts. Use round bristle brush with a diameter 1/2-inch greater than internal diameter of duct. Clean internal surfaces of handholes.

- B. Duct Integrity: Swab out ducts with a mandrel 1/4 inch smaller in diameter than internal diameter of ducts.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Distribution, dry-type transformers with nominal primary and secondary rating of 600 V and less, with capacities up to 1500 kVA.
- B. Related Requirements:
 - 1. Section 26 05 00 "General Electrical Provisions" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.02 ACTION SUBMITTALS

- A. Product Data:
 - 1. For each type of product.
 - a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type and size of transformer.
 - b. Include rated nameplate data, capacities, weights, dimensions, minimum clearances, installed devices and features, and performance for each type and size of transformer.
- B. Shop Drawings:
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of field connections.
 - 2. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment.
 - 3. Include diagrams for power, signal, and control wiring.

1.03 INFORMATIONAL SUBMITTALS

- A. Manufacturers' Published Instructions: Record copy of official installation instructions issued to Installer by manufacturer for the following:
 - 1. Transformer temporary heating, working clearances, anchoring, torque values, and insulation-resistance testing.
- B. Source quality-control reports.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Inspection: On receipt, inspect for and note shipping damage to packaging and transformer.
 - 1. If manufacturer packaging is removed for inspection, and transformer will be stored after inspection, re-package transformer using original or new packaging materials that provide protection equivalent to manufacturer's packaging.
- B. Storage: Store in warm, dry, and temperature-stable location in original shipping packaging.
- C. Temporary Heating: Apply temporary heat in accordance with manufacturer's published instructions within enclosure of ventilated-type units, throughout periods during which equipment is not energized and when transformer is not in space that is continuously under normal control of temperature and humidity.

- D. Handling: Follow manufacturer's instructions for lifting and transporting transformers.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Dry Type Distribution Transformers:
1. General Electric
 2. Federal Pacific
 3. Square D
 4. Eaton
 5. Approved Equal
- B. Source Limitations: Obtain each type of transformer from single source from single manufacturer.

2.02 GENERAL TRANSFORMER REQUIREMENTS

- A. Description: Factory-assembled and -tested, air-cooled units for 60 Hz service.
- B. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
- C. Transformers Rated 15 kVA and Larger:
1. Comply with 10 CFR 431 (DOE 2016) efficiency levels.
 2. Marked as compliant with DOE 2016 efficiency levels by qualified electrical testing laboratory recognized by authorities having jurisdiction.

2.03 DISTRIBUTION TRANSFORMERS

- A. Comply with NFPA 70, and list and label as complying with UL 1561.
- B. Cores: Electrical grade, non-aging silicon steel with high permeability and low hysteresis losses.
1. One leg per phase.
 2. Core volume must allow efficient transformer operation at 10 percent above nominal tap voltage.
 3. Grounded to enclosure.
- C. Coils: Continuous windings without splices except for taps.
1. Coil Material: Copper.
 2. Internal Coil Connections: Brazed or pressure type.
 3. Terminal Connections: Welded.
- D. Enclosure: Ventilated.
1. Core and coil must be encapsulated within resin compound using vacuum-pressure impregnation process to seal out moisture and air.
 2. KVA Ratings: Based on convection cooling only and not relying on auxiliary fans.
 3. Wiring Compartment: Sized for conduit entry and wiring installation.

- 4. Environmental Protection:
 - a. Outdoor: UL 50E, Type 3R with Stainless Steel base channel.
- 5. Finish Color: ANSI 61 gray weather-resistant enamel.
- E. Taps for Transformers 25 kVA and Larger: Two 2.5 percent taps above and two 2.5 percent taps below normal full capacity.
- F. Insulation Class, 30 kVA and Larger: 220 deg C, UL-component-recognized insulation system with maximum of 115 deg C rise above 40 deg C ambient temperature.
- G. Grounding: Provide ground-bar kit or ground bar installed on inside of transformer enclosure.
- H. Low-Sound-Level Requirements: Maximum sound levels when factory tested in accordance with IEEE C57.12.91, as follows:
 - 1. 30.01 to 50.00 kVA: 45 dB(A-weighted) for K-factors of 1, 4, and 9
 - 2. 50.01 to 150.00 kVA: 50 dB(A-weighted) for K-factors of 1, 4, and 9.

2.04 IDENTIFICATION

- A. Nameplates:
 - 1. Engraved, laminated-acrylic or melamine plastic signs for distribution transformers, mounted with corrosion-resistant screws.

2.05 SOURCE QUALITY CONTROL

- A. Nonconforming Work:
 - 1. System equipment that does not pass tests and inspections will be considered defective.
- B. Prepare test and inspection reports.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine conditions for compliance with enclosure- and ambient-temperature requirements for transformers.
- B. Verify that field measurements are as needed to maintain working clearances required by NFPA 70 and manufacturer's published instructions.
- C. Examine walls, floors, roofs, and concrete bases for suitable mounting conditions where transformers will be installed.
- D. Verify that ground connections are in place and requirements in Section 26 05 26 "Grounding" have been met. Maximum ground resistance must be 5 Ω at location of transformer.
- E. Environment: Enclosures must be rated for environment in which they are located. Covers for UL 50E, Type 4X enclosures may not cause accessibility problems.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install transformers level and plumb on concrete base with vibration-dampening supports. Locate transformers away from corners and not parallel to adjacent wall surface.
- B. Construct concrete bases and anchor floor-mounted transformers in accordance with manufacturer's published instructions.

1. Coordinate size and location of concrete bases with actual transformer provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.
- C. Secure transformer to concrete base in accordance with manufacturer's published instructions.
- D. Secure covers to enclosure and tighten bolts to manufacturer-recommended torques to reduce noise generation.
- E. Remove shipping bolts, blocking, and wedges.

3.03 CONNECTIONS

- A. Ground equipment in accordance with Section 26 05 26 "Grounding."
- B. Connect wiring in accordance with Section 26 05 19 "Wire and Cables, Secondary Voltages"
- C. Tighten electrical connectors and terminals in accordance with manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- D. Provide flexible connections at conduit and conductor terminations and supports to eliminate sound and vibration transmission to building structure.

3.04 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 1. Small (Up to 167 kVA Single-Phase or 500 kVA Three-Phase) Dry-Type Transformer Field Tests:
 - a. Visual and Mechanical Inspection.
 - 1) Inspect physical and mechanical condition.
 - 2) Inspect anchorage, alignment, and grounding.
 - 3) Verify that resilient mounts are free and that shipping brackets have been removed.
 - 4) Verify that unit is clean.
 - 5) Perform specific inspections and mechanical tests recommended by manufacturer.
 - 6) Verify that as-left tap connections are as specified.
 - 7) Verify presence of surge arresters and that their ratings are as specified.
 - b. Electrical Tests:
 - 1) Measure resistance at windings, taps, and bolted connections.
 - 2) Perform insulation-resistance tests winding-to-winding and windings-to-ground. Apply voltage in accordance with manufacturer's published data. In absence of manufacturer's published data, comply with NETA ATS, Table 100.5. Calculate polarization index: value of index may not be less than 1.0.
 - 3) Verify correct secondary voltage, phase-to-phase and phase-to-neutral, after energization and prior to loading.
- B. Test Labeling: On completion of satisfactory testing of units, attach dated and signed "Satisfactory Test" label to tested components.

C. Nonconforming Work:

1. Transformer will be considered defective if it does not pass tests and inspections.
2. Remove and replace units that do not pass tests or inspections and retest as specified above.

D. Assemble and submit test and inspection reports.

3.05 ADJUSTING

- A. Record transformer secondary voltage at unit for at least 48 hours of typical occupancy period. Adjust transformer taps to provide optimum voltage conditions at secondary terminals. Optimum is defined as not exceeding nameplate voltage plus 5 percent and not being lower than nameplate voltage minus 3 percent at maximum load conditions. Submit recording and tap settings as test results.
- B. Output Settings Report: Prepare written report recording output voltages and tap settings.

3.06 CLEANING

- A. Vacuum dirt and debris; do not use compressed air to assist in cleaning.

3.07 MAINTENANCE

- A. Infrared Scanning: Two months after Substantial Completion, perform infrared scan of transformer connections.
1. Use infrared-scanning device designed to measure temperature or detect significant deviations from normal values. Provide documentation of device calibration.
 2. Perform two follow-up infrared scans of transformers, one at four months and another at 11 months after Substantial Completion.
 3. Prepare certified report identifying transformer checked and describing results of scanning. Include notation of deficiencies detected, remedial actions taken, and scanning observations after remedial action.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all panelboard equipment complete. All equipment shall be dead front type, door in door construction and shall bear the U.L. label. Load centers will not be acceptable.
- B. All panels provided for service entrance locations as defined by the NEC shall be provided with a UL label, "Suitable for Use as Service Entrance Equipment" (SUSE).

1.02 SUBMITTALS

A. SHOP DRAWINGS

- 1. Prepare and submit for review prior to manufacture. Include front view, dimensions, device sizes and layout, list of nameplates and all other information required to demonstrate conformance with contract documents.
- 2. Dimensions of panelboards shall not exceed those noted on or scaled from the contract documents.

PART 2 – PRODUCTS

2.01 PRODUCT DESCRIPTION

- A. All project panelboards shall be as shown on the panelboard schedule.
- B. All panelboards shall be fully rated (Series rated panelboards are not acceptable for this project).
- C. All panelboards' buss bars shall be copper.
- D. AIC rating of all panelboards shall be as shown on the drawings.

2.02 ACCEPTABLE MANUFACTURERS

- A. Square D
- B. Eaton
- C. General Electric
- D. Siemens
- E. Engineer approved equal

PART 3 – EXECUTION

3.01 GENERAL INSTALLATION

- A. Secure panelboards in place with top of cabinet at 6'-0", above finished grade or floor. Top of cabinet and trim shall be level; trim and door shall fit neatly without gaps, openings or distortion.
- B. Top edges of adjacent panels shall be even.
- C. Provide steel channel support framing where panelboard is free standing. Submit support rack shop drawings for approval prior to fabrication.

3.02 CIRCUIT INDEX

- A. Each panelboard shall be provided with a typewritten index listing each circuit in the panel by number, with its proper designation. Listing shall match circuit breaker arrangements, typically with odd numbers on the left and even numbers on the right.

Mount index with a transparent protective cover inside the cabinet door.

3.03 PANELBOARD NAMEPLATE

- A. Provide phenolic engraved nameplate for each panelboard.

END OF SECTION

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all disconnect switches required by NEC for equipment furnished under this and other divisions of these specifications and by the Engineer.

1.02 SUBMITTALS

- A. Disconnects and Fuses for Circuits

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Siemens
- B. General Electric
- C. Square D
- D. Cutler Hammer
- E. Engineer approved equal

2.02 DISCONNECT SWITCHES

- A. Switches shall be NEMA type HD (heavy duty), quick make, quick break, dual rated with electrical characteristics as required by the system voltage and the load served. Switches shall be single throw and have blades to open all ungrounded conductors.
- B. Enclosure shall have interlocking cover to prevent opening door when switch is closed. Interlock shall include a defeating scheme for authorized service work.
- C. Operator handle shall be lockable in the "off" position.
- D. Disconnect enclosures shall be suitable for mounting locations. Provide NEMA 3R for damp or exterior locations. Provide other NEMA ratings as indicated on drawings or to suit area requirements if not specified on drawings.
- E. All disconnect switches shall be the product of one manufacturer to facilitate future maintenance.

2.03 FUSIBLE DISCONNECTS

- A. Fusible disconnect switches provided shall be per 2.02 above with the addition of fuse space and clips to accept only Class R fuses.

2.04 NAMEPLATES

- A. Provide nameplates on all disconnects and fused switches. Nameplates shall be engraved laminated phenolic mounted with screws. Adhesive only will not be acceptable. Each nameplate shall include this information: Load served, voltage, phase, panel, circuit number, fuse size and type.

PART 3 - EXECUTION

3.01 SUPPORT

- A. Secure disconnect switches to building structure, equipment unit or approved mounting frame. Support by conduit system only is not acceptable.

3.02 SPLICES

- A. Wiring space within disconnect switches shall not be used for splicing; provide suitable junction boxes for this purpose.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The work includes excavation, trenching, shoring, filling, backfilling, subgrade preparation, grading, and compaction as well as requirements for furnishing, transporting, and delivering crushed surfacing base courses in conformance with these Specifications.
- B. Excess soil and aggregate generated as a result of the work shall be re-used on site for Fill or, Backfill, and Base Course. Excess soil and aggregate shall not be exported off-site, unless deemed unsuitable by the Engineer. If the material does not meet the aggregate gradation for Fill, Backfill, or Base Course the material may be blended with additional aggregates to meet the grading requirements.

1.02 RELATED SECTIONS

- A. 31 23 19 – Dewatering
- B. 31 32 13 Cement Treated Base
- C. 31 23 33 Trenching and Backfill

1.03 QUALITY ASSURANCE

- A. On-site Testing and Inspection: The Port will provide and pay for on-site testing and inspection services. Sampling and testing for compliance with the contract provisions will be in accordance with Section 01 45 00 – Quality Control. The Contractor shall assist in obtaining samples and may obtain copies of test results performed by the Port at no cost. Tests conducted for the sole benefit of the Contractor shall be at the Contractor's expense.
- B. Compaction Control Tests: The Port will provide and pay for laboratory and on-site field compaction control tests in accordance with the applicable provisions of these specifications.
 - 1. The compaction control density shall be the maximum density at optimum moisture content as determined by ASTM D 1557, Standard Methods for Moisture-Density Relationships of Soil and Soil Aggregates, Methods B, C or D as applicable, but shall be no less than 95% of dry density for fill, backfill, crushed surfacing and trench backfill above the bedding zone. Compact trench bedding zone material to 90% of dry density.
 - 2. Field tests to determine in-place compliance with required densities as specified, shall be performed in accordance with ASTM D 1556, D 2167, or D 2922.
- C. Shoring shall be provided in accordance with Specification 31 41 00 – Shoring and Underpinning, applicable local, State and Federal safety codes. Design, agency approval, permits, construction, maintenance, and removal of all shoring elements are the sole responsibility of the Contractor.

1.04 SUBMITTALS

- A. Source characterization, testing, reporting, and certification for all off-site borrow materials.
- B. Samples of on-site borrow material for physical and/or chemical characterization as requested by the Engineer.
 - 1. Submit test reports confirming all imported materials meet the material requirements listed in Part 2 of this specification section.

1.05 SITE CONDITIONS

- A. Anticipate encountering groundwater at any location within the project site. The groundwater elevation varies depending upon proximity to the shoreline, soil conditions, tidal conditions, and weather. See Section 31 23 19 – Dewatering.
- B. Verify the location of existing utilities at the site, and use an independent private locate company to assist. Those utilities which are to remain shall be protected from damage and remain operational. Damage to utilities which are to remain shall be repaired by the Contractor at its own expense.

PART 2 – PRODUCTS

2.01 FILL AND BACKFILL

- A. Material used for fill and backfill shall be clean, free-draining, sandy gravel or gravelly sand obtained from natural deposits or from excess soils generated during site construction activities. Individual particles shall be free from all objectionable coating. The material shall contain no organic matter or soft friable particles considered objectionable by the Engineer.
- B. Material used for fill and backfill shall be one of the following:
 - 1. Material from excavation, trench excavation or other on-site borrow soils generated during construction at the site, as approved by the Engineer in accordance with paragraph 2.07, free from organic matter, demolition debris, or other deleterious substances, and containing no rocks or lumps over 6 inches in greatest dimension, except where otherwise approved by the Engineer. “Nesting” of rock pieces that will create voids will not be permitted. Characterization of on-site common borrow materials shall be completed by the Port as directed by the Engineer.
 - 2. Imported fill material consisting of bank run gravel for trenches meeting the requirements of Washington State Department of Transportation Standard Specifications Section 9-03.19. The amount of fines shall not exceed 5 percent based on the minus ¾-inch fraction. Off-site borrow materials shall be characterized as specified in sections 2.06 at the Contractor’s expense.

Material shall be graded between the limits specified below:

Sieve Size	Percent Passing (by weight)
8-inch	100
4-inch	95-100
3/4-inch	60-90
U.S. No. 10	25-65
U.S. No. 40	10-40
U.S. No. 200	0-4

The moisture content of fill material shall be within minus 2 percent to plus 1 percent of the optimum moisture content at the time of compaction.

2.02 CRUSHED SURFACING

- A. Crushed surfacing base course and top course shall comply with Section 9-03.9(3) of the Washington State Department of Transportation Standard Specifications for Road, Bridge and Municipal Construction, 2023 edition.

2.03 GRAVEL BORROW

- A. Gravel Borrow shall meet the requirements of paragraph 2.02. Imported gravel base shall be characterized as specified in paragraph 2.06 at the Contractor's expense.

2.04 STRUCTURAL FILL

- A. Structural fill shall meet the requirements per WSDOT Section 9.03.12(1)A. Ballast shall meet the requirements per WSDOT 9.03.9(1). Select Borrow shall meet the requirements per WSDOT 9.03.14(2). Backfill shall meet the requirements per WSDOT 9.03.19. Imported gravel base shall be characterized as specified in paragraph 2.06 at the Contractor's expense.

2.05 GRAVEL BACKFILL FOR PIPE ZONE BEDDING

- A. Gravel backfill for pipe zone bedding shall consist of crushed, processed or naturally occurring granular material. It shall be free from various types of wood waste or other extraneous or objectionable materials. It shall have such characteristics of size and shape that it will compact and shall meet the following specifications for grading and quality:

Sieve Size	Percent Passing (by weight)
1-1/2" square	100
1" square	75-100
5/8" square	50-100
U.S. No. 4	20-80
U.S. No. 40	3-24
U.S. No. 200	10.0 Max.
Sand Equivalent	35 min.

- B. Imported bedding material shall be characterized as specified in sections 2.06 and 2.08 at the Contractor's expense.

2.06 OFF-SITE BORROW SOURCE CHARACTERIZATION

- A. Off-site borrow source characterization shall be performed by the Contractor as specified in Section 2.08 to assure that imported materials are natural, native, virgin materials, free of contaminants, including debris or recycled materials, and meet the requirements of the contract documents.
- B. Each source of off-site borrow material shall be tested once per year for physical properties.
- C. Each source of off-site borrow for sands and gravels shall be tested once per calendar year for metals.
- D. Each source of off-site borrow for soils, including materials to be used for fill and backfill, shall be tested for metals, chemical compounds and hydrocarbons once for every 500 cubic yards of material to be imported.
- E. The Engineer maintains the right to reject any materials that have been determined to be substandard for any reason. In the event of rejection, it shall be the responsibility of the contractor to remove all stockpiles of rejected material from the site.

1. General

- a. Materials shall be of the quality, size, shape, gradation, or equal to that manufactured as specified herein. The Contractor shall submit a characterization of any and all imported material prior to any on-site placement. The characterization will include source identification, analyses of a material source sample, and a source inspection report. The material shall not be imported to the site until approved by the Engineer. Once approved and imported to the site, the Contractor shall perform an on-site inspection of the material to verify that it is the material sampled for characterization and approval.
2. Source Identification
 - a. The Contractor shall provide documentation of the origin of imported materials and maps identifying specific location(s) of material source(s). Physical and chemical characterization reports available from the material supplier shall be provided to the Engineer.
3. Inspection of Source
 - a. The Contractor shall inspect all material sources. During such inspection, the Contractor shall assure that materials to be delivered to the jobsite are likely to meet the appropriate specifications. The Contractor shall provide the Engineer two weeks notice of such inspections. The Engineer or a designated representative may accompany the Contractor to witness such inspections. This witnessing shall in no way release the Contractor from complying with the specifications and in no way shall be construed as approval of any particular source of material.
4. Testing, Reporting, and Certification
 - a. Off-site borrow materials shall be in accordance with the requirements of Section 2.08 unless waived by the Engineer.
5. Inspection of Materials at the Jobsite
 - a. The Contractor shall visually inspect imported material upon delivery. Materials shall be inspected for presence of foreign, recycled, or reprocessed material. The Engineer may at any and all times perform an independent inspection. Material may be tested according to Section 2.08 at the Engineer's discretion. Material may be rejected due to the presence of deleterious substances or as a result of substandard test results.

2.07 ON-SITE BORROW SOURCE CHARACTERIZATION

- A. Excavated in-situ soils generated during site construction activities shall be used or reused as backfill and base course material, if approved by the Engineer. It is to be assumed that all excavated in-situ material will be found acceptable for reuse.
- B. Provide samples of the material for physical and/or chemical characterization as requested by the Engineer. The material shall not be reused at the site until approved by the Engineer.
- C. Characterization and characterization testing of excavated materials for reuse may be performed by the Port to assure that materials meet the requirements of the contract documents.

2.08 CHARACTERIZATION TESTING, REPORTING, AND CERTIFICATION OF OFF-SITE MATERIAL

- A. The Contractor shall provide characterization and testing as described below for off-site borrow materials. Testing results shall meet the Port of Tacoma Import Material Screening Criteria to be considered acceptable.

- B. The Contractor shall provide test sample(s) of excess materials to be exported. The sample data shall be provided at least 21 days before proposed export of the materials.
- C. The Contractor is responsible for all testing costs associated with characterization of off-site borrow materials. The Port is responsible for testing costs associated with on-site borrow materials and excess materials to be exported.
- D. The Contractor shall provide the following information with each sample submitted:
 - 1. Material Source
 - 2. Proposed On-site Use
 - 3. Sampling dates
 - 4. Chain of custody
 - 5. Sampling locations
 - 6. Contractor's certification that the samples submitted are representative of the materials that shall be used at the site.
- E. Characterization Testing shall include:
 - 1. Physical Properties:
 - a. Grain Size Distribution (ASTM D 422-63)
 - b. Maximum Dry Density (ASTM D1557)
 - 2. Metals and Chemicals:
 - a. Import Material Screening Criteria as indicated in Table 31 00 00 - 1 – Import Material Screening Criteria
 - b. Petroleum Hydrocarbons (NWTPH-Gx (Gasoline) and –Dx (Diesel/Oil))

Table 31 00 00 - 1 – Import Material Screening Criteria

Chemical / Metal Name	Gravel/Rock Criteria (mg/kg)	Soil Criteria (mg/kg)
Volatile Organic Compounds (EPA Method 8260)		
Benzene	-	0.004
Ethylbenzene	-	6.0
Toluene	-	7.0
Xylenes	-	9.0
Tetrachloroethylene (PCE)	-	0.05
Semi-Volatile Organic Compounds (EPA Method 8270)		
acenaphthene		97.9
anthracene		2,275
benzo[a]anthracene		0.130
benzo[a]pyrene		0.1
benzo[b]fluoranthene		0.440
benzo[k]fluoranthene		13.7

benzoic acid	-	257
benzyl alcohol	-	8,000
bis(2-ethylhexyl) phthalate	-	13.9
chrysene	-	95.5
benzyl butyl phthalate	-	12.8
cresol;o-	-	2.3
cresol;p-	-	8,000
dibenzo[a,h]anthracene	-	0.1
dibenzofuran	-	80
di-butyl phthalate	-	56.5
dichlorobenzene;1,2-	-	8.4
dichlorobenzene;1,4-	-	0.2
diethyl phthalate	-	72.2
dimethylphenol;2,4-	-	1.3
di-n-octyl phthalate	-	800
fluoranthene	-	631
fluorene	-	101
hexachlorobenzene	-	0.09
hexachlorobutadiene	-	0.6
indeno[1,2,3-cd]pyrene	-	1.2
methyl naphthalene;2-	-	320
naphthalene	-	0.006
nitrosodiphenylamine;N-	-	0.0009
pentachlorophenol	-	0.003
phenol	-	11
pyrene	-	655
trichlorobenzene;1,2,4-	-	0.06
Pesticides / PCBs (EPA Method 8081/8082)		
ddd	-	0.3
dde	-	0.4
ddt	-	2.9
Polychlorinated biphenyls (PCBs)	-	0.5
Metals (EPA Method 6010/6020/7041)		
Arsenic	13.8	13.8
Cadmium	2.0	2.0
Chromium (total)	113	113
Chromium (VI)	-	0
Copper	136	136
Lead	250	250
Mercury	0.14	0.14
Nickel	61	61
Zinc	100	100

PART 3 – EXECUTION

3.01 GENERAL

- A. Excavating, filling and grading shall be completed within the tolerances established or within reasonably close conformity with the alignment grade and cross sections indicated on the Drawings or as established within these specifications.

3.02 EXCAVATION

- A. Excavation: Shall be the naturally occurring earth, sand, gravel, clays, or mixtures of the above, required to be moved for the construction.
 - 1. Excavation material shall be moved with the use of mechanical equipment, such as shovels, loaders, bulldozers, graders, rippers, etc., but shall not require drilling and blasting or drilling and line breaking.
 - 2. Excavation by sluicing method will not be permitted unless specifically approved by the Engineer.
 - 3. In general, excavation shall be removed in horizontal layers in such a way that the resulting material will be a reasonable blend of the naturally occurring materials.
- B. Protect excavated material, stockpiled for reuse as fill or backfill, from contamination by other materials and from weather damage by covering with waterproof sheeting and other effective means. Any material not properly protected which becomes unsuitable or contaminated shall be replaced at no additional cost to the Port.
- C. Separate stockpiles shall be employed for material to be reused as backfill, subgrade, and base course. At end of project, any material remaining in temporary “material acceptable for reuse” stockpiles shall be considered surplus / excess material, and following testing of material by the Port, Contractor shall haul excess material off-site to a Port approved disposal facility that is appropriate for the material being disposed. Disposal of material off-site prior to end of project, when there is still potential the material may be needed for backfill, shall first be approved by the Engineer.
- D. Unsuitable Excavation: Shall consist of unstable materials, such as peat, muck, water impregnated clays, swampy or other undesirable materials, including buried logs, stumps, or trash. Unsuitable excavation materials shall be removed to the depth designated by the Engineer.
- E. Unsuitable material excavated shall be replaced with Gravel Backfill for Drains per WSDOT 9.03.12(4) or as directed by the Engineer.
- F. Unsuitable materials, excess material and excavated material not approved by the Engineer for use as fill or backfill shall be transported off-site by the Contractor in accordance with Section 01 74 16 Soil Characteristics and Waste Management.

3.03 EXCAVATION FOR PAVEMENT, STRUCTURES AND UTILITIES

- A. Excavate as necessary for pavement, structure and utilities to the lines and grades indicated on the drawings.
- B. Excavation below the designed depth, except as directed by the Port, shall be backfilled with quarry spalls per WSDOT 8-15.3(6), or other suitable backfill material as approved by the Engineer and compacted as specified, at no extra cost to the Port.
- C. Brace and shore sides of excavations. Comply with all federal, state, and local regulations regarding shoring, bracing, and other protection requirements.

- D. Keep water out of excavated pits and trenches by pumping or other means of dewatering. Water level shall be kept below the bottom of concrete pours before, during, and for a minimum of three days thereafter.
- E. Protect excavated material, stockpiled for use as backfill, from contamination by other materials and from damage by weather by covering with waterproof sheeting or other suitable means.

3.04 FILL, BACKFILL AND COMPACTION FOR STRUCTURES AND UTILITIES

- A. Trenches for all underground structures including manholes, catch basins, vaults, handholes and/or other structures, shall be over excavated by one foot. The subgrade shall be prepared, and a minimum of 12 inches of Gravel Backfill for Drains per WSDOT 9-03.12(4), or more if specified on the Drawings shall be placed and compacted. If subgrade is soft and cannot be adequately compacted, contact Engineer for direction.
- B. Place backfill and structural backfill to lines and grades indicated on the Drawings.
- C. Remove water from excavated areas, by pumping or other means, before placing any fill material.
- D. Compact subgrade, as specified in paragraph 3.06, before placing any fill or backfill material.
- E. Do not place any fill against concrete walls/structures until the concrete has attained its specified design strength and/or certain other construction sequence criteria, if noted on the drawings, are met, or as specifically approved by the Port.
- F. Pipe Zone Bedding material shall provide uniform support along the entire pipe barrel, without load concentration at joint collars or bells. All adjustments to line and grade shall be made by scraping away or filling in with bedding material under the body of the pipe and not by blocking or wedging. Bedding disturbed by pipe movement, or by removal of shoring movement of a trench shield or box, shall be reconsolidated prior to backfill. Pipe Zone Bedding shall be placed in loose layers and compacted to 90 percent maximum density. Bedding shall be placed, spread, and compacted before the pipe is installed so that the pipe is uniformly supported along the barrel. Lifts of not more than 6 inches in thickness shall be placed and compacted along the sides of the pipe to the height shown in the Drawings. Material shall be worked carefully under the pipe haunches and then compacted. If the Engineer determines that the material existing in the bottom of the trench is satisfactory for bedding the pipe, the existing material shall be loosened, regraded, and compacted to form a dense, unyielding base.
- G. Backfill by placing material in horizontal layers not exceeding 8-inches upon earth which has been undisturbed, stabilized, or otherwise approved by the Engineer.

Construct in compacted layers of uniform thickness. Carry the layers up full width from the bottom. Compact with modern, efficient compacting units, or as directed by the Engineer. The compacting units may be of any type, provided they are capable of compacting each lift of the material to the specified density. The Engineer may order the use of any particular compacting unit discontinued if it is not capable of compacting the material to the required density within a reasonable time, or if the equipment may damage underlying or adjacent soils or structures.
- H. Unless noted elsewhere compact each layer to 95% of the maximum density as determined by compaction control tests described in Paragraph 1.04 above. Use small mechanical or vibratory compactor units to compact the layers adjacent to structures that are inaccessible to other compaction equipment.

3.05 COMPACTION

- A. Compaction shall be performed with approved compaction equipment suited to the soil and the area being compacted. Moisten or aerate material as necessary to provide the moisture content that will readily facilitate obtaining the specified compaction with the equipment used. Each lift of material placed shall be uniformly compacted to the density indicated for the specific material and use set forth in these Specifications. The percent of density required is in relation to the maximum density obtainable at optimum moisture content (Compaction Control Density) as determined in paragraph 3.07 "Compaction Control Tests."

3.06 COMPACTION CONTROL TESTS

- A. Laboratory and field tests shall be performed in accordance with the applicable provisions of these Specifications.
- B. Compaction control density shall be the maximum density at optimum moisture content as determined by ASTM D 1557, Standard Methods for Moisture Density Relationships of Soil and Soil Aggregates, Methods B, C or D as applicable but shall be no less than 95% of dry density for Select Fill and Backfill and no less than 98% of dry density for Base Course Material.
- C. Field tests to determine in place compliance with required densities as specified, shall be performed in accordance with ASTM D1556, D2167, or D2922.

3.07 PREPARATION FOR CRUSHED SURFACING:

- A. Preparation of Subgrade
 - 1. Immediately prior to placement of surfacing materials, clean the entire width of the area of all debris and dispose of as directed by the Engineer. All depressions or ruts which contain storm water shall be drained.
 - 2. Shape the entire subgrade to a smooth uniform surface, true to line, grade, and cross section as staked by the Engineer. Compact the subgrade material to 95% of the maximum density as determined by compaction tests ASTM Designation D1557. If soft or spongy material underlying the upper eight inches of the area being prepared precludes satisfactory compaction of the upper eight inches, loosen, aerate, or excavate, replace and compact to the required density as directed by the Engineer.
 - 3. Remove and dispose of excess material which cannot be disposed of by normal drifting to low spots during blading and shaping operations or by placing in subgrade areas deficient in materials or by wasting, all as directed by the Engineer. Subgrade areas deficient in materials shall be brought to grade by importing suitable materials from other subgrade areas or other sources as directed by the Engineer. Materials added to subgrade areas deficient in materials shall be watered and compacted as necessary to yield a true finished subgrade as described above.
 - 4. Once it is prepared, maintain the subgrade for surfacing in the finished condition until the first course of surfacing has been placed.
- B. Finishing Subgrades
 - 1. Before any paving or base material is placed, the subgrade shall be brought to the proper line, grade and cross section and shall be so maintained until the crushed surfacing and paving is placed.
 - 2. Compact the subgrade for pavement to 95% of maximum density as defined for Compaction Control Density, Article "Compaction Control Tests" these Specifications, to a minimum depth of six inches.

C. Subgrade Protection

1. Take all precautions necessary to protect the subgrade from damage; hauling over the finished subgrade shall be limited to that which is essential for construction purposes.
2. Equipment used for hauling over the prepared subgrade which, in the opinion of the Engineer, is causing undue damage to the prepared subgrade or to the underlying materials, shall be removed from the work at the request of the Engineer.
3. Repair at the Contractor's expense all cuts, ruts and breaks in the surface of the subgrade prior to placing surfacing, treated base, or paving materials.
4. Protect the prepared subgrade from both the Contractor's traffic and public traffic and maintain the subgrade by blading and rolling as frequently as may be necessary to preserve the subgrade in a completely satisfactory condition.

3.08 PLACEMENT OF CRUSHED SURFACING:

- A. Prior to placement Contractor shall blend the various source materials to create a homogenous, well graded, mixture.
- B. Equipment necessary for the satisfactory performance of this construction shall be on the project and approved by the Engineer prior to beginning work. If central-mix-plant methods are used, the central mixing plant shall comply with the applicable portions Section 4-04.3(3) of the WSDOT Standard Specifications, 2023 Edition.
- C. Prepare subgrades as specified above and obtain approval of the Engineer before placing Base Course or surfacing materials.
- D. Mixing: After each layer of material is placed, mix the material by motor graders or other approved equipment until the mixture is uniform throughout. Add water as directed by the Engineer to facilitate mixing and compacting.
- E. Placing and Spreading: Spread each layer of material by means of approved spreading equipment. Such equipment may be bottom-dump hauling equipment with transverse spreading facilities; self-propelled spreading and leveling machines; or spreader boxes equipped with wheels or so constructed as to preclude damage to the subgrade or underlying courses. Spreading in small areas of less than 2,000 square yards or in areas irregular in shape may be accomplished by other means as directed by the Engineer. Material shall be placed in layers not exceeding six inches.
- F. Shaping and Compacting: Immediately following spreading and shaping, compact each layer to at least ninety five percent (95%) of the maximum dry density determined in accordance with ASTM D-1557 before the next succeeding layer is placed thereon. When the thickness of the base course is less than 0.15 feet, density testing may not be required and the Engineer will determine the number of coverage's required for the particular compaction equipment available.
- G. Vibratory compactors or rollers shall be adequate in design and number to provide compaction and obtain the specified density for each layer while still moist. Apply a mist spray of water as needed to replace moisture lost by evaporation. The completed layer shall have a smooth, tight, uniform surface true to the line, grade and cross section indicated on the Drawings.
- H. Variations in the surface of the top course shall be a maximum of 1/4 inch in 10 feet. Shave off or fill in variations greater than the allowable and recompact that area.

- I. Surface Maintenance: Maintain the surface of each layer of material true to line, grade and cross section by blading, watering and rolling until placing the succeeding course. Place the first course of material on all available subgrade before placing the succeeding course unless otherwise authorized by the Engineer. Should irregularities develop in any surface during or after compaction, remedy by loosening the surface and correcting the defects, then thoroughly recompact the entire area, including the surrounding surface. In the event that additional materials are necessary to make the repairs, they shall be provided at no additional cost to the Port.
- J. Route hauling equipment over the roadway in such a manner as to be most effective in the compacting of the material. Hauling over the surfacing in the process of construction will not be permitted when, in the opinion of the Engineer, the effect will be detrimental.

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. This work includes all necessary measures to keep excavations and pipe trenches dry during construction. The work covered by this specification consists of providing all supervision, labor, materials, and equipment required to dewater excavations and trenches.

1.02 SITE CONDITIONS

- A. The Contractor should anticipate encountering groundwater in excavations. The Port has subsurface investigations made at and near the project site, the information is available for review as described in Section 00 31 00 – Available Project Information.
- B. All water removed from trenches and excavations shall be discharged back into the trench/excavation, collected for offsite disposal, or to the City of Tacoma sanitary sewer in accordance with the conditions of the Special Authorization to Discharge (SAD) obtained by the Port if necessary.

1.03 QUALITY CONTROL

- A. It shall be the sole responsibility of the Contractor to control the rate and effect of the dewatering operations in such a manner as to avoid all objectionable settlement and subsidence.
- B. All dewatering operations shall be adequate to ensure the integrity of the finished project and shall be the responsibility of the Contractor.

1.04 SUBMITTALS

- A. The Contractor shall submit a dewatering plan which addresses the methods proposed in dewatering excavations and trenches and handling the dewatering discharge.
- B. Dewatering plan shall include:
 - 1. Water pumping, conveyance and storage equipment.
 - 2. Anticipated pumping rates and durations.
 - 3. Water treatment best management practices.
 - 4. Water discharge.
 - 5. Schedule for completion of work within the trench.
 - 6. Sequence of installation and removal for dewatering measures.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products that are required to accomplish, or to be incorporated into, the work of this Section shall be as selected by the Contractor, subject to review by the Engineer.

2.02 EQUIPMENT

- A. The Contractor shall have available on this site of work sufficient pumping equipment, means of dewatering water storage and/or other machinery to ensure that the operation of the dewatering system can be maintained.

PART 3 - EXECUTION

3.01 GENERAL

- A. Site work for excavations and pipe trenches shall be kept free from water to facilitate fine grading, construction of structures, the proper laying and joining of pipe and appurtenances, and placement of backfill material. Adequate pumping equipment shall be provided to handle and dispose of the water without damage to adjacent property. Trenches shall be dewatered if, at the decision of the Engineer, the quantity of water present prevents the proper installation of structures, pipes and ductbanks. Water in pipe trenches shall not be allowed to flow through the pipe.
- B. The Contractor shall provide and maintain at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water entering trenches and excavations and other parts of the work, whether the water be surface water or underground water. No piping shall be laid in water, nor shall water be allowed to rise over them until the concrete or mortar has set at least 24 hours or until the pipeline has been adequately backfilled to prevent buoyancy. No embankment material shall be placed in standing water. The Contractor shall be responsible for obtaining all water discharge permits as required. No water shall be discharged to areas or work built or under construction.
- C. Water shall be disposed of in such a manner as not to be a nuisance or menace to the public health.
- D. Written permission shall be secured from the Engineer before locating any wells, well points, or drain lines for purposes of dewatering within the limits of an excavation. The Engineer shall have the right to require that any dewatering well, line, or trench drains left in place within the excavation limits be filled with concrete or grout as herein specified, and shown on the Record Drawings.
- E. Dewatering of excavations must be controlled to prevent damage from settlement due to possible lowering of the adjacent groundwater table.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Work herein generally covers trenching, bedding, backfilling and compaction required for installation of site utilities and site storm drainage. Trench excavation and backfill shall include all excavation, backfilling, disposal of surplus and unsuitable material and all other work incidental to the construction of trenches.

1.02 SITE CONDITIONS

- A. The Port has subsurface investigations made at and near the proposed project site. The information is available for review by the Contractor as described in Section 00 31 00, Available Project Information.
- B. The Contractor should anticipate the presence of groundwater at or near the existing ground surface at much of the project site. The groundwater elevation varies depending upon proximity to the shoreline, tidal conditions and weather.

1.03 SUBMITTALS

- A. For each off-site source of material, submit test reports for the following:
 - 1. Grain Size Distribution, ASTM D 422-63.
 - 2. Weight per unit volume of uncompacted material, ASTM C-29.
 - 3. Specific gravity of material as determined from absolute volume, in accordance with ASTM No. D854.
 - 4. Off-site borrow source characterization per Section 31 00 00 2.06

PART 2 - PRODUCTS

2.01 BEDDING MATERIAL

- A. Refer for Section 31 00 00 - Earthwork

2.02 BACKFILL MATERIAL

- A. Refer to Section 31 00 00 – Earthwork

2.03 UNDERGROUND MARKING TAPE

- A. Underground marking tape shall consist of inert polyethylene plastic, 4-mil thickness that is impervious to all known alkalis, acids, chemical reagents and solvents likely to be encountered in the soil, with a metallic foil core to provide the most positive detection and pipeline locators.
- B. The tape shall be color coded and shall be imprinted continuously over its entire length in permanent black ink. The message shall convey the type of line buried below and shall also have the word "Caution" prominently shown. Color coding of the tape shall be as follows:

Utility	Tape Color
Stormwater	Green
Electrical	Red
Communications/Fiber Optic	Orange

- C. The width of the tape shall be as recommended by the manufacturer for the depth of installation and detection.

PART 3 - EXECUTION

3.01 STOCKPILING AND DISPOSAL

- A. All excavated material shall be stock piled beside the trench as it is removed and shall be backfilled from this position or wasted offsite. The disposal of excess material shall be performed in accordance with Section 01 74 16 Soil Characterization and Waste Management.

3.02 TRENCH EXCAVATION

- A. The Contractor shall maintain, at all times during the execution of this work, safe and stable excavations. All trench excavation and preparation shall comply with Section 7-08.3(1) of the Washington State Department of Transportation Standard Specifications, 2018 edition.
- B. Unsuitable materials encountered during trench excavation shall be handled as specified in Section 01 74 16 Soil Characterization and Waste Management.

3.03 BEDDING AND BACKFILLING

- A. Backfill trenches with bedding material as specified and as called for on the Drawings. Fine-grade the bedding material to the required slope and excavate to accommodate bell and spigot joints so the entire length of each pipe will be uniformly supported. Trench backfill shall be common material placed in horizontal layers not to exceed eight inches in loose thickness and carefully compacted by the use of small vibratory or mechanical compactors until the cover is one (1) foot above the top of the pipe. Subsequent layers of trench backfill shall not exceed eight inches in loose thickness but may be compacted by any method, which will not exceed the allowable stresses for the pipe. Compaction testing will be performed in conformance with Section 31 00 00 - Earthwork.
- B. Backfill utility structures with structural backfill as specified in Section 31 00 00 Earthwork and as called for on the Drawings.

3.04 COMPACTION

- A. Compaction shall be performed with approved compaction equipment suited to the soil and the area being compacted. Moisten or aerate material as necessary to provide the moisture content that will readily facilitate obtaining the specified compaction with the equipment used. Each lift of material placed shall be uniformly compacted to the density indicated for the specific material and use set forth in these Specifications.
- B. The Contractor shall properly place and compact all bedding and backfill materials to at least 90% of dry density (ASTM D 1557) in the bedding zone and 95% of dry density in trench backfill zone, and shall correct any deficiencies resulting from insufficient or improper compaction of such materials throughout the contract period.

3.05 COMPACTION CONTROL TESTS

- A. Laboratory and field tests shall be performed in accordance with the applicable provisions of these Specifications.
- B. Compaction control density shall be the maximum density at optimum moisture content as determined by ASTM D-1557, Standard Methods for Moisture-Density Relationships of Soil and Soil Aggregates, Methods B, C or D as applicable.
- C. Field tests to determine in-place compliance with required densities as specified, shall be performed in accordance with ASTM D1556, D2167, or D2922.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Furnish all labor, materials, equipment, and incidentals required to perform cement-treatment of on-site soils.
- B. This Work consists of the treatment of on-site soils, with a cement admixture to produce a relatively high strength soil-cement subgrade material.
 - 1. Soil-cement shall consist of on-site subgrade materials, Portland cement, and water which are uniformly mixed, compacted, finished, and cured in accordance with this section.
 - 2. Cement treatment will include stabilization of pavement subgrades as specified in the contract documents.
 - 3. For bidding purposes, assume a compacted soil dry density of 132 pounds per cubic foot (pcf), an applied cement ratio of 4 percent by dry weight, a minimum 7-day unconfined compressive strength of 500 pounds per square inch (psi), and a minimum treatment depth of 10 inches. The soil subgrade shall be moisture conditioned to 6 to 8 percent moisture content.
 - 4. The actual application rate may vary, as determined by the Geotechnical Engineer depending on field conditions encountered at time of improvement and results of field quality control test results.
- C. Hold a pre-construction meeting at least 7 business days prior to any cement amendment activities to discuss the cement amendment requirements and quality assurance plan. The meeting must include the Contractor, the Specialty Contractor, Engineer, Geotechnical Engineer, and Special Inspector.

1.02 RELATED SECTIONS

- A. Section 31 00 00, Earthwork.

1.03 REFERENCE STANDARDS AND DOCUMENTS

- A. Geotechnical engineering report prepared by Hart Crowser, Inc. titled East Blair 1 Pavement and Restroom Building, Tacoma, Washington, dated January 21, 2021. See Section 00 31 00 Available Project Information.
- B. American Association of State Highway and Transportation Officials (AASHTO), Current Edition.
 - 1. AASHTO M 85, Standard Specifications for Portland Cement.
- C. American Society for Testing and Materials (ASTM), Current Edition.
 - 1. ASTM C150, Standard Specification for Portland Cement.
 - 2. ASTM C117, Standard Test Method for Materials Finer than 75 μ m (No. 200) Sieve in Mineral Aggregates by Washing.
 - 3. ASTM D1557, Test Methods of Laboratory Compaction Characteristics of Soil Using Modified Effort.
 - 4. ASTM D1633, Standard Test Methods for Compressive Strength of Molded Soil-Cement Cylinders.
 - 5. ASTM D2166, Test Method for Unconfined Compressive Strength of Cohesive Soil.

6. ASTM D6913, Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis.
7. ASTM D6938, Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.04 DEFINITIONS

- A. Specialty Contractor: The "Specialty Contractor" shall refer to the contractor performing cement-treatment of the on-site soils using Portland Cement.
- B. Geotechnical Engineer: The "Geotechnical Engineer" shall refer to Haley & Aldrich, Inc. (formerly Hart Crowser, Inc.).
- C. Special Inspector: The "Special Inspector" shall refer to the Owner's representative tasked with performing quality control assurance.

1.05 QUALITY ASSURANCE

- A. The Specialty Contractor shall be experienced in cement stabilization of soils and successfully completed at least five projects similar in scope and size.
- B. All cement treated soil is to be evaluated through observation and/or testing by the Geotechnical Engineer or Special Inspector.
- C. All cement treated base is to be evaluated through observation of a final proof rolling by the Geotechnical Engineer.
- D. Where, in the opinion of the Geotechnical Engineer or Special Inspector, unsuitable soils or earthwork are encountered, Work in that area is to stop until remedial measures are identified and conducted.
- E. Tests and observations will be conducted by the Special Inspector throughout the progress of Work to observe conditions, modify the procedures as required, and to evaluate the suitability of the cement treated subgrade and fill. Tests and observations will include the following:
 1. Gradation/Sieve analyses of the soil to be amended in accordance with ASTM D6913.
 2. Moisture-density relationship of the soil-cement material in accordance with ASTM D1557.
 3. Field density and moisture content determined in accordance with ASTM D6938.
 4. Strength of the cured soil-cement determined in accordance with ASTM D1633, however, the modified Proctor mold and tamping procedure should follow ASTM D1557 in lieu of the standard Proctor mold and tamping procedure per ASTM D698.
 5. Alternatively, the strength of the cured soil-cement can be determined in accordance with ASTM D2166.
- F. The Special Inspector and Geotechnical Engineer will review site conditions during construction activities. Specialty Contractor shall adjust the cement content above or below the base content specified in part 1.01.B.3 of this section as needed to minimize cement use and obtain the strength and compaction specified in part 1.01.B.3 of this section. The Engineer will direct any changes to the cement content and will negotiate these changes with the Contractor.

1.06 SUBMITTALS

- A. Provide the following submittals:
 1. Documentation of the Specialty Contractor's experience with cement-treatment of soils shall be submitted at least 14 days prior to the pre-construction meeting.

2. Provide a written plan describing the equipment and methods that will be used to accomplish cement-treatment of existing materials. Plan shall specifically address procedures for processing/removing existing crushed rock, quarry spalls, asphalt, asphalt-treated base, and oversized materials, blending of cement, moisture condition of soil, handling soft ground conditions, wet weather procedures, and compaction of the cement-amended materials. This plan shall be submitted for review by the Engineer at least 14 days prior to the pre-construction meeting.

1.07 PROTECTION

- A. Existing Utilities: Verify the location of any existing underground utilities in the areas of work. Provide adequate means to protect utilities if utilities are to remain in place during treatment.
 1. Contact the utility owner immediately for directions if uncharted or incorrectly charted underground utility lines are encountered during Work. Do not interrupt existing active utility and drainage lines serving facilities to remain, except when permitted in writing by the Owner and when temporary utilities are provided.
 2. Protect existing utilities during work. Provide temporary utility services for occupied buildings when permanent utility lines are interrupted.
- B. Subgrade areas used as haul routes for heavy construction equipment may require additional stabilization, such as by using higher cement content or a thicker layer of stabilized subgrade. Actual percent cement and thickness of stabilized subgrade shall be determined by the Special Inspector based on in-situ soil moisture content and field conditions at time of amendment.
- C. Protect and maintain the structural integrity of the stabilized Work area and replace any area that is pumping or unstable before proceeding.
- D. Cement shall be applied only when wind and other weather conditions are not detrimental to the Work or to the public and adjacent property. The Contractor shall take all precautions necessary to maintain a safe work environment, protect the public, and to avoid damage to adjacent property.
 1. Placement of Portland cement shall be stopped if directed by the Engineer or their representative if windblown Portland cement powder is observed or reported to be leaving the site and impacting the operations of the Port of Tacoma. The contractor may adjust their methods for placement of the cement or methods for mixing the cement into the subgrade soils to limit wind exposure and loss of powdered cement in order to resume working on windy days. The contractor may resume treatment with verbal confirmation of acceptance of the updated methods by either the Engineer or their representative.
 2. Cement treatment activities can be adversely affected by rain. On rainy days, cement treatment activities may be performed provided the moisture content of the subgrade soils can be maintained with the range specified in section 1.01.B.3, the rainfall does not interfere with uniform spreading and mixing of cement powder, and the rainfall rate is evaluated by the Special Inspector to not have a deleterious effect on the nuclear density gauge required for field moisture content and density determinations. Additionally, tilled/blended soil shall be compacted as soon as possible to reduce the potential for saturation of the soils.
- E. Prevent any untreated impacted stormwater runoff from the cement-amended soil from leaving the site. No untreated stormwater runoff from the site shall reach to the Blair Waterway.
- F. Protect subgrade from disturbance by construction traffic. Subgrade disturbed by construction traffic shall be replaced according to Part 3.03.A of this section, at no cost to Owner.

1.08 COORDINATION

- A. This Work shall be performed in accordance with the schedule prepared by the Contractor.
- B. The Specialty Contractor shall cooperate in planning and layout of Work with the Contractor.
- C. The Specialty Contractor shall be informed on the requirements of adjacent Work and check own Work for conflicts.
- D. The Specialty Contractor shall order materials and supplies in a timely manner to insure adherence to the schedule.
- E. The Specialty Contractor shall coordinate with the Geotechnical Engineer and Special Inspector to observe conditions and shall modify procedures as directed by the Engineer to obtain suitable materials and specified results.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement-treated soils shall consist of a soil-cement mixture using on-site soils (silt, sand, and gravel), free of clay balls, roots, organic matter, and particles greater than 1.5 inches in diameter.
- B. Asphalt-treated base, quarry spalls, and asphaltic concrete surfacing are present on site and are required to be removed prior to treatment.

2.02 CEMENT

- A. Portland Cement, Type 1: Conforming to ASTM C150 or AASHTO M 85.

2.03 EQUIPMENT

- A. Equipment shall be adequate to accomplish the Work and not disturb final subgrade elevation soils.
- B. Spreading Equipment
 - 1. Use a spreader capable of distributing the cement uniformly on the ground to within 0.3 percent of the specified application percentage.
- C. Mixing Equipment
 - 1. Use a pulverizer/mixer capable of uniformly mixing the cement into the subgrade to the design depth. The pulverizer/mixer shall consist of a BOMAG MPH-100, CAT RR-250, or an alternate approved by the Engineer.
 - 2. Blade mixing will not be allowed.
 - 3. Pulverize the soil-cement mixture as specified in 3.03.A.11 of this section. If water is required, use a water application system capable of metering water to a tolerance of $\frac{1}{4}$ gallon per square foot of surface area.
- D. Compaction Equipment:
 - 1. Use a vibratory, smooth-drum roller with a minimum applied lineal force of 600 pounds per inch for initial and final compaction of granular soils (sands and gravels), or an alternate approved by the Engineer.

PART 3 - EXECUTION

3.01 MONITORING

- A. Verify areas to be stabilized are free of debris, snow, ice, or water and that ground surfaces are not frozen. Area shall be observed and reviewed by the Engineer for acceptance prior to the stabilization activity.
- B. Prior to the start of soil cement mixing, verify that the air temperature is at least 40 degrees Fahrenheit and rising and that the ground temperature is at least 32 degrees Fahrenheit and rising. Maintain a log summarizing the temperature throughout the day.

3.02 SUBGRADE PREPARATION

- A. Before starting Subgrade Work, including backfill, complete all underground work contemplated in the area of the Subgrade. This requirement includes work by the Contractor, or by others. Drain all depressions or ruts which contain water.
- B. The Contractor shall excavate areas of soft and organic soils in the subgrade that are unsuitable for treatment or where deeper removal is required. Backfill with material, as approved by the Engineer.
- C. Prepare subgrade where cement treatment is to be performed to support construction equipment without damage or disturbance of subgrade.
- D. Remove existing crushed rock, asphalt-treated base, asphaltic concrete, and quarry spalls within the depth of treatment as specified in 1.01.B.3 and the project plans. This work shall be completed prior to Subgrade Stabilization work specified in 3.03.
- E. Geotechnical Engineer shall approve subgrade preparation prior to placement of fill materials. Notify Engineer a minimum of 2 working days prior to subgrade operations.

3.03 SUBGRADE STABILIZATION

- A. Stabilize subgrade in accordance with the following procedures/requirements:
 - 1. Subgrade to be stabilized shall be graded and shaped by the Contractor as required to construct the cement treated base in conformance with grades and lines shown on the plans.
 - 2. Unsuitable soil material shall be removed and replaced with acceptable material.
 - 3. The stabilized subgrade shall be firm and able to support the construction equipment without disturbance to soils at depths greater than the treatment depth. The Specialty Contractor shall prepare soft or excessively yielding subgrade to adequately support equipment before stabilization of the subgrade proceeds.
 - 4. A qualified Special Inspector will be retained by the Engineer to test and evaluate the adequacy of the treated subgrade. Notify both the Engineer at least 2 working days in advance of stabilization Work.
 - 5. The subgrade shall be moisture conditioned to the target moisture content indicated in Part 1.01.B.3 of this section.
 - 6. If additional water is required, the water shall be applied uniformly to the subgrade with spray bars from a water tanker ahead of the mixer or from spray bars integral to the mixer.

7. If the moisture content of the subgrade is greater than the target moisture content, then subgrade shall be scarified and allowed to dry until the target moisture content is reached, or the cement content shall be increased as needed to achieve the required strength indicated in Part 1.01.B.3 of this section.
8. Cement shall be applied at a uniform rate established by the Geotechnical Engineer. The Specialty Contractor shall assume the application rates indicated in Part 1.01.B.3 of this section.
9. Variations from the base content shall be made in conformance with the cement content versus moisture relationships.
10. Mixing of the soil material and cement shall be accomplished by a mixed-in-place method and to the depths specified in part 1.01.B.3 of this section. Cement or the soil-cement mixture shall not be spread when the soil or subgrade is frozen or when the air temperature is less than 40 degrees Fahrenheit.
11. The soil-cement mixture shall be pulverized to the full depth of the specified treatment so that 100 percent by dry weight passes a 1.5-inch sieve and a minimum of 50 percent by dry weight passes a No. 4 sieve.
12. Cement application, mixing, hauling, spreading, compacting, and finishing shall be continuous. The total elapsed time between cement application and the completion of finishing shall not exceed 4 hours. The total elapsed time between mixing cement into the soil and compaction and additional mixing shall not exceed 3 hours. If the Contractor has not compacted and finished the material within the specific time frame, the mixture shall be pulverized and additional cement added as required.
13. Compact the soil-cement mixture to 95 percent of the soils maximum dry density as determined by ASTM D1557 or to the level required to provide sufficient density to meet the strength requirements as specified in Part 1.01.B.3 of this section.
14. During final compaction, the surface of the soil-cement shall be shaped to the required lines, grades, and cross-section. Compaction and finishing shall be performed in such a manner (less than 4 hours since applying the cement) as to produce a smooth, dense surface free of compaction planes, cracks, ridges, or loose materials.
15. The finished cement treated surface shall be protected from construction disturbance for a minimum of 7 days prior to proof rolling. This delay is to allow the collection and performance of cement treated base strength tests as indicated in section 3.04. The Specialty Contractor shall limit traffic over treated subgrade to wheel loads that do not cause damage to the subgrade and which do not deflect, ravel, or wear the surface during this period.
16. Perform final proof rolling of the cement treated base under the observation of the Geotechnical Engineer prior to placing the crushed surfacing base course. Final proof rolling shall be performed with a loaded tri axle dump truck or approved alternative with a minimum weight of 30,000 pounds. Proof rolling shall consist of several passes of the heavy vehicle across the treated and cured base to the satisfaction of the Geotechnical Engineer. Areas observed to be yielding during the proof rolling shall be pulverized and retreated at no cost to the owner.

17. When used for construction haul roads, the improved surface should be protected from abrasion by placing a minimum of 4 inches of imported granular material. If the granular material is contaminated with soil during construction, it should be removed and replaced with clean material in pavement areas so that the minimum thickness of free draining base at the surface is 4 inches.
18. The Specialty Contractor shall keep the subgrade surface moist during curing or place an asphaltic fog seal over the treated surface.

3.04 FIELD QUALITY CONTROL

- A. Provide for observation of the preparation of the subgrade prior to cement treatment by the Geotechnical Engineer. The Geotechnical Engineer shall visually evaluate if existing crushed rock, asphalt-treated base, asphaltic concrete, quarry spalls, oversized (>1.5 inches) materials, and other deleterious materials have been removed.
 1. If the composition of the subgrade is in question, the Geotechnical Engineer may require the Special Inspector to collect subgrade soil samples and submit them for laboratory testing for gradation/sieve analyses per ASTM D6913. Up to one test location per 500 square yards of proposed treated surface may be required.
- B. The Special Inspector shall perform moisture content testing of the subgrade immediately prior to subgrade stabilization. Up to one test location per 250 square yards of proposed treated surface may be required. Testing shall be completed using nuclear methods (ASTM D6938) and the nuclear gauge probe shall be extended the full treatment depth indicated in Part 1.01.B.3 of this section.
- C. Provide for observation of cement treatment process by the Geotechnical Engineer.
- D. Provide for observation of proof rolling of cured cement treated subgrade by the Geotechnical Engineer at least 7 days after stabilization.
- E. During soil treatment the Contractor shall coordinate with the Special Inspector for testing and observations, provide a smooth surface for testing, and otherwise cooperate in the orderly completion of testing Work. The Special Inspector shall:
 1. Perform density and moisture testing of the treated soils prior to curing by nuclear methods (ASTM D6938) on an average on one test location per 250 square yards of treated surface. The moisture content shall be within 2% of optimal moisture and the density should be at 95% of the optimal density of the closest representative modified Proctor test.
 2. Track the percentage of cement placed over a treatment area by measuring the area and depth treated and the applied tonnage of cement for each truck placed. The average percentage of cement applied and mixed by dry weight shall meet or exceed that indicated in Part 1.01.B.3 of this section.
 3. Collect bulk samples of treated soil and process samples in the field for preparation for Unconfined Compressive Strength testing per ASTM D1633. The test procedure shall be modified to utilize a modified Proctor mold and tamping procedure outlined in ASTM D1557 in lieu of the standard Proctor mold and tamping procedure outlined ASTM D698. One sample per 750 square yards of treated surface shall be prepared. The sample preparation shall be completed within 4 hours of soil treatment. The sample shall be held for 7 days and then be testing per ASTM D1633. The unconfined compressive strength shall meet or exceed that indicated in Part 1.01.B.3 of this section.

- a. The uniformity of the treatment depth shall be evaluated during the bulk sample collection. The Special Inspector will collect the bulk sample by digging a hole through the full depth of the treatment indicated in section 1.01.B.3. The treated soils will be visually evaluated and if not observed to be uniform in color and texture the Special Inspector will direct the contractor to resume pulverization and mixing activities.
- F. As an alternative to collecting samples for unconfined compressive strength testing during stabilization as described in Part 3.04.E, the Special Inspector can verify the unconfined compressive strength after the cement curing period as follows:
1. Unconfined Compressive Strength of the soil-cement material (ASTM D1633) shall be performed on an average on one test location per 500 square yards of treated surface.
 2. Unconfined compressive testing of the soil-cement material should be performed on cores collected from the cured treated base. The full treatment depth shall be cored. The core length (L) to diameter (d) ratio shall be between 2 and 2.5.
 3. The unconfined compressive strength shall be a minimum of the value specified in section 101.B.3.
 4. If coring strength tests will be performed, the uniformity of the treatment depth shall be evaluated by the Special Inspector digging a hole through the full depth of the treatment indicated in section 1.01.B.3 at a frequency of one hole per 750 SY. The treated soils will be visually evaluated and if not observed to be uniform in color and texture the Special Inspector will direct the contractor to resume pulverization and mixing activities.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. This Section describes the work necessary to furnish, place, maintain and remove shoring required for all structure and trench excavations greater than four (4) feet deep. Shoring shall be provided in accordance with Section 2-09.3(3) D Shoring and Cofferdams of the Washington State Department of Transportation Standard Specifications for Road, Bridge and Municipal Construction, 2023 Edition and applicable local, State and Federal safety codes.
- B. Design, approvals, and construction of all shoring are the exclusive responsibility of the Contractor. A Professional Engineer, licensed in the State of Washington, shall be used to design all aspects of the shoring.

1.02 SITE CONDITIONS

- A. The Contractor should anticipate to encounter groundwater at or near the existing ground surface at much of the project site. The groundwater elevation varies depending upon proximity to the shoreline, tidal conditions and weather.
- B. The Contractor shall ascertain to his own satisfaction the extent and method in which shoring will be required to meet all required safety codes based on the nature of the material in which it will appear, and the extent to which such occurrence of water shall affect his bid.

1.03 SUBMITTALS

- A. Submit plans prior to beginning excavation, showing proposed shoring methods and construction details.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Products that are required to accomplish, or to be incorporated into, the work of this Section shall be as selected by the Contractor, subject to review by the Engineer.

PART 3 - EXECUTION

3.01 GENERAL

- A. The method of shoring shall be according to the Contractor's design. The design, planning, installation and removal, if required, of sheeting and bracing shall be accomplished in such a manner as to maintain the required excavation or trench section and to maintain the undisturbed state of soils below and adjacent to the excavation.
- B. Damages resulting from improper support or from failure to support excavations shall be the sole responsibility of the Contractor.
- C. In trenching operations, the use of horizontal strutting below the barrel of pipe or the use of pipe as support for trench bracing will not be permitted.
- D. Sheet piling and timbers in trench excavations shall be withdrawn in a manner so as to prevent subsequent settlement of the pipe or additional backfill loading which might overload the pipe.
- E. That portion of cribbing or sheeting extending below the springline of pipe shall be left in place unless satisfactory means of reconsolidating bedding or side support disturbed by cribbing or sheeting removal can be demonstrated.

- F. If a movable box is used in lieu of cribbing or sheeting, and the bottom cannot be kept above the spring line of the pipe, the bedding or side support shall be carefully reconsolidated behind the movable box prior to placing initial backfill.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The work covered by this Section includes the furnishing of all labor, materials, equipment and necessary services to construct asphalt pavements to the sections and at the locations as specified in this Section and as indicated on the Contract Drawings.
- B. The materials specified herein are intended primarily for use in repairing large areas.

1.02 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. Unless otherwise indicated, the most recent edition of the publication, including any revisions, shall be used.
- C. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. AASHTO M 17 – (2011) Mineral Filler for Bituminous Paving Mixtures
 - 2. AASHTO M 320 – (2010) Performance-Graded Asphalt Binder
 - 3. AASHTO M 323 - (2013) Superpave Volumetric Mix Design
 - 4. AASHTO T 11 - (2005; R2009) Materials Finer Than 75 µm No. 200) Sieve in Mineral Aggregates by Washing
 - 5. AASHTO T 27 - (2011) Sieve Analysis of Fine and Coarse Aggregates
 - 6. AASHTO T 89 - (2013) Determining the Liquid Limit of Soils
 - 7. AASHTO T 90 - (2000; R2008) Determining the Plastic Limit and Plasticity Index of Soils
 - 8. AASHTO T 96 - (2002; R2010) Resistance to Degradation of Small-Size Coarse Aggregate and Impact in the Los Angeles Machine
 - 9. AASHTO T 104 - (1999; R2011) Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
 - 10. AASHTO T 112 - (2000; R2012) Clay Lumps and Friable Particles in Aggregate
 - 11. AASHTO T164 - (2011) Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)
 - 12. AASHTO T 176 - (2008) Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
 - 13. AASHTO T 304 - (2011) Uncompacted Void Content of Fine Aggregate
 - 14. AASHTO T308 - (2010) Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
 - 15. AASHTO T 312 - (2012) Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
 - 16. AASHTO T 335 - (2009) Determining the Percentage of Fracture in Coarse Aggregate
- D. American Society for Testing and Materials (ASTM)
 - 1. ASTM D75 – (2009) Sampling Aggregates

2. ASTM D4791 - (2010) Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- E. Washington State Department of Transportation (WSDOT)
 1. Construction Manual, M 41-01; Current edition.
 2. Standard Specifications for Road, Bridge and Municipal Construction, M 41-10; Current edition.
 3. Materials Manual, M 46-01; Current edition.

1.03 SUBMITTALS

- A. A separate job mix formula for each proposed mix design shall be submitted in writing by the Contractor. Submittals shall represent all submittal elements specified herein and shall include as a minimum:
 1. Mix designation/identification number.
 2. Plant where mix will be produced.
 3. Performance Graded Binder Certified Test Reports
 - a. Source location and type of binder.
 - b. Certificate of Compliance, including date and signature of the supplier, regarding conformance with AASHTO M 320, Table 1.
 - c. Temperature-viscosity relationship of the asphalt cement.
 - d. Minimum mixing temperature (degrees F).
 - e. Minimum compaction temperature (degrees F).
 4. Coarse Aggregate Certified Test Reports:
 - a. Source location and type of aggregate.
 - b. Angularity.
 - c. Bulk specific gravity.
 - d. Flat and elongated particles.
 - e. Soundness.
 - f. LA Abrasion.
 5. Fine Aggregate Certified Test Reports:
 - a. Source location and type of aggregate.
 - b. Bulk specific gravity.
 - c. Liquid limit.
 - d. Plasticity index.
 - e. Percent natural sand (if used).
 - f. Sand equivalent.
 - g. Uncompacted void content.
 6. Recycled Asphalt Pavement Test Reports (if used)

7. Anti-strip agent:
 - a. Certification.
 - b. Amount used.
 8. Percentage and grade of performance graded asphalt binder.
 9. Proportions and percentage of each aggregate stockpile.
 10. Temperature of mix when discharged from the mixer.
 11. Plot of the blended aggregate gradation and gradation control points on the Federal Highway Administration (FHWA) 0.45 power gradation curve.
 12. Maximum specific gravity at the target binder content.
 13. Gyratory compaction curve for Nmax.
 14. Bulk specific gravity at Ndesign gyrations.
 15. Air void content at Ninitial, Ndesign, and Nmax gyrations.
 16. Voids in mineral aggregate at Ndesign gyrations.
 17. Voids filled with asphalt at Ndesign gyrations.
 18. Graphical plots of air voids, voids in the mineral aggregate, voids filled with asphalt, fines to effective binder content ratio, and unit weight verses asphalt content. Plots shall indicate values at -0.5 percent design asphalt content, design asphalt content, and +0.5 percent design asphalt content.
 19. Tensile strength ratio (TSR), strength of conditioned samples, and worksheets.
- B. The certification(s) shall show the appropriate AASHTO/ASTM test(s) for each material, test results, and a statement that the material meets the specification requirement.
- C. If requested by the Engineer, submit samples for each type aggregate to be used and from each source with proper identification as to source, type of aggregate and contract number. Take all samples in accordance with requirements of ASTM D75 and D242. Submit in clean, sturdy bags and in the following amounts for each sample when requested:
- | Material | Sample Size |
|----------------------------|-------------|
| Coarse Aggregate | 25 lbs. |
| Fine Aggregate | 25 lbs. |
| Reclaimed Asphalt Pavement | 25 lbs. |
| Mineral Filler | 5 lbs. |
- D. The job mix formula for each mixture shall be in effect until modified in writing by the Engineer. Should a change in mix or sources of materials be made, a new job mix formula must be tested and resubmitted for approved by the Engineer before the new mix is used.
- E. Working Drawings: For each paving area, provide working drawings to show the following information:
1. Direction of paving.
 2. Lane widths.
 3. Thickness of each lift.

- F. Submit smoothness measurements and surface grade survey results to the Engineer prior to application for payment.

1.04 CONTRACTOR QUALITY CONTROL

- A. The Contractor shall be responsible for developing the asphalt mix designs specified herein. The mix designs shall be developed and/or certified by a laboratory accredited by AASHTO under the AASHTO Materials Reference Laboratory (AMRL) program.
- B. Quality Control Testing: The Contractor shall conduct any and all quality control (QC) testing that he deems necessary to properly control the quality, consistency, and uniformity of the asphalt concrete mix being produced. No minimum number of quality control tests is required for this Contract.
- C. If the Contractor chooses to conduct quality control tests, the information and data determined through that testing shall be made available for inspection by the Engineer. In no case, however, shall the Contractor's quality control test data be used by the Engineer for acceptance or payment purposes.
- D. Surface Grades: Grades shall conform to the tolerance requirements specified herein, except where closer tolerance is required for the proper functioning of appurtenant structures and drainage as determined by the Engineer.

1.05 QUALITY ASSURANCE

- A. The Port will provide inspection services to the satisfaction of the Engineer. Sampling and testing for compliance shall be in accordance with the applicable reference standards using certified technicians and accredited independent testing laboratories.
- B. Sampling and testing for compliance with the Contract provisions shall be in accordance with Section 01 45 00 - Quality Control.
- C. The Contractor may obtain copies of results of tests performed by the Port from the office of the Port, at no cost. Tests conducted for the sole benefit of the Contractor, shall be at the Contractor's expense.
- D. Unless otherwise referenced or modified herein, quality control and quality standards for this section shall be as specified in the WSDOT Standard Specifications.

1.06 JOB CONDITIONS

- A. Environmental Requirements:
 - 1. Weather limitations shall be in accordance WSDOT Standard Specifications Section 5-04.3(1), as modified herein.
 - 2. In case of sudden rain, the Engineer may permit placing of mixture then in transport from the plant provided that the surface upon which the mix is being placed is free from pools of water. In addition, the laydown temperatures must conform to the above requirements. Such permission, however, shall not be interpreted as a waiver of any of the quality requirements.
- B. New and existing manholes, catch basins, and utility vault covers shall be adjusted to conform to the new pavement grades. Paving shall be finished ¼-inch to ½-inch higher than adjacent structures, unless otherwise shown or specified.
- C. Existing Underground Utilities: The Contractor shall locate existing underground utilities in the area of the work. Those utilities which are to remain shall be adequately protected from damage.

- D. All permanent utilities shall be installed prior to final paving. All utility trenches shall be patched with asphalt pavement as shown on the Contract Drawings.
- E. Dust Control: The Contractor shall be responsible for dust control at the site. As a minimum, a water truck and vacuum truck shall be used on site for dust control when required by the Engineer.

PART 2 - PRODUCTS

2.01 PERFORMANCE GRADED ASPHALT BINDER (PGAB)

- A. Asphalt shall conform to the requirements of AASTHO M 320 and the elastic recovery requirements of WSDOT Standard Specification Section 9-02.1(4) for the Performance Grade specified herein.

2.02 AGGREGATE

- A. Coarse Aggregate – Coarse aggregate shall conform to WSDOT Standard Specification Section 9-03.8 and AASHTO M 323, as modified below:

Test	Specification
Flat and Elongated Particles (ASTM D 4791, using a ratio of 5:1, maximum to minimum dimension)	8%, maximum
Coarse Aggregate Angularity (AASHTO T 335-Test Method 2 is no longer acceptable)	90% with 2 or more fractured faces 95% with 1 or more fractured faces
LA Abrasion Wear (AASHTO T 96, 500 revolutions)	30%, maximum
Sodium Sulfate Soundness Loss (AASHTO T 104, 5 cycles)	13%, maximum

- B. Fine Aggregate - Fine aggregate shall consist of clean, sound, durable, angular shaped particles produced by crushing stone or gravel that meets the requirements for wear and soundness specified for coarse aggregate. Natural (non-manufactured) siliceous sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. The amount of sand to be added will be adjusted to produce mixtures conforming to requirements of this Specification. The aggregate particles shall be free from coatings of clay, silt, or other objectionable matter and shall contain no clay balls. Fine aggregate shall conform to WSDOT Standard Specification Section 9-03.8 and AASHTO M 323, as modified below:

Test	Specification
Sand Equivalent (AASHTO T 176)	45%, minimum
Uncompacted Void Content (AASHTO T 304, Method A)	44%, minimum
Plasticity Index (AASHTO T 90)	Non-plastic
Liquid Limit (AASHTO T 89-13)	25, maximum
Deleterious Materials (AASHTO T 112)	2%, maximum

- C. Mineral filler, when used, shall conform to the requirements of AASHTO M 17.

D. Recycled Asphalt Pavement (RAP)

1. RAP, if used, shall conform to the requirements of WSDOT Standard Specification Section 9-03.8(3)B, 9-03.21(1) 9-03.21(1)A, as modified herein.
2. The maximum proportion of RAP permitted within each mix shall not exceed 20 percent.
3. RAP shall have 100 percent passing the 2-inch sieve, 95 percent passing the 1-inch sieve, and shall be a mixture of only coarse aggregate, fine aggregate, and asphalt cement, free of solvents and other contaminating materials.
4. When RAP is used in a mixture, the RAP aggregate shall be extracted from the RAP using a solvent extraction (AASHTO T164) or ignition oven (AASHTO T308). The RAP aggregate shall be included in determinations of gradation, coarse aggregate angularity, fine aggregate angularity, and flat-and-elongated requirements. The sand equivalent requirements shall be waived for the RAP aggregates but shall apply to the remainder of the aggregate blend.
5. Documentation of RAP stockpile quality and traceability shall be submitted to the Engineer for approval prior to use.

E. Aggregate Gradation

1. Each gradation contains maximum and minimum control points. Job mix formula gradations must fall within control points for the specified nominal aggregate size. The combined aggregate shall conform to the gradation requirements shown below when tested in accordance with AASHTO T11 and T27. Design gradation requirements are as follows:

Design Aggregate Gradation Control Points	
Sieve Size	Class 1/2-inch (Percent Passing)
1-1/2"	-
1"	-
3/4"	100
1/2"	90-100
3/8"	75-90
No. 4	46-66
No. 8	-
No. 10	30-42
No. 40	11-24
No. 200	3.0-7.0

2. Aggregates shall be provided in sufficient sizes to produce a uniform mixture. The Contractor shall indicate on the proposed job-mix formula the separate size designations of aggregate to be used.
3. It is recommended that the Bailey Method of gradation evaluation be used to evaluate the packing of aggregate particles and constructability of the blended aggregate mix. If segregation or non-uniformity is evident in the finished pavement, the Engineer reserves the right to require the Contractor to discontinue the use of crusher run or aggregate blends and to furnish separate sizes of open graded aggregate material.

2.03 HOT MIX ASPHALT (HMA) MIX DESIGN

A. Mix design shall be prepared in accordance with WSDOT SOP 732 as modified herein.

B. Asphalt Binder: PG 58H-22.

C. Aggregate Gradation: Class 1/2".

D. Gyration levels for mix preparation shall conform to the following:

Mix Designation	Ninitial	Ndesign	Nmax
Class 1/2"	8	100	160

E. The target air voids (Va) of the mix design at the design number of gyrations shall be as follows:

Mix Designation	Air Voids (Percent)
Class 1/2"	4

F. The voids filled with asphalt (VFA) at the target air void level shall be as follows:

Mix Designation	Voids Filled with Asphalt (Percent)
Class 1/2" Wearing Course	65 – 75

G. The voids in mineral aggregate (VMA) of the HMA design shall be as follows:

Mix Designation	Voids in Mineral Aggregate (Percent)	
	Minimum	Maximum
Class 1/2"	14.0	16.0

H. The HMA design when compacted in accordance with AASHTO T 312, shall meet the density specified below at the initial, design, and maximum compaction levels.

Compaction Level (Number of Gyrations)	Required Density (% of Theoretical Maximum Specific Gravity)
Nini	%Gmm =< 89
Ndes	%Gmm = 96
Nmax	%Gmm =< 98

I. The dust to binder ratio of the blended mix shall be between 0.6 and 1.6.

J. Compacted mix design shall have a tensile strength ratio (TSR) greater than or equal to 85 percent when tested in accordance with WSDOT Test Method T718, including the optional freeze-thaw cycle. In addition, the mixture shall have a minimum wet tensile strength of 80 pounds per square inch (psi). In the event the mix design does not meet the tensile strength requirements the Contractor shall increase the approved anti-stripping agent dosage or take other corrective action to satisfy the specification.

2.04 HEAT-STABLE ANTI-STRIPPING ADDITIVE

A. Mix designs shall include a minimum of 0.1 percent by weight of binder, anti-stripping additive conforming to the requirements of WSDOT Standard Specification Section 9-02.4.

2.05 TACK COAT

- A. Unless otherwise approved by the Engineer, the tack coat shall be CSS-1, CSS-1h, or STE-1 emulsified asphalt conforming to WSDOT Standard Specification Section 9-02.1(6). The CSS-1 and CSS-1h emulsified asphalt may be diluted with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

2.06 JOINT AND CRACK SEALANT

- A. Sealant material shall conform to the requirements of WSDOT Standard Specification Section 9-04.10.

PART 3 - EXECUTION

3.01 CONSTRUCTION METHODS

- A. Asphalt Mixing Plant – Asphalt shall be produced at a plant approved by the WSDOT. Plants shall conform to WSDOT Standard Specifications Section 5-04.3(3)A.
- B. Hauling Equipment:
 - 1. Hauling equipment shall conform to WSDOT Standard Specifications Section 5-04.3(3)B, as modified herein.
 - 2. Trucks shall be equipped with tarps, in good condition without holes, which can be tied down over the sides and ends of the truck beds during periods of inclement weather to prevent rain from entering the truck bed and coming in contact with the asphalt concrete mix.
 - 3. Trucks shall be loaded using a multiple-drop method (front then back the middle) to minimize truck to truck segregation.
- C. Paving Equipment – Asphalt pavers shall conform to WSDOT Standard Specifications Section 5-04.3(3)C.
- D. Compaction Equipment – Rollers shall conform to WSDOT Standard Specifications Section 5-04.3(3)E.
- E. Preparation of the Asphalt Binder Material (asphalt cement):
 - 1. The binder shall be stored within the temperature range specified by the supplier of the binder for the grade of asphalt cement being used. Different grades of asphalt binder shall be stored separately and not mixed together at any time.
 - 2. The binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the bituminous material to the mixer at a uniform temperature.
 - 3. The temperature of the binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 350 degrees F unless otherwise required by the asphalt binder manufacturer.
- F. Preparation of the Aggregates:
 - 1. The aggregate for the mixture shall be heated and dried prior to introduction into the mixer. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates.

2. The aggregate temperature shall not be lower than is required to obtain complete coating and uniform distribution of the aggregate particles and to provide a mixture of satisfactory workability.

G. Preparation of Bituminous Mixture:

1. Mixing shall conform to WSDOT Standard Specifications Section 5-04.3(6), as modified herein.
2. The aggregates and the bituminous material shall be properly proportioned and introduced into the mixer in the amount specified by the job mix formula. Aggregate acceptance shall conform with WSDOT 5-04.3(8).
3. Job mix formula production tolerances shall conform to WSDOT Standard Specifications Section 9-03.8(7), except the tolerance limits for aggregate shall not exceed the limits of the control points specified herein.
4. The moisture content of all bituminous mix upon discharge shall not exceed one (1) percent.

H. Preparation of the Underlying Surface:

1. Preparation shall conform to WSDOT Standard Specifications Sections 5-04.3(4), 5-04.3(4)A, 5-04.3(4)B, and 5-04.3(4)C.
2. Asphalt materials shall not be placed until the underlying course has been tested by the Port's Representative and accepted by the Engineer.
3. Immediately before placing asphalt materials, clean all underlying pavement surfaces and previous courses of all loose and foreign material by sweeping with hand brooms, power sweepers or blowers as directed by the Port's Representative or Engineer.
4. Tack Coat:
 - a. Tack coat shall be applied in accordance with WSDOT Standard Specifications Section 5-04.3(5)A, as modified herein. The Port inspector shall verify that the tack coat has been properly placed prior to constructing subsequent pavement lifts. Refer to the applicable sections in Chapter 5 of the WSDOT Construction Manual for guidance on tack coat application and inspection.
 - b. Apply tack coat only when the underlying surface is dry, and the ambient temperature meets the requirements for the pavement course being placed.
 - c. Residual asphalt coating shall be 0.03 to 0.05 gallons per square yard on newly placed asphalt surfaces
 - d. Residual asphalt coating shall be 0.06 to 0.08 gallons per square yard on existing or milled asphalt surfaces.
5. Manholes, valve boxes, inlets, and other appurtenances within the area to be paved shall be adjusted to grade as shown on the Contract Drawings. Permanent curbs, gutters, and other supports shall be constructed and backfilled prior to placing asphalt. All contact surfaces shall be coated with tack coat.

I. Transporting, Placing, and Finishing:

1. The asphalt concrete mixture shall be transported from the mixing plant to the site in vehicles conforming to the requirements specified herein.

2. Hauling over freshly placed material shall be not permitted until the material has been compacted, as specified, and allowed to cool to atmospheric temperature.
3. Placing and finishing of the asphalt mixture shall be in accordance with WSDOT Standard Specifications Section 5-04.3(7), as modified herein.
4. The nominal compacted depth of any layer of any course shall not exceed five (5) times the nominal maximum aggregate size of the asphalt mix.
5. The hot mix asphalt mixture shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than that specified below. The temperature requirements may be waived by the Engineer, if requested; however, all other requirements including compaction shall be met.

Lift Thickness, T (inches)	Minimum Base Temperature (degrees F)
$T > 3$	40
$2 < T < 3$	45
$T < 2$	55

6. The initial placement of the asphalt concrete mixture shall occur at a temperature suitable for obtaining density, surface smoothness, and other specified requirements but not less than 250 degrees F, unless approved by the Engineer.
7. Upon arrival, the mixture shall be placed to the full width of the paving lane. It shall be struck off in a uniform layer of such depth that, when the mix is properly compacted, shall have the required thickness and conform to the grade and contour indicated. The speed of the paver shall be regulated to eliminate pulling and tearing of the bituminous mat. Unless otherwise permitted, placement of the mixtures shall begin along the centerline of a crowned section or on the high side or areas with a one-way slope. The mixture shall be placed in consecutive adjacent strips having a minimum width of 10-feet except where edge lanes require less width to complete the area.
8. Compaction of the asphalt mixture shall be in accordance with WSDOT Standard Specifications Section 5-04.3(10), as modified herein.
 - a. For density determination, each day's production will be treated as a lot. A minimum of ten sublots will be tested each day; 15 if production tonnage is expected to exceed 600 tons for that day. In no case shall the subplot size for density determination exceed 40 tons. Random test locations will be determined according to WSDOT Test Method T 716.
 - b. In-place density shall be a minimum of 93% of the reference theoretical maximum density as determined by WSDOT FOP for WAQTC TM 8. Evidence of gauge calibration to cores, required in the test method, shall be provided for the approved job-mix being placed at a similar thickness or the gauge will be calibrated as described in the test method.
 - c. Determine reference theoretical maximum density as the moving average of the most recent five determinations for the lot of asphalt concrete being placed according to WSDOT Materials Manual Standard Operating Procedure 729.
 - d. Engineer may evaluate cyclic density as described in WSDOT Standard Specifications Section 5-04.3(10)B to assess segregation.
9. Joints:

- a. The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least 6-inches; however, the joint in the surface course shall be at the centerline of the pavement if that pavement is to be used by normal car or truck traffic.
 - b. Longitudinal joint density shall be assessed once per subplot in accordance with WSDOT SOP 735. Low density is defined as less than 91 percent of reference maximum density. When placing a single paver width patch, consecutive density tests will be taken on alternating sides of the patch.
 - c. Transverse joints in one course shall be offset by at least 10-feet longitudinally from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10-feet.
10. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture may be spread and raked by hand tools.

3.02 JOINT SEALANT

- A. Apply joint sealant to the edges of new paving joints, catch basins, manholes, at the meet lines to concrete structures and as directed by the Engineer.

3.03 SURFACE SMOOTHNESS

- A. The completed surface of the wearing course shall conform to the smoothness tolerance requirements of WSDOT Standard Specifications Section 5-04.3(13).

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 SUMMARY

- A. The work includes constructing pavement markings, wheel stops, extruded curbs and traffic control signage for the roadways and parking areas as indicated on the Drawings.

1.02 QUALITY ASSURANCE

- A. Standard Specifications:
 - 1. All work shall conform with the WSDOT M41-10, Standard Specifications and Standard Plans for Road, Bridge and Municipal Construction, 2023 Edition, as published by the Washington State Department of Transportation, unless otherwise indicated herein.
 - 2. The Contractor shall have one copy of the Standard Specifications and Standard Drawings at the job site.
 - 3. The Standard Specifications apply only to performance and materials and how they are to be incorporated into the work. The legal/contractual relationship sections, and the measurement and payment sections do not apply to this document.
- B. Qualification of Workers: Employ at least one person who shall be present at all times during execution of this portion of the Work, shall be thoroughly familiar with the type of materials being installed and the best methods for their installation and shall direct all work performed under this section.
- C. Codes and Standards: Comply with the applicable provisions of all pertinent codes and regulations. References made herein for manufactured materials, refer to designations for American Association of State Highway and Transportation Officials (AASHTO) or to American Society for Testing Materials (ASTM).

1.03 SUBMITTALS

- A. The Contractor shall submit the following information:
 - 1. Product Data: Provide manufacturer's product data on striping, paint, precast curbs, extruded curb and accessories.

PART 2 - MATERIALS

2.01 THERMOPLASTIC

- A. Thermo plastic for pavement markings shall be hot laid, thermoplastic material, containing reflective glass bead, conforming to WSDOT M41-10 Section 9-34.3(1), with additional glass bead applied separately, 125 mil minimum thickness and colors as indicated on the Drawings.

2.02 WHEEL STOPS

- A. Wheel stops shall be per Drawings.

2.03 EXTRUDED CURBS

- A. Extruded curbs shall be per Drawings. Extruded curbs shall be per WSDOT Standard Specifications Section 8-04.3(2).

PART 3 - EXECUTION

3.01 GENERAL

- A. Pavement markings installation shall conform with manufacturer's recommendations and Section 8-22 of the Washington State Department of Transportation Standard Specifications (M41-10), 2022 edition, except that the Contractor shall be responsible for all layout and control points, striping shall not deviate more than 1/4-inch in 10-feet from a straight line and striping shall not be more than 1-inche from the specified locations. Paint striping shall only be applied after the pavement has been allowed to cure 14-days minimum, when the pavement is clean and dry and when the temperature is above 50 degrees F.

END OF SECTION

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. The extent of Water Utilities work is indicated on the drawings. Work includes the requirements for providing the water system complete in place, including excavation, bedding, backfill, compaction, installation of pipe sleeves, thrust blocking, valves and valve boxes, coordination with electrical work, etc., all in conformance with these specifications and the dimensions and sections indicated on the drawings or within the lines and grades established by the Engineer.

1.02 QUALITY ASSURANCE

- A. Qualification of Workers: Employ the services of a qualified utility contractor, who will be thoroughly familiar with the type of materials being installed and the best methods for their installation, and who shall direct all work performed under this section.
- B. Codes and Standards: Comply with the applicable provisions of all pertinent codes and regulations. References made herein for manufactured materials, such as pipe, fittings, valves, hydrants and specialties; refer to designations for American Water Works Association (AWWA), American National Standards Institute (ANSI), International Plumbing Code and to the latest edition of the Standard Specifications and Standard Plans for Road, Bridge, and Municipal Construction prepared jointly by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA).
- C. City of Tacoma: The Contractor shall coordinate with and comply with the applicable provisions of all pertinent local codes and regulations of Tacoma Public Utilities / Tacoma Water, and International Plumbing Code concerning testing, flushing, disinfection, installation, inspection and materials used.
- D. Tacoma Water facilities must remain accessible at all times. Any damage to Tacoma Water facilities occurring as a result of work performed by the Contractor shall be repaired by Tacoma Water at the expense of the Contractor.
- E. All water system components unless noted otherwise shall be rated for a working pressure of at least 125 psi and a testing pressure of 225 psi, meet current Safe Drinking Water Act lead free requirements and be approved for potable use by National Sanitation Foundation (NSF).

1.03 SUBMITTALS

- A. Piping, Fittings, Valves, Accessories
 - 1. Manufacturer's catalog cuts and shop drawings to demonstrate that all items conform to the specifications for the following:
 - a. Pipe, fittings, couplings and accessories
 - b. Valves
 - c. Backflow Prevention Assembly
 - d. Strainers
 - e. Pipe Supports
 - f. Heated Enclosure
 - 2. The Contractor shall furnish the manufacturer's installation and operations manuals, bulletins, and spare parts lists for all items.

1.04 PRODUCT HANDLING

- A. Pipe shall be handled in conformance with section 7-09.3 (13) of the WSDOT Standard Specifications. Handle pipe to prevent damage to the pipe, pipe lining, or coating. Damage to the pipe, pipe lining, or coating, if any, shall be repaired as directed by the Engineer or replaced at the Contractor's expense.
- B. At times when pipe laying is not in progress, close the open ends of the pipe with a watertight plug or by other means approved by the Engineer to ensure cleanliness inside the pipe.

PART 2 – PRODUCTS

2.01 PIPE AND FITTINGS

- A. General: Materials shall be in accordance with the applicable references within WSDOT Standard Specifications, Section 7-09.2.
- B. Copper Pipe and Fittings:
 - 1. Copper pipe shall be annealed, seamless, and conform to the requirements of ASTM B88, Type K rating for both below ground pipe and for above ground pipe where specified on the plans.
 - 2. Fittings shall be wrought copper, conforming to ASTM B 75 for materials and ANSI B16.22 for dimensions, or cast bronze, conforming with ASTM B 62 for materials and ANSI B16.18 for dimensions. Solder joints with 95/5 solder and NAPP gas.
- C. High Density Polyethylene (HDPE) Water Service Pipe and Fittings:
 - 1. HDPE water service pipe shall be manufactured from PE4710 resin conforming to ASTM D3350. Pipe shall be manufactured in accordance with AWWA C901 and diameter sizes.

2.02 ACCESSORIES

- A. Service Saddle and Corporation Stop:
 - 1. Water service saddle shall be in accordance with WSDOT Standard Specifications, Section 9-30.6(1) and corporation stop shall be in accordance with WSDOT Standard Specifications, Section 9-30.6(2).
 - 2. Saddle shall be nylon coated with stainless steel straps, U-bolts and taper thread. Saddle shall be Romac Industries, or approved equal. Corporation stop shall be brass body conforming to AWWA C800, 300 psi working pressure as manufactured by the Ford Meter Box Company.
- B. Adapters, Couplings and Unions: Coupling adapters at tie-ins to existing pipes, if required, shall be Smith Blair or approved equal. Provide dielectric unions and couplings at connections between dissimilar materials.
- C. Heat Tracing:
 - 1. Heat tracing in Hot Boxes: Self-regulating Low Temperature Cable for metallic pipe shall have a protective high temperature overjacket. Input shall be 120 volts, output 6 watts per foot of cable. Cable shall not be hard wired. Cable shall come with accessories, including but not limited to power connection boot, end termination boot, thermostat, mounting brackets and caution labels in full compliance with NEC. Heat tracing cable shall be 3M or as approved by the Engineer.

2.03 VALVES

- A. Gate Valves 2-1/2 Inches & Smaller: 1. MSS SP-80; Class 125, 200-psi cold working pressure (CWP), or Class 150, 300-psi CWP; ASTM B 62 cast-bronze body and bonnet, solid-bronze wedge, copper-silicon alloy rising stem, teflon-impregnated packing with bronze packing nut, threaded or soldered end connections; and with aluminum or malleable-iron hand wheel.
 - 1. Manual Operator: Hand wheel for valves in structures, 2-inch square operating nut for buried valve box installation
- B. Ball Valves:
 - 1. Size: Two (2) inches and smaller
 - 2. Material: Bronze
 - 3. Rating: 600 psi W.O.G.
 - 4. 4Ball and Stem: 316 Stainless steel
 - 5. Seats: reinforced Teflon
 - 6. Connection: Threaded
 - 7. Manufacturer: Watts, Series FBV-3, or approved equal.

2.04 BACKFLOW PREVENTION ASSEMBLIES

- A. 2-inch
 - 1. Type: Reduced Pressure Principle
 - 2. Design: Check valves shall be ductile iron and loaded to one psi in the direction of flow. A pressure differential relief valve shall be located between the two check valves.
 - 3. Accessories: Ball Valves and Test Cocks
 - 4. Working pressure: Max. 175 psi
 - 5. Hydrostatic Test Pressure: 350 psi
 - 6. Approvals: By State and Local Authorities
 - 7. Body: Bronze
 - 8. Ends: Threaded or Flanged, see Drawings
 - 9. Servicing: provide unions for removal or assembly outside of ball valves.
 - 10. Manufacturer: FEBCO Series 825Y, Watts LF909, or approved equal.
- B. Heated Enclosures: Heated Enclosures shall be sectional aluminum enclosures certified to ASSE 1060 with removable doors and the capability to be completely removed for maintenance. Insulation shall be R10 and a minimum of 1 1/2" thick, and be unicellular, non-wicking, polyisocyanate, sprayed in place to form a monolithic bond. Drains shall be sized for full port backflow discharge and designed to prohibit the intrusion of debris and/or vermin. Enclosure shall be anchored to a concrete slab from within the enclosure with steel anchors and shall be lockable. Hot Boxes shall be of the size indicated on the Drawings and shall be manufactured by Hot Box, Jacksonville, FL or approved equal.

2.05 VALVE BOX

- A. Valve box shall a water meter box in accordance with WSDOT Standard Specifications 9-30.6(7). Meter boxes located in traffic areas shall be constructed of reinforced concrete, cast iron, or ductile iron. Traffic covers shall be constructed of aluminum, stell, cast iron, or ductile iron. Meter boxes and covers shall be designed for H-20 loading.

2.06 CONCRETE FOR THRUST BLOCKS, PADS AND COLLARS

- A. Concrete compressive strength shall be minimum 3,000 psi at 28 days and in conformance with the requirements of WSDOT Section 6-02.3(2) B – Commercial Concrete.

PART 3 – EXECUTION

3.01 TRENCHING, BEDDING AND BACKFILL

- A. All earthwork related to water piping shall conform to the requirements of Section 31 00 00 – Earthwork, Section 31 23 33 - Trenching and Backfilling and Section 31 23 19 - Dewatering and the details and notes on the Drawings. Provide shoring as necessary to support existing items noted to remain in place.
- B. In the event that water is encountered or accumulates in the trench, it shall be removed during the pipe-laying operation and be maintained in a water-free condition until the ends of the pipe are sealed and provisions are made to prevent floating of the pipe. At no time allow trench water to enter the pipe.

3.02 COORDINATION WITH OTHERS

- A. Prior to starting work coordinate shut downs, demolition, testing, flushing, disinfection and reopening water supply with the Port, Tacoma Water, Tacoma Fire Department and others as required by permit.

3.03 HANDLING THE PIPE

- A. During installation, handle the pipe as specified in paragraph 1.04 above. Pipe that has become damaged or contaminated shall be removed from the trench, cleaned, and repaired as required and re-laid.

3.04 LAYING PIPE

- A. General: Construction shall conform to manufacturer instructions and requirements in accordance with WSDOT Section 7-09.3. Fully extend each joint of restrained joint piping during installation.

3.05 VALVE INSTALLATION

- A. Inspect all valves upon delivery in the field to ensure proper working order before installation. Set and joint to the pipe in the manner set forth in the AWWA Standards for the type of connection ends furnished. Inspect the valves carefully for damage to the outer protective coatings. Where the coating has been ruptured or scraped off, clean the damaged area thoroughly to expose the iron base installation, and recoat the cleaned area with two or more field coats of Quigley Triple A-1 0, Triple A-20, or approved equal.
- B. Install valves in the positions shown on the drawings and provide with a valve box, where required, so arranged that no load or shock will be transmitted to the valve. Center the box over the operating nut, and set the box cover flush with the finished paved surface.
- C. After installation, all valves shall be subjected to the field test for piping. If defects in design, materials, or workmanship appear during these tests, correct such defects with the least possible delay as directed by the Engineer.

- D. Valve boxes shall be positioned during backfill to be in a plumb alignment. Valve box shall not rest directly on the body of the valve, or the water main. Set the upper casting flush with finish pavement and align to match grade.
- E. Concrete pad with rebar as shown on the valve details shall be constructed where indicated on the Drawings. Construction, materials and finished of the concrete shall conform to WSDOT Section 6.02 – Concrete Structures. The concrete pad shall be set flush with the immediately surrounding finished grade.

3.06 THRUST BLOCKS FOR BURIED PIPE

- A. Concrete thrust blocking shall be constructed in accordance with the details on the drawings and WSDOT Standard Specifications Section 7-09.3(21).

3.07 FIELD TESTS

- A. Test all piping and appurtenances in accordance with the requirements of WSDOT Standard Specifications Section 7-09.3 (23), Tacoma Water and Tacoma Fire Department.
- B. Test pipe in accordance with pipe and fitting manufacturer's requirements.

3.08 FLUSHING & DISINFECTION OF POTABLE WATER LINES

- A. Before being placed in service, flush and disinfect all new, repaired portions, or extensions of potable water lines in accordance with the requirements of WSDOT Standard Specifications Section 7-09.3(24) and 7-09.3(24)A and Tacoma Water. Dispose of test water in accordance with applicable regulations.

3.09 RESTROOM BUILDING PLUMBING HOOKUPS

- A. Water connection hookups to the restroom building shall be constructed in accordance with the 2021 IBC.
- B. Contractor shall supply all other work and materials in order to provide a fully functional system compliant with the IBC and UPC.

END OF SECTION

This page intentionally left blank

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. The location and extent of "Sanitary Sewage Utilities" work is indicated on the drawings. The work includes the requirements for furnishing and installing sanitary sewer pipe and sanitary sewer structures.

1.02 QUALITY ASSURANCE

- A. Qualification of Workmen: Employ at least one person, who shall be present at all times during execution of this portion of the Work, shall be thoroughly familiar with and have at least 5 years of experience with the type of materials being installed.
- B. The project superintendent shall have at least 3 years of pipe ramming, "bore and jack", experience and shall have worked on at least two projects in similar ground conditions using equipment similar to the equipment required for this project. The operator shall have at least 2 years of pipe ramming experience and shall have worked on at least 1 pipe ramming project using the same ramming equipment proposed for this project.
- C. Codes and Standards: Comply with the applicable provisions of all pertinent codes and regulations. References made herein for manufactured materials, such as pipe, fittings, valves, hydrants and specialties; refer to designations for American Water Works Association (AWWA), American National Standards Institute (ANSI) and to the latest edition of the Standard Specifications and Standard Plans for Road, Bridge, and Municipal Construction prepared jointly by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA) and the International Plumbing Code.
- D. Testing and Inspection for Contractor Quality Control: The Contractor shall perform the inspection and tests described below and based upon the results of these inspections and tests, shall take the action required and shall submit specified reports.
 - 1. Sampling and Testing of Materials at each work area
 - 2. Pipeline Testing at each work area.
 - 3. Leak Testing
 - 4. Field Tests for Concrete
- E. Materials and equipment furnished in this section shall be from manufacturers who have been regularly engaged in the design and manufacture of the materials and equipment for a period of 5 years. Demonstrate to the satisfaction of the Engineer that the quality is equal to the materials and equipment made by the manufacturer specifically named herein, if an alternate manufacturer is proposed.
- F. Contractor shall review the Geotechnical Engineering Design Study available as part of Section 00 31 00 Available Project Information, for soil data and design requirements.

1.03 SUBMITTALS

- A. Manufacturer's literature and cut sheets for pipes and fittings including couplings and gaskets.
- B. Manufacturer's literature on manholes, cleanouts, covers, lids, grates and frames.
 - 1. Design drawings and calculations confirming manholes and catch basins are designed for the Concentrated Live Loads for container handling equipment shown on drawing G1.1.
 - 2. Certificates of compliance that structure lids meet 125 kip load ratings.
- C. Casing Spacers

- D. Pilot Tube Pipe Ramming Plan: The Contractor shall submit a Pipe Ramming plan to the Engineer for review and approval prior to construction. The Pipe Ramming Plan shall include items necessary to control all work associated with the installation of the steel casing pipe and the pilot tube pipe ramming method. The plan shall include the following items at a minimum:
1. Calculations demonstrating that the pipe selected has been designed to support the maximum anticipated earth loads and superimposed live loads, both static and dynamic, which may be imposed on the pipe. Determine the additional stresses imposed on the pipe during ramming operations and upgrade the quality and strength of the pipe and pipe joints to extent necessary to withstand the additional stresses imposed by the ramming operation.
 2. Cut sheets on all equipment that will be used on site including the ramming system, the pilot tube guidance system, and adapter between the pilot tube system and the pipe ramming system.
 3. Detailed description of the pilot tube guided pipe ramming procedure including equipment set-up, sequencing, reaction frame for the pilot tube installation, ground water control during pipe ramming, and monitoring to install casing, in conformance with the drawings.
 4. Calculations and drawings indicating the limits of access pits and proposed ground support system.
 5. Methods of spoils disposal including details, See Section 01 74 16 – Soil Characteristics and Waste Management.
 6. Details of groundwater control measures at ramming and receiving pits (both within the pit and within the lead section of pipe ram casing). Plan should be coordinated with section 31 23 19 – Dewatering.
 7. Documentation by the pipe ramming manufacturer that the hammer proposed for this project is appropriate for the length and diameter indicated on the project drawings. Manufacturers cut sheets for proposed equipment (pilot tube system pipe, ram system, and spoil removal system) including hammer energy rating, thrust capacity, condition, and operational characteristics.
 8. Work drawings, including the following pages:
 - a. Layout of pipe ramming and ancillary equipment at each pit locations.
 - b. Shop drawings including configuration of cutting show and overcut.
 - c. Pipe lubrication system details if used.
 - d. Grade and alignment control system details for the pilot tube guided system.
 9. Contractor safety plan for personnel conducting the ramming operations and appurtenance installation. The plan should include provisions for lighting and electrical safeguards.
 10. Steel Casing Pipe documentation showing compliance with project specifications and contractor calculations.
 11. Steel Casing Pipe jointing method and details.
 12. Documentation summarizing the qualifications of the project, Superintendent, operators, and site safety representative.

13. Contingency plan for encountering anticipated and unanticipated obstacles, for higher than allowable ramming forces, and for deviation from design line and grade. No spoils shall be removed from the casing until the pipe ram is complete without approval from the Engineer.
14. Log of pilot tube guided ramming operations. As a minimum, the log shall consist of the following:
 - a. The position of the pilot tube in relation to the design line and grade.
 - b. The date, start time and finish time for each stage of construction (pilot, ram, and spoil removal).
 - c. Advance rates in feet per minute measured at once per pilot tube rod and at least once per pipe ram pipe section.
 - d. Hammer strokes per minute during pipe ramming.
 - e. Operating pressure.
 - f. Muck quantities removed if any "during pipe ramming" spoil removal is approved by the Engineer.
15. "As-built" plan and profile.
16. Spoils disposal procedures and plan. See Section 01 74 16 – Soil Characteristics and Waste Management.

1.04 PRODUCT HANDLING

- A. Pipe shall be handled in conformance with section 7-09.3 (13) of the WSDOT Standard Specifications. Handle pipe to prevent damage to the pipe, pipe lining, or coating. Damage to the pipe, pipe lining, or coating, if any, shall be repaired as directed by the Engineer or replaced at the Contractor's expense.
- B. At times when pipe laying is not in progress, close the open ends of the pipe with a watertight plug or by other means approved by the Engineer to ensure cleanliness inside the pipe.

PART 2 – PRODUCTS

2.01 PIPE AND FITTINGS

- A. Polyvinyl Chloride (PVC) Gravity Sewer Pipe and Fittings:
 1. PVC Pipe and fittings shall be in accordance with WSDOT Standard Specifications Section 9-05.12(1) and approved for sanitary sewer use.
- B. The contractor shall procure and install the following items for connection of the sewer system to the restroom building.
 1. 2" waste pipe, 12" stub up below finish floor
 2. P-trap assembly.

2.02 MANHOLES

- A. Manholes shall be of precast concrete with ductile iron castings. Materials shall be in accordance with the applicable references within WSDOT Standard Specifications Section 7-05.2. Manholes shall be designed to meet the Concentrated Live Load for container handling equipment shown on drawing G1.1.

1. Manhole rings and covers shall be non-locking heavy duty ductile iron castings of the size and style indicated on the Drawings. Covers shall be embossed 3" high with "SEWER" in the center.
2. Provide watertight rubber gaskets at matching segments of precast units.
3. All manhole blockouts for pipes shall be fitted with flexible boot connection conforming to the requirements of ASTM C923, Kor-N-Seal or approved equal.
4. All manhole lids shall have a 125 kip load capacity rating.

2.03 ACCESSORIES

- A. Adapters and Couplings: Coupling adapters at tie-ins to existing pipes, if required, shall be Smith Blair or approved equal.

2.04 PNEUMATIC PIPE HAMMER

- A. Hammer shall be mono-bloc design; specifically manufactured to drive steel casing from a drive pit through the soil conditions as described in the Geotechnical Engineering Design Study available as part of Section 00 31 00 Available Project Information.
- B. Drives shall be compatible with the soil conditions, stiffness characteristics of selected pipe, and joint system at the designed maximum ramming loads.
- C. Guided pipe ramming equipment and hammer shall be sized per the Manufacturer's recommendations and the Contractor's knowledge of ramming in soils similar to those at the site.

2.05 CASING PIPE

- A. Pipe material shall be steel.
- B. Pipe to be placed by ramming shall be as follows:
 1. Steel casing shall be new, smooth wall carbon steel which conforms to ASTM Specifications A139, Grade B. No hydrostatic testing will be performed on casing pipe.
 2. Steel casing pipe shall have a minimum yield strength of 35,000 psi.
 3. Pipe casing diameter shall be 10-inch I. D. minimum.
- C. Minimum pipe wall thickness shall be as shown on the drawings. Contractor shall design and size wall thickness based on static and dynamic loads from traffic loading and anticipated ramming forces for selected pipe and driven pipe lengths per drawing.
 1. Steel pipes joints shall be welded.
 2. All steel casing pipe shall be square cut (with beveled ends for welding).
 3. Steel casing pipe shall have a minimum rough roundness such that the difference between the major and minor outside diameter shall not exceed 1% of the specified nominal outside diameter of 0.25 inch, whichever is less.
 4. Steel casing shall have an outside circumference which is less than 1% of the nominal circumference within 0.50 inch, whichever is less.
 5. Steel casing pipe shall have a minimum allowable straightness deviation and any 10 foot length of 1/8 inch.

PART 3 – EXECUTION

3.01 TRENCHING, BEDDING AND BACKFILL

- A. All earthwork related to sanitary sewer piping shall conform to the requirements of Section 31 00 00 – Earthwork, Section 31 23 19 – Dewatering and Section 31 41 00 – Shoring and Underpinning and the details and notes on the Drawings. Provide shoring as necessary to support existing items noted to remain in place.
- B. In the event that water is encountered or accumulates in the trench, it shall be removed during the pipe-laying operation and be maintained in a water-free condition until the ends of the pipe are sealed and provisions are made to prevent floating of the pipe. At no time allow trench water to enter the pipe.

3.02 SURVEYS

- A. Layout of alignment and grade of site sewer piping shall be established by a Land Surveyor State licensed in Washington. Check the line and grade during installation to ensure that the Work is within the following allowable tolerances:
 - 1. Fine grade and prepare bedding so the pipe can be initially placed with a variation from true line or grade, measured at each joint, of not more than 1/32 inch per inch diameter or 1/2 inch maximum, provided that:
 - a. A resulting level or backsloping length of pipe does not occur; and
 - b. No more than one half of the permissible variation shall be accumulated between successive joints.
 - c. Pipe laid within these tolerances shall not be subjected to any further adjustment. Measurement for grade shall be taken at the pipe invert, NOT TOP OF PIPE. Eccentricity of pipe barrels, with respect to jointing surfaces, shall not produce grade interruption adverse to flow of more than 1/4 inch maximum.

3.03 INSTALLATION OF UNDERGROUND PIPE

- A. Furnish all necessary machinery for the work and pump, bail, or otherwise remove any water which accumulates in the trench. Perform all work necessary to keep the trench clear of water while the pipe is being laid.
- B. The Contractor shall coordinate all Pipe Ramming work and sequencing with the Engineer prior to construction including location, space and duration required to stage, welt, and install the steel casing pipe.
- C. Placing: Place the pipe from downstream to upstream with the bells pointing upstream in appropriate bedding graded to conform with the grades and alignment indicated on the Drawings and prepared as specified. Ensure that the pipe has a full, solid bearing along its entire length. Provide small depressions for pipe bells when utilized. Make minor adjustments to line and grade by scraping away, or filling in with, bedding material. Do not support pipes on blocks or mounds of any nature.

- D. Jointing: Take care to properly align the pipe and clean the bell and spigot or tongue of the pipe. Gaskets must be straight, properly lubricated and without twist. The pipe shall be partially supported by hand, sling, or crane, as required, to minimize lateral pressure on the gasket and to maintain concentricity until the pipe has been forced into final longitudinal position in accordance with the manufacturer's recommendations. Pipe handling, after the gasket has been affixed, shall be carefully controlled to avoid bumping the gasket and, thus, knocking it out of position or loading it with dirt or other foreign material. Gaskets so disturbed shall be removed, cleaned, relubricated and replaced before the joint is attempted.
- E. Apply sufficient restraint to the line to ensure that the joints, once home, are held so by tamping fill material under and alongside the pipe. At the end of the day's work, block the last pipe in such a manner as may be required to prevent creep during down time.

3.04 HANDLING THE PIPE

- A. During installation, handle the pipe as specified in paragraph 1.04 above. Pipe that has become damaged shall be removed from the trench, cleaned, and repaired as required and re-laid.

3.05 PIPE RAMMING

A. A. Pits

1. Excavations are required to provide access for pipe ramming and to ensure the safety of the work. Acceptable excavation methods include the use of interlocks steel sheet piling or open excavation, see Specification section 31 41 00 – Shoring and Underpinning and 31 00 00 – Earthwork.
2. Final dimensions of access pits selected by Contractor shall conform as a minimum with dimensions required to permit installation of the work.
3. The contractor shall properly support all excavations and prevent the movement of the soil, pavement, utilities, or structures outside of the excavation. All pits shall conform with applicable local safety standards, OSHA standards, trenching and shoring standards.
4. Construct pits to accommodate the installation of pipe casings and ramming device. Install seals in the pit walls as required to control ground movement where the casings enter and exit the ground.
5. All work of excavating, shoring, bracing, and pipe ramming shall be executed such that settlement is minimized.
6. Before beginning construction at any location of this project, adequately protect existing structures and other permanent objects. The repair of or compensation for damage to permanent facilities due to negligence or lack of adequate protection on the part of the Contractor will be at no cost to the owner.
7. Provide surface drawings during the period of construction to protect the work, see specification section 01 57 13 – Temporary Erosion and Sediment Control.
8. Where pipe ramming may encounter groundwater immediately outside the ramming pit, an artificial soil plug, pipe plug, or bulkhead within the lead section of casing shall be designed to control soil and groundwater inflows. The bulkhead, soil plug, or pipe plug shall be sufficient to withstand lateral earth and hydrostatic pressures.
9. Provide all dewatering and test any groundwater discharges. All discharge limits and reporting requirements shall be the responsibility of the contractor, see Specification Section 31 23 33 – Dewatering.

10. Traffic; Size and locate pits and their work areas so as to avoid interferences with all forms of terminal traffic and public traffic.

B. Control Line and Grade

1. The Contractor will establish the alignment indicated on the plans using a pilot tube guided system.
2. Use the alignment established by the pilot tubes to install the steel casing by pipe ramming.

C. Installation

1. Each pipe section shall be rammed forward without removing spoils from inside the casing unless approved by the engineer. The hammer shall be positioned to develop a uniform distribution of ramming forces around the periphery of the pipe. Use hammer connection adapters to maximize the energy transfer between the hammer and the casing pipe without overstressing or causing damage to the casing.
2. If launch seals are used, they should be specifically designed and constructed for pipe ramming. Special care should be taken when setting the pipe guide rails in the pit to ensure correctness of the alignment.
3. After the casing is completely installed along the design alignment, the spoils may be removed from inside the casing. The soil transportation method shall be capable of handling and removing material identified in the geotechnical report. All excavated material from the pipe ramming and pit construction shall be disposed of off-site by the Contractor per section 31 00 00 – Earthwork and section 01 74 16 – Soil Characteristics and Waste Management.
4. The overcut of the cutting shoe shall not exceed 1-inch greater than the diameter of the pipe without approval of the engineer. The annular space created by the overcut shall be filled with a lubricant that has been provided suitable for the particular soil conditions.

3.06 MANHOLES

- A. Furnish all necessary machinery for the Work and pump, bail or otherwise remove water which accumulates in the trench. Perform all Work necessary to keep the trench clear of water while the foundation and masonry are being constructed or the pipe is being laid.
1. Place manholes at the elevation and location indicated on the drawings, upon the appropriate bedding prepared in accordance with Section 31 00 00 - Earthwork.
 2. Carefully place precast manholes on the prepared bedding to be fully and uniformly supported in true alignment and ensure that all entering pipes can be inserted on the proper grade.
 3. Thoroughly wet all lift holes and all joints between precast elements; completely fill with mortar and smoothed and pointed both inside out, to ensure watertightness.
 4. Place and align precast sections to provide vertical sides and vertical alignment of the ladder rungs. The completed manhole shall be rigid, true to dimensions and watertight.
 5. In precast manhole sections where steel loops have been provided in lieu of lift holes, remove the loops flush with the inside wall surface after the manhole has been completed. No sharp cutoff protrusions will be permitted. If concrete spalling occurs as a result of the loop removal, restore the spalled area with mortar to a uniform smooth surface.

6. Grade Adjustments: Initially construct manholes of the type noted on the project drawings so as to provide adjustment space for setting cover fastenings to a finished grade. The manhole grade furnished by the Engineer for manhole construction indicates the approximate top grade for the manhole plus or minus two-tenths foot, and the final grade will be set by the Engineer after backfilling has been completed to the grade established by the Engineer.
7. Where Work is in paved areas which have been brought to grade, provide not less than eight inches or more than 16 inches between the top of the cone or slab and the underside of the manhole casting ring for adjustment of the casting ring to grade.
8. Pipe Connections: Place all un-reinforced pipes entering or leaving the manhole on firmly compacted bedding, particularly within the area of the manhole excavation, which normally is deeper than that of the sewer trench. Take special care to see that the openings through which pipes enter the structure are completely and firmly rammed full of mortar to ensure watertightness.
9. Backfill: Hand-place backfill around the manhole and extending at least one pipe length into each trench and tamp with selected material up to an elevation of six inches above the crown of all entering pipes. Work shall conform to the applicable provisions of Section 31 00 00 – Earthwork and 31 23 33 – Trenching and Backfilling.

3.07 RESTROOM BUILDING PLUMBING HOOKUPS

- A. The following items will be provided as part of the restroom building package, but shall be installed by the Contractor. These items shall be installed in accordance with the 2021 IBC by a qualified Contractor with experience completing similar work.
 1. Floor drain grout
 2. 2" trap seal
- B. All items identified in section 2.01.B shall be installed per the 2021 IBC by a qualified Contractor with experience completing similar work.
 1. Contractor shall supply all other work and materials in order to provide a fully functional system compliant with the IBC and UPC.

3.08 ACCEPTANCE TESTING

- A. After completion of the following, authorization from the Engineer shall be required before the Contractor can perform initial acceptance testing:
 1. Acceptable placement of applicable pipe, bedding and backfill material.
 2. Acceptable completion of all applicable manhole channels and grout work.
 3. Acceptable debris removal, cleaning and flushing of all applicable pipes and structures.
- B. Completed gravity pipe installation shall be tested in accordance with the Low Pressure Air Test requirements of WSDOT Section 7-17.3(2)F. Infiltration testing in accordance with WSDOT Section 7-17.3(2)C is required for pipe installed below the ground water elevation.
- C. Before final acceptance, the Contractor shall inspect all sewage lines, 6 inches and larger diameter, by the use of a television camera, utilizing a Port approved independent inspection service company. The television inspection requirements shall include the provisions of:
 1. A color analog/digital camera with pan and tilt capacity in order to view all main lines, lateral lines, and structures including channels.

2. A dye solution to be introduced in sufficient quantity to travel from the structure that is the highest point of inspection to the downstream terminus of the inspection limits. Red or purple dye shall be used for PVC pipe and green dye for ductile iron and concrete pipe.
 3. A one-inch reference ball to be mounted to the camera in order to drag along the bottom of the pipe during the entire inspection procedure.
 4. Linear measure references to be measured from the center of the beginning structure to the center of the next inline structure and include the direction of flow. The locations of lateral pipes and all distinctive pipe conditions shall be referenced to the centerline of the beginning structure. All structure references shall utilize the designated structure reference numbers shown on the plans.
- D. The following television inspection information shall be provided to the Engineer:
1. A clear movie format on a portable storage device (thumbdrive) which encompasses the limits of the inspection area and including all reference data as described herein. A tape reference time and date for the start of each run shall also be indicated.
 2. A written report shall be provided corresponding to the taped inspection and including all reference data as described herein. The report shall consist of a written narrative of all distinctive pipe conditions including ponding areas in excess of $\frac{1}{4}$ inch

END OF SECTION

This page intentionally left blank

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The location and extent of the "Storm Drainage Utilities" work is indicated on the Drawings. The work includes the requirements for furnishing and installing storm drain pipes, and storm drain structures.

1.02 QUALITY ASSURANCE

- A. Qualification of Workmen: Employ at least one person who shall be present at all times during execution of this portion of the work, shall have all portions of the Drawings and Specifications applicable to that portion of the contract, shall be thoroughly familiar with the type of materials being installed and the best methods for their installation, and shall direct all work performed under this Section.
- B. Codes and Standards: The Contractor shall comply with the applicable provisions of all pertinent codes and regulations. References made herein for manufactured materials such as pipes, fittings, and specialties refer to designations for the latest edition of materials published by the American Association of State Highway and Transportation Officials (AASHTO), the American Society for Testing Materials (ASTM), the American Public Works Association (APWA) Standard Specification for Municipal Public Works Construction, and the WSDOT/APWA 2023 Standard Specifications for Road, Bridge and Municipal Construction.

1.03 SUBMITTALS

- A. Manufacturer's literature on pipe and fitting materials.
- B. Manufacturer's certificates of compliance for pipe and fitting materials.
- C. Manufacturer's literature on the metal castings for manholes, catch basins and cleanouts.
- D. Design drawings and calculations confirming manholes and catch basins are designed for the Concentrated Live Loads for container handling equipment shown on drawing G1.1.
- E. Certificates of compliance that structure lids meet 125 kip load ratings.

PART 2 - PRODUCTS

2.01 STORM DRAINAGE PIPE

- A. Corrugated Polyethylene Pipe (CPEP) with diameters less than or equal to 30 inches shall be smooth interior annular exterior corrugations and shall meet or exceed the specifications of ASTM F2736 and AASHTO MP-21.
- B. PVC storm drainage pipe larger than 15 inch diameter shall conform to ASTM F679. PVC pipe shall have integral bell joints complying with ASTM D 3212 and gaskets conforming to ASTM F477.

2.02 MANHOLES AND CATCH BASINS

- A. Catch Basins and manholes shall be of precast concrete and shall be made up from the components indicated on the Drawings and shall conform to the Washington State Department of Transportation Standard Plans for Road, Bridge and Municipal Construction, most recent edition for dimensions and functionality.
- B. Metal frame and grate or cover for catch basins and manholes shall be Special Duty, Load Class F ductile iron of the size and style indicated on the Drawings.
- C. Ladders and other steel components and hardware shall be coated with HDPE.

- D. Mortar shall be mixed 1:1; Type I cement and sand.

2.03 PIPE COUPLING

- A. Pipe couplings for joining new pipe to existing pipe shall conform to the performance requirements of ASTM C 1173 and shall include a PVC gasket, stainless steel clamps and stainless steel shear ring. Gasket shall conform to ASTM D 5926 with a minimum tensile strength of 1000 psi and minimum elongation at rupture of 250 percent. Shear ring shall be designed to resist heavy earth loads and shear forces, and retain pipe alignment. Shear ring shall be stainless steel, 0.012 inch or greater thickness.

PART 3 - EXECUTION

3.01 GENERAL

- A. It shall be the Contractor's responsibility to verify the actual locations (horizontal and vertical) of all utilities prior to beginning trench excavation. If utilities are to remain in place, provide protection from damage during construction operations.

3.02 EARTHWORK

- A. Excavation, bedding, and backfilling shall be as specified in Section 31 00 00 – Earthwork, Section 31 23 19 – Dewatering, and Section 31 23 33 – Trenching and Backfilling of these Specifications.

3.03 SURVEYS

- A. Layout of alignment and grade of site drainage piping shall be established by a Land Surveyor State licensed in Washington. Check the line and grade during installation to ensure that the Work is within the following allowable tolerances:
1. Fine-grade and prepare bedding so the pipe can be initially placed with a variation from true line or grade, measured at each joint, of not more than 1/32 inch per inch diameter or 1/2 inch maximum, provided that:
 - a. A resulting level or backsloping length of pipe does not occur; and
 - b. No more than one-half of the permissible variation shall be accumulated between successive joints.
 - c. Pipe laid within these tolerances shall not be subjected to any further adjustment. Measurement for grade shall be taken at the pipe invert, NOT TOP OF PIPE. Eccentricity of pipe barrels, with respect to jointing surfaces, shall not produce grade interruption adverse to flow of more than 1/4 inch maximum.

3.04 INSTALLATION OF UNDERGROUND PIPE

- A. Contractor shall hold a pre-construction conference onsite with culvert manufacturer and Engineer a minimum of 2 weeks prior to beginning culvert installation.
- B. Furnish all necessary machinery for the work and pump, bail, or otherwise remove any water which accumulates in the trench. Perform all work necessary to keep the trench clear of water while the foundation and the masonry are being constructed or the pipe is being laid.

- C. Placing: Place the pipe from downstream to upstream with the bells pointing upstream in appropriate bedding graded to conform with the grades and alignment indicated on the Drawings and prepared as specified. Ensure that the pipe has a full, solid bearing along its entire length. Provide small depressions for pipe bells when utilized. Make minor adjustments to line and grade by scraping away, or filling in with, bedding material. Do not support pipes on blocks or mounds of any nature.
- D. Jointing: Take care to properly align the pipe and clean the bell and spigot or tongue of the pipe. Gaskets must be straight, properly lubricated and without twist. The pipe shall be partially supported by hand, sling, or crane, as required, to minimize lateral pressure on the gasket and to maintain concentricity until the pipe has been forced into final longitudinal position in accordance with the manufacturer's recommendations. Pipe handling, after the gasket has been affixed, shall be carefully controlled to avoid bumping the gasket and, thus, knocking it out of position or loading it with dirt or other foreign material. Gaskets so disturbed shall be removed, cleaned, relubricated and replaced before the joint is attempted.
- E. Apply sufficient restraint to the line to ensure that the joints, once home, are held so by tamping fill material under and alongside the pipe. At the end of the day's work, block the last pipe in such a manner as may be required to prevent creep during down time.

3.05 INSTALLATION OF MANHOLES AND CATCH BASINS

- A. Furnish all necessary labor, materials, or equipment to pump, bail, or otherwise dewater the trench or pit for the duration of the construction and backfill period.
- B. Manholes/Catch Basins
 - 1. Place manholes/catch basins at the elevation and location indicated on the Drawings upon the appropriate bedding prepared in accordance with Section 31 00 00 – "Earthwork".
 - 2. Carefully place precast manholes/catch basins on the quarry spall and structural fill bedding so as to be fully and uniformly supported in true alignment, making sure that all entering pipes can be inserted on proper grade.
 - 3. All lift holes and all joints between precast elements shall be thoroughly wetted and then completely filled with mortar, smoothed and point both inside and out, to ensure watertightness.
 - 4. Place precast sections and align to provide vertical sides and vertical alignment of the ladder rungs. The completed catch basin shall be rigid, true to dimensions and watertight.
 - 5. In precast manhole/catch basin sections where steel loops have been provided in lieu of lift holes, remove the loops flush with the inside wall surface after the catch basin has been completed. No sharp cutoff protrusions will be permitted. If concrete spalling occurs as a result of the loop removal, restore the spalled area with mortar to a uniformly smooth surface.
- C. Grade Adjustment: The manhole/catch basin casting frame or casting ring may be either cast into a concrete collar or set flange down on pre-cast concrete adjustment rings and mortared, as directed by the Engineer. It shall not, in any case, be grouted to final grade until the final elevation of the pavement in which it is to be placed has been established and permission has been given by the Engineer to grout the casting in place. Provide not less than eight inches or more than 16 inches between the top of the cone or slab and the underside of the manhole casting ring for adjustment of the casting ring to grade. Bricks for grade adjustment shall not be used. Location of manholes/catch basins will be staked by the Contractor.

- D. Pipe Connections: Place all pipes entering or leaving the structure on firmly compacted bedding, particularly within the area of the structure excavation, which normally is deeper than that of the sewer trench. All openings in the walls of catch basins constructed with precast sections for the insertion of pipe connections and outlet trap castings shall, after pipe or castings have been placed to their final position, be grouted tight in place to present a smooth uniform surface inside and outside. Pipe placed through walls to which connections will be made shall be so placed that the socket end of the pipe is backed against the outside surface of the catch basin as closely as practicable for the angle of entrance. The spigot end of the pipe shall be cut square with the last point of contact with the inside wall surface. Provide flexible joints within 12 inches of the catch basin structure.
- E. Backfill: Hand-place backfill around the manhole, extending at least one pipe length into each trench and tamp with selected material up to an elevation of six inches above the crown of all entering pipes. Conform to the applicable provisions of Section 31 00 00 – “Earthwork” and Section 31 23 33 – “Trenching and Backfilling”.

3.06 ACCEPTANCE TESTING

- A. After completion of the following, authorization from the Engineer shall be required before the Contractor can perform acceptance testing:
 - 1. Acceptable placement of applicable pipe, bedding, and backfill material.
 - 2. Acceptable completion of all applicable manhole channels and grout work.
 - 3. Acceptable debris removal, cleaning, and flushing of all applicable pipes and structures.
- B. Contractor shall perform testing as required by Section 7-17.3 (2) Cleaning and Testing of the WSDOT Standard Specifications for Road Bridge and Municipal Construction, 2023 Edition. Infiltration Testing shall be required where the pipe is installed below the ground water table.
- C. Before final acceptance, the Contractor shall inspect all drainage lines by the use of a television camera, utilizing a Port approved independent inspection service company. The television inspection requirements shall include the provisions of:
 - 1. A color analog/digital camera with pan and tilt capacity in order to view all main lines, lateral lines, and structures including channels.
 - 2. A dye solution to be introduced in sufficient quantity to travel from the structure that is the highest point of inspection to the downstream terminus of the inspection limits. Red or purple dye shall be used for PVC pipe and green dye for ductile iron and concrete pipe.
 - 3. A one-inch reference ball to be mounted to the camera in order to drag along the bottom of the pipe during the entire inspection procedure.
 - 4. Linear measure references to be measured from the center of the beginning structure to the center of the next inline structure and include the direction of flow. The locations of lateral pipes and all distinctive pipe conditions shall be referenced to the centerline of the beginning structure. All structure references shall utilize the designated structure reference numbers shown on the plans.
- D. The following television inspection information shall be provided to the Engineer:
 - 1. A clear movie format on portable storage device (thumbdrive) which encompasses the limits of the inspection area and including all reference data as described herein. A tape reference time and date for the start of each run shall also be indicated.

2. A written report shall be provided corresponding to the taped inspection and including all reference data as described herein. The report shall consist of a written narrative of all distinctive pipe conditions including ponding areas in excess of $\frac{1}{4}$ inch.

END OF SECTION

APPENDIX A

PORT OF TACOMA

CONSTRUCTION SWPPP

Construction Stormwater General Permit

Stormwater Pollution Prevention Plan (SWPPP)

for

EB01 Pavement and Restrooms

Prepared for:

The Washington State Department of Ecology
Southwest Region

Permittee / Owner	Developer	Operator / Contractor
TBD	Port of Tacoma	TBD

2940 Alexander Ave

Tacoma Wa 98421

Certified Erosion and Sediment Control Lead (CESCL)

Name	Organization	Contact Phone Number
TBD		

SWPPP Prepared By

Name	Organization	Contact Phone Number
Anita Fichthorn	NWSA/Port of Tacoma	253.830.5379

SWPPP Preparation Date

2/23/2023

Project Construction Dates

Activity / Phase	Start Date	End Date
[Insert Name]		

Table of Contents

1	Project Information.....	4
1.1	Existing Conditions	4
1.2	Proposed Construction Activities.....	4
2	Construction Stormwater Best Management Practices (BMPs).....	6
2.1	The 13 Elements.....	6
2.1.1	Element 1: Preserve Vegetation / Mark Clearing Limits	6
2.1.2	Element 2: Establish Construction Access	6
2.1.3	Element 3: Control Flow Rates	6
2.1.4	Element 4: Install Sediment Controls	6
2.1.5	Element 5: Stabilize Soils	7
2.1.6	Element 6: Protect Slopes.....	7
2.1.7	Element 7: Protect Drain Inlets	8
2.1.8	Element 8: Stabilize Channels and Outlets	8
2.1.9	Element 9: Control Pollutants.....	8
2.1.10	Element 10: Control Dewatering	9
2.1.11	Element 11: Maintain BMPs.....	9
2.1.12	Element 12: Manage the Project.....	10
2.1.13	Element 13: Protect Low Impact Development (LID) BMPs	10
3	Pollution Prevention Team	10
4	Monitoring and Sampling Requirements	11
4.1	Site Inspection	11
4.2	Stormwater Quality Sampling.....	11
4.2.1	Turbidity Sampling	11
4.2.2	pH Sampling	12
5	Discharges to 303(d) or Total Maximum Daily Load (TMDL) Waterbodies	13
6	Reporting and Record Keeping	13
6.1	Record Keeping	13
6.1.1	Site Log Book	13
6.1.2	Records Retention	13
6.1.3	Updating the SWPPP.....	14
6.2	Reporting	14
6.2.1	Discharge Monitoring Reports.....	14
6.2.2	Notification of Noncompliance.....	14

List of Tables

Table 1 – Summary of Site Pollutant Constituents	4
Table 2 – Pollutants	8
Table 5 – Management.....	10
Table 7 – Team Information.....	10
Table 8 – Turbidity Sampling Method	11
Table 9 – pH Sampling Method	13

List of Appendices

Appendix/Glossary

- A. Site Map
- B. BMP Detail
- C. Correspondence
- D. Site Inspection Form
- E. Construction Stormwater General Permit (CSWGP)

List of Acronyms and Abbreviations

Acronym / Abbreviation	Explanation
303(d)	Section of the Clean Water Act pertaining to Impaired Waterbodies
BFO	Bellingham Field Office of the Department of Ecology
BMP(s)	Best Management Practice(s)
CESCL	Certified Erosion and Sediment Control Lead
CO₂	Carbon Dioxide
CRO	Central Regional Office of the Department of Ecology
CSWGP	Construction Stormwater General Permit
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ERO	Eastern Regional Office of the Department of Ecology
ERTS	Environmental Report Tracking System
ESC	Erosion and Sediment Control
GULD	General Use Level Designation
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Units
NWRO	Northwest Regional Office of the Department of Ecology
pH	Power of Hydrogen
RCW	Revised Code of Washington
SPCC	Spill Prevention, Control, and Countermeasure
su	Standard Units
SWMMEW	Stormwater Management Manual for Eastern Washington
SWMMWW	Stormwater Management Manual for Western Washington
SWPPP	Stormwater Pollution Prevention Plan
TESC	Temporary Erosion and Sediment Control
SWRO	Southwest Regional Office of the Department of Ecology
TMDL	Total Maximum Daily Load
VFO	Vancouver Field Office of the Department of Ecology
WAC	Washington Administrative Code
WSDOT	Washington Department of Transportation
WWHM	Western Washington Hydrology Model

1 Project Information

Project/Site Name: EB01 Paving
Street/Location: 2940 Alexander Ave
City: Tacoma State: WA Zip code: 98421
Subdivision:
Receiving waterbody: Blair Waterway

1.1 Existing Conditions

Total acreage (including support activities such as off-site equipment staging yards, material storage areas, borrow areas).

Total acreage: 17
Disturbed acreage: 3.5
Existing structures: Several
Landscape: Flat
topography:
Drainage patterns: Sheet flow to catch basins, direct discharge to surface water
Existing Vegetation: None
Critical Areas (wetlands, streams, high erosion risk, steep or difficult to stabilize slopes): N/A

List of known impairments for 303(d) listed or Total Maximum Daily Load (TMDL) for the receiving waterbody: N/A

Table 1 includes a list of suspected and/or known contaminants associated with the construction activity.

Table 1 – Summary of Site Pollutant Constituents

Constituent (Pollutant)	Location	Depth	Concentration
N/A			

1.2 Proposed Construction Activities

Description of site development (example: subdivision):

Grade and pave a 3.5 acre are that is currently a gravel surface. Construct restroom facilities and install associated utilities.

Description of construction activities (example: site preparation, demolition, excavation):

Grading and paving.

Description of site drainage including flow from and onto adjacent properties. Must be consistent with Site Map in Appendix A:

Stormwater sheet flows to a series of catch basins, is conveyed to a stormwater treatment facility and discharges directly to the Blair Waterway.

Description of final stabilization (example: extent of revegetation, paving, landscaping):
Site will be fully paved.

Contaminated Site Information:

Proposed activities regarding contaminated soils or groundwater (example: on-site treatment system, authorized sanitary sewer discharge):
No known contamination.

2 Construction Stormwater Best Management Practices (BMPs)

The SWPPP is a living document reflecting current conditions and changes throughout the life of the project. These changes may be informal (i.e., hand-written notes and deletions). Update the SWPPP when the CESCL has noted a deficiency in BMPs or deviation from original design.

2.1 The 13 Elements

2.1.1 Element 1: Preserve Vegetation / Mark Clearing Limits

List and describe BMPs: C105 Stabilized Construction Entrance: Site is paved with the exception of the construction area.

Installation Schedules: Completed

Inspection and Maintenance plan: Daily during grading activities to prevent track out.

Responsible Staff: Contractor TBD

2.1.2 Element 2: Establish Construction Access

Access will be controlled at the entry control point of the terminal, gates are manned with security at all times during construction

List and describe BMPs: C107 Construction Road/Parking Area Stabilization: Laydown areas are currently paved.

Installation Schedules: Completed

Inspection and Maintenance plan: Daily

Responsible Staff: Contractor TBD

2.1.3 Element 3: Control Flow Rates

Flow control exempt facility

2.1.4 Element 4: Install Sediment Controls

List and describe BMPs:

- C233 Silt fence
- C140 Dust Control
- C123 Plastic Covering for stockpiles
- C220 Inlet protection – catch basin socks

Installation Schedules: Prior to and during construction

Inspection and Maintenance plan: Daily

Responsible Staff: Contractor TBD

2.1.5 Element 5: Stabilize Soils

West of the Cascade Mountains Crest

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	May 1 – September 30	7 days
During the Wet Season	October 1 – April 30	2 days

Soils must be stabilized at the end of the shift before a holiday or weekend if needed based on the weather forecast.

Anticipated project dates: Start date: June 2023 End date: October 2023

Will you construct during the wet season?

☐ Yes ☒ No

List and describe BMPs:

- C150 Materials on Hand
- C140 Dust Control
- C162 Scheduling

Installation Schedules: Prior to and during construction

Inspection and Maintenance plan: Daily

Responsible Staff: Contractor TBD

2.1.6 Element 6: Protect Slopes

Will steep slopes be present at the site during construction?

☐ Yes ☒ No

List and describe BMPs: N/A Site is flat

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

2.1.7 Element 7: Protect Drain Inlets

List and describe BMPs: C220 Inlet Protection – Catch basin socks

Installation Schedules: Prior to grading activities

Inspection and Maintenance plan: Daily during construction

Responsible Staff: Contractor TBD

2.1.8 Element 8: Stabilize Channels and Outlets

No channels or new outlets will be constructed.

List and describe BMPs: N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

2.1.9 Element 9: Control Pollutants

The following pollutants are anticipated to be present on-site:

Table 2 – Pollutants

Pollutant (List pollutants and source, if applicable)
Mobile fueling for construction equipment
Hydraulic oil on construction equipment

List and describe BMPs: C153 Material Delivery, Storage and Containment

Installation Schedules: Prior to and during construction

Inspection and Maintenance plan: Daily

Responsible Staff: Contractor TBD

Will maintenance, fueling, and/or repair of heavy equipment and vehicles occur on-site?

☒ Yes ☐ No

Spill Prevention Control and Countermeasures Plan has been submitted by the contractor prior to construction and will be implemented in the event of a release.

Will wheel wash or tire bath system BMPs be used during construction?

☐ Yes ☒ No

2.1.10 Element 10: Control Dewatering

No dewatering is anticipated on this project.

List and describe BMPs: N/A

Installation Schedules: N/A

Inspection and Maintenance plan: N/A

Responsible Staff: N/A

2.1.11 Element 11: Maintain BMPs

All temporary and permanent Erosion and Sediment Control (ESC) BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function.

Maintenance and repair will be conducted in accordance with each particular BMP specification (see *Volume II of the SWMMWW* or *Chapter 7 of the SWMMEW*).

Visual monitoring of all BMPs installed at the site will be conducted at least once every calendar week and within 24 hours of any stormwater or non-stormwater discharge from the site. If the site becomes inactive and is temporarily stabilized, the inspection frequency may be reduced to once every calendar month.

All temporary ESC BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed.

Trapped sediment shall be stabilized on-site or removed. Disturbed soil resulting from removal of either BMPs or vegetation shall be permanently stabilized.

Additionally, protection must be provided for all BMPs installed for the permanent control of stormwater from sediment and compaction. BMPs that are to remain in place following completion of construction shall be examined and restored to full operating condition. If sediment enters these BMPs during construction, the sediment shall be removed and the facility shall be returned to conditions specified in the construction documents.

2.1.12 Element 12: Manage the Project

The project will be managed based on the following principles:

- Projects will be phased to the maximum extent practicable and seasonal work limitations will be taken into account.
- Inspection and monitoring:
 - Inspection, maintenance and repair of all BMPs will occur as needed to ensure performance of their intended function.
 - Site inspections and monitoring will be conducted in accordance with Special Condition S4 of the CSWGP. Sampling locations are indicated on the Site Map. Sampling station(s) are located in accordance with applicable requirements of the CSWGP.
- Maintain an updated SWPPP.
 - The SWPPP will be updated, maintained, and implemented in accordance with Special Conditions S3, S4, and S9 of the CSWGP.

As site work progresses the SWPPP will be modified routinely to reflect changing site conditions. The SWPPP will be reviewed monthly to ensure the content is current.

Table 5 – Management

☒	Design the project to fit the existing topography, soils, and drainage patterns
☒	Minimize the extent and duration of the area exposed
☒	Retain sediment on-site
☒	Thoroughly monitor site and maintain all ESC measures
☒	Schedule major earthwork during the dry season

2.1.13 Element 13: Protect Low Impact Development (LID) BMPs

This is a paving project, no LID BMPs will be constructed.

3 Pollution Prevention Team

Table 7 – Team Information

Title	Name(s)	Phone Number
Certified Erosion and Sediment Control Lead (CESCL)	Ben Nield	253.888.4736
Emergency Ecology Contact	ERTS	1.800.645.7911
Emergency Permittee/ Owner Contact	Anita Fichthorn	253.830.5379
Non-Emergency Owner Contact	Norm Gilbert	253.383.9406
Monitoring Personnel	Ben Nield	253.888.4736

4 Monitoring and Sampling Requirements

Monitoring includes visual inspection, sampling for water quality parameters of concern, and documentation of the inspection and sampling findings in a site log book. A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Stormwater sampling data

The site log book must be maintained on-site within reasonable access to the site and be made available upon request to Ecology or the local jurisdiction.

4.1 Site Inspection

Site inspections will be conducted at least once every calendar week and within 24 hours following any discharge from the site. For sites that are temporarily stabilized and inactive, the required frequency is reduced to once per calendar month.

The discharge point(s) are indicated on the Site Map (see Appendix A) and in accordance with the applicable requirements of the CSWGP.

4.2 Stormwater Quality Sampling

4.2.1 Turbidity Sampling

Requirements include calibrated turbidity meter or transparency tube to sample site discharges for compliance with the CSWGP. Sampling will be conducted at all discharge points at least once per calendar week.

Method for sampling turbidity:

Table 8 – Turbidity Sampling Method

☒	Turbidity Meter/Turbidimeter (required for disturbances 5 acres or greater in size)
☐	Transparency Tube (option for disturbances less than 1 acre and up to 5 acres in size)

The benchmark for turbidity value is 25 nephelometric turbidity units (NTU) and a transparency less than 33 centimeters.

If the discharge's turbidity is 26 to 249 NTU or the transparency is less than 33 cm but equal to or greater than 6 cm, the following steps will be conducted:

1. Review the SWPPP for compliance with Special Condition S9. Make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
2. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible. Address the problems within 10

days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.

3. Document BMP implementation and maintenance in the site log book.

If the turbidity exceeds 250 NTU **or** the transparency is 6 cm or less at any time, the following steps will be conducted:

1. Telephone or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) within 24 hours.
 - **Southwest Region** (Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum,): (360) 407-6300 or http://www.ecy.wa.gov/programs/spills/forms/nerts_online/SWRO_nerts_online.html
2. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible. Address the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period
3. Document BMP implementation and maintenance in the site log book.
4. Continue to sample discharges daily until one of the following is true:
 - Turbidity is 25 NTU (or lower).
 - Transparency is 33 cm (or greater).
 - Compliance with the water quality limit for turbidity is achieved.
 - 1 - 5 NTU over background turbidity, if background is less than 50 NTU
 - 1% - 10% over background turbidity, if background is 50 NTU or greater
 - The discharge stops or is eliminated.

4.2.2 pH Sampling

pH monitoring is required for "Significant concrete work" (i.e., greater than 1000 cubic yards poured concrete over the life of the project). The use of recycled concrete or engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD] or fly ash) also requires pH monitoring.

For significant concrete work, pH sampling will start the first day concrete is poured and continue until it is cured, typically three (3) weeks after the last pour.

For engineered soils and recycled concrete, pH sampling begins when engineered soils or recycled concrete are first exposed to precipitation and continues until the area is fully stabilized.

If the measured pH is 8.5 or greater, the following measures will be taken:

1. Prevent high pH water from entering storm sewer systems or surface water.

2. Adjust or neutralize the high pH water to the range of 6.5 to 8.5 su using appropriate technology such as carbon dioxide (CO₂) sparging (liquid or dry ice).
3. Written approval will be obtained from Ecology prior to the use of chemical treatment other than CO₂ sparging or dry ice.

Method for sampling pH:

Table 9 – pH Sampling Method

☒	pH meter
☐	pH test kit
☐	Wide range pH indicator paper

5 Discharges to 303(d) or Total Maximum Daily Load (TMDL) Waterbodies

N/A

6 Reporting and Record Keeping

6.1 Record Keeping

6.1.1 Site Log Book

A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Sample logs

6.1.2 Records Retention

Records will be retained during the life of the project and for a minimum of three (3) years following the termination of permit coverage in accordance with Special Condition S5.C of the CSWGP.

Permit documentation to be retained on-site:

- CSWGP
- Permit Coverage Letter
- SWPPP
- Site Log Book

Permit documentation will be provided within 14 days of receipt of a written request from Ecology. A copy of the SWPPP or access to the SWPPP will be provided to the public when requested in writing in accordance with Special Condition S5.G.2.b of the CSWGP.

6.1.3 Updating the SWPPP

The SWPPP will be modified if:

- Found ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site.
- There is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

The SWPPP will be modified within seven (7) days if inspection(s) or investigation(s) determine additional or modified BMPs are necessary for compliance. An updated timeline for BMP implementation will be prepared.

6.2 Reporting

6.2.1 Discharge Monitoring Reports

Cumulative soil disturbance is one (1) acre or larger; therefore, Discharge Monitoring Reports (DMRs) will be submitted to Ecology monthly. If there was no discharge during a given monitoring period the DMR will be submitted as required, reporting “No Discharge”. The DMR due date is fifteen (15) days following the end of each calendar month.

DMRs will be reported online through Ecology’s WQWebDMR System.

To sign up for WQWebDMR go to:

<http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html>

6.2.2 Notification of Noncompliance

If any of the terms and conditions of the permit is not met, and the resulting noncompliance may cause a threat to human health or the environment, the following actions will be taken:

1. Ecology will be notified within 24-hours of the failure to comply by calling the applicable Regional office ERTS phone number (Regional office numbers listed below).
2. Immediate action will be taken to prevent the discharge/pollution or otherwise stop or correct the noncompliance. If applicable, sampling and analysis of any noncompliance will be repeated immediately and the results submitted to Ecology within five (5) days of becoming aware of the violation.
3. A detailed written report describing the noncompliance will be submitted to Ecology within five (5) days, unless requested earlier by Ecology.

Specific information to be included in the noncompliance report is found in Special Condition S5.F.3 of the CSWGP.

Anytime turbidity sampling indicates turbidity is 250 NTUs or greater, or water transparency is 6 cm or less, the Ecology Regional office will be notified by phone within 24 hours of analysis as required by Special Condition S5.A of the CSWGP.

- **Southwest Region** at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum

Include the following information:

1. Your name and / Phone number
2. Permit number
3. City / County of project
4. Sample results
5. Date / Time of call
6. Date / Time of sample
7. Project name

In accordance with Special Condition S4.D.5.b of the CSWGP, the Ecology Regional office will be notified if chemical treatment other than CO₂ sparging is planned for adjustment of high pH water.

A. Site Map

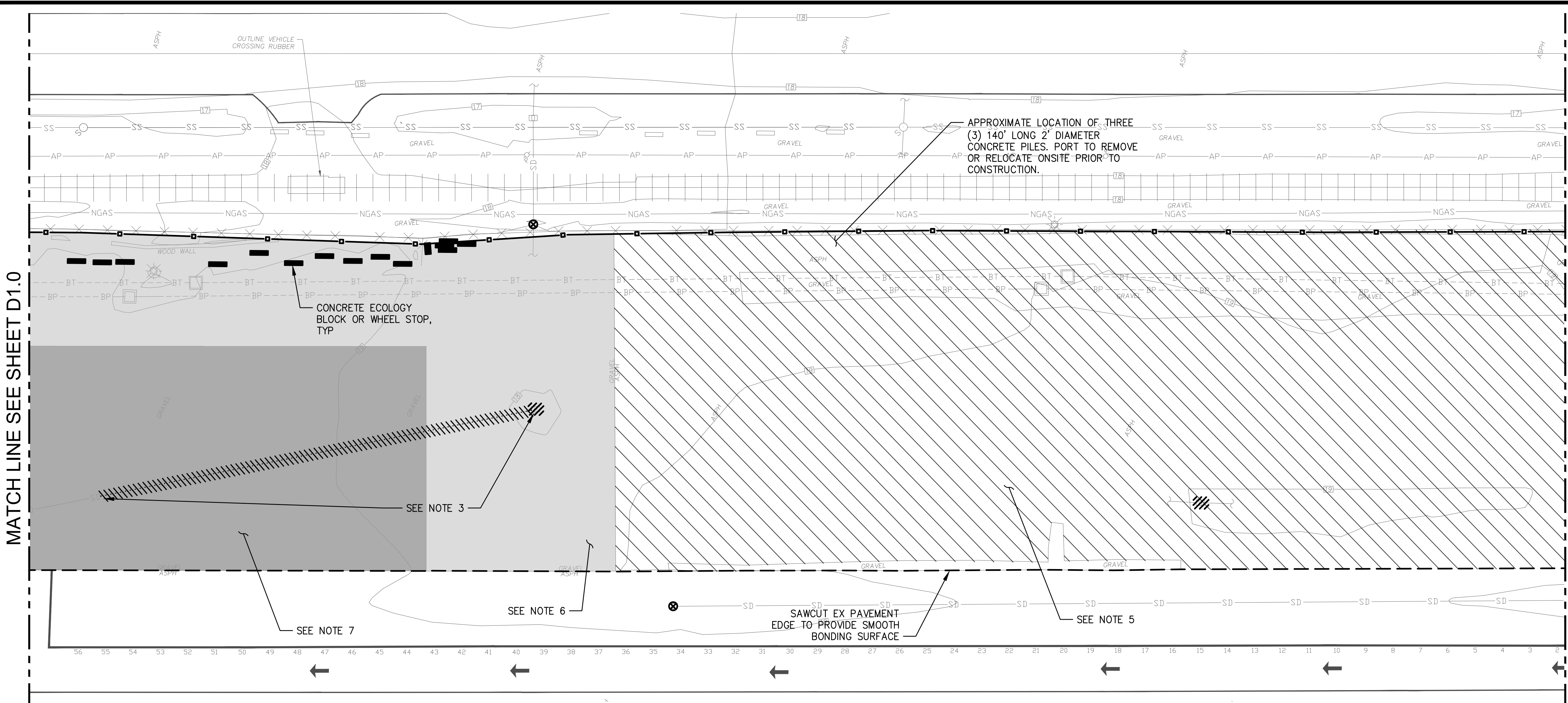
B. BMP Detail

C. Correspondence

Ecology
EPA
Local Government

D. Site Inspection Form

E. Construction Stormwater General Permit (CSWGP)

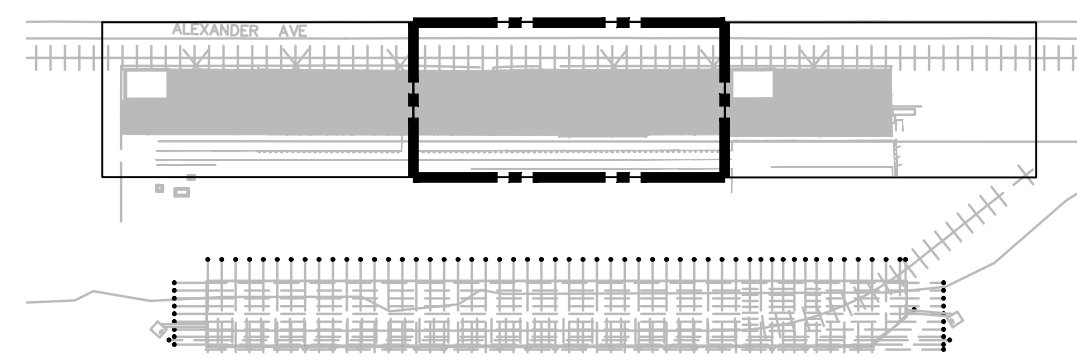


LEGEND

	REMOVE EXISTING HMA. SEE NOTE 5.
	REMOVE EXISTING CSBC MATERIAL. SEE NOTE 6.
	REMOVE EXISTING ATB AND CSBC. SEE NOTE 7.
	REMOVE EXISTING HMA. SEE C1.2 FOR HMA REPLACEMENT
	REMOVE AND STOCKPILE CONCRETE ECOLOGY BLOCK OR WHEEL STOP FOR REINSTALLATION
	CONCRETE ECOLOGY BLOCK AND WHEEL STOP STOCKPILE LOCATION
	INLET PROTECTION, SEE DETAIL 1 ON SHEET D1.3
	REMOVE UTILITY STRUCTURE
	REMOVE STORM DRAIN PIPE
	REMOVE SANITARY SEWER PIPE
	REMOVE AND RELOCATE BURIED POWER (SEE ELECTRICAL)
	REMOVE AND RELOCATE BURIED COMMUNICATIONS (SEE ELECTRICAL)
	STRAW WATTLE, SEE DETAIL 2 ON SHEET D1.3
	SAWCUT PAVEMENT

NOTES

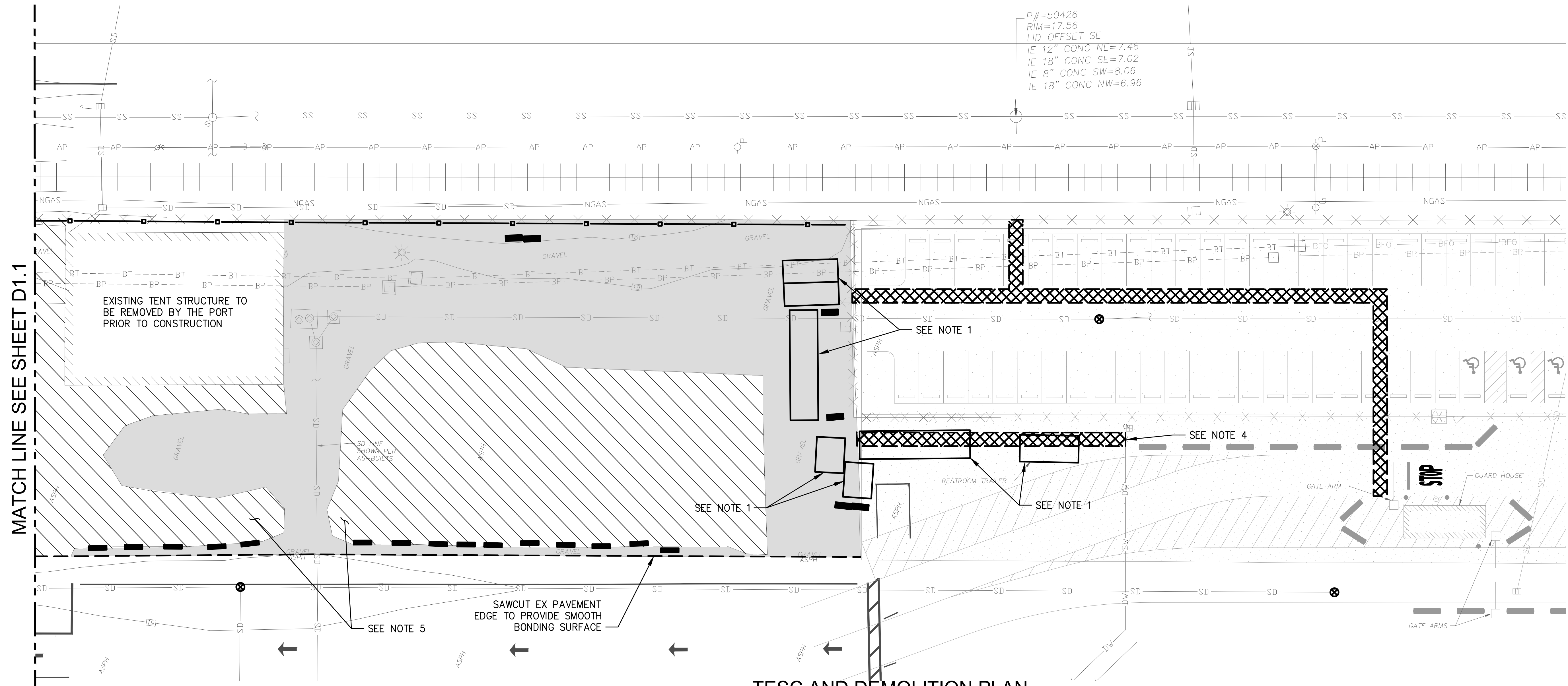
- STRUCTURE TO BE RELOCATED BY THE PORT.
- ALL UTILITIES AND SITE FEATURES TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
- CATCH BASIN TO BE REMOVED. NEW CATCH BASIN TO BE INSTALLED AS SHOWN ON SHEET C1.1.
- CONTRACTOR TO LOCATE WATER LINE FROM END OF AS-BUILT PIPE TO EX TRAILERS.
- CONTRACTOR TO ASSUME AREA CONSISTS OF 2" OF HMA OVER 2" OF CSBC MATERIAL. CONTRACTOR SHALL STOCKPILE CSBC MATERIAL FOR REUSE AS BASE MATERIAL. CONTRACTOR TO DEMOLISH HMA AND DISPOSE OFFSITE.
- CONTRACTOR TO ASSUME AREA CONSISTS OF 4" OF CSBC MATERIAL. CONTRACTOR TO STOCKPILE CSBC MATERIAL FOR REUSE AS BASE MATERIAL.
- CONTRACTOR TO ASSUME AREA CONSISTS OF 2" OF CSBC MATERIAL OVER 3" OF ASPHALT TREATED BASE. CONTRACTOR TO STOCKPILE CSBC MATERIAL FOR REUSE AS BASE MATERIAL. CONTRACTOR TO DEMOLISH ATB AND DISPOSE OFFSITE.
- SANITARY SEWER LINE OBSERVED TO BE 4" PVC. LINE IS BURIED APPROXIMATELY 1.5' BELOW EX GRADE.



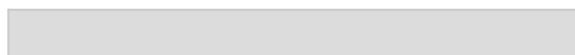
KEY PLAN

100% DESIGN

 Port of Tacoma 2407 North 31st Street, Suite 100 Tacoma, Washington 98407 (253) 396-0150 Fax (253) 396-0162	 kpff K. P. F. F. & ASSOCIATES, INC. 1000 1st Avenue, Suite 100 Tacoma, WA 98401 (253) 396-0150	 CITY OF TACOMA SEAL OF THE CITY OF TACOMA 1890	APPROVED:	TJH	4/29/2022		
			CHECKED BY	DATE			
D1.1 8 OF 26	TOWNSHIP: 21N RANGE: 3E SECTION: 36 PORT OF TACOMA BM# DRAWING SCALE: AS SHOWN	TOWNSHIP: 21N RANGE: 3E SECTION: 36 PORT OF TACOMA BM# DRAWING SCALE: AS SHOWN	DIRECTOR	ENG. DATE	PROJ. ENGR	DATE	
			PRINTED BY:	thbig	Apr 29, 2022		
			PORT ADDRESS:	ONE SITCUM PLAZA			
			PARCEL:	0321354035			
CONTR/CONS:	07/1255						
M. ID:	201105.01						
PHASE:	100% DESIGN						
THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION			MARK:	REVISION:	BY:	APPR:	DATE:

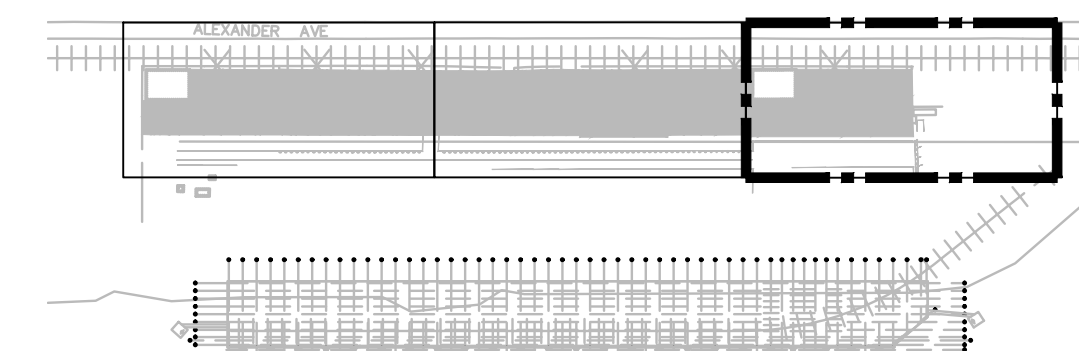
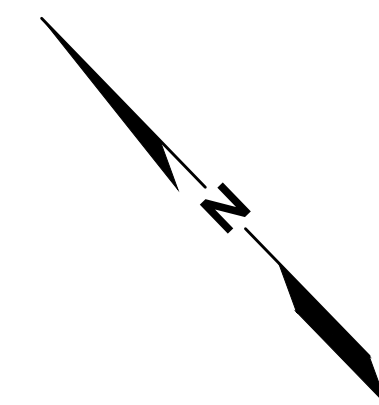
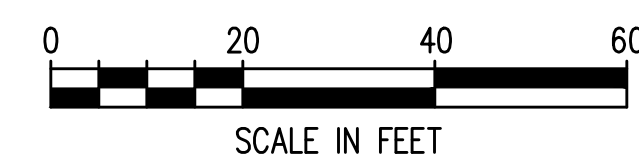


LEGEND

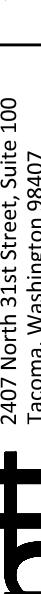
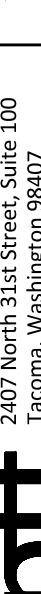
	REMOVE EXISTING HMA. SEE NOTE 5.
	REMOVE EXISTING CSBC MATERIAL. SEE NOTE 6.
	REMOVE EXISTING ATB AND CSBC. SEE NOTE 7.
	REMOVE EXISTING HMA. SEE C1.2 FOR HMA REPLACEMENT
	REMOVE AND STOCKPILE CONCRETE ECOLOGY BLOCK OR WHEEL STOP FOR REINSTALLATION
	CONCRETE ECOLOGY BLOCK AND WHEEL STOP STOCKPILE LOCATION
	INLET PROTECTION, SEE DETAIL 1 ON SHEET D1.3
	REMOVE UTILITY STRUCTURE
	REMOVE STORM DRAIN PIPE
	REMOVE SANITARY SEWER PIPE
	REMOVE AND RELOCATE BURIED POWER (SEE ELECTRICAL)
	REMOVE AND RELOCATE BURIED COMMUNICATIONS (SEE ELECTRICAL)
	STRAW WATTLE, SEE DETAIL 2 ON SHEET D1.3
	SAWCUT PAVEMENT

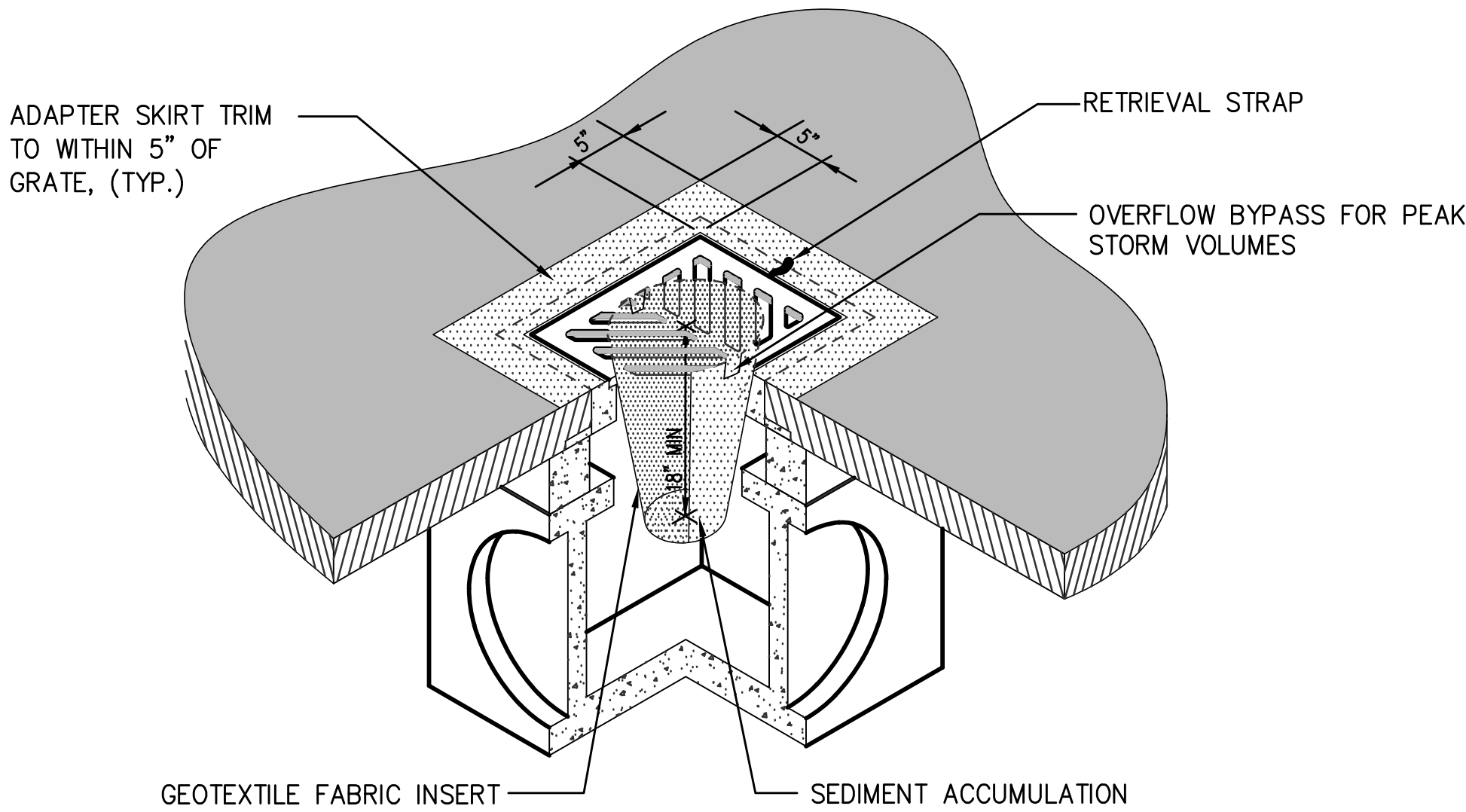
NOTES

1. STRUCTURE TO BE RELOCATED BY THE PORT.
2. ALL UTILITIES AND SITE FEATURES TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
3. CATCH BASIN TO BE REMOVED. NEW CATCH BASIN TO BE INSTALLED AS SHOWN ON SHEET C1.1.
4. CONTRACTOR TO LOCATE WATER LINE FROM END OF AS-BUILT PIPE TO EX TRAILERS.
5. CONTRACTOR TO ASSUME AREA CONSISTS OF 2" OF HMA OVER 2" OF CSBC MATERIAL. CONTRACTOR SHALL STOCKPILE CSBC MATERIAL FOR REUSE AS BASE MATERIAL. CONTRACTOR TO DEMOLISH HMA AND DISPOSE OFFSITE.
6. CONTRACTOR TO ASSUME AREA CONSISTS OF 4" OF CSBC MATERIAL. CONTRACTOR TO STOCKPILE CSBC MATERIAL FOR REUSE AS BASE MATERIAL.
7. CONTRACTOR TO ASSUME AREA CONSISTS OF 2" OF CSBC MATERIAL OVER 3" OF ASPHALT TREATED BASE. CONTRACTOR TO STOCKPILE CSBC MATERIAL FOR REUSE AS BASE MATERIAL. CONTRACTOR TO DEMOLISH ATB AND DISPOSE OFFSITE.
8. SANITARY SEWER LINE OBSERVED TO BE 4" PVC. LINE IS BURIED APPROXIMATELY 1.5' BELOW EX GRADE.



100% DESIGN

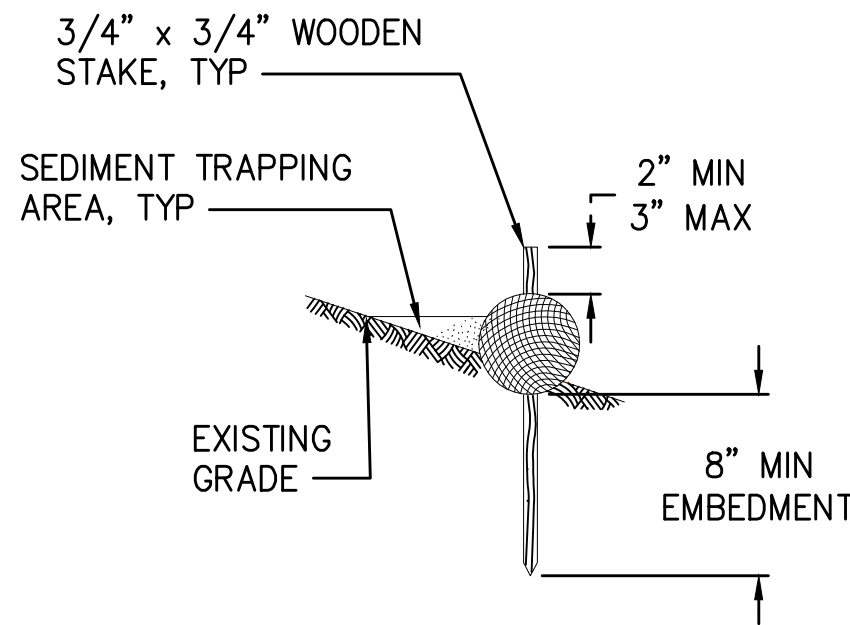
D1.2 9 OF 26	EB-1 PAVEMENT AND RESTROOM BUILDINGS				APPROVED: TJH 4/29/2022				2407 North 31st Street, Suite 100 Tacoma, Washington 98407 (253) 556-0130 FAX (253) 556-0162	
	TESC AND DEMOLITION PLAN AREA 3				CHECKED BY DATE					
CON'T/CONS: 071255	TOWNSHIP: 21N	RANGE: 3E	SECTION: 36	PROJ. ENGR DATE	SEK 4/29/2022			2407 North 31st Street, Suite 100 Tacoma, Washington 98407 (253) 556-0130 FAX (253) 556-0162		
M. ID: 201105.01	DAT-HRZ: WB3-SF	VERT: PORT OF TACOMA BM#	PRINTED BY: thelbig Apr 29, 2022	DIRECTOR ENG. DATE						
PHASE: 100% DESIGN	PARCEL: 0321354035	DRAWING SCALE: AS SHOWN	PORT ADDRESS: ONE SITCUM PLAZA	TACOMA WA, 98401-1837						
										MARK: REVISION:



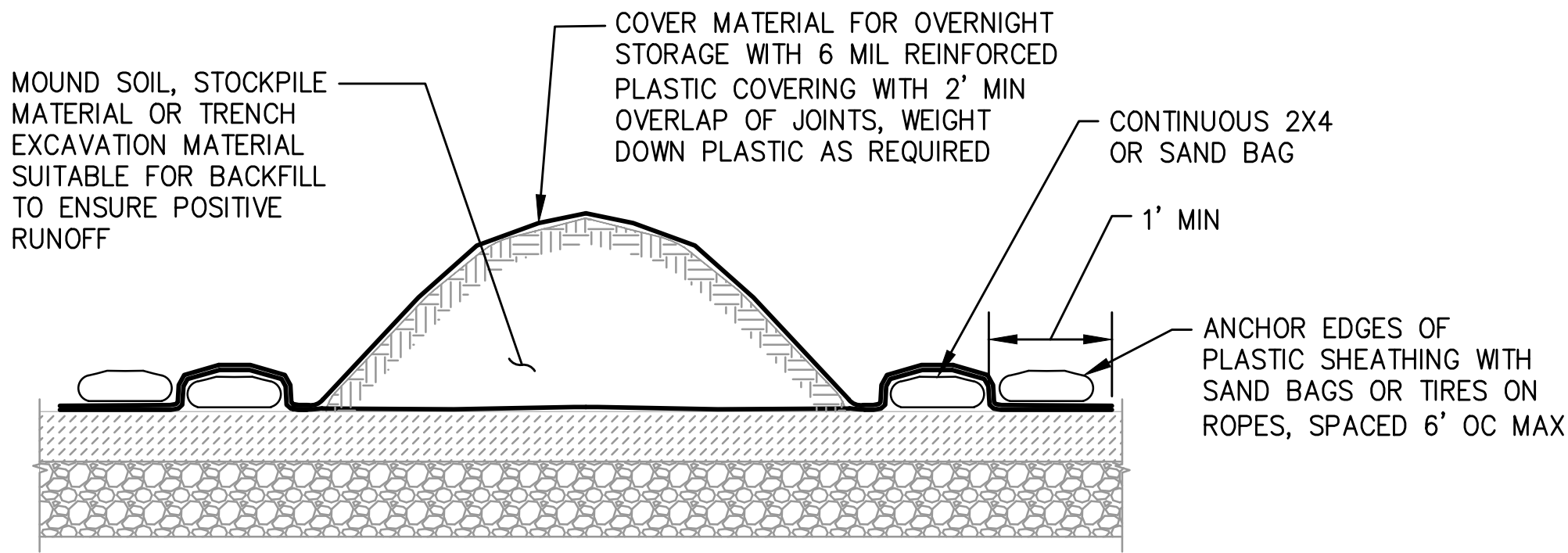
NOTES:

1. INSERT SHALL BE INSTALLED IN ALL LOCATIONS SHOWN ON THE PLANS.
2. FILTERS SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACED WHEN IT IS 1/3 FULL.
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING INTO APPROPRIATE DISPOSAL LOCATION, AND REINSERTING IT INTO THE CATCH BASIN.

1 INLET PROTECTION DETAIL
D1.0-D1.2 NTS



2 STRAW WATTLE DETAIL
D1.0-D1.2 NTS



NOTES:

1. RIPS AND TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER.
2. SOIL, STOCKPILE MATERIAL, AND TRENCH EXCAVATION MATERIAL SUITABLE FOR BACKFILL SHALL BE STOCKPILED AT NO MORE THAN 1 TO 1 SLOPE AND THE TOE OF THE STOCKPILE SHALL BE NO CLOSER THAN 2' FROM THE EDGE OF EXCAVATION. STOCKPILES HEIGHT SHALL NOT EXCEED 10'.

3 TEMPORARY STOCKPILE DETAIL
NTS

EROSION & SEDIMENT CONTROL NOTES:

1. THE IMPLEMENTATION OF THESE EROSION AND SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
2. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
3. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
4. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
5. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
6. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.
7. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
8. CONTRACTOR SHALL IMPLEMENT BMP'S AS NECESSARY TO ENSURE CONSTRUCTION ROUTE THROUGH TERMINAL REMAINS FREE OF DIRT AND DEBRIS.

DEMOLITION NOTES:

1. CONTRACTOR SHALL DEMOLISH HMA AND ATB MATERIAL AND DISPOSE OFFSITE.
2. DEMOLISHED MATERIALS NOT NOTED FOR REUSE SHALL BE DISPOSED OF AT CONTRACTOR'S EXPENSE.

D1.3 10 OF 26	EB-1 PAVEMENT AND RESTROOM BUILDINGS	TESC AND DEMOLITION DETAILS AND NOTES	APPROVED:	TJH	4/29/2022		
			CHECKED BY	DATE			
			SEK	4/29/2022			
			PROJ. ENGR	DATE			
CONTR/CONS:	071255	TOWNSHIP:	21N	RANGE:	3E	SECTION:	36
M. ID:	201105.01	DAT-HRZ:	W83-SF	VERT:	PORT OF TACOMA BM#		
PHASE:	100% DESIGN	PARCEL:	0321354035	DRAWING SCALE:	AS SHOWN		
				TACOMA, WA, 98401-1837			

Port of Tacoma
2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162
P.O. BOX 1837 TACOMA, WA 98401 (253) 396-5441

kpff
2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162
P.O. BOX 1837 TACOMA, WA 98401 (253) 396-5441

MARK:

REVISION:

BY:

APPR:

DATE:

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

BMP C103: High-Visibility Fence

Purpose

High-visibility fencing is intended to:

- Restrict clearing to approved limits.
- Prevent disturbance of sensitive areas, their buffers, and other areas required to be left undisturbed.
- Limit construction traffic to designated construction entrances, exits, or internal roads.
- Protect areas where marking with survey tape may not provide adequate protection.

Conditions of Use

To establish clearing limits plastic, fabric, or metal fence may be used:

- At the boundary of sensitive areas, their buffers, and other areas required to be left uncleared.
- As necessary to control vehicle access to and on the site.

Design and Installation Specifications

High-visibility plastic fence shall be composed of a high-density polyethylene material and shall be at least four feet in height. Posts for the fencing shall be steel or wood and placed every 6 feet on center (maximum) or as needed to ensure rigidity. The fencing shall be fastened to the post every six inches with a polyethylene tie. On long continuous lengths of fencing, a tension wire or rope shall be used as a top stringer to prevent sagging between posts. The fence color shall be high-visibility orange. The fence tensile strength shall be 360 lbs/ft using the ASTM D4595 testing method.

If appropriate install fabric silt fence in accordance with [BMP C233: Silt Fence](#) to act as high-visibility fence. Silt fence shall be at least 3 feet high and must be highly visible to meet the requirements of this BMP.

Metal fences shall be designed and installed according to the manufacturer's specifications.

Metal fences shall be at least 3 feet high and must be highly visible.

Fences shall not be wired or stapled to trees.

Maintenance Standards

If the fence has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

BMP C105: Stabilized Construction Access

Purpose

Stabilized construction accesses are established to reduce the amount of sediment transported onto paved roads outside the project site by vehicles or equipment. This is done by constructing a stabilized pad of quarry spalls at entrances and exits for project sites.

Conditions of Use

Construction accesses shall be stabilized wherever traffic will be entering or leaving a construction site if paved roads or other paved areas are within 1,000 feet of the site.

For residential subdivision construction sites, provide a stabilized construction access for each residence, rather than only at the main subdivision entrance. Stabilized surfaces shall be of sufficient length/width to provide vehicle access/parking, based on lot size and configuration.

On large commercial, highway, and road projects, the designer should include enough extra materials in the contract to allow for additional stabilized accesses not shown in the initial Construction SWPPP. It is difficult to determine exactly where access to these projects will take place; additional materials will enable the contractor to install them where needed.

Design and Installation Specifications

See [Figure II-3.1: Stabilized Construction Access](#) for details. Note: the 100' minimum length of the access shall be reduced to the maximum practicable size when the size or configuration of the site does not allow the full length (100').

Construct stabilized construction accesses with a 12-inch thick pad of 4-inch to 8-inch quarry spalls, a 4-inch course of asphalt treated base (ATB), or use existing pavement. Do not use crushed concrete, cement, or calcium chloride for construction access stabilization because these products raise pH levels in stormwater and concrete discharge to waters of the State is prohibited.

A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall meet the standards listed in [Table II-3.2: Stabilized Construction Access Geotextile Standards](#).

**Table II-3.2: Stabilized Construction Access
Geotextile Standards**

Geotextile Property	Required Value
Grab Tensile Strength (ASTM D4751)	200 psi min.
Grab Tensile Elongation (ASTM D4632)	30% max.
Mullen Burst Strength (ASTM D3786-80a)	400 psi min.
AOS (ASTM D4751)	20-45 (U.S. standard sieve size)

- Consider early installation of the first lift of asphalt in areas that will be paved; this can be used as a stabilized access. Also consider the installation of excess concrete as a stabilized access. During large concrete pours, excess concrete is often available for this purpose.
- Fencing (see [BMP C103: High-Visibility Fence](#)) shall be installed as necessary to restrict traffic to the construction access.
- Whenever possible, the access shall be constructed on a firm, compacted subgrade. This can substantially increase the effectiveness of the pad and reduce the need for maintenance.
- Construction accesses should avoid crossing existing sidewalks and back of walk drains if at all possible. If a construction access must cross a sidewalk or back of walk drain, the full length of the sidewalk and back of walk drain must be covered and protected from sediment leaving the site.

Alternative Material Specification

WSDOT has raised safety concerns about the Quarry Spall rock specified above. WSDOT observes that the 4-inch to 8-inch rock sizes can become trapped between Dually truck tires, and then released off-site at highway speeds. WSDOT has chosen to use a modified specification for the rock while continuously verifying that the Stabilized Construction Access remains effective. To remain effective, the BMP must prevent sediment from migrating off site. To date, there has been no performance testing to verify operation of this new specification. Jurisdictions may use the alternative specification, but must perform increased off-site inspection if they use, or allow others to use, it.

Stabilized Construction Accesses may use material that meets the requirements of WSDOT's *Standard Specifications for Road, Bridge, and Municipal Construction* Section 9-03.9(1) ([WSDOT, 2016](#)) for ballast except for the following special requirements.

The grading and quality requirements are listed in [Table II-3.3: Stabilized Construction Access Alternative Material Requirements](#).

**Table II-3.3: Stabilized
Construction Access
Alternative Material
Requirements**

Sieve Size	Percent Passing
2½"	99-100
2"	65-100
¾"	40-80
No. 4	5 max.
No. 100	0-2
% Fracture	75 min.

- All percentages are by weight.
- The sand equivalent value and dust ratio requirements do not apply.
- The fracture requirement shall be at least one fractured face and will apply the combined aggregate retained on the No. 4 sieve in accordance with FOP for AASHTO T 335.

Maintenance Standards

Quarry spalls shall be added if the pad is no longer in accordance with the specifications.

- If the access is not preventing sediment from being tracked onto pavement, then alternative measures to keep the streets free of sediment shall be used. This may include replacement/cleaning of the existing quarry spalls, street sweeping, an increase in the dimensions of the access, or the installation of BMP C106: Wheel Wash.
- Any sediment that is tracked onto pavement shall be removed by shoveling or street sweeping. The sediment collected by sweeping shall be removed or stabilized on site. The pavement shall not be cleaned by washing down the street, except when high efficiency sweeping is

ineffective and there is a threat to public safety. If it is necessary to wash the streets, the construction of a small sump to contain the wash water shall be considered. The sediment would then be washed into the sump where it can be controlled.

- Perform street sweeping by hand or with a high efficiency sweeper. Do not use a non-high efficiency mechanical sweeper because this creates dust and throws soils into storm systems or conveyance ditches.
- Any quarry spalls that are loosened from the pad, which end up on the roadway shall be removed immediately.
- If vehicles are entering or exiting the site at points other than the construction access(es), BMP C103: High-Visibility Fence shall be installed to control traffic.
- Upon project completion and site stabilization, all construction accesses intended as permanent access for maintenance shall be permanently stabilized.

Figure II-3.1: Stabilized Construction Access



[pdf download](#)

Approved as Functionally Equivalent

Ecology has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept these products, or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology’s website at:

<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies>

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

BMP C107: Construction Road / Parking Area Stabilization

Purpose

Stabilizing roads, parking areas, and other on-site vehicle transportation routes immediately after grading reduces erosion caused by construction traffic or stormwater runoff.

Conditions of Use

Roads and parking areas shall be stabilized wherever they are constructed, whether permanent or temporary, for use by construction traffic.

[BMP C103: High-Visibility Fence](#) shall be installed, if necessary, to limit the access of vehicles to only those roads and parking areas that are stabilized.

Design and Installation Specifications

- On areas that will receive asphalt as part of the project, install the first lift as soon as possible.
- A 6-inch depth of 2- to 4-inch crushed rock, gravel base, or crushed surfacing base course shall be applied immediately after grading or utility installation. A 4-inch course of asphalt treated base (ATB) may also be used, or the road/parking area may be paved. It may also be possible to use cement or calcium chloride for soil stabilization. If cement or cement kiln dust is used for roadbase stabilization, pH monitoring and [BMP C252: Treating and Disposing of High pH Water](#) is necessary to evaluate and minimize the effects on stormwater. If the area will not be used for permanent roads, parking areas, or structures, a 6-inch depth of hog fuel may also be used, but this is likely to require more maintenance. Whenever possible, construction roads and parking areas shall be placed on a firm, compacted subgrade.
- Temporary road gradients shall not exceed 15 percent. Roadways shall be carefully graded to drain. Drainage ditches shall be provided on each side of the roadway in the case of a crowned section, or on one side in the case of a super-elevated section. Drainage ditches shall be directed to a sediment control BMP.
- Rather than relying on ditches, it may also be possible to grade the road so that runoff sheet-flows into a heavily vegetated area with a well-developed topsoil. Landscaped areas are not adequate. If this area has at least 50 feet of vegetation that water can flow through, then it is

generally preferable to use the vegetation to treat runoff, rather than a sediment pond or trap. The 50 feet shall not include wetlands or their buffers. If runoff is allowed to sheetflow through adjacent vegetated areas, it is vital to design the roadways and parking areas so that no concentrated runoff is created.

- Storm drain inlets shall be protected to prevent sediment-laden water entering the drainage system (see [BMP C220: Inlet Protection](#)).

Maintenance Standards

Inspect stabilized areas regularly, especially after large storm events.

Crushed rock, gravel base, etc., shall be added as required to maintain a stable driving surface and to stabilize any areas that have eroded.

Following construction, these areas shall be restored to pre-construction condition or better to prevent future erosion.

Perform street cleaning at the end of each day or more often if necessary.

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

BMP C140: Dust Control

Purpose

Dust control prevents wind transport of dust from disturbed soil surfaces onto roadways, drainage ways, and surface waters.

Conditions of Use

Use dust control in areas (including roadways) subject to surface and air movement of dust where on-site or off-site impacts to roadways, drainage ways, or surface waters are likely.

Design and Installation Specifications

- Vegetate or mulch areas that will not receive vehicle traffic. In areas where planting, mulching, or paving is impractical, apply gravel or landscaping rock.
- Limit dust generation by clearing only those areas where immediate activity will take place, leaving the remaining area(s) in the original condition. Maintain the original ground cover as long as practical.
- Construct natural or artificial windbreaks or windscreens. These may be designed as enclosures for small dust sources.
- Sprinkle the site with water until the surface is wet. Repeat as needed. To prevent carryout of mud onto the street, refer to [BMP C105: Stabilized Construction Access](#) and [BMP C106: Wheel Wash](#).
- Irrigation water can be used for dust control. Irrigation systems should be installed as a first step on sites where dust control is a concern.
- Spray exposed soil areas with a dust palliative, following the manufacturer's instructions and cautions regarding handling and application. Used oil is prohibited from use as a dust suppressant. Local governments may approve other dust palliatives such as calcium chloride or PAM.
- PAM ([BMP C126: Polyacrylamide \(PAM\) for Soil Erosion Protection](#)) added to water at a rate of 0.5 pounds per 1,000 gallons of water per acre and applied from a water truck is more effective than water alone. This is due to increased infiltration of water into the soil and reduced evaporation. In addition, small soil particles are bonded together and are not as easily transported by wind. Adding PAM may reduce the quantity of water needed for dust control. Note that the application rate specified here applies to this BMP, and is not the same application rate that is specified in [BMP C126: Polyacrylamide \(PAM\) for Soil Erosion Protection](#), but the downstream protections still apply.

Refer to [BMP C126: Polyacrylamide \(PAM\) for Soil Erosion Protection](#) for conditions of use. PAM shall not be directly applied to water or allowed to enter a water body.

- Contact your local Air Pollution Control Authority for guidance and training on other dust control measures. Compliance with the local Air Pollution Control Authority constitutes compliance with this BMP.
- Use vacuum street sweepers.
- Remove mud and other dirt promptly so it does not dry and then turn into dust.
- Techniques that can be used for unpaved roads and lots include:
 - Lower speed limits. High vehicle speed increases the amount of dust stirred up from unpaved roads and lots.
 - Upgrade the road surface strength by improving particle size, shape, and mineral types that make up the surface and base materials.
 - Add surface gravel to reduce the source of dust emission. Limit the amount of fine particles (those smaller than .075 mm) to 10 to 20 percent.
 - Use geotextile fabrics to increase the strength of new roads or roads undergoing reconstruction.
 - Encourage the use of alternate, paved routes, if available.
 - Apply chemical dust suppressants using the admix method, blending the product with the top few inches of surface material. Suppressants may also be applied as surface treatments.
 - Limit dust-causing work on windy days.
 - Pave unpaved permanent roads and other trafficked areas.

Maintenance Standards

Respray area as necessary to keep dust to a minimum.

BMP C150: Materials on Hand

Purpose

Keep quantities of erosion prevention and sediment control materials on the project site at all times to be used for regular maintenance and emergency situations such as unexpected heavy rains. Having these materials on-site reduces the time needed to replace existing or implement new BMPs when inspections indicate that existing BMPs are not meeting the Construction SWPPP requirements. In addition, contractors can save money by buying some materials in bulk and storing them at their office or yard.

Conditions of Use

- Construction projects of any size or type can benefit from having materials on hand. A small commercial development project could have a roll of plastic and some gravel available for immediate protection of bare soil and temporary berm construction. A large earthwork project, such as highway construction, might have several tons of straw, several rolls of plastic, flexible pipe, sandbags, geotextile fabric and steel “T” posts.
- Materials should be stockpiled and readily available before any site clearing, grubbing, or earthwork begins. A large contractor or project proponent could keep a stockpile of materials that are available for use on several projects.
- If storage space at the project site is at a premium, the contractor could maintain the materials at their office or yard. The office or yard must be less than an hour from the project site.

Design and Installation Specifications

Depending on project type, size, complexity, and length, materials and quantities will vary. A good minimum list of items that will cover numerous situations includes:

- Clear Plastic, 6 mil
- Drainpipe, 6 or 8 inch diameter
- Sandbags, filled
- Straw Bales for mulching
- Quarry Spalls
- Washed Gravel
- Geotextile Fabric

- Catch Basin Inserts
- Steel "T" Posts
- Silt fence material
- Straw Wattles

Maintenance Standards

- All materials with the exception of the quarry spalls, steel “T” posts, and gravel should be kept covered and out of both sun and rain.
- Re-stock materials as needed.

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

BMP C153: Material Delivery, Storage, and Containment

Purpose

Prevent, reduce, or eliminate the discharge of pollutants to the stormwater system or watercourses from material delivery and storage. Minimize the storage of hazardous materials on-site, store materials in a designated area, and install secondary containment.

Conditions of Use

Use at construction sites with delivery and storage of the following materials:

- Petroleum products such as fuel, oil and grease
- Soil stabilizers and binders (e.g., Polyacrylamide)
- Fertilizers, pesticides and herbicides
- Detergents
- Asphalt and concrete compounds
- Hazardous chemicals such as acids, lime, adhesives, paints, solvents, and curing compounds
- Any other material that may be detrimental if released to the environment

Design and Installation Specifications

- The temporary storage area should be located away from vehicular traffic, near the construction entrance(s), and away from waterways or storm drains.
- Safety Data Sheets (SDS) should be supplied for all materials stored. Chemicals should be kept in their original labeled containers.
- Hazardous material storage on-site should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- During the wet weather season (Oct 1 – April 30), consider storing materials in a covered area.
- Materials should be stored in secondary containments, such as an earthen dike, horse trough, or even a children's wading pool for non-reactive materials such as detergents, oil, grease, and paints. Small amounts of material may be secondarily contained in "bus boy" trays or concrete mixing trays.

- Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and, when possible, within secondary containment.
- If drums must be kept uncovered, store them at a slight angle to reduce ponding of rainwater on the lids to reduce corrosion. Domed plastic covers are inexpensive and snap to the top of drums, preventing water from collecting.
- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall not be overfilled. Containers and drums shall be stored in temporary secondary containment facilities.
- Temporary secondary containment facilities shall provide for a spill containment volume able to contain 10% of the total enclosed container volume of all containers, or 110% of the capacity of the largest container within its boundary, whichever is greater.
- Secondary containment facilities shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- During the wet weather season (Oct 1 – April 30), each secondary containment facility shall be covered during non-working days, prior to and during rain events.
- Keep material storage areas clean, organized and equipped with an ample supply of appropriate spill clean-up material (spill kit).
- The spill kit should include, at a minimum:
 - 1-Water Resistant Nylon Bag
 - 3-Oil Absorbent Socks 3"x 4'
 - 2-Oil Absorbent Socks 3"x 10'
 - 12-Oil Absorbent Pads 17"x19"
 - 1-Pair Splash Resistant Goggles
 - 3-Pair Nitrile Gloves
 - 10-Disposable Bags with Ties
 - Instructions

Maintenance Standards

- Secondary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids

shall be handled as hazardous waste unless testing determines them to be non-hazardous.

- Re-stock spill kit materials as needed.

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

BMP C160: Certified Erosion and Sediment Control Lead

Purpose

The project proponent designates at least one person as the responsible representative in charge of erosion and sediment control (ESC), and water quality protection. The designated person shall be responsible for ensuring compliance with all local, state, and federal erosion and sediment control and water quality requirements. Construction sites one acre or larger that discharge to waters of the State must designate a Certified Erosion and Sediment Control Lead (CESCL) as the responsible representative.

Conditions of Use

A CESCL shall be made available on projects one acre or larger that discharge stormwater to surface waters of the state. Sites less than one acre may have a person without CESCL certification conduct inspections.

The CESCL shall:

- Have a current certificate proving attendance in an erosion and sediment control training course that meets the minimum ESC training and certification requirements established by Ecology.

Ecology has provided the minimum requirements for CESCL course training, as well as a list of ESC training and certification providers at:

<https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Certified-erosion-sediment-control>

OR

- Be a Certified Professional in Erosion and Sediment Control (CPESC). For additional information go to:

<http://www.envirocertintl.org/cpesc/>

Specifications

- CESCL certification shall remain valid for three years.
- The CESCL shall have authority to act on behalf of the contractor or project proponent and shall be available, or on-call, 24 hours per day throughout the period of construction.
- The Construction SWPPP shall include the name, telephone number, fax number, and address of the designated CESCL. See [II-2 Construction Stormwater Pollution Prevention Plans \(Construction SWPPPs\)](#).
- A CESCL may provide inspection and compliance services for multiple construction projects in the same geographic region, but must be on site whenever earthwork activities are occurring that could generate

release of turbid water.

- Duties and responsibilities of the CESCL shall include, but are not limited to the following:
 - Maintaining a permit file on site at all times which includes the Construction SWPPP and any associated permits and plans.
 - Directing BMP installation, inspection, maintenance, modification, and removal.
 - Updating all project drawings and the Construction SWPPP with changes made.
 - Completing any sampling requirements including reporting results using electronic Discharge Monitoring Reports (WebDMR).
 - Facilitate, participate in, and take corrective actions resulting from inspections performed by outside agencies or the owner.
 - Keeping daily logs, and inspection reports. Inspection reports should include:
 - Inspection date/time.
 - Weather information; general conditions during inspection and approximate amount of precipitation since the last inspection.
 - Visual monitoring results, including a description of discharged stormwater. The presence of suspended sediment, turbid water, discoloration, and oil sheen shall be noted, as applicable.
 - Any water quality monitoring performed during inspection.
 - General comments and notes, including a brief description of any BMP repairs, maintenance or installations made as a result of the inspection.
 - A summary or list of all BMPs implemented, including observations of all erosion/sediment control structures or practices. The following shall be noted:
 1. Locations of BMPs inspected.
 2. Locations of BMPs that need maintenance.
 3. Locations of BMPs that failed to operate as designed or intended.
 4. Locations of where additional or different BMPs are required.

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

BMP C162: Scheduling

Purpose

Sequencing a construction project reduces the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking.

Conditions of Use

The construction sequence schedule is an orderly listing of all major land-disturbing activities together with the necessary erosion and sedimentation control measures planned for the project. This type of schedule guides the contractor on work to be done before other work is started so that serious erosion and sedimentation problems can be avoided.

Following a specified work schedule that coordinates the timing of land-disturbing activities and the installation of control measures is perhaps the most cost-effective way of controlling erosion during construction. The removal of ground cover leaves a site vulnerable to erosion. Construction sequencing that limits land clearing, provides timely installation of erosion and sedimentation controls, and restores protective cover quickly can significantly reduce the erosion potential of a site.

Design Considerations

- Minimize construction during rainy periods.
- Schedule projects to disturb only small portions of the site at any one time. Complete grading as soon as possible. Immediately stabilize the disturbed portion before grading the next portion. Practice staged seeding in order to revegetate cut and fill slopes as the work progresses.

BMP C220: Inlet Protection

Purpose

Inlet protection prevents coarse sediment from entering drainage systems prior to permanent stabilization of the disturbed area.

Conditions of Use

Use inlet protection at inlets that are operational before permanent stabilization of the disturbed areas that contribute runoff to the inlet. Provide protection for all storm drain inlets downslope and within 500 feet of a disturbed or construction area, unless those inlets are preceded by a sediment trapping BMP.

Also consider inlet protection for lawn and yard drains on new home construction. These small and numerous drains coupled with lack of gutters can add significant amounts of sediment into the roof drain system. If possible, delay installing lawn and yard drains until just before landscaping, or cap these drains to prevent sediment from entering the system until completion of landscaping. Provide 18-inches of sod around each finished lawn and yard drain.

[Table II-3.10: Storm Drain Inlet Protection](#) lists several options for inlet protection. All of the methods for inlet protection tend to plug and require a high frequency of maintenance. Limit contributing drainage areas for an individual inlet to one acre or less. If possible, provide emergency overflows with additional end-of-pipe treatment where stormwater ponding would cause a hazard.

Table II-3.10: Storm Drain Inlet Protection

Type of Inlet Protection	Emergency Overflow	Applicable for Paved/ Earthen Surfaces	Conditions of Use
Drop Inlet Protection			
Excavated drop inlet protection	Yes, temporary flooding may occur	Earthen	Applicable for heavy flows. Easy to maintain. Large area requirement: 30'x30'/acre
Block and gravel drop inlet	Yes	Paved or Earthen	Applicable for heavy concentrated flows. Will not pond.

Type of Inlet Protection	Emergency Overflow	Applicable for Paved/ Earthen Surfaces	Conditions of Use
protection			
Gravel and wire drop inlet protection	No	Paved or Earthen	Applicable for heavy concentrated flows. Will pond. Can withstand traffic.
Catch basin filters	Yes	Paved or Earthen	Frequent maintenance required.
Curb Inlet Protection			
Curb inlet protection with wooden weir	Small capacity overflow	Paved	Used for sturdy, more compact installation.
Block and gravel curb inlet protection	Yes	Paved	Sturdy, but limited filtration.
Culvert Inlet Protection			
Culvert inlet sediment trap	N/A	N/A	18 month expected life.

Design and Installation Specifications

Excavated Drop Inlet Protection

Excavated drop inlet protection consists of an excavated impoundment around the storm drain inlet. Sediment settles out of the stormwater prior to entering the storm drain. Design and installation specifications for excavated drop inlet protection include:

- Provide a depth of 1-2 ft as measured from the crest of the inlet structure.
- Slope sides of excavation should be no steeper than 2H:1V.
- Minimum volume of excavation is 35 cubic yards.
- Shape the excavation to fit the site, with the longest dimension oriented toward the longest inflow area.
- Install provisions for draining to prevent standing water.

- Clear the area of all debris.
- Grade the approach to the inlet uniformly.
- Drill weep holes into the side of the inlet.
- Protect weep holes with screen wire and washed aggregate.
- Seal weep holes when removing structure and stabilizing area.
- Build a temporary dike, if necessary, to the down slope side of the structure to prevent bypass flow.

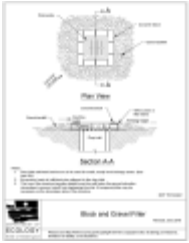
Block and Gravel Filter

A block and gravel filter is a barrier formed around the inlet with standard concrete blocks and gravel. See [Figure II-3.17: Block and Gravel Filter](#). Design and installation specifications for block gravel filters include:

- Provide a height of 1 to 2 feet above the inlet.
- Recess the first row of blocks 2-inches into the ground for stability.
- Support subsequent courses by placing a pressure treated wood 2x4 through the block opening.
- Do not use mortar.
- Lay some blocks in the bottom row on their side to allow for dewatering the pool.
- Place hardware cloth or comparable wire mesh with ½-inch openings over all block openings.
- Place gravel to just below the top of blocks on slopes of 2H:1V or flatter.
- An alternative design is a gravel berm surrounding the inlet, as follows:
 - Provide a slope of 3H:1V on the upstream side of the berm.
 - Provide a slope of 2H:1V on the downstream side of the berm.
 - Provide a 1-foot wide level stone area between the gravel berm and the inlet.
 - Use stones 3 inches in diameter or larger on the upstream slope of the berm.

- Use gravel ½- to ¾-inch at a minimum thickness of 1-foot on the downstream slope of the berm.

Figure II-3.17: Block and Gravel Filter



[pdf download](#)

Gravel and Wire Mesh Filter

Gravel and wire mesh filters are gravel barriers placed over the top of the inlet. This method does not provide an overflow. Design and installation specifications for gravel and wire mesh filters include:

- Use a hardware cloth or comparable wire mesh with ½-inch openings.
 - Place wire mesh over the drop inlet so that the wire extends a minimum of 1-foot beyond each side of the inlet structure.
 - Overlap the strips if more than one strip of mesh is necessary.
- Place coarse aggregate over the wire mesh.
 - Provide at least a 12-inch depth of aggregate over the entire inlet opening and extend at least 18-inches on all sides.

Catch Basin Filters

Catch basin filters are designed by manufacturers for construction sites. The limited sediment storage capacity increases the amount of inspection and maintenance required, which may be daily for heavy sediment loads. To reduce maintenance requirements, combine a catch basin filter with another type of inlet protection. This type of inlet protection provides flow bypass without overflow and therefore may be a better method for inlets located along active rights-of-way. Design and installation specifications for catch basin filters include:

- Provides 5 cubic feet of storage.
- Requires dewatering provisions.
- Provides a high-flow bypass that will not clog under normal use at a construction site.

- Insert the catch basin filter in the catch basin just below the grating.

Curb Inlet Protection with Wooden Weir

Curb inlet protection with wooden weir is an option that consists of a barrier formed around a curb inlet with a wooden frame and gravel. Design and installation specifications for curb inlet protection with wooden weirs include:

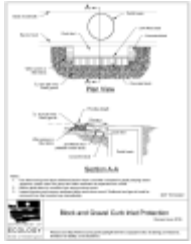
- Use wire mesh with ½-inch openings.
- Use extra strength filter cloth.
- Construct a frame.
- Attach the wire and filter fabric to the frame.
- Pile coarse washed aggregate against the wire and fabric.
- Place weight on the frame anchors.

Block and Gravel Curb Inlet Protection

Block and gravel curb inlet protection is a barrier formed around a curb inlet with concrete blocks and gravel. See [Figure II-3.18: Block and Gravel Curb Inlet Protection](#). Design and installation specifications for block and gravel curb inlet protection include:

- Use wire mesh with ½-inch openings.
- Place two concrete blocks on their sides abutting the curb at either side of the inlet opening. These are spacer blocks.
- Place a 2x4 stud through the outer holes of each spacer block to align the front blocks.
- Place blocks on their sides across the front of the inlet and abutting the spacer blocks.
- Place wire mesh over the outside vertical face.
- Pile coarse aggregate against the wire to the top of the barrier.

Figure II-3.18: Block and Gravel Curb Inlet Protection



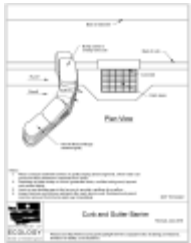
[pdf download](#)

Curb and Gutter Sediment Barrier

Curb and gutter sediment barrier is a sandbag or rock berm (riprap and aggregate) 3 feet high and 3 feet wide in a horseshoe shape. See [Figure II-3.19: Curb and Gutter Barrier](#). Design and installation specifications for curb and gutter sediment barrier include:

- Construct a horseshoe shaped berm, faced with coarse aggregate if using riprap, 3 feet high and 3 feet wide, at least 2 feet from the inlet.
- Construct a horseshoe shaped sedimentation trap on the upstream side of the berm. Size the trap to sediment trap standards for protecting a culvert inlet.

Figure II-3.19: Curb and Gutter Barrier



[pdf download](#)

Maintenance Standards

- Inspect all forms of inlet protection frequently, especially after storm events. Clean and replace clogged catch basin filters. For rock and gravel filters, pull away the rocks from the inlet and clean or replace. An alternative approach would be to use the clogged rock as fill and put fresh rock around the inlet.
- Do not wash sediment into storm drains while cleaning. Spread all excavated material evenly over the surrounding land area or stockpile and stabilize as appropriate.

Approved as Functionally Equivalent

Ecology has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept these products, or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology's website at:

<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies>

Washington State Department of Ecology

2019 Stormwater Management Manual for Western Washington (2019 SWMMWW)

Publication No.19-10-021

APPENDIX B

PORT OF TACOMA

CONSTRUCTION SWPPP

SHORT FORM

CONSTRUCTION SWPPP SHORT FORM

The threshold for using the Port of Tacoma's (Port) short form is a project that proposes to clear or disturb less than one acre of land. Projects falling within this threshold may use this short form instead of preparing a professionally designed Construction Stormwater Pollution Prevention Plan (SWPPP). If project disturbance quantities exceed this threshold, you must prepare of formal Construction SWPPP as part of your submittal package. If your project is within the threshold and includes—or may affect—a critical area, please contact the Port to determine if the SWPPP short form may be used.

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN SHORT FORM

Project Name:

Address:

Contact/Owner:

Phone:

Erosion Control Supervisor:

Phone:

Cell:

Pager:

Emergency (After hours) Contact:

Phone:

Permit No.:

Parcel No.:

Required Submittals

A Construction SWPPP consists of both a project narrative and a site plan. The project narrative describes existing conditions on the site, the proposed conditions, and how construction site runoff will be managed until final site stabilization is achieved. Any additional relevant information should be included in the project narrative. All Best Management Practices (BMPs) that will be utilized onsite must be included as part of the project narrative and provided (electronically or hard copy) as part of the submittal package. If additional BMPs beyond those included in the Washington Department of Ecology's (Ecology) Western Washington Stormwater Management Manual (Ecology SWMM) or the City of Tacoma's (City) Stormwater Management Manual (City SWMM) are proposed to be used, a narrative and appropriate details describing the BMP (its function, installation method, and maintenance activities) will be required.

The site plan is a drawing which shows the location of the proposed BMPs to control erosion and sedimentation during and after construction activities.

PROJECT NARRATIVE

The Construction SWPPP Short Form narrative must be completed at part of the submittal package. Any information described, as part of the narrative, should also be shown on the site plan.

Note: From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted by special authorization from the Port.

A. Project Description (Check all that apply)

☐ New Structure	☐ Building Addition	☐ Grading/Excavation
☐ Paving	☐ Utilities	☐ Other:

1. Total project area (square feet)
2. Total proposed impervious area (square feet)
3. Total existing impervious area (square feet)
4. Total proposed area to be disturbed (square feet)
5. Total volume of cut/fill (cubic yards)

Additional Project Information:

B. Existing Site Conditions (Check all that apply)

1. Describe the existing vegetation on the site. (Check all that apply)

☐ Forest	☐ Pasture/field grass	☐ Pavement	☐ Landscaping	☐ Brush
☐ Trees	☐ Other:			
2. Describe how surface water (stormwater) drainage flows across/from the site. (Check all that apply)

☐ Sheet Flow	☐ Gutter	☐ Catch Basin	☐ Ditch/Swale	☐ Storm Sewer
☐ Stream	☐ Other:			
3. Describe any unusual site condition(s) or other features of note.

☐ Steep Grades	☐ Large depression	☐ Underground tanks	☐ Springs
☐ Easements	☐ Existing structures	☐ Existing utilities	☐ Other:

C. Adjacent Areas (Check all that apply)

1. Check any/all adjacent areas that may be affected by site disturbance and fully describe below in item 2:

☐ Streams* ☐ Lakes* ☐ Wetlands* ☐ Steep slopes*
☐ Residential Areas ☐ Roads ☐ Ditches, pipes, culverts ☐ Other:

** If the site is on or adjacent to a critical area (e.g., waterbody), the Port may require additional information, engineering, and other permits to be submitted with this short form.*

2. Describe how and where surface water enters the site from properties located upstream:

3. Describe the downstream drainage path from the site to the receiving body of water (minimum distance of 0.25 mile [1320 feet]). (E.g., water flows from the site into a curb-line, then to a catch basin at the intersection of X and Y streets. A 10-inch pipe system conveys water another 1000 feet to a wetland.) Include information on the condition of the drainage structures.

D. Soils (Check all that apply)

The intent of this section is to identify when additional soils information may be required for applicants using this short form. There are other site-specific issues that may necessitate a soils investigation or more extensive erosion control practices. The Port will determine these situations on a case-by-case basis as part of their review.

1. Does the project propose infiltration? Infiltration systems require prior Port approval.

☐ Yes ☐ No

2. Does the project propose construction on or near steep slopes (15% or greater)?

☐ Yes ☐ No

If infiltration is proposed for the site or steep slopes (15% or greater) have been identified, the Port will require soils information as part of project design. The applicant must contact a soil professional or civil engineer that specializes in soil analysis and perform an in-depth soils investigation. If the Yes box is checked for either question, the Port may not permit the use of this short form.

E. Construction Sequencing/Phasing

1. Construction sequence: the standard construction sequence is as follows:
 - Mark clearing/grading limits.
 - Install initial erosion control Best Management Practices (BMPs) (e.g., construction entrance, silt fence, catch basin inserts, etc.).
 - Clear, grade, and fill project site as outlined in the site plan while implementing and maintaining proper temporary erosion and sediment control BMPs simultaneously.
 - Install permanent erosion protection as described in the specifications (e.g., impervious surfaces, landscaping, etc.).
 - Remove temporary erosion control methods as permitted. Do not remove temporary erosion control until permanent erosion protection is fully established.

List any changes from the standard construction sequence outlined above:

2. Construction phasing: if construction is going to occur in separate phases, please describe:

F. Construction Schedule

1. Provide a proposed construction schedule (dates construction starts and ends, and dates for any construction phasing.)

Start Date:

End Date:

Interim Phasing Dates:

Wet Season Construction Activities: Wet season occurs from October 1 to April 30. Please describe construction activities that will occur during this time period.

Note: Additional erosion control methods may be required during periods of increased surface water runoff.

2. Site plan (see Figure 1, page 6)

A site plan, to scale, must be included with this checklist that shows the following items:

- ☐ a. Address, Parcel Number, Permit Number, and Street Names
- ☐ b. North Arrow
- ☐ c. Indicate boundaries of existing vegetation (e.g., tree lines, grassy areas, pasture areas, fields, etc.)
- ☐ d. Identify any onsite or adjacent critical areas and associated buffers (e.g., wetlands, steep slopes, streams, etc.).
- ☐ e. Identify any FEMA base flood boundaries and Shoreline Management boundaries.
- ☐ f. Show existing and proposed contours.
- ☐ g. Delineate areas that are to be cleared and/or graded.
- ☐ h. Show all cut and fill slopes, indicating top and bottom of slope catch lines.
- ☐ i. Show locations where upstream run-on enters the site and locations where runoff leaves the site.
- ☐ j. Indicate existing surface water flow direction(s).
- ☐ k. Label final grade contour and indicate proposed surface water flow direction and surface water conveyance systems (e.g., pipes, catch basins, ditches, etc.).
- ☐ l. Show grades, dimensions, and direction of flow in all (existing and proposed) ditches, swales, culverts, and pipes.
- ☐ m. Indicate locations and outlets of any dewatering systems (usually to sediment trap).
- ☐ n. Identify and locate all erosion control methods to be used during and after construction.

ONSITE FIELD VERIFICATION OF ACTUAL CONDITIONS IS REQUIRED.

Figure 1. (to be worked out with Engineering Dept.)

GUIDELINES FOR EROSION CONTROL ELEMENTS

This SWPPP must contain the 12 required elements, as required by Ecology. Check off each element as it is addressed in the SWPPP short form and/or on your site plan.

- ☐ 1. Mark Clearing Limits
- ☐ 2. Establish Construction Access
- ☐ 3. Control Flow Rates
- ☐ 4. Install Sediment Controls
- ☐ 5. Stabilize Soils
- ☐ 6. Protect Slopes
- ☐ 7. Protect Drain Inlets
- ☐ 8. Stabilize Channels and Outlets
- ☐ 9. Control Pollutants
- ☐ 10. Control Dewatering
- ☐ 11. Maintain BMPs
- ☐ 12. Manage the Project

The following is a brief description of each of the 12 required elements of a SWPPP. If an element does not apply to the proposed project site, please describe why the element does not apply. Applicable BMPs are listed with each element and in Table 1. Please note that this list is not a comprehensive list of BMPs available for small construction projects, but erosion and sediment control techniques most pertinent to small construction sites are included here. More detailed information on construction BMPs can be found in Ecology's SWMM Volume II and the City's SWMM Volume II (Ecology 2005; City of Tacoma 2012). Please provide hard copies of the BMPs that will be used for the project and include as part of this Construction SWPPP. BMPs that may be used if needed can be noted as being contingent in the event additional erosion control is needed. Describe any additional BMPs that will be utilized onsite and add them to the SWPPP short form.

For phased construction projects, clearly indicate erosion control methods to be used for each phase of construction.

Element #1 – Mark Clearing Limits

All construction projects must clearly mark any clearing limits, sensitive areas and their buffers prior to beginning any land disturbing activities, including clearing and grading. Clearly mark the limits both in the field and on the site plans. Limits shall be marked in such a way that any trees or vegetation that is to remain will not be harmed.

Applicable BMPs include:

- BMP C101: Preserving Natural Vegetation
- BMP C102: Buffer Zones
- BMP C103: High Visibility Plastic or Metal Fence
- BMP C104: Stake and Wire Fence

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #2 – Establish Construction Access

All construction projects subject to vehicular traffic shall provide a means of preventing vehicle “tracking” soil from the site onto streets or neighboring properties. Limit vehicle traffic on- and off-site to one route if possible. All access points shall be stabilized with a rock pad construction entrance or other Port-approved BMP. The applicant should consider placing the entrance in the area for future driveway(s), as it may be possible to use the rock as a driveway base material. The entrance(s) must be inspected weekly, at a minimum, to ensure no excess sediment buildup or missing rock.

Applicable BMPs include:

- BMP C105: Stabilized Construction Entrance
- BMP C106: Wheel Wash
- BMP C107: Construction Road/Parking Area Stabilization

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #3 – Control Flow Rates

Protect properties and waterways downstream of the project site from erosion due to increases in volume, velocity, and peak flow of stormwater runoff from the project site.

Permanent infiltration facilities shall not be used for flow control during construction unless specifically approved by the Environmental Department. Sediment traps can provide flow control for small sites by allowing water to pool and allowing sediment to settle out of the water.

Applicable BMPs include:

- BMP C207: Check Dams
- BMP C240: Sediment Trap

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element 4 – Install Sediment Controls

Surface water runoff from disturbed areas must pass through an appropriate sediment removal device prior to leaving a construction site or discharging into a waterbody. Sediment barriers are typically used to slow stormwater sheet flow and allow the sediment to settle out behind the barrier.

Sediment controls must be installed/constructed prior to site grading.

Applicable BMPs include:

- BMP C208: Triangular Silt Dike
- BMP C232: Gravel Filter Berm
- BMP C233: Silt Fence
- BMP C235: Straw Wattles

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #5 – Stabilize Soils

Stabilize exposed and unworked soils by applying BMPs that protect the soils from raindrop impact, flowing water, and wind.

From October 1 through April 30, no soils shall remain exposed or unworked for more than 2 days. From May 1 to September 30, no soils shall remain exposed or unworked for more than 7 days. This applies to all soils whether at final grade or not.

Applicable BMPs include:

- BMP C120: Temporary and Permanent Seeding
- BMP C121: Mulching
- BMP C122: Nets and Blankets
- BMP C123: Plastic Covering
- BMP C140: Dust Control

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #6 – Protect Slopes

Protect slopes by diverting water at the top of the slope. Reduce slope velocities by minimizing the continuous length of the slope.

Applicable BMPs include:

- BMP C200: Interceptor Dike and Swale
- BMP C204: Pipe Slope Drains
- BMP C207: Check Dams

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #7 – Protect Drain Inlets

All operable storm drain inlets must be protected during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment. Install catch basin protection on all catch basins within 500 feet downstream of the project.

Applicable BMPs include:

- BMP C220: Storm Drain Inlet Protection

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #8 – Stabilize Channels and Outlets

Stabilize all temporary onsite conveyance channels. Provide stabilization to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the conveyance system outlets.

Applicable BMPs include:

- BMP C202: Channel Lining
- BMP C209: Outlet Protection

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #9 – Control Pollutants

Handle and dispose of all pollutants, including demolition debris and other solid wastes in a manner that does not cause stormwater contamination. Provide cover and containment for all chemicals, liquid products (including paint), petroleum products, and other materials. Handle all concrete and concrete waste appropriately.

Applicable BMPs include:

- BMP C150: Materials on Hand
- BMP C151: Concrete Handling
- BMP C152: Sawcutting and Surface Pollution Prevention
- BMP C153: Material Delivery, Storage and Containment

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #10 – Control Dewatering

Clean, non-turbid dewatering water, such as groundwater, can be discharged to the stormwater system provided the dewatering flow does not cause erosion or flooding of receiving waters.

Applicable BMPs include:

- BMP C150: Materials on Hand

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #11 – Maintain BMPs

Maintain and repair temporary erosion and sediment control BMPs as needed. Inspect all BMPs at least weekly and after every storm event.

Remove all temporary erosion and sediment control BMPs within 30 days after final site stabilization or if the BMP is no longer needed. Any sediment trapped during construction activities should be removed or stabilized onsite. No sediment shall be discharged into the stormwater drainage system or any natural conveyance system (e.g., streams).

Applicable BMPs include:

- BMP C160: Certified Erosion and Sediment Control Lead

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #12 – Manage the Project

Phase development projects to prevent soil erosion and the transport of sediment from the project site during construction. Coordinate all work prior initial construction with subcontractors and other utilities to ensure no areas are worked prematurely.\

A designated erosion and sediment control person is required for all construction projects. This person is responsible for ensuring that the project's erosion and sediment control BMPs are appropriate for the site and are functioning properly. They are also responsible for updating the SWPPP as necessary as site conditions warrant. They must be available 24 hours a day to ensure compliance.

Applicable BMPs include:

- BMP C160: Certified Erosion and Sediment Control Lead
- BMP C162: Scheduling
- BMP C180: Small Project Construction Stormwater Pollution Prevention

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Table 1. Applicable BMPs for the 12 Elements of a SWPPP

Element #1 – Mark Clearing Limits		
BMP C101	Preserving Natural Vegetation	
BMP C102	Buffer Zones	
BMP C103	High Visibility Plastic and Wire Fence	
BMP C104	Stake and Wire Fence	
Element #2 – Establish Construction Entrance		
BMP C105	Stabilized Construction Entrance	
BMP C106	Wheel Wash	
BMP C107	Construction Road/Parking Area Stabilization	
Element #3 – Control Flow Rates		
BMP C207	Check Dams	
BMP C240	Sediment Trap	
Element #4 – Install Sediment Controls		
BMP C208	Triangular Silt Trap	
BMP C232	Gravel Filter Berm	
BMP C233	Silt Fence	
BMP C235	Straw Wattles	
Element #5 – Stabilize Soils		
BMP C120	Temporary and Permanent Seeding	
BMP C121	Mulching	
BMP C122	Nets and Blankets	
BMP C123	Plastic Covering	
BMP C140	Dust Control	
Element #6 – Protect Slopes		
BMP C200	Interceptor Dike and Swale	
BMP C204	Pipe Slope Drains	
BMP C207	Check Dams	
Element #7 – Protect Drain Inlets		
BMP C220	Storm Drain Inlet Protection	
Element #8 – Stabilize Channels and Outlets		
BMP C202	Channel Lining	
BMP C209	Outlet Protection	
Element #9 – Control Pollutants		
BMP C150	Materials on Hand	

Element #9 – Control Pollutants, cont.		
BMP C151	Concrete Handling	
BMP C152	Sawcutting and Surfacing Pollution Prevention	
BMP C153	Materials, Delivery, Storage and Containment	
Element #10 – Control Dewatering		
BMP C150	Materials on Hand	
Element #11 – Maintain BMPs		
BMP C160	Certified Erosion and Sediment Control Lead	
Element #12 – Manage the Project		
BMP C160	Certified Erosion and Sediment Control Lead	
BMP C162	Scheduling	
BMP C180	Small Project Construction Stormwater Pollution Prevention	

REFERENCES

City of Tacoma. 2012. Stormwater Management Manual 2012 Edition. Public Works/ Environmental Services, Maintenance Division, Tacoma, Washington.

Washington State Department of Ecology (Ecology). 2005. Stormwater Management Manual for Western Washington. Water Quality Program, Lacey, Washington.

APPENDIX C

STATE ENVIRONMENTAL

POLICY ACT (SEPA)

DETERMINATION OF

NONSIGNIFICANCE



DETERMINATION OF NONSIGNIFICANCE

RCW 197-11-970

Description of proposal:

As part of the Blair Waterway Infrastructure Improvements Project the Port of Tacoma (Port) proposes to conduct dredging to widen the Blair Waterway at three locations, to relocate the 1,200-foot pier and associated upland improvements (marine building, lighting, paving upgrades, and fencing) approved by the Pierce County Terminal Expansion Project (but not yet constructed) from the east side of the Turning Basin area to the east side of the Blair Inner Reach area, to remove and demolish the existing wood chip facility, to demolish and replace an existing mooring dolphin in the southwest corner of the head of the Blair Waterway, to provide improvements to the stormwater collection and treatment systems, to relocate three existing outfalls, to demolish 425 feet of Pier 4, and to relocate 2 existing Navigational Aids within the Blair Bridge Reach area. Approximately 2.95 million cubic yards of material will be dredged. Mitigation for unavoidable adverse impacts will be provided as part of the Gog-le-hi-te II Mitigation Action.

Proponent: Port of Tacoma

Location of proposal, including street address, if any:

The proposed Project is located within the Port industrial area. The waterway infrastructure components of the Project will be conducted in three general areas of the Blair Waterway.

The first area is located along the eastern shore near the head of the waterway and is referred to as the "Blair Inner Reach Cutback and Turning Basin Expansion" area. This Project area is located west of Alexander Avenue in Tacoma, Washington. (The address for this Project area is 2510 Alexander Avenue, Tacoma, WA 98421.) This Project area is located within the SE 1/4 of Section 35 and SW 1/4 of Section 36, Township 21 North, Range 3 East; and NW 1/4 of Section 1, Township 20 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

The second area is located at the southwest corner of the head of the waterway and is referred to as the "Southwest Corner Cutback" area. This Project area is located east of Port of Tacoma Road in Tacoma, Washington. (The address for this Project area is 2901 Port of Tacoma Road, Tacoma, WA 98421.) This Project area is located within the NE 1/4 of Section 2, Township 20 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

The third area is located along the western shore where the previous Blair Bridge and East 11th Street right-of-way were located and is referred to as the "Blair Bridge Reach Widening" area. This Project area is located east of Port of Tacoma Road in Tacoma, Washington. (The address for this Project area is 1001 Port of Tacoma Road, Tacoma, WA 98421.) This Project area is located within the SE 1/4 of Section 27 and NE 1/4 of Section 34, Township 21 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

The mitigation proposed for unavoidable adverse impacts associated with the Project is located south of Lincoln Avenue, north of SR 509, and on the east side of the Puyallup

River, Tacoma, WA, 98421. (The proposed mitigation site does not have a street address.) This site is located within the SW 1/4 and SE 1/4 of Section 3, Township 20 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

Lead agency: *Port of Tacoma*

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by: **July 9, 2004.**

Responsible official: Andrea Riniker

Position/title: Executive Director, Port of Tacoma

Address: P.O. Box 1837, Tacoma, WA. 98401-1837

Date: June 25, 2004

Signature: 

ENVIRONMENTAL CHECKLIST

Blair Waterway Infrastructure Improvements Project

A. Background

1. Name of proposed project, if applicable:

Blair Waterway Infrastructure Improvements Project

2. Name of applicant:

Port of Tacoma

3. Address and phone number of applicant and contact person:

Mr. Richard Gilmur
Director, Environmental Affairs
P.O. Box 1837
Tacoma, WA 98401-1837
(253) 383-9464

4. Date checklist prepared:

June 21, 2004

5. Agency requesting checklist:

Port of Tacoma

6. Proposed timing or schedule (including phasing, if applicable):

The in-water dredging and related work approved by this Project is anticipated to commence on July 16, 2005, with completion on or before February 28, 2006. The relocated 1,200 foot pier and associated upland improvements (building, lighting, and fencing) would be constructed either during the 2007/2008 or 2008/2009 in-water construction season. The upland construction activities, which include demolition, building construction, stormwater drainage improvements, and repaving, would be conducted during the course of the overall construction work. The Mitigation Action is expected to be constructed during the summer and early fall of 2005.

7. Do you have any plans for future actions, expansions, or further activity related to or connected with this proposal? If yes, explain.

No future actions are planned within the Blair Waterway at this time. However, it is recognized that additional dredging actions for maintenance purposes or to widen Blair Waterway for other development or improvement projects may occur at some future time. Future actions on the lands covered by this Project or adjacent areas may also occur based on future needs of Port tenants.

It is noted that a portion of the mitigation acreage proposed to be constructed as part of this Project will be assigned as advanced compensation to offset the impacts of other Port of Tacoma (Port) projects consistent with the provisions of RCW 90.74 – Aquatic Resources Mitigation. Also, the Port expects to file a permit application in the near future to fill the Blair Barge Slip that is located near the Southwest Corner Cutback area of the Project. The Port expects to assign a portion of the mitigation credit that is constructed as part of the current Project as advanced habitat compensation for the Blair Barge Slip fill permit to offset the impacts of filling the Barge Slip.

The mitigation site has been designed to allow for and to be compatible with future habitat improvement actions/mitigation that may occur within the proposed perimeter levee. As only a portion of the area within the levee will be excavated as part of the Mitigation Action for this Project, the levee will also contain an area available for future Port habitat actions.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Environmental information that relate to this proposal include:

The Project is described in the Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates which is attached and incorporated into this checklist by reference.

A separate Sampling and Analysis Plan (SAP) has been prepared by the Port and approved by the Dredged Material Management Program (DMMP) agencies pursuant to the DMMP requirements for the Blair Inner Reach Cutback and Turning Basin Expansion area, and the Blair Bridge Reach Widening area. A separate SAP will be prepared for the Southwest Corner Cutback area for DMMP approval. The DMMP agencies will use the sampling results to determine if the dredged material is suitable for open water disposal or beneficial use.

A hazardous materials survey (lead, asbestos and PCBs) will be conducted on the buildings/structures scheduled for demolition. This report will be used to ensure demolition/contractor activities comply with applicable local, state and federal regulations.

A SEPA Checklist was prepared on May 18, 2000 and a Determination of Nonsignificance was issued on May 25, 2000 by the Port for the 'Pierce County Terminal Expansion Project', and is incorporated herein by reference. The current Project includes the relocation of the 1,200 foot pier and associated upland improvements (marine building, lighting, paving upgrades, and fencing) that were approved as part of the Pierce County Terminal Expansion Project. These project components, while previously evaluated pursuant to SEPA and approved as part of prior regulatory permit processes for the Pierce County Terminal Expansion Project, have not yet been constructed. The impacts associated with construction of these components are not expected to change from those identified as part of the June 8, 2000 Determination of Nonsignificance issued for the Pierce County Terminal Expansion Project, except for location and some additional upland acreage being included for upgrading for future container marshalling yard use.

A SEPA Checklist was prepared on February 11, 2004 and a Determination of Nonsignificance was issued on February 13, 2004 by the Port for the 'Blair Inner Reach Cutback and Turning Basin Expansion Area – Phase 1 Site Improvements' project, and is incorporated herein by reference. (See discussion in the response to item A.9 below for additional information.)

A SEPA Checklist was prepared on May 7, 2004 and a Determination of Nonsignificance was issued on May 11, 2004 by the Port for the 'Utility Line Relocation-Blair Bridge Reach' project, and is herein incorporated by reference.

Since the Project will be evaluated for compliance with the Endangered Species Act (ESA) under Section 7, a Biological Evaluation has been prepared for the Project. This document will be provided to the U.S. Army Corps of Engineers as part of the Port's permit application package.

9. Do you know whether applications are pending for governmental approvals of other proposals affecting the property covered by your proposal? If yes, explain.

Yes. It is noted that a City of Tacoma shoreline permit has been requested by the Port to allow the removal of existing asphalt pavement and portions of the underlying materials, without coming into contact with the marine aquatic environment, as a "Phase 1 Site Improvements" action. The shoreline permit request for that action encompasses the removal of approximately 12,000 cyds of asphalt pavement that will either be stockpiled on Port property outside the shoreline district for reuse or recycled, and the removal of up to approximately 650,000 cyds of underlying materials that will be transported for disposal or placement to approved off-site locations and/or beneficially reused as determined appropriate by the Port. The "Phase 1 Site Improvements" action will commence in June 2004 (or as soon as the shoreline management substantial development permit is issued) and will continue until the follow-on aquatic permits for the Blair Waterway Infrastructure Improvements Project are approved in the near future (expected to be approximately April 2005). The work contained in the "Phase 1 Site Improvements" action is also being addressed in the aquatic permits for the Blair Waterway Infrastructure Improvements Project for completeness. This will provide the needed flexibility to enable the Port to accomplish the infrastructure improvements as expeditiously as possible. Once the aquatic permits are approved, any underlying material not yet removed as part of the "Phase 1 Site Improvements" action, would be able to be removed and disposed of, placed, or beneficially reused in accordance with those permit approvals.

10. List any government approvals or permits that will be needed for your proposal, if known.

- City of Tacoma Shoreline Management Substantial Development Permit
- U.S. Army Corps of Engineers Section 10/404 Permit
- Ecology Water Quality Certification and Short-term Modification to the Water Quality Standards
- Ecology Coastal Zone Consistency Certification
- Washington Department of Fish and Wildlife Hydraulic Project Approval
- Department of Natural Resources Open Water Disposal Site Use Permit
- Ecology General Permit to Discharge Stormwater Associated with Construction Activity (This permit only pertains to the uplands remaining after dredging at the Blair Inner Reach Cutback and Turning Basin Expansion area.)
- Ecology Stormwater Baseline General Permit for Industrial Activity or individual Industrial Activity NPDES Permit (Tenant Obligation)
- PSAPCA Notice for Demolition Activities
- City of Tacoma Grading, Paving, Demolition and Construction/Building Permits

- Puyallup Tribe of Indians Planning and Development Permit (for mitigation site adjacent to the Puyallup River)
 - Puyallup Tribe of Indians Water Quality Certification (for breaching Corps levee and making connection to the Puyallup River)
11. **Give brief, complete description of your proposal, including the proposed use and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description).**

The Port is planning to conduct dredging to widen the Blair Waterway at three locations as part of this infrastructure improvements Project, to relocate the 1,200 foot pier and associated upland improvements (marine building, lighting, paving upgrades, and fencing) approved by the Pierce County Terminal Expansion Project (but not yet constructed) from the east side of the Turning Basin area to the east side of the Blair Inner Reach area, to remove and demolish the existing wood chip facility, to demolish and replace an existing mooring dolphin in the southwest corner of the head of the Blair Waterway, to provide improvements to the stormwater collection and treatment systems, to relocate three existing outfalls, to demolish 425 feet of Pier 4, and to relocate 2 existing Navigational Aids within the Blair Bridge Reach area. Approximately 2.95 million cubic yards of material will be dredged. Mitigation for unavoidable adverse impacts will be provided as part of the Gog-le-hi-te II Mitigation Action. It is noted that a portion of the mitigation acreage proposed to be constructed as part of this Project will be assigned as advanced compensation to offset the impacts of other Port projects consistent with the provisions of RCW 90.74 – Aquatic Resources Mitigation. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for a complete description of the Project.

12. **Location of the proposal. Give sufficient information to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps and detailed plans submitted with any specific applications related to this checklist.**

The proposed Project is located within the Port industrial area. The waterway infrastructure components of the Project will be conducted in three general areas of the Blair Waterway (Sheet 1).

The first area is located along the eastern shore near the head of the waterway and is referred to as the “Blair Inner Reach Cutback and Turning Basin Expansion” area. This Project area is located west of Alexander Avenue in Tacoma, Washington. (The address for this Project area is 2510 Alexander Avenue, Tacoma, WA 98421.) This Project area is located within the SE 1/4 of Section 35 and SW 1/4 of Section 36, Township 21 North, Range 3 East; and NW 1/4 of Section 1, Township 20 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

The second area is located at the southwest corner of the head of the waterway and is referred to as the “Southwest Corner Cutback” area. This Project area is located east of Port of Tacoma Road in Tacoma, Washington. (The address for this Project area is 2901 Port of Tacoma Road, Tacoma, WA 98421.) This Project area is located within the NE 1/4

of Section 2, Township 20 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

The third area is located along the western shore where the previous Blair Bridge and East 11th Street right-of-way were located and is referred to as the "Blair Bridge Reach Widening" area. This Project area is located east of Port of Tacoma Road in Tacoma, Washington. (The address for this Project area is 1001 Port of Tacoma Road, Tacoma, WA 98421.) This Project area is located within the SE 1/4 of Section 27 and NE 1/4 of Section 34, Township 21 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

The mitigation proposed for unavoidable adverse impacts associated with the Project is located south of Lincoln Avenue, north of SR 509, and on the east side of the Puyallup River, Tacoma, WA, 98421. (The proposed mitigation site does not have a street address.) This site is located within the SW 1/4 and SE 1/4 of Section 3, Township 20 North, Range 3 East of the Willamette Meridian, County of Pierce, State of Washington.

See attached Project drawings (Sheets 1-21) and legal descriptions.

B. Environmental Elements

1. Earth

- a. General description of the site (underline one): Flat, rolling, hilly, mountainous, other _____.**

The Project dredging areas are located within the Blair Waterway. Blair Waterway is a navigable waterway, currently dredged to -51 feet Mean Lower Low Water (MLLW). The upland portion of the site is relatively flat. The shoreline banks range in slope, but are generally 2H:1V (Horizontal to Vertical). The steepest slope is approximately 1.75H:1V. The mitigation site is also generally flat, although it includes breaching the Puyallup River levee which is sloped approximately 2H:1V. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional information regarding site conditions.

- b. What is the steepest slope on the site (approximate percent slope)?**

The Project upland areas are relatively flat. The shoreline banks range in slope, but are generally 2H:1V (Horizontal to Vertical). The steepest slope is approximately 1.75H:1V. The mitigation site is also generally flat, although it includes breaching the Puyallup River levee which is sloped approximately 2H:1V. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional information.

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

The Project areas consist of dredged fill consisting of medium dense to dense fine sand with silt, silty fine sand, and soft sandy silt overlying former tideflats. Imported pit run and gravel exists over the dredged fill materials and the upland areas are paved. The underlying native material consists of interbedded silt and sands. The mitigation site consists of native sands and silts covered with landfill material (garbage) placed as part of municipal landfill operations.

- d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

No.

- e. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

Dredging of approximately 2.95 million cubic yards of material will occur as part of the Project. Some trench excavations and backfilling will occur as part of stormwater drainage collection and treatment system modifications/improvements. As part of this work, approximately 555 cubic yards of asphalt and 2,280 cubic yards of base course and soil will be excavated, and approximately 540 cubic yards of asphalt and 2,330 cubic yards of base course and soil will be placed.

The slope protection materials that will be placed on the side slopes after dredging will consist of approximately 57,000 cubic yards of rock materials, 69,000 cubic yards of filter blanket and shoulder ballast materials, and 13,000 cubic yards of sandy dredged material as an overlay on the riprap below elevation -10 ft MLLW.

The Project upland areas are currently paved. Asphalt over the areas to be converted from upland into aquatic habitat (21.53 acres) will be removed prior to dredging (approximately 9,500 cubic yards). The uplands that remain at the Blair Inner Reach and Turning Basin Expansion area following dredging (approximately 25 acres) will be upgraded at the time the approved 1,200 foot pier that will be relocated as part of this Project is constructed. These areas will be upgraded to support marshalling yard traffic. (About half of this work area is outside the 200 foot shoreline district boundary – see Sheet 3.) The pavement upgrade will be accomplished by overlaying the existing pavement with additional asphalt concrete (approximately 10,000 cubic yards). (Approximately half of this will be within the shoreline district boundaries.) Some engineered fill (subgrade materials) may be required. Finished site grades are not expected to be significantly different from existing site grades. Catchbasins will be extended/raised as necessary to ensure proper functioning of the stormwater drainage system.

At the mitigation site approximately 69,000 cubic yards of material (soil previously placed as fill, municipal landfill materials, and native soil) will be excavated as part of the construction action. Approximately 5,250 cubic yards of clean soil will be placed as backfill and approximately 630 cubic yards of rock will be placed for slope protection purposes as part of this work. In addition, approximately 180,500 cubic yards of material will be placed for construction of the perimeter levee.

The asphalt pavement removed as part of this Project will either be stockpiled on Port property outside the shoreline district for reuse or recycled. Prior to import, the Port will review all material being imported to the Project site for environmental suitability. Only clean fill materials will be imported and placed at the Project site. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- f. **Could erosion occur as a result of grading, filing, construction, or use? If so, generally describe.**

All upland demolition and construction activities will be implemented in a manner to ensure that debris, sediment, or waste materials are not allowed to enter the Blair Waterway. This includes demolition of existing buildings, improvements to the

stormwater collection/treatment systems, and other upland improvements. Erosion is not expected to occur as part of the Project. Also, as the mitigation site will be constructed in isolation from the Puyallup River (except for breaching the levee), erosion is expected to be adequately controlled. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- g. About what percent of the site will be covered with impervious surfaces after project completion (for example, asphalt or buildings)?**

Almost all of the uplands within the Project area that are to be dredged are currently paved with asphalt (about 99 percent). Only a small portion of upland vegetated habitat within the Fairliner Habitat Area is not paved. Approximately 21.53 acres of existing upland will be converted to aquatic habitat as a result of this proposal. Approximately 100 percent of the uplands that remain after dredging will still be covered with impervious surfaces when the Project is completed. The mitigation site does not contain impervious surfaces, nor will it after construction. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

Appropriate measures will be taken to control water quality impacts from the proposed dredging to ensure compliance with the Project's Water Quality Certification and Short-Term Modification to the Water Quality Standards approvals issued by the Department of Ecology.

Water spray will be employed if needed during demolition and construction to control fugitive dust. Control measures (e.g., silt fences, catch basin inserts, and hay bales) will be used as appropriate to minimize any erosion during construction. As part of the mitigation site construction activities, vehicle wheels will be washed as needed prior to leaving the site and streets will be swept as needed to prevent tracking of material. Additional erosion and sediment control measures will be adapted and applied throughout the Project based on field conditions. In addition, the contractor will be required to prepare an erosion control plan and a spill prevention, control, and countermeasure plan for their construction activities. These will be required to be included in the contractor's Work Plan.

2. Air

- a. What type of emissions to the air would result from the proposal (i.e. dust, automobile, odors, industrial, wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.**

Short term - during construction activities there will be an increase in air emissions associated with construction equipment. Long term - no significant emission increases are expected. These emissions will be compatible with the surrounding land use.

- b. Are there any off-site source of emissions or odor that may affect your proposal? If so, generally describe.**

The Project site is located in an industrial area. No sources which could affect this Project have been identified.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

Normal methods associated with construction activities would be used. The contractor will be required to manage the construction work in a manner that minimizes the generation of dust. This will be required to be addressed in the contractor's Work Plan.

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

The Project site is located along the Blair Waterway which is a federal navigable waterway in Commencement Bay. In addition, Wapato Creek flows westerly to the Blair Waterway through a culvert that extends from the east side of Alexander Avenue to the outlet located near the southeast corner of the existing PCT pier. The mitigation site is located east of and adjacent to the Puyallup River. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- 2) Will the project require any work over, in, or adjacent to (within 200') the described waters? If yes, please describe and attach available plans.**

Yes, see the response to item A.11 above and the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

See the response to item B1.e. above.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.**

No.

- 5) Does the proposal lie within a 100-year flood plain? If so, note the location on the site plan.**

No. The Project site is located on Blair Waterway which is tidally connected to and a part of Commencement Bay. Blair Waterway is a federal navigation channel. The mitigation site is located adjacent to the Puyallup River, east of the existing levee.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No, there should be no waste material generated.

b. Ground:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

No. Ground water will not be withdrawn nor will water be discharged into ground water as a part of this proposal.

- 2) Describe waste materials that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Not applicable.

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and the method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.**

The Project is not expected to generate waste materials. Materials from accidental spills associated with construction activities or facility operations in the Project area could potentially occur. Federal, state and Port spill response measures are established in Commencement Bay to minimize the impacts of such occurrences. The contractor will be required to prepare an erosion control plan and a spill prevention, control, and countermeasure plan for their construction activities. These will be required to be included in the contractor's Work Plan.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

After Project completion, there will be less upland area draining into the Blair as this Project will convert uplands (21.53 acres) into aquatic lands. In addition, improvements to the existing stormwater drainage systems will occur as part of the Project. During dredging, appropriate measures will be taken to control water quality impacts to ensure compliance with the standards established as part of the Project's Water Quality Certification and Short-Term Modification to the Water Quality Standards approvals issued by the Department of Ecology. During upland construction activities, appropriate measures will be taken to control stormwater runoff impacts associated with the Project. Control measures (e.g., silt fences, , catch basin inserts, and hay bales) will be used as appropriate to minimize any erosion during construction. Also, as the Mitigation Action will be constructed in isolation from the Puyallup River (except for breaching the levee), erosion is expected to be adequately controlled. The contractor will be required to prepare an erosion control plan and a spill prevention, control, and countermeasure plan for their construction activities. These will be required to be included in the contractor's Work Plan.

4. Plants

a. Check or circle types of vegetation found on site:

- ☒ deciduous tree: alder, maple, aspen, other
- ☒ evergreen tree: fir, cedar, pine, other (located at the Fairliner Habitat Area)
- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☒ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ☒ other types of vegetation (marine algae common to Commencement Bay)

The upland portions of the Project site are essentially paved except for the small area of upland vegetated habitat within the Fairliner Habitat Area that will be converted to aquatic habitat. This vegetation will be removed prior to dredging. Marine algae existing in the intertidal area will be impacted by dredging. After dredging, marine algae will re-establish itself. The proposed Gog-le-hi-te II mitigation site generally consists of grasses and blackberries and some small deciduous trees. Some wetland vegetation exists in compacted depressions on the site. However, the site does not contain regulated wetlands as it was filled and converted to uplands as part of municipal landfill operations and as the landfill material (garbage) is not a hydric soil. Also, some wetland vegetation has become established on portions of the river side of the levee. This area of the river system was contained within levees by the Corps in the late 1940s. The constructed river levee system is an engineered feature that keeps the river in its designated location and protects the adjacent uplands. The channelization of the river occurred through cut and fill construction techniques and the levee was constructed with fill and rock. The levee system is managed and maintained by the Corps to ensure its required function and purpose, which is to contain the river and protect the uplands, continue. The levee includes an access road that provides easy access for levee maintenance actions. This includes maintaining the roadway, and controlling vegetation along the sides of the levee. The Corps regularly removes trees and mows the grasses/vegetation as part of its management and maintenance activities. The vegetation is maintained to help minimize erosion from the upper portions of the levee bank protection feature. Based on the site use and history, it is clear that the levee was engineered and constructed with riprap and fill materials, and has been managed and maintained to continue to serve its intended river and flood control purposes. It is obvious this management and maintenance cannot be discontinued or abandoned as the levee is vital to the continued containment of the Puyallup River and to the protection of the adjacent uplands. As such, any areas along the levee above the ordinary high water line that may have developed wetland characteristics are not jurisdictional wetlands.

b. What kind and amount of vegetation will be removed or altered?

The Project will remove existing deciduous trees, blackberries, cattails, grasses and other vegetation in the areas subject to dredging along the Blair Waterway and the areas that will be excavated at the mitigation site adjacent to the Puyallup River. Marine algae existing in the intertidal area will be impacted by dredging. After dredging, marine algae will re-establish itself. The areas affected by excavation within the mitigation site will provide additional habitat. Designated areas within the mitigation site that are disturbed by construction activities will be vegetated with wetland and upland plants (including hydroseeding) as appropriate. The areas dredged will be converted from uplands to aquatic habitat (21.53 acres). See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

- c. **List any threatened or endangered species known to be on or near the site.**

None known.

- d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

The areas affected by excavation will provide additional habitat. Designated areas within the Project site and upland areas that are disturbed by construction activities will be vegetated with wetland and upland plants (including hydroseeding) as appropriate. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information. Post-Project monitoring of the constructed habitat is also addressed in the attached Mitigation Plan.

5. **Animals**

- a. **Underline any birds or animals which have been observed on or near the site or are known to be on or near the site:**

birds: hawk, heron, eagle, songbirds, other: Seagull, Canada Geese and other bird species common to the Port Industrial Area.

mammals: deer, bear, elk, beaver, other: _____

fish: salmon, trout, herring, shellfish, other: species common to Commencement Bay and the lower Puyallup River.

- b. **List any threatened or endangered species known to be on or near the site.**

On May 24, 1999, the National Marine Fisheries Service (NMFS) formalized listing of Puget Sound chinook salmon as threatened under the Endangered Species Act (ESA). This species occurs in the Puyallup River drainage and Commencement Bay.

The U.S. Fish and Wildlife Service (USFWS) announced the listing of Coastal-Puget Sound bull trout (*Salvelinus confluentus*) as threatened on October 28, 1999. Bull trout occur in the Puyallup River drainage and Commencement Bay.

Other listed species that could occur in Commencement Bay include the humpback whale (*Megaptera novaeangliae*), Steller sea lion (*Eumetopias jubatus*), leatherback sea turtle (*Dermochelys coriacea*) and bald eagle (*Haliaeetus leucocephalus*). This list of species is based on information provided by NMFS (now NOAA Fisheries) and USFWS with respect to another Port project in Commencement Bay (Pierce County Terminal Expansion Project).

Potential water quality impacts to salmonids will be controlled and avoided by using normal construction protocols and adhering to Ecology's Water Quality Certification permit requirements.

Since the Project will be evaluated for compliance with the Endangered Species Act (ESA) under Section 7, a Biological Evaluation addressing the Project's potential effects on threatened and endangered species has been prepared for the Project. This document will be provided to the U.S. Army Corps of Engineers as part of the Port's permit application package.

The Project will convert uplands (21.53 acres) into aquatic habitat within the Blair Waterway. The Mitigation Action will convert uplands into a range of salmon rearing habitat within the lower Puyallup River. The primary goal of the Mitigation Action is to provide a self-sustaining habitat comprised of tidal channels and flats suitable for colonization by freshwater marsh species directly benefiting juvenile salmonids. The Mitigation Action will provide a habitat type that is not common in the lower Puyallup River system, but was identified as the most significant habitat gap for juvenile salmonids between the river and the Puget Sound (Simenstad 2000). The Project will not have an adverse impact on water quality or fish life.

c. Is the site part of a migration route? If so, explain.

Yes. The Tacoma Tideflats are part of the Pacific flyway for migrating birds. Adult salmon may pass through Blair Waterway as they migrate from Commencement Bay into the Puyallup River or Wapato Creek systems to spawn, and as juveniles migrate downstream into Commencement Bay as smolts.

d. Proposed measures to preserve or enhance wildlife, if any:

The Port considered and incorporated several design modifications to avoid and to minimize potential adverse impacts to existing intertidal and shallow subtidal habitat. In addition, the Project would be conducted in a manner that would avoid and minimize the potential for adverse impacts to salmonids. The Project will convert uplands (21.53 acres) into aquatic habitat within the Blair Waterway. The Mitigation Action will convert uplands into a range of salmon rearing habitat within the lower Puyallup River. The Project will not have an adverse impact on water quality or fish life. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

6. Energy and Natural Resource

a. What kinds of energy (electrical, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The existing facilities within and adjacent to the Project site use electrical power. The only changes associated with this Project to existing facilities occurs at the Blair Inner Reach and Turning Basin Expansion area where the wood chip facility will be removed and the 1,200 foot pier and associated upland improvements approved as part of the Pierce County Terminal Expansion Project will be relocated. As previously approved, these Project components will use electricity when completed. The mitigation site will not have any energy needs when it is completed.

b. Would your project affect the potential use of solar power by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans for this proposal? List other proposed measures to reduce or control energy impacts, if any:

Not applicable.

7. Environmental Health

- a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, generally describe.**

The mitigation site is located in an area that was used by the City of Tacoma for municipal landfill purposes. The Port will conduct soil testing in support of the Project and excavated soil and old garbage will be handled and disposed of appropriately.

Some construction equipment will use fuels that inherently have that potential. Federal, state and Port spill response measures are established in Commencement Bay to minimize the impacts of such occurrences. The contractor will be required to prepare an erosion control plan and a spill prevention, control, and countermeasure plan for their construction activities. These will be required to be included in the contractor's Work Plan.

- 1) **Describe special emergency services that might be required**

During construction there is the potential for an accident which could require medical attention and emergency services. Routine fire protection, police and medical aid provided by and/or within the City of Tacoma would be available. Contractors will establish and follow appropriate health and safety plans. No special emergency service needs are anticipated.

- 2) **Proposed measures to reduce or control environmental health hazards, if any:**

A hazardous materials survey (lead, asbestos and PCBs) will be conducted on the buildings/structures scheduled for demolition. This report will be used to ensure the demolition contractor activities comply with applicable regulations. The Port will conduct soil and groundwater testing in support of the Mitigation Action and excavated soil and old garbage will be handled and disposed of appropriately. All applicable state and federal safety guidelines will be adhered to in the construction of the proposed Project. Contractors will follow appropriate health and safety plans. The need for additional measures is not anticipated.

- b. **Noise**

- 1) **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

The site is located in an industrial area. Noise is not expected to affect the project.

- 2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Short-term construction noise will include diesel-operated equipment, however, this noise is consistent with the surrounding industrial area. Terminal operations are not expected to create noise levels above current operations and conditions that exist within the area. The noise associated with this Project is consistent with current uses and the surrounding industrial area. No significant adverse impacts are anticipated.

- 3) **Proposed measures to reduce or control impacts, if any:**

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The Project areas are located along the Blair Waterway, which is a federal navigable waterway in Commencement Bay owned by the Port. Adjacent uplands are used for Port industrial purposes. They include terminals, manufacturing and streets. The following is a general description of each of the three Project areas within the Blair Waterway. A description of the mitigation area that is adjacent to the Puyallup River is also provided below.

Blair Inner Reach Cutback and Turning Basin Expansion area:

This portion of the Project area is located on the eastern face of the Blair Inner Reach and head of the Blair Waterway (Turning Basin), as shown on Sheets 1 and 2. This area includes an existing wood chip facility and an area formerly used by the Auto Warehousing Company for the staging of imported automobiles.

Fill was placed in this Project area during previous dredging of the Blair Waterway in the 1960s and 1970s. The portion of the Blair Inner Reach area occupied by the wood chip facility was paved in 1972 and has been used by a Port tenant (Weyerhaeuser) for chip storage and export since that time. The wood chip facility generally consists of a rail dump building, truck dump building, laboratory, maintenance shop, substation, chip conveyors, a pier, ship loader platform and chip stockpiles. Two 6,000-gallon aboveground storage tanks (ASTs) containing diesel are located at the site for refueling the chip loaders. These tanks are located within a concrete containment area (concrete slab and curbing). The site receives chips from various sources via trucks, rail and barge, and stores the chips in stockpiles until the time they are loaded onto ships. The chips are then exported to Japan. Weyerhaeuser operations will be discontinued at this facility prior to the construction of the relocated 1,200 foot pier and associated upland improvements (marine building, lighting, paving upgrades, and fencing). This will include the removal and demolition of all structures and equipment at the wood chip facility. During the course of Project demolition, dredging and construction, the wood chip facility may continue operating with modified and temporary equipment.

The portion of the Project area (includes a portion of the Blair Inner Reach Cutback area and the Turning Basin Expansion area) previously occupied by the Auto Warehousing Company (a Port tenant) was paved in 1980 for their use after the area was filled with dredged material. The area previously occupied by the Auto Warehousing Company is bounded by the Blair Waterway to the west and south, the wood chip facility to the north, and Alexander Avenue to the east. Auto Warehousing Company used the site continuously until October 2003, for staging of imported automobiles after unloading from transport ships. The automobiles were stored on paved areas and prepared for distribution from the Port. The vehicles were transported overland to the Auto Warehousing Company site from the Pierce County Terminal pier and other off-loading locations. In October 2003, Auto Warehousing Company was relocated to another facility. Since that time the site has been used for temporary construction staging for the Pierce County Terminal Expansion Project (Corps permit Nos. 2000-2-00765 and 200000765; and City of Tacoma shoreline permit File No. SHR2000-00026). The site conditions that will exist following completion of the PCT Expansion Project are the site conditions that will be used as the "existing conditions" in the Blair Inner Reach Cutback and Turning Basin Expansion area for the current proposed Project. The post-PCT Expansion Project dredging site condition is shown along with the proposed Project dredging on the sheets.

This portion of the Project area is bounded by the Blair Waterway to the west, the former Auto Warehousing Company site to the south that is being converted into a container terminal facility, Alexander Avenue to the east and Puyallup Tribe of Indians property to the north (Emerald Queen Casino – scheduled to close before the end of 2004).

Southwest Corner Cutback area:

This portion of the Project area is shown on Sheets 1 and 8. Fill was also placed in this area during previous dredging of the Blair Waterway in the 1960s and 1970s. The upland within the Project area was covered with gravel and used as part of an employee parking lot for a Port tenant. This area was paved in the mid-1980s and the site was used for log storage and general cargo handling. The site is currently part of the Port's Blair Terminal Facility, which handles general cargo, bulk cargo, autos, and specialty cargo.

Construction for the PCT Expansion Project as approved by Corps Permit Nos. 2000-2-00765 and 200000765 is currently in progress, as discussed earlier. However, it is noted that all dredging and most of the pier construction work approved under those permits have been completed within the Southwest Corner Cutback area. Therefore, the site conditions that will exist following completion of the PCT Expansion Project are, essentially, the site conditions that exist presently for the current proposed Project. These are the "existing conditions" that are depicted in the Project drawings.

As part of the current Project, an existing mooring dolphin will be demolished and replaced. The existing catwalk from the PCT pier to the mooring dolphin will be removed and then reinstalled after the mooring dolphin is replaced.

This portion of the Project area is currently used for the Blair Terminal facility which is used as a multi-purpose facility for the movement of cargo. Blair Waterway abuts to the east. The adjacent properties are used for Port industrial purposes. They include terminals, rail facilities, and streets.

Blair Bridge Reach Widening area:

The Blair Bridge Reach Widening area is located on the western side of Blair Waterway where the Blair Bridge and the former East 11th Street right-of-way previously existed (Sheet 1). Historical photos indicate that prior to the 1950s, the area was largely undeveloped with the exception of East 11th Street and a sawmill located to the north. The fill for East 11th Street extended beyond the street right-of-way to the south and in a 1946 aerial photo appears to have several buildings on it (perhaps part of the sawmill operation). These buildings are gone in a 1960 photo. In the 1960 photo it is also evident that additional dredging and fill had occurred since 1946 as the upland area for Fairliner Marina was completed and the boat basin had been dredged.

The area north of East 11th Street was redeveloped during the 1950s and 1960s into a cargo terminal. The Terminal 4 Pier (a portion of which is included within the Blair Bridge Reach Widening area) was constructed in 1967. It is a concrete pile supported pier structure. These cargo facilities handled wood products, rubber, and produce (apples). Pier 4 was upgraded to accommodate container cargo/cranes in 1982. Evergreen began operations at Terminal 4 in 1991.

The area south of East 11th Street was used by the Fairliner Marina operation until the Port purchased the land in 1990. The aquatic portion of the Fairliner Marina site was converted into a mitigation area ("Fairliner Habitat Area") in 1996. It was constructed with clean dredged material from the West Blair Terminal Project along with some imported riprap.

In 1997 and 1998, the Port vacated East 11th Street and combined this land with the Fairliner Marina site and other adjacent uplands. The Port expanded Terminal 4 onto these lands in 2000. As part of the current Project, the Port will demolish the southern 425 feet of Pier 4.

Several utilities currently run either over or under the Blair Waterway at the Blair Bridge Reach location. These include communication lines owned by Qwest and a water main owned by Tacoma Water (both located under the waterway), and overhead electrical lines and transmission towers owned by Tacoma Power. These utilities are being relocated under the waterway using directional drilling/boring techniques and the existing transmission towers (one on each side of the Blair Waterway) will be demolished as part of a separate permit action.

This portion of the Project area is located within the Port's Terminal 3/4 complex. Blair Waterway abuts to the east, Concrete Technology to the south, public streets to the west, and Port facilities to the northwest.

Gog-le-hi-te II Mitigation Action area:

The mitigation area is located south of the Port's existing Gog-le-hi-te Habitat Area (Sheet 1). The Gog-le-hi-te Habitat Area was built in 1985 and was enlarged in 2003-2004 by the construction of an additional embayment. The Project area for the Mitigation Action is bounded to the north by the setback dike (constructed as a component of the original Gog-le-hi-te Habitat), to the west by the Puyallup River Levee, to the east by the existing railroad tracks, and to the south by the SR 509 right-of-way. Historically the Project area for the Mitigation Action was used as a municipal landfill. There are no structures on site. The site does not contain regulated wetlands as it was filled and converted to uplands as part of municipal landfill operations and as the landfill material (garbage) is not a hydric soil.

The setback dike and Puyallup River Levee are owned by the Corps, the railroad tracks are owned by Burlington Northern Santa Fe railroad, and SR-509 is a state highway owned by WSDOT. The Port and the Puyallup Tribe own properties within the mitigation site and adjacent to the site. Also, a very small parcel of land adjacent to the site on the northeast is apparently owned by Tacoma Power. An easement for an underground pipeline (Olympic Pipeline) also exists to the east of the site.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structure on the site.

See response to item B.8.a. above and the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

d. Will any structures be demolished?

Yes. See response to item B.8.a. above and the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

e. What is the current zoning?

The Project areas along the Blair Waterway are zoned "S-10" Port Industrial Shoreline District and "PMI" Port Maritime Industrial District. The mitigation site is zoned "S-9" Puyallup River Shoreline District and "PMI" District. The portion of the mitigation site on Puyallup Tribe of Indians land has not been zoned.

f. What is the current comprehensive plan designation of the site?

High Intensity. The portion of the mitigation site on Puyallup Tribe of Indians does not have a comprehensive plan designation.

g. If applicable, what is the current shoreline master program designation of the site?

The "S-10" Shoreline District and the "S-9" Shoreline District are designated Urban Environment.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

It should be noted that a special aquatic site (mudflat) is located adjacent to the Southwest Corner Cutback area as shown on Sheets 8 and 10. The mudflat is located below elevation +6 ft MLLW on the western lobe and below +4 ft MLLW on the eastern lobe and extends down to elevation -2 ft MLLW on a portion of the southern embankment of the southwest corner, approximately as shown on Sheet 8. The mudflat is not a remnant of the historical mudflats within Commencement Bay, but rather was formed when this portion of the waterway was constructed by converting uplands to waterway in the mid-1960s. Although human-made, this habitat is considered a "special aquatic site" in the context of this Project.

The Port's dredging design will avoid impacts to the mudflat while meeting Evergreen's berth requirements. Avoidance of impacts to the mudflat will be accomplished by installing a sheet pile wall along the southern embankment of the waterway north of and downslope of the mudflat at elevation -10 ft MLLW as shown on Sheet 10. The installation of this wall will allow the berth area to be extended westward without impacting the special aquatic site or the PCT pier and truck accessway. See the attached Blair Waterway Infrastructure Improvements Project, Mitigation Plan dated June, 2004, prepared by Grette Associates for additional Project information.

i. Approximately how many people would reside or work in the completed project?

The Project will not impact the number of employees working at the Terminal 3/4 facility (Blair Bridge Reach Widening area) or the Blair Terminal (Southwest Corner Cutback area). The marine container terminal facility to be constructed at the Blair Inner Reach and Turning Basin Expansion area (the relocated 1,200 foot pier and associated upland improvements) is expected to have approximately 11 people working per 8-hour shift. Longshore labor is also used during ship loading and unloading operations.

j. Approximately how many people would the completed project displace?

The wood chip facility currently has 6 employees. When the Weyerhaeuser operations are discontinued at this facility, these employees will be displaced.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None needed.

- 1. Proposed measures to insure the proposal is compatible with existing and projected land uses and plans, if any:**

This Project is compatible and consistent with the surrounding uses and with current zoning and comprehensive plan designations for this site.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

Not applicable.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

Not applicable.

- c. Proposed measures to reduce or control housing impacts, if any:**

Not applicable.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?**

There are no new buildings or structures proposed as part of this Project. The buildings and structures previously approved as part of the Pierce County Terminal Expansion Project that will be relocated as part of the current Project (the 1,200 foot pier and associated upland structures) are not considered "new" for the SEPA review purposes of this Project. As previously approved, the marine building will be approximately 30 –36 feet high and it will be constructed of wood or metal. Also, as previously approved, the light poles will be approximately 110 feet above the ground.

- b. What views in the immediate vicinity would be altered or obstructed?**

No views will be altered or obstructed.

- c. Proposed measures to reduce or control aesthetic impacts, if any:**

None.

11. Light and Glare

- a. What type of light and glare will the proposal produce? What time of day would it mainly occur?**

Lighting of the 1,200 foot pier to be relocated as part of this Project and associated upland areas will be directed down toward the work areas. This is not a change from the previously approved project. The lights from the light poles located landward of Pier 4 that currently illuminate the 425 feet of Pier 4 that will be demolished will be redirected toward remaining work areas. This will ensure lighting impacts will not occur to the aquatic habitat from the Project.

- b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

No.

- c. **What existing off-site source of light or glare may affect your proposal?**

None.

- d. **Proposed measure to reduce or control light and glare impacts, if any:**

See response to item B.11.a. above.

12. Recreation

- a. **What designated and informal recreational opportunities are in the immediate vicinity?**

Recreational fishing and boating occur in Commencement Bay; however, there are no recreational opportunities in the immediate vicinity of the proposed Project. The existing Gog-le-hi-te Habitat Area adjacent to the mitigation site supports public access for walking and bird watching.

- b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No.

- c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

None needed.

13. Historic and Cultural Preservation

- a. **Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, general describe.**

None known. In response to a letter from the Port of Tacoma dated May 8, 1995 concerning planned development within Commencement Bay (east of Puyallup River, north of Interstate 5 and west of Marine View Drive), the Washington State Office of Archeology and Historic Preservation indicated in a letter dated May 12, 1995 that no further contact with them was necessary since cultural resources have not been identified. However, in the event such resources become evident during the course of the Project, the Port of Tacoma will stop work in the area of discovery and contact OAHF for further consultation.

- b. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

None known.

- c. **Proposed measures to reduce or control impacts, if any:**

None needed.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

The Project areas on the west side of the Blair Waterway are accessed from Port of Tacoma Road, and the Project area on the east side of the waterway is accessed by Alexander Avenue. Interstate 5, SR-509 (East-West Road) and Highway 99 serve the Project areas via Port of Tacoma Road and Alexander Avenue. (Once Alexander Avenue is partially vacated as part of a separate approved action, Alexander Avenue will be accessed via Taylor Way and Lincoln Avenue.) The mitigation site is accessed via Lincoln Avenue and the Puyallup River Levee road.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

The most frequent and nearest transit stops to the Project areas appear to be the 61 bus which serves Northeast Tacoma-Browns Point and passes on Port of Tacoma Road and on Alexander Avenue from Lincoln Avenue to SR-509. In addition, the mitigation site is served by the 65 bus that provides service on Lincoln Avenue adjacent to the existing Gog-le-hi-te Habitat Area.

- c. How many parking spaces would the completed project have? How many would the project eliminate?**

The Project will not impact the number of parking spaces available at the Blair Terminal (Southwest Corner Cutback area) or the Terminal 3/4 facility (Blair Bridge Reach Widening area). It is noted that an area used for longshore parking will be eliminated as part of the conversion of uplands to aquatic habitat at the Terminal 3/4 facility (Blair Bridge Reach Widening area), however, adequate parking is available within the overall terminal facility. Parking issues for the 1,200 foot pier and associated upland improvements approved as part of the Pierce County Terminal Expansion Project that will be relocated as part of the current Project have previously been evaluated and approved. This is not considered a "new" issue or impact for the SEPA review purposes of this Project. As previously approved, adequate parking will be provided for employees and longshore workers at the facility when it is completed. The parking currently available for the wood chip facility and the 6 employees will be eliminated when the Weyerhaeuser operations are discontinued.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

No.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The Project areas are located along the Blair Waterway, which is a federal navigable waterway in Commencement Bay owned by the Port. The infrastructure improvements (widening of the waterway in three locations) are water-dependent actions that are necessary to meet the demands and needs of the Port's international shipping customers and to improve waterway safety. These improvements will benefit the users of the waterway. The Port owned facilities that use the waterway also use rail transportation.

The mitigation site is located immediate west of a Burlington Northern Santa Fe railroad spur track. It is possible that some of the excavated material from the mitigation site could be transported via rail for appropriate off-site disposal. This would be determined during the public bidding process.

- f. **How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

The Project will not change the number of vehicular trips at the Blair Terminal (Southwest Corner Cutback area) or the Terminal 3/4 facility (Blair Bridge Reach Widening area). Vehicular trips associated with the 1,200 foot pier and associated upland improvements approved as part of the Pierce County Terminal Expansion Project that will be relocated as part of the current Project have previously been evaluated and approved. This is not considered a "new" issue or impact for the SEPA review purposes of this Project. As previously approved, the existing road and rail infrastructure meets the operational needs of the approved facility. It is noted, however, that the vehicular trips currently associated with the wood chip facility and the 6 employees will be eliminated when the Weyerhaeuser operations are discontinued.

- g. **Proposed measures to reduce or control transportation impacts, if any:**

None needed.

15. **Public Services**

- a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No.

- b. **Proposed measures to reduce or control direct impacts to public services, if any.**

None needed.

16. **Utilities**

- a. **Underline utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.**

The Project areas are served by public utilities including water, sanitary sewer, electricity, refuse and telephone. Stormwater will be directed into the existing and improved stormwater drainage systems. These systems will connect either to Port or City of Tacoma drainage systems.

- b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

The existing facilities within and adjacent to the Project site use electrical power. The only changes associated with this Project to existing facilities occurs at the Blair Inner Reach and Turning Basin Expansion area where the wood chip facility will be removed and the 1,200 foot pier and associated upland improvements approved as part of the Pierce County Terminal Expansion Project will be relocated. As previously approved, these Project

components will use electricity when completed. The mitigation site will not have any energy needs when it is completed.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Richard Gilman

Date Submitted: 6-21-04

Legal Descriptions

Area description for Blair Inner Reach Cutback/Turning Basin Expansion area.

A PARCEL OF LAND SITUATE IN SECTION 35 AND 36, TOWNSHIP 21 NORTH, RANGE 3 EAST AND SECTION 1, TOWNSHIP 20 NORTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, COUNTY OF PIERCE, STATE OF WASHINGTON BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

The point of beginning being the intersection of the West Right of Way line of Alexander Avenue and the Northerly boundary of the Weyerhaeuser Chip facility, thence 869.24' to the intersection of the projected Northerly boundary of the Weyerhaeuser Chip facility and the East Channel line of the Blair Waterway, thence 4808.97 feet along the extended channel line to the West Right of Way line of Alexander Avenue, thence north along the Right of Way line 369.37' to a curve to the left, said curve having a radius of 1864.86' and a central angle of 31 degrees, thence 17.45' to the West along the Northern line of Sec. 1, T20N, R3E, and the West Right of Way line of Alexander Avenue, to a curve to the left along the same Right of Way line of Alexander Avenue, having a radius of 1849.86' and a central angle of 17 degrees, thence along the West Right of Way line of Alexander Avenue 3181.02' to the point of beginning.

Area description for Southwest Corner Cutback area.

A PARCEL OF LAND SITUATE IN SECTION 2, TOWNSHIP 20 NORTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, COUNTY OF PIERCE, STATE OF WASHINGTON BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

The point of beginning being the monument at the intersection of Marshall Avenue and Port of Tacoma Road, thence South $88^{\circ} 39' 56''$ East, 624.92 feet to the true point of beginning; thence N $00^{\circ} 28' 07''$ East, 506.84 feet; thence South $89^{\circ} 03' 26''$ East, 335.74 feet; thence South $01^{\circ} 20' 04''$ West, 509.08 feet; thence North $88^{\circ} 39' 56''$ West, 328.08 feet to the true point of beginning.

Area description for Blair Bridge Reach Widening area.

A PARCEL OF LAND SITUATE IN SECTIONS 27 and 34, TOWNSHIP 21 NORTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, COUNTY OF PIERCE, STATE OF WASHINGTON BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

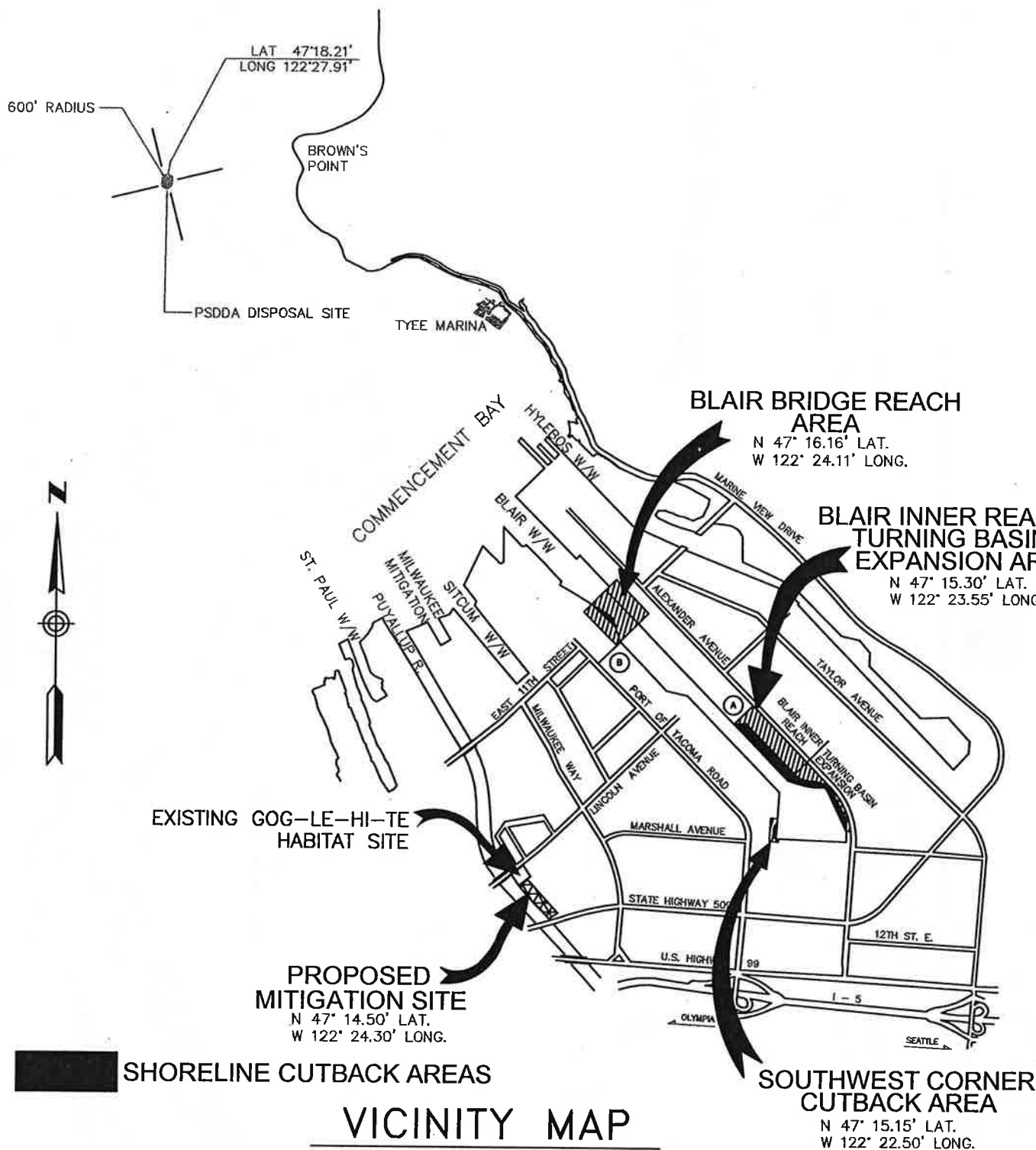
The point of beginning being the monument at the intersection of Port of Tacoma Road and East 11th street, thence North $43^{\circ} 19' 11''$ East, 1037.44 feet to the true point of beginning; thence North $45^{\circ} 22' 55''$ West, 435.11 feet; thence North $45^{\circ} 27' 15''$ East,

364.48 feet; thence South 46° 58' 17" East, 825.49 feet; thence South 44° 37' 05" West, 387.34 feet, thence North 45° 22' 55" West, 395.38 feet to the true point of beginning.

Area description for Gog-le-hi-te II Mitigation Action area.

A PARCEL OF LAND SITUATE IN SECTION 3, TOWNSHIP 22 NORTH, RANGE 3 EAST OF THE WILLAMETTE MERIDIAN, COUNTY OF PIERCE, STATE OF WASHINGTON BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

The point of beginning being the monument at the intersection of Lincoln Avenue and Marshall Avenue, thence South 44° 17' 18" West, 1733.85 feet; thence South 23° 21' 46" East, 775.54 feet to the true point of beginning; thence South 58° 39' 22" West, 953.93 feet; thence South 40° 41' 11" East, 2226.32 feet; thence North 28° 26' 03" East, 668.55 feet; thence North 30° 53' 13" West, 1860.33 feet to the true point of beginning.



PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

ADJACENT PROPERTY OWNERS:

- ① PUYALLUP TRIBE OF INDIANS
- ② CONCRETE TECH. INC.



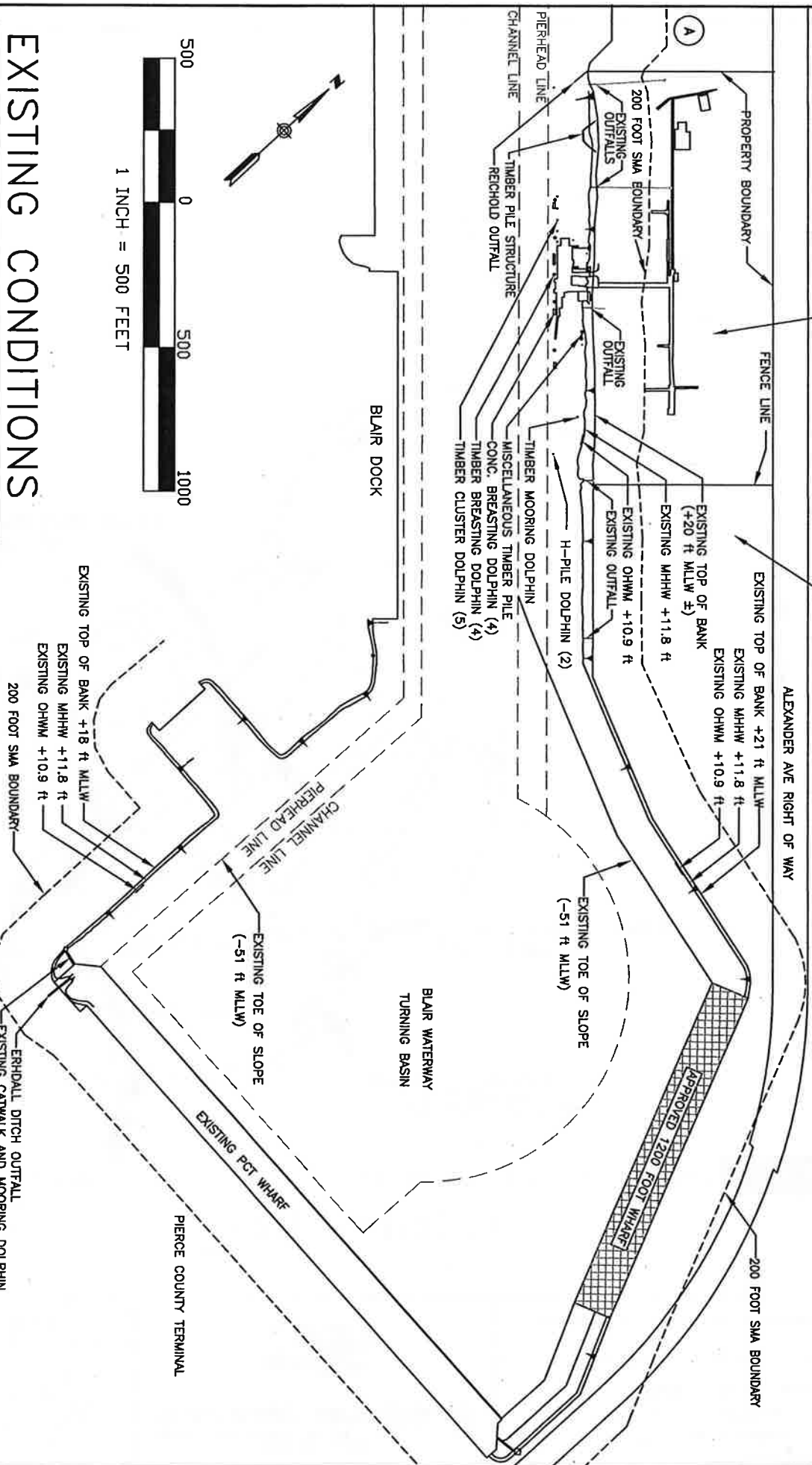
PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 1 OF 21 DATE: 05/21/04

-FORMER AUTO WAREHOUSING CO. FACILITY



EXISTING CONDITIONS

EXISTING CONDITIONS SHOWN ARE THE CONDITIONS APPROVED AS PART OF THE PIERCE COUNTY TERMINAL EXPANSION PROJECT, WHICH IS CURRENTLY UNDER CONSTRUCTION (COE # 2000-2-00765 AND 200000765)

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

ADJACENT PROPERTY OWNERS

(A) PUYALLUP TRIBE OF INDIANS



PORT OF TACOMA

P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

**BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT**

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 2 OF 21 **DATE: 05/21/04**

BLAIR INNER REACH TURNING BASIN EXPANSION

ALEXANDER AVE RIGHT OF WAY

NEW 200 FOOT SMA BOUNDARY

NEW MHHW +11.8 ft
NEW OHWM +10.9 ft

PROPERTY BOUNDARY

NEW 200 FOOT SMA BOUNDARY

CONTRACTOR STAGING AND LANDOWN AREA

EXISTING OUTFALL

RELOCATED OUTFALL (SHEET 7)

RELOCATED 1200 FOOT WHARF

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

(A)

PIERHEAD LINE

CHANNEL LINE

REICHOLD OUTFALL

SHT 3

SHT 2

SHT 1

SHT 4

SHT 5

SHT 6

SHT 7

SHT 8

SHT 9

SHT 10

SHT 11

SHT 12

SHT 13

SHT 14

SHT 15

SHT 16

SHT 17

SHT 18

SHT 19

PIERHEAD LINE

CHANNEL LINE

RELOCATED OUTFALL (SHEET 7)

RELOCATED 1200 FOOT WHARF

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

SHT 3

SHT 2

SHT 1

SHT 4

SHT 5

SHT 6

SHT 7

SHT 8

SHT 9

SHT 10

SHT 11

SHT 12

SHT 13

SHT 14

SHT 15

SHT 16

SHT 17

SHT 18

SHT 19

SHT 20

SHT 21

SHT 22

SHT 23

SHT 24

SHT 25

SHT 26

SHT 27

SHT 28

BLAIR DOCK

BLAIR WATERWAY
TURNING BASIN

PIERHEAD LINE

CHANNEL LINE

RELOCATED OUTFALL (SHEET 7)

RELOCATED 1200 FOOT WHARF

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

PIERHEAD LINE

CHANNEL LINE

RELOCATED OUTFALL (SHEET 7)

RELOCATED 1200 FOOT WHARF

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

RELOCATED OUTFALL (SHEET 7)

500

0

500

1000

1 INCH = 500 FEET

PROPOSED CONDITION

EXISTING CONTOURS

PROPOSED CONTOURS

NEW TOP OF BANK +18 ft MLLW

NEW MHHW +11.8 ft

NEW OHWM +10.9 ft

NEW 200 FOOT SMA BOUNDARY

ERDALL DITCH OUTFALL

NEW CATWALK AND MOORING DOLPHIN.

NEW SHEET PILE WALL

NEW TOE OF SLOPE (-51 ft MLLW)

PCT WHARF

PIERCE COUNTY TERMINAL

SOUTHWEST CORNER CUTBACK

(SHT 8)



PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

ADJACENT PROPERTY OWNERS

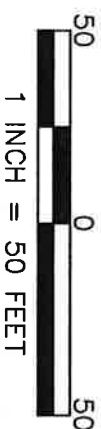
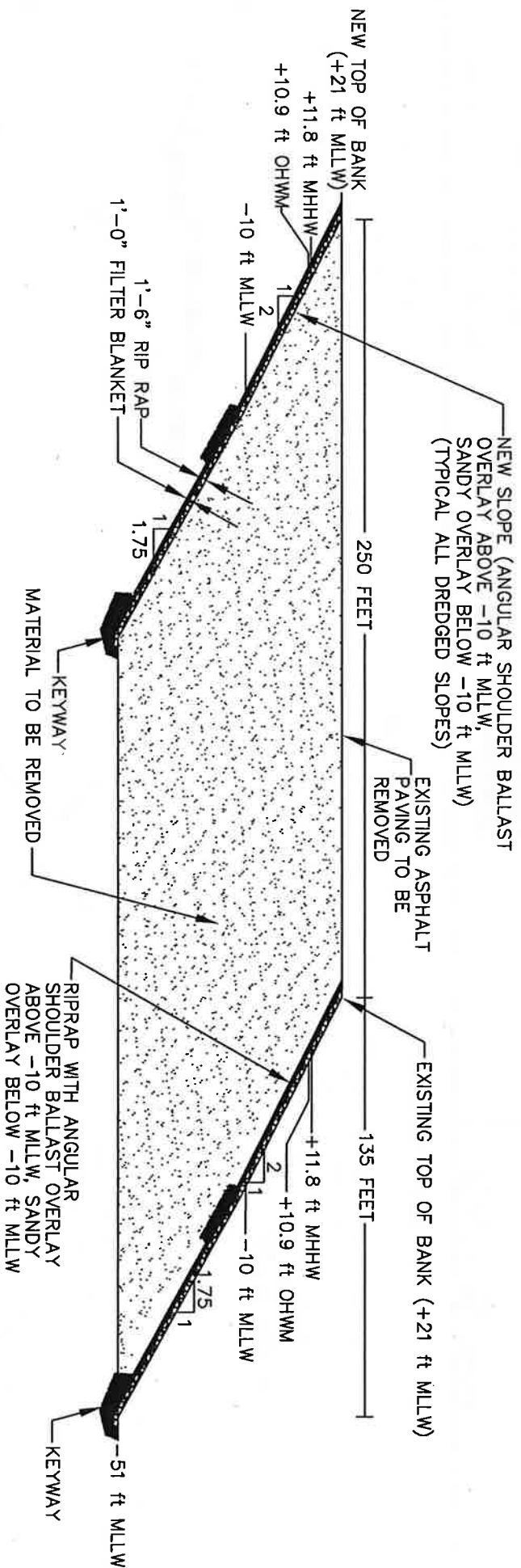
(A) PUYALLUP TRIBE OF INDIANS

PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 3 OF 21 DATE: 05/21



1
SHT3

TURNING BASIN EXPANSION SECTION - SHORELINE CUTBACK AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)



PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

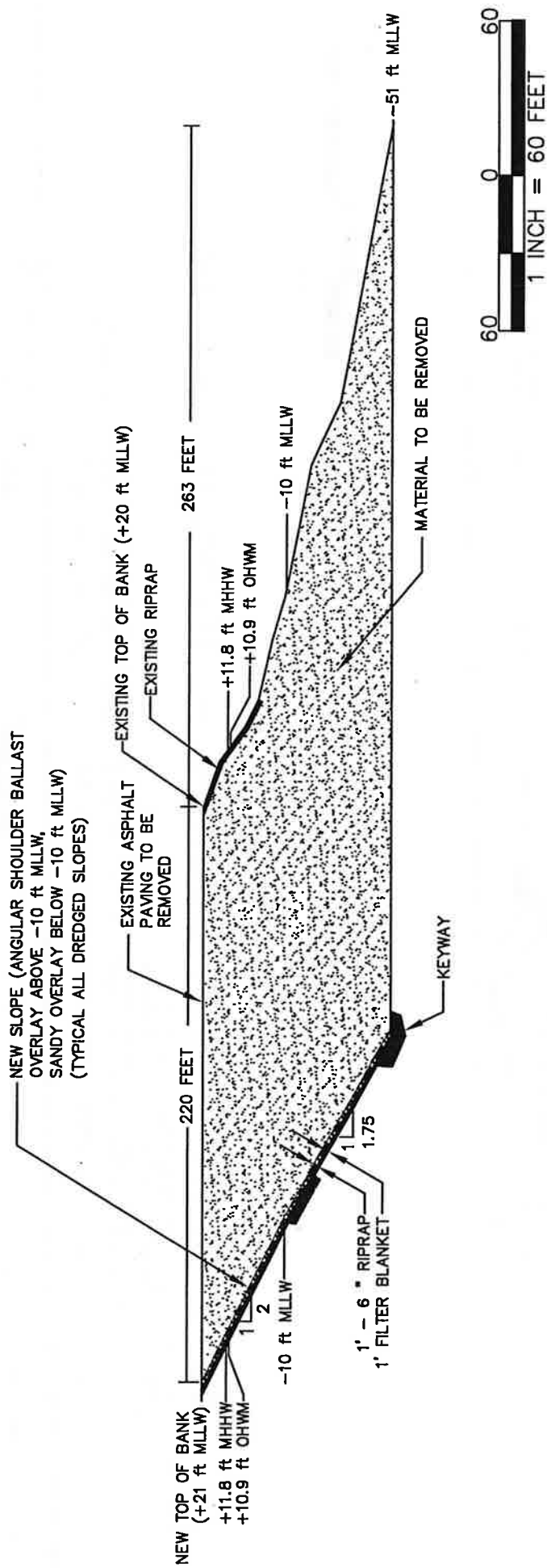
IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 4 OF 21 DATE: 05/21/04



(1,200 FT WHARF APPROVED AS PART OF THE PIERCE COUNTY TERMINAL EXPANSION PROJECT, COE # 2000-2-00765 AND 200000765. RELOCATION IS PART OF CURRENT PROJECT.)

SHEET NO. 5 OF 21 DATE: 05/21/04



3
SHT3

BLAIR INNER REACH SECTION - SHORELINE CUTBACK AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

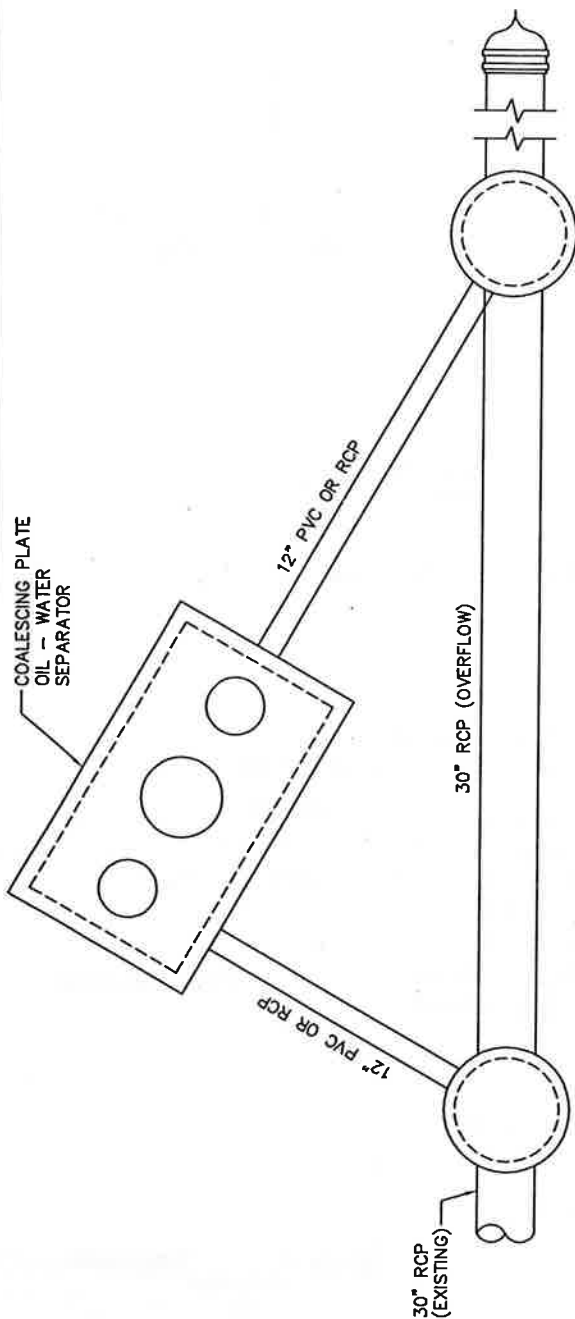


PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

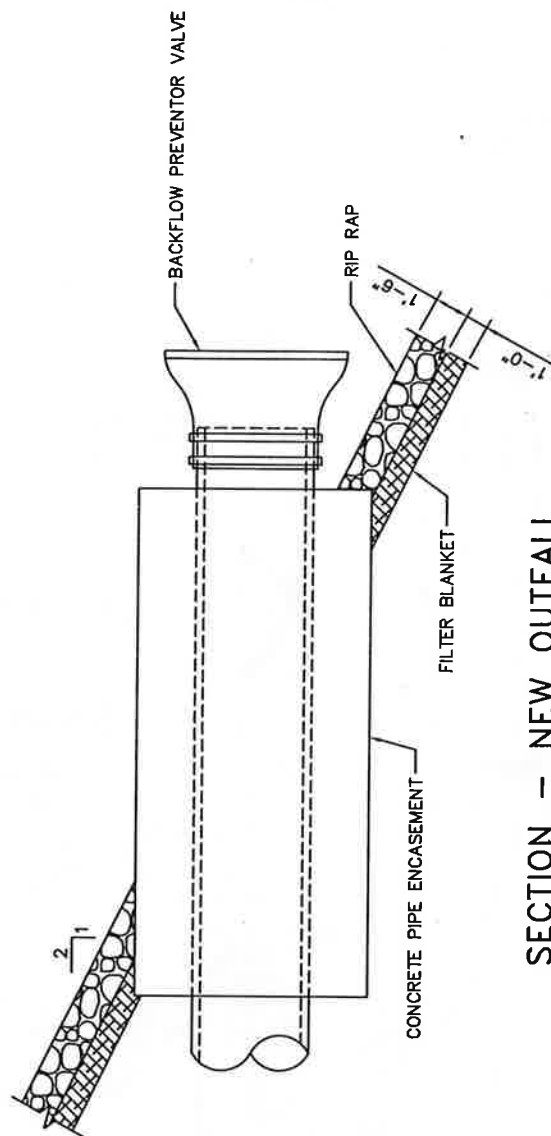
BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 6 OF 21 DATE: 05/21/04



PLAN - NEW OUTFALL



SECTION - NEW OUTFALL



PURPOSE: IMPROVABLE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

ADJACENT PROPERTY OWNERS:

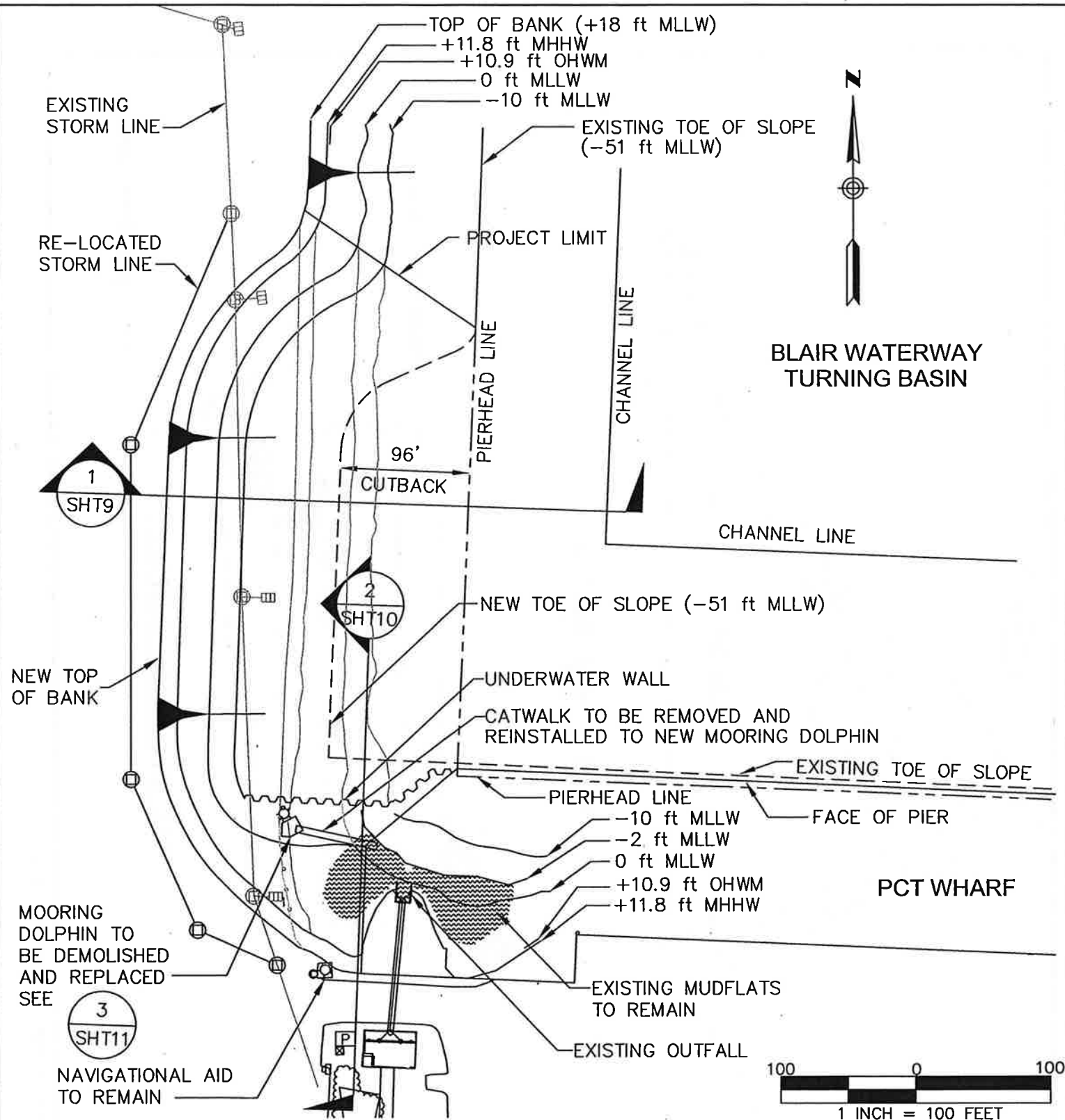


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

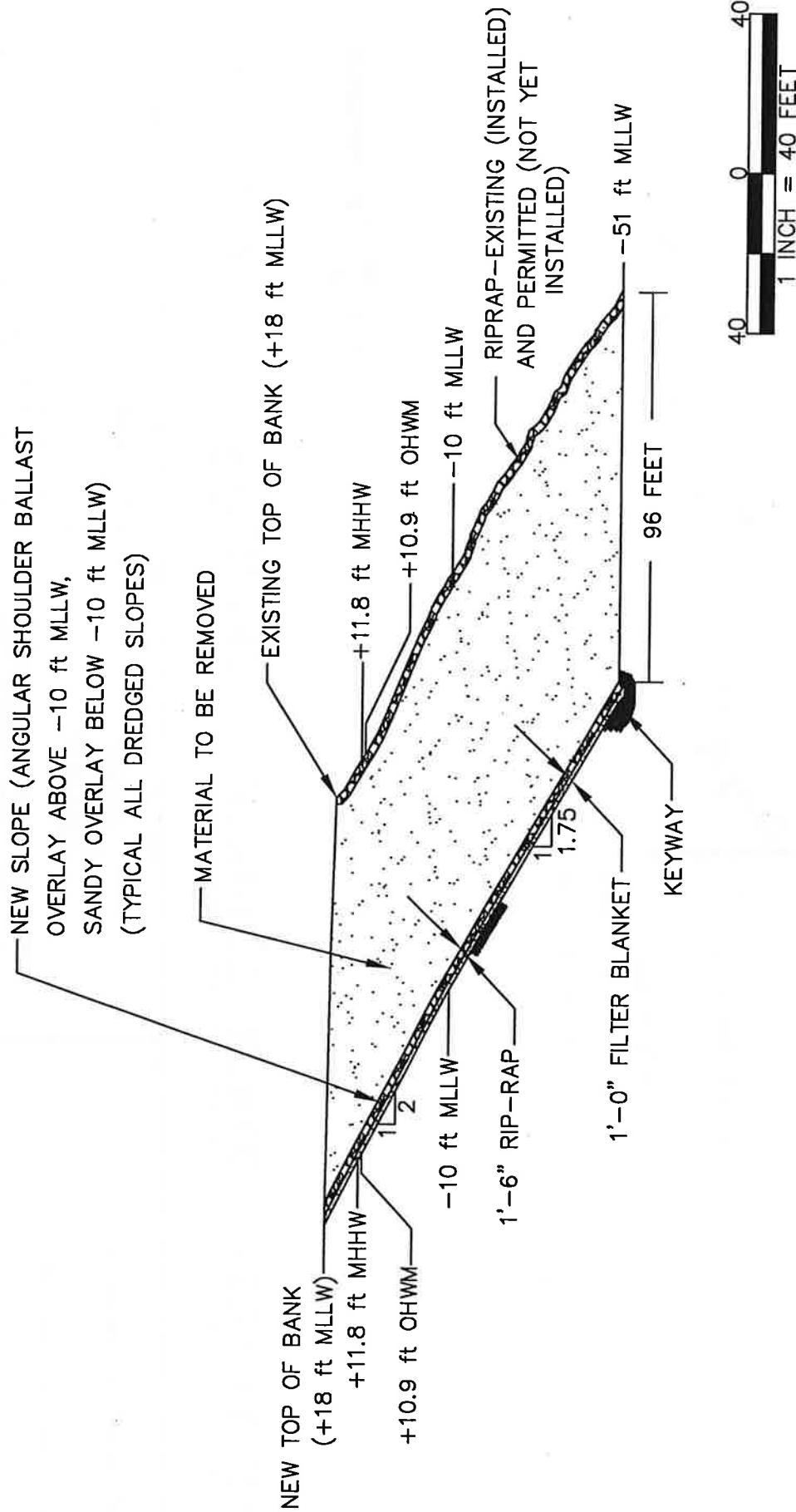
SHEET NO. 7 OF 21 DATE: 05/21/04



SOUTHWEST CORNER CUTBACK PROPOSED CONDITION

--- EXISTING STRUCTURES AND CONTOURS
 — PROPOSED STRUCTURES AND CONTOURS

PURPOSE: IMPROVE THE BLAIR WATERWAY DATUM: MLLW = 0.00 FEET (NOS)	 PORT OF TACOMA P.O. BOX 1837 TACOMA, WASHINGTON 98401 (253) 383-5841	BLAIR WATERWAY INFRASTRUCTURE IMPROVEMENTS PROJECT IN: BLAIR WATERWAY AT: PORT OF TACOMA COUNTY OF: PIERCE STATE: WA APPLICATION BY: PORT OF TACOMA SHEET NO. 8 OF 21 DATE: 05/21/04



1
SHT7

SOUTHWEST CORNER CUTBACK - SHORELINE CUTBACK AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

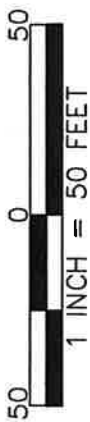
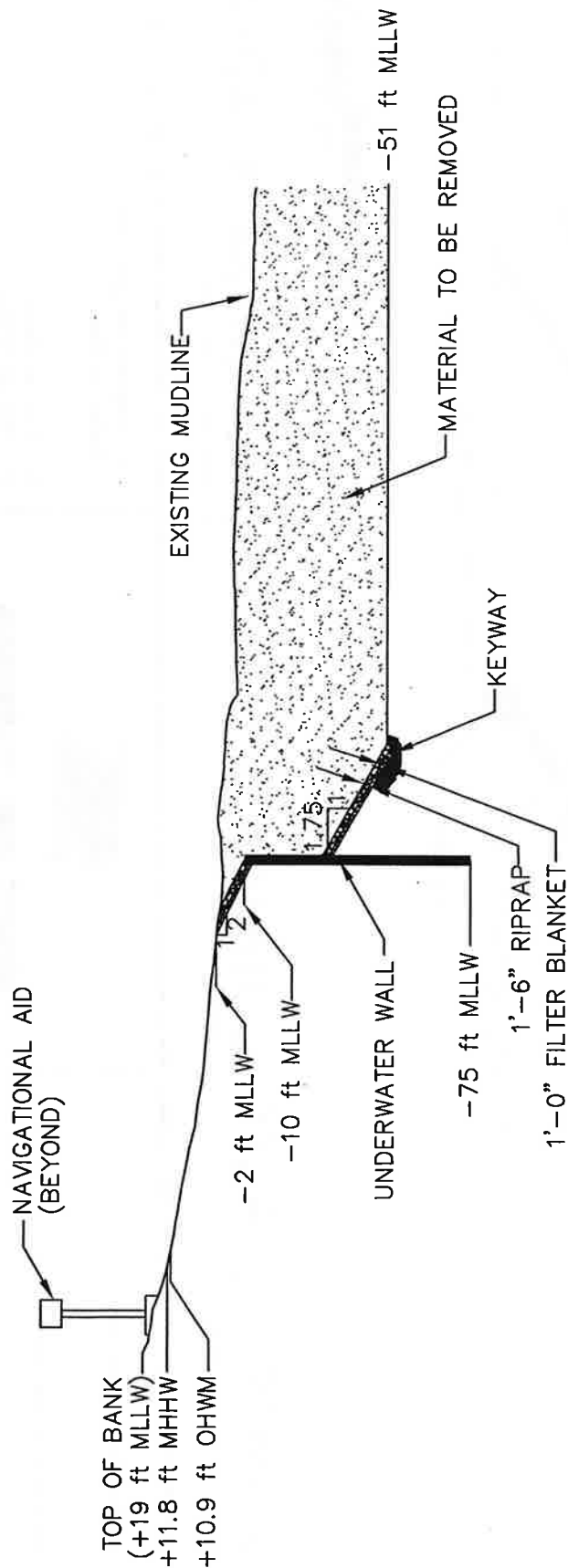


PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 9 OF 21 DATE: 05/21/04



2
SHT8

SOUTHWEST CORNER CUTBACK - SHORELINE CUTBACK AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

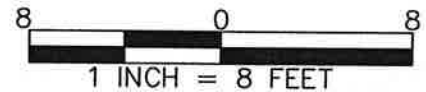
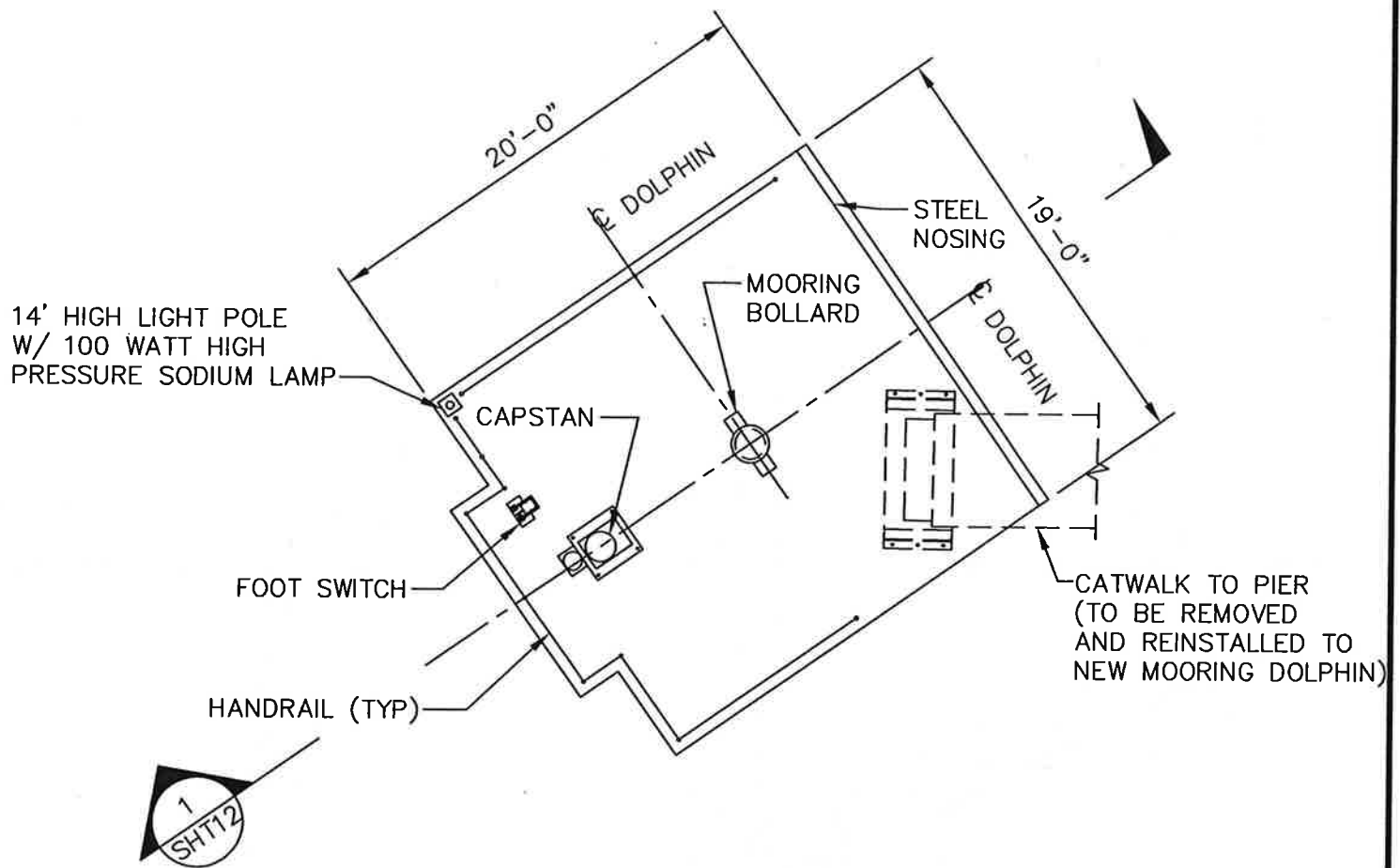


PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 10 OF 21 DATE: 05/21/04



PLAN — MOORING DOLPHIN

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

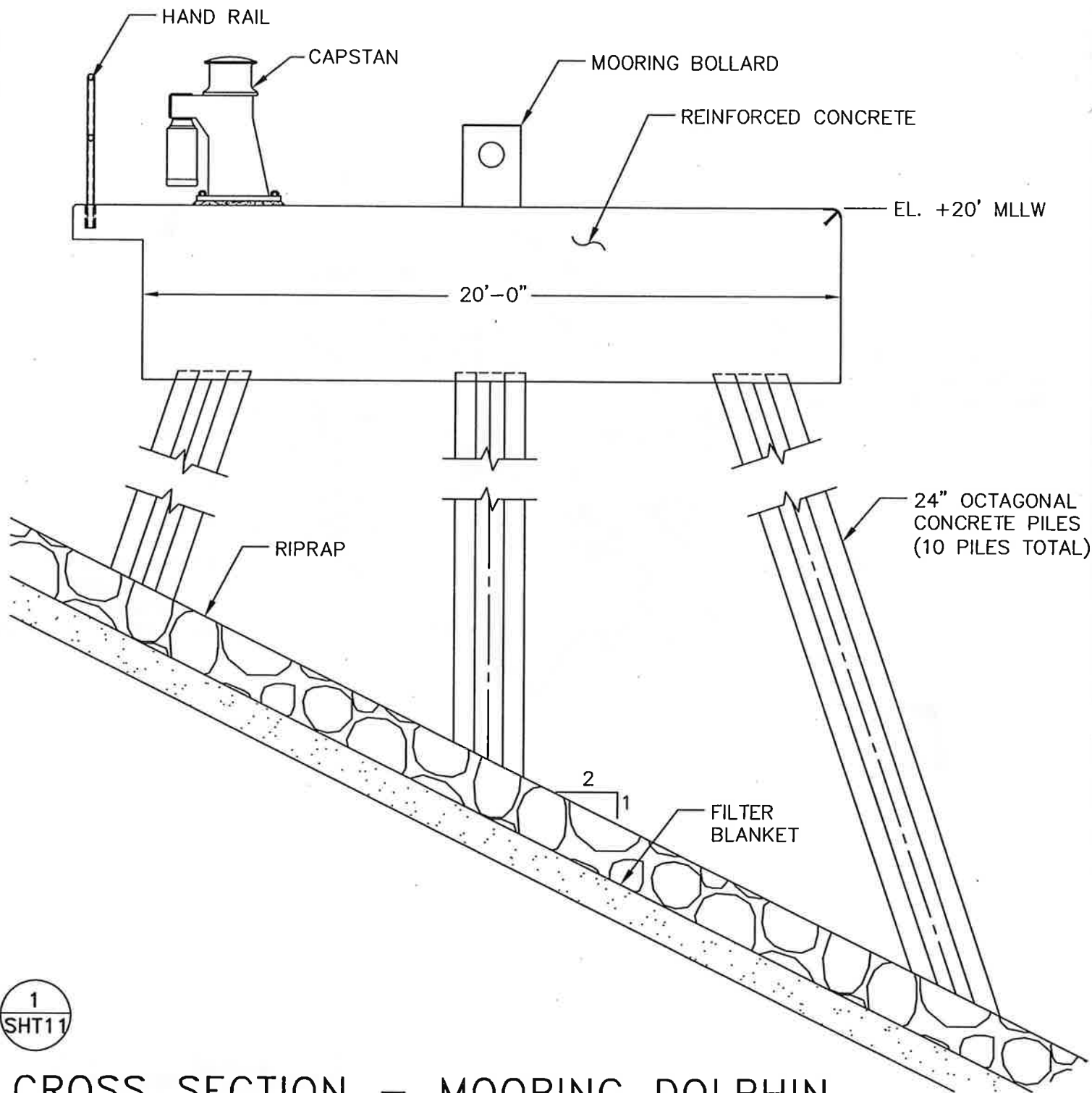


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 11 OF 21 DATE: 05/21/04



PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

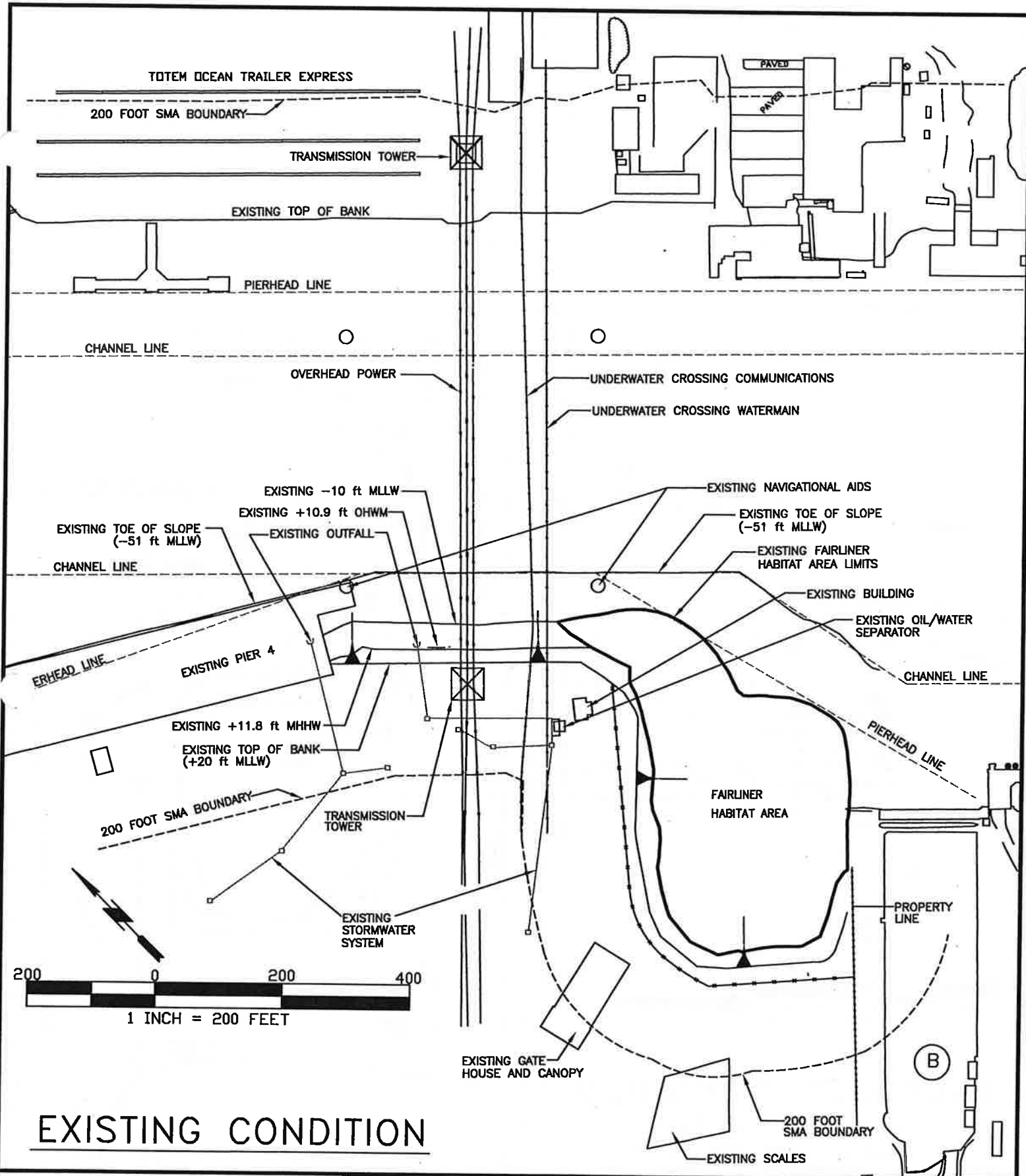


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 12 OF 21 DATE: 05/21/04



EXISTING CONDITION

PURPOSE: IMPROVE THE BLAIR WATERWAY

datum: MLLW = 0.00 FEET (NOS)

ADJACENT PROPERTY OWNERS

⑧ CONCRETE TECH. INC.

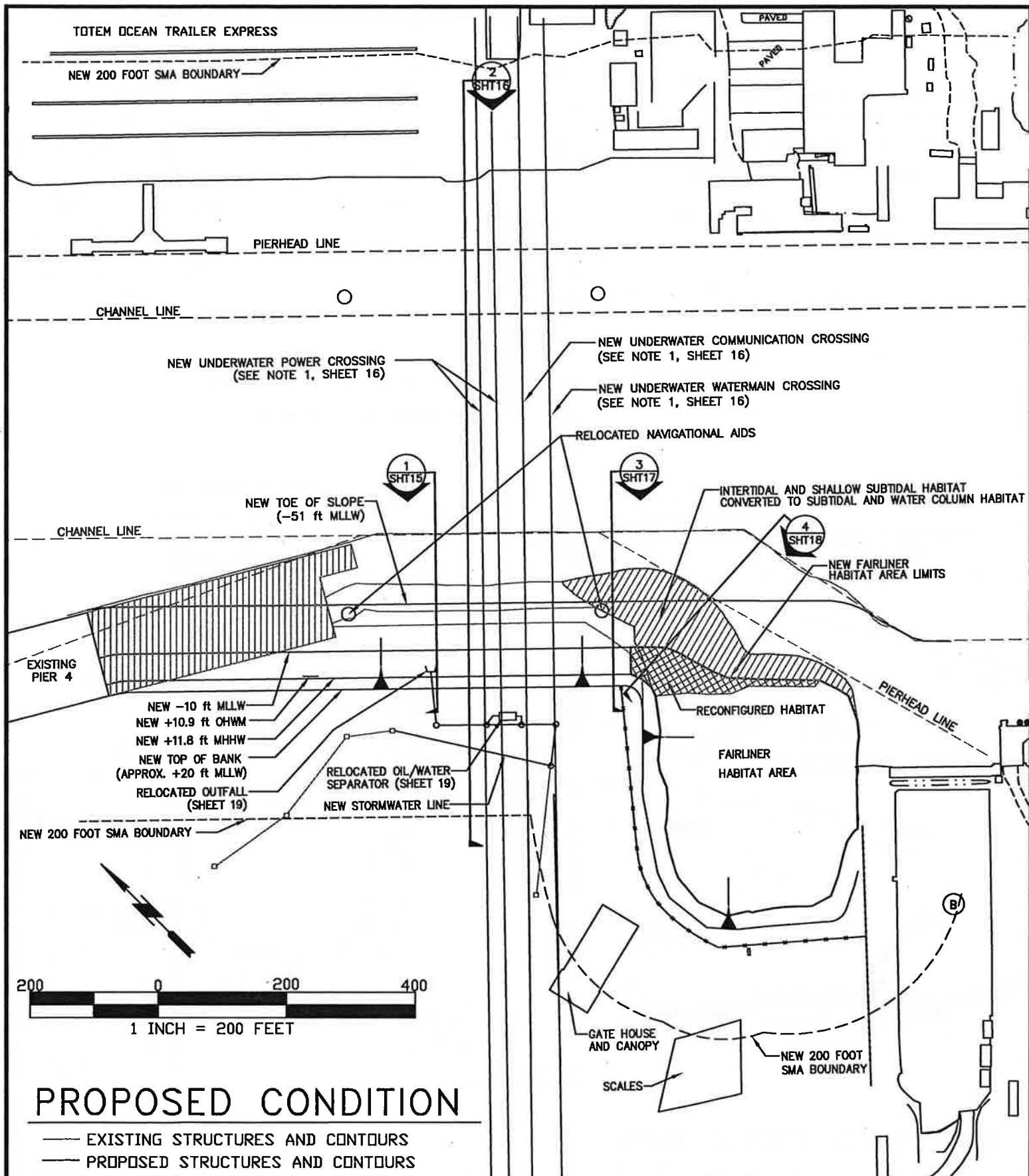


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 13 OF 21 DATE: 05/21/04



PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

ADJACENT PROPOERTY OWNERS

(B) CONCRETE TECH. INC.



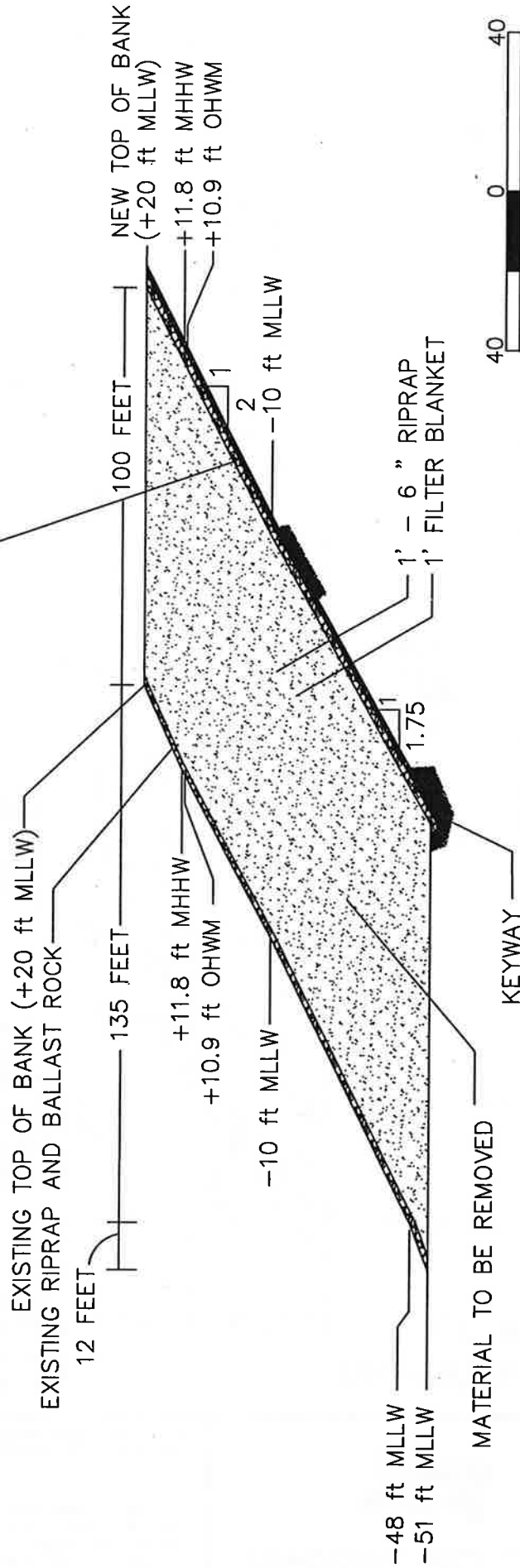
PORT OF TACOMA
 P.O. BOX 1837 TACOMA, WASHINGTON 98401
 (253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
 IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
 AT: PORT OF TACOMA
 COUNTY OF: PIERCE STATE: WA
 APPLICATION BY: PORT OF TACOMA

SHEET NO. 14 OF 21 DATE: 04/21/04

NEW SLOPE (ANGULAR SHOULDER BALLAST OVERLAY ABOVE -10 ft MLLW,
SANDY OVERLAY BELOW -10 ft MLLW)(TYPICAL ALL DREDGED SLOPES)



1
SHT14

BLAIR BRIDGE REACH SECTION - SHORELINE CUTBACK AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)



PORT OF TACOMA
TACOMA, WASHINGTON 98401
P.O. BOX 1837
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 15 OF 21 DATE: 05/21/04

TYPICAL CROSS SECTION AT
EAST 11TH STREET 450' WIDENING

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

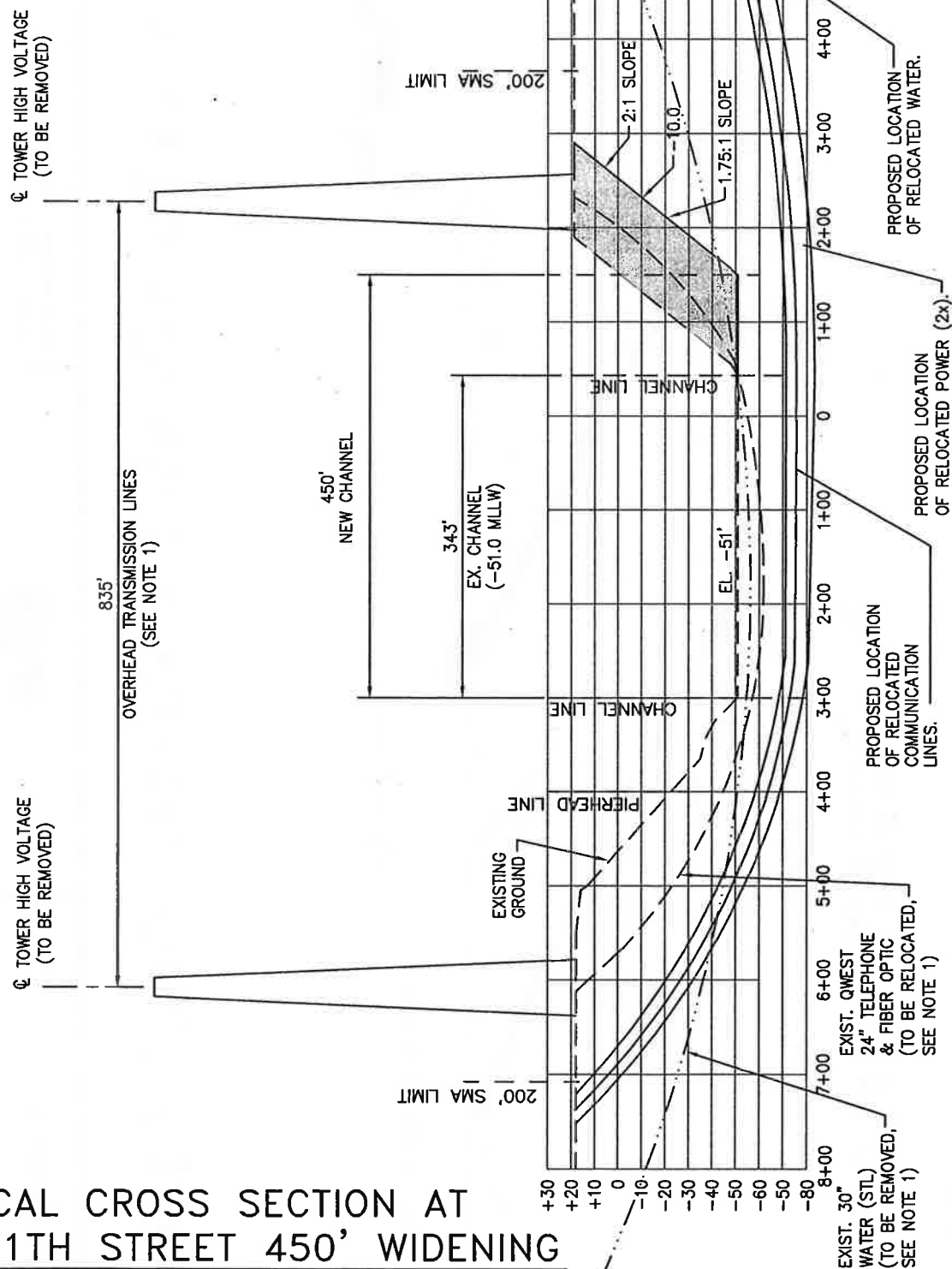


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

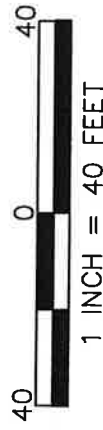
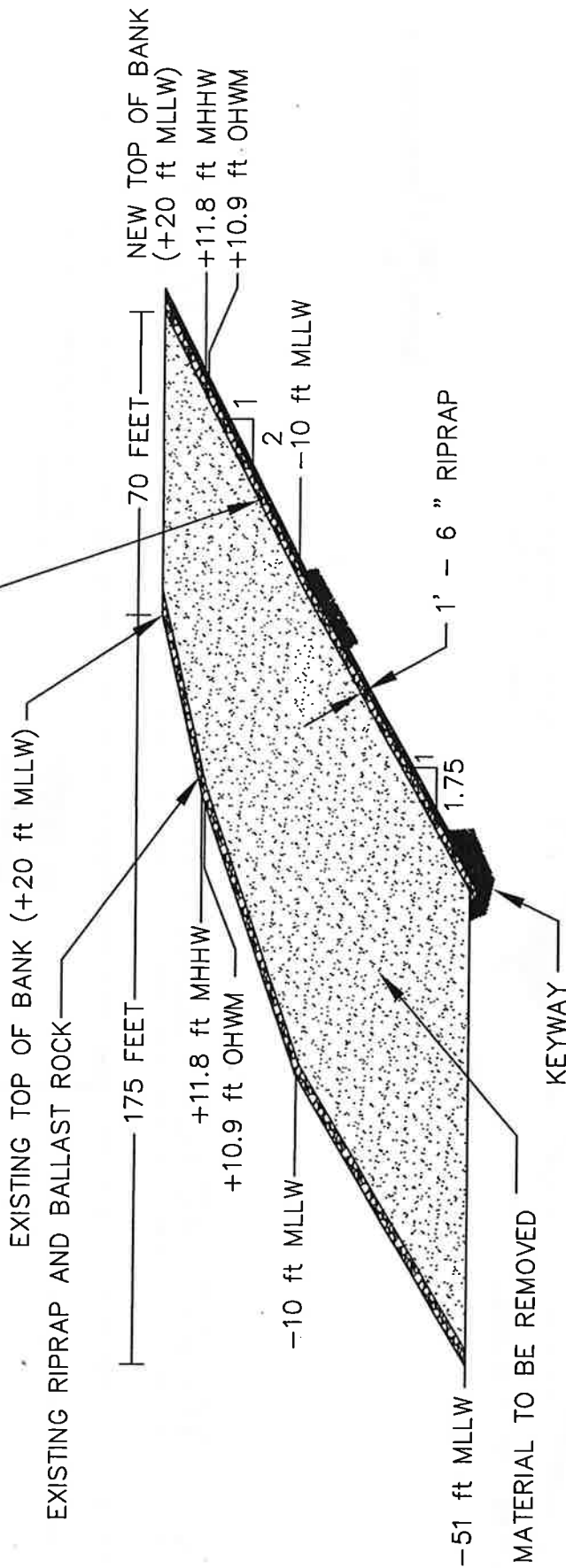
SHEET NO. 16 OF 21 DATE: 05/21/04



NOTES:

1. COMMUNICATIONS, WATER, AND POWER WILL BE RELOCATED UNDER THE WATERWAY VIA SEPARATE DIRECTIONAL BORING OPERATIONS AS PART OF A SEPARATE PERMIT ACTION.
2. WIDTH OF EXISTING COE CHANNEL IS BASED ON CORPS DRAWING E-3-6-58 AT -51 MLLW.
3. VERTICAL DATUM IS MLLW (NOS)

NEW SLOPE (ANGULAR SHOULDER BALLAST OVERLAY ABOVE -10 ft MLLW,
SANDY OVERLAY BELOW -10 ft MLLW)(TYPICAL ALL DREDGED SLOPES)



3
SHT14

BLAIR BRIDGE REACH SECTION - FAIRLINER HABITAT AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW ± 0.00 FEET (NOS)

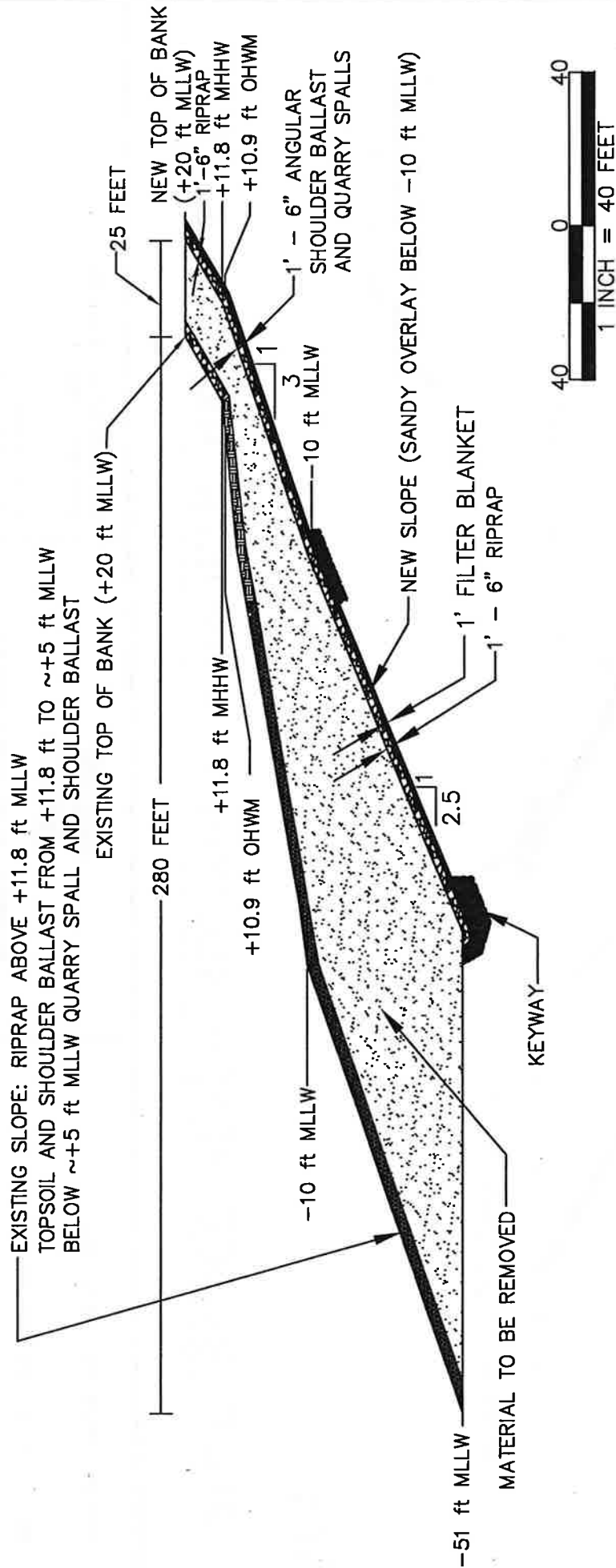


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 17 OF 21 DATE: 05/21/04



4
SHT14

BLAIR BRIDGE REACH SECTION - FAIRLINER HABITAT AREA

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

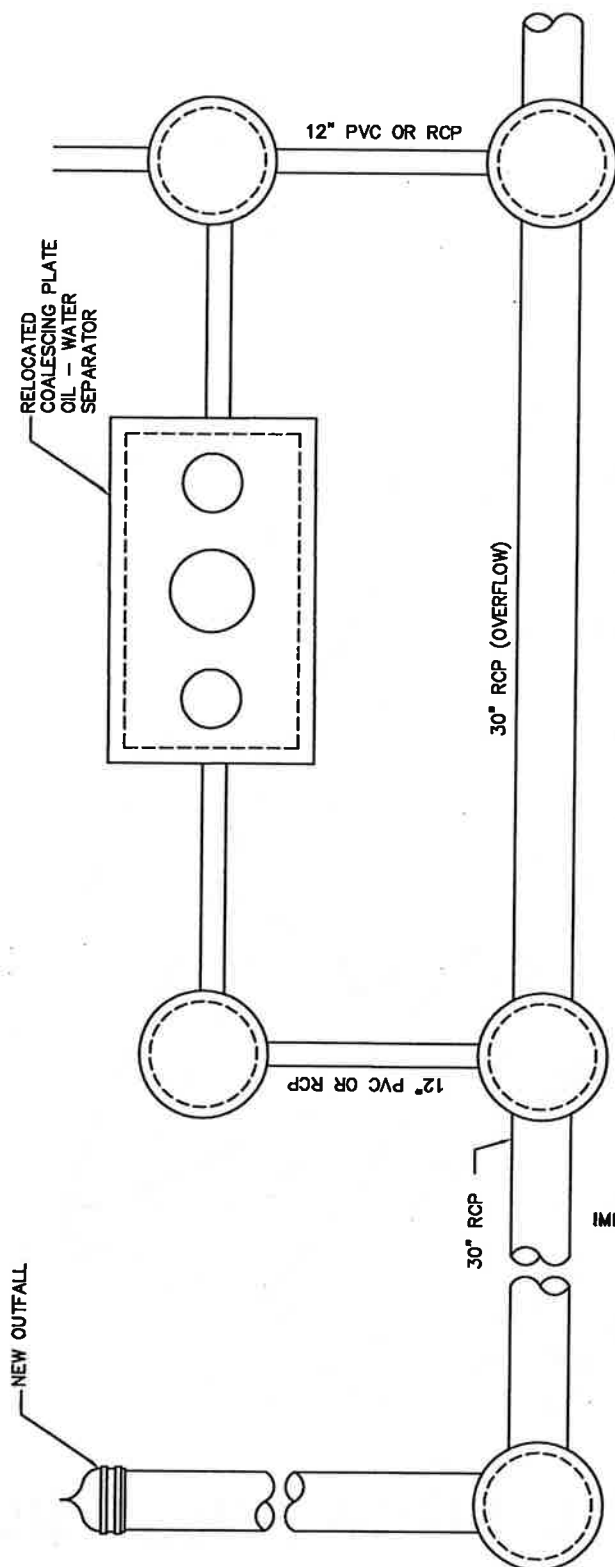


PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

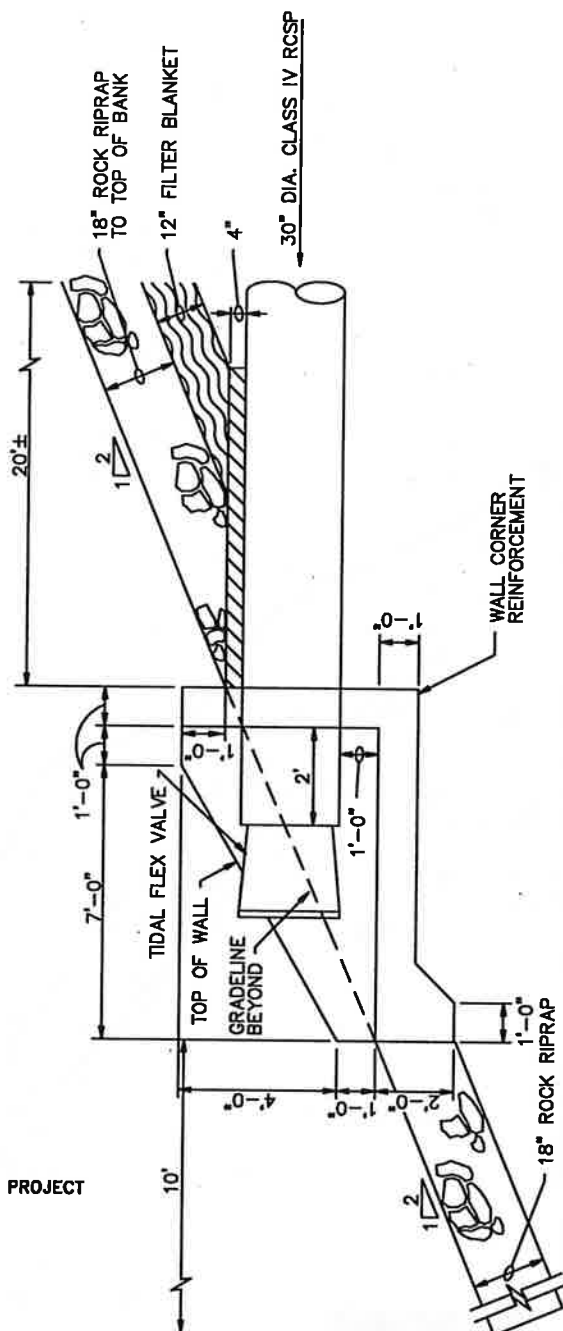
BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 18 OF 21 DATE: 5/21/04



**PLAN -- NEW OUTFALL AND
RELOCATED O/W SEPARATOR**



SECTION - NEW OUTFALL

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)

ADJACENT PROPERTY OWNERS:

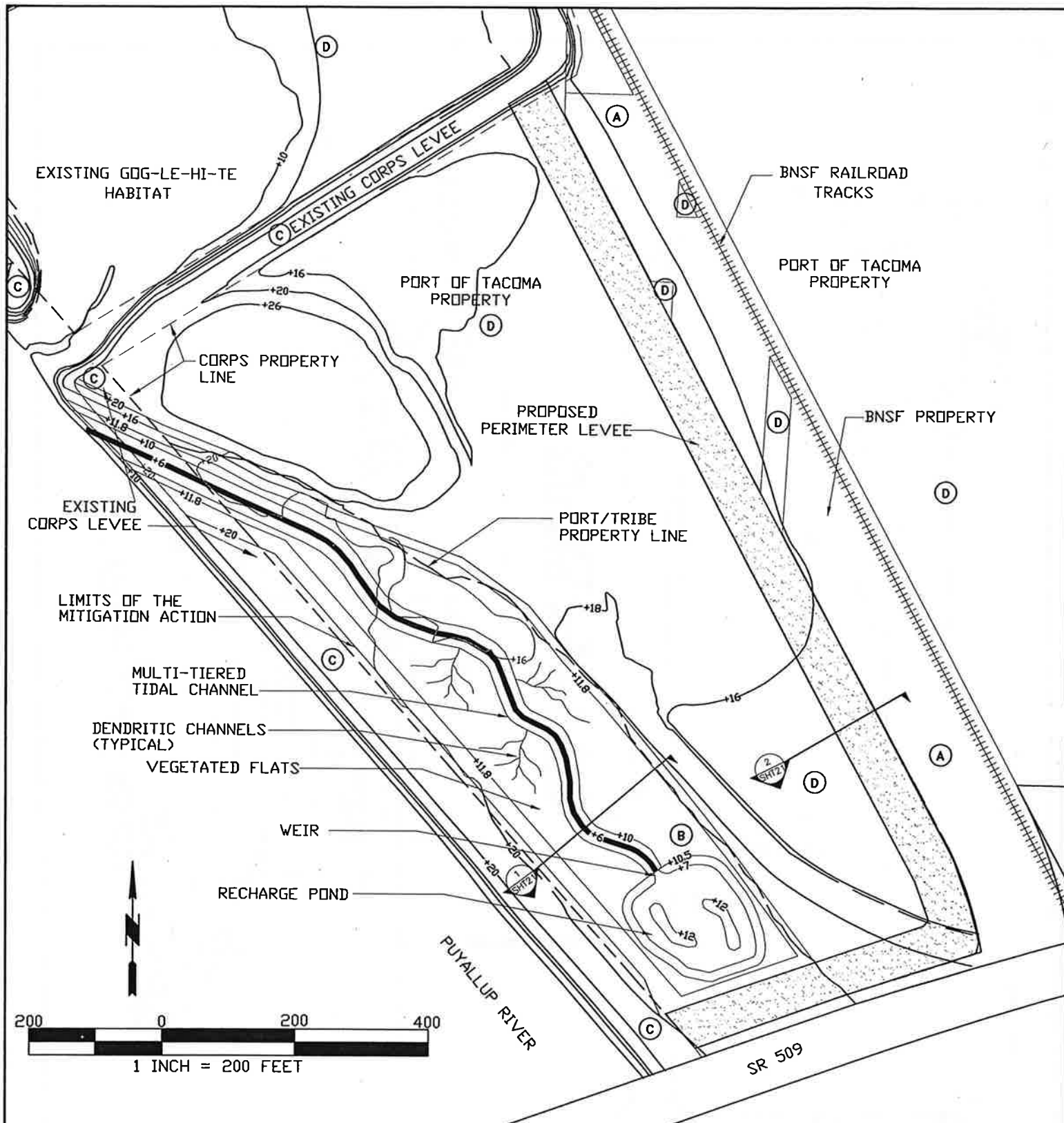


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

**BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT**

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 19 OF 21 DATE: 05/21/04



GOG-LE-HI-TE II CONCEPTUAL MITIGATION DESIGN

— EXISTING CONTOURS
— PROPOSED CONTOURS

PURPOSE: IMPROVE THE BLAIR WATERWAY
DATUM: MLLW = 0.00 FEET (NOS)
ADJACENT PROPERTY OWNERS

- (A) BURLINGTON NORTHERN SANTE FE (BNSF)
- (B) PUYALLUP TRIBE OF INDIANS
- (C) US ARMY CORPS OF ENGINEERS
- (D) PORT OF TACOMA

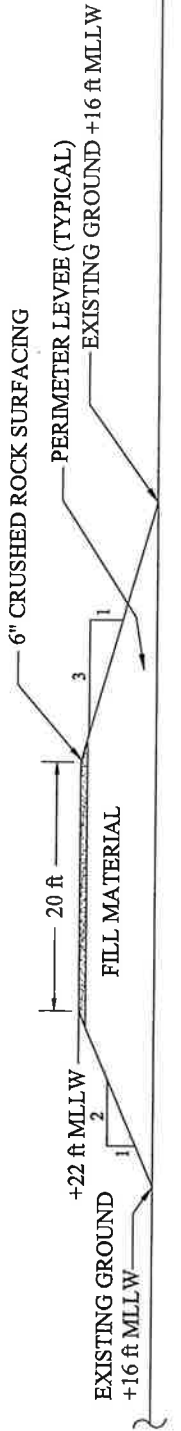


PORT OF TACOMA
P.O. BOX 1837 TACOMA, WASHINGTON 98401
(253) 383-5841

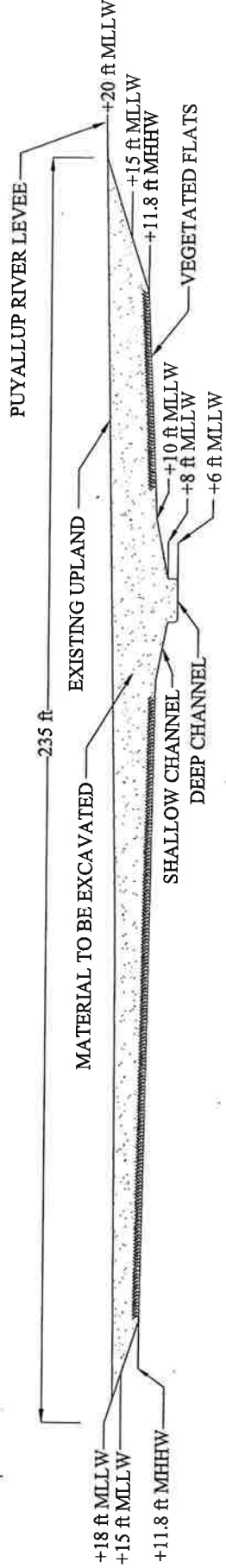
BLAIR WATERWAY INFRASTRUCTURE IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

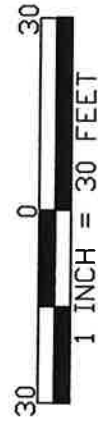
SHEET NO. 20 OF 21 DATE: 05/21/04



1
SHT20



2
SHT20



GOG-LE-HI-TE II MITIGATION CONCEPTUAL DESIGN

PURPOSE: IMPROVE THE BLAIR WATERWAY

DATUM: MLLW = 0.00 FEET (NOS)



PORT OF TACOMA
P.O. BOX 1837
TACOMA, WASHINGTON 98401
(253) 383-5841

BLAIR WATERWAY INFRASTRUCTURE
IMPROVEMENTS PROJECT

IN: BLAIR WATERWAY
AT: PORT OF TACOMA
COUNTY OF: PIERCE STATE: WA
APPLICATION BY: PORT OF TACOMA

SHEET NO. 21 OF 21 DATE: 05/21/04

APPENDIX D

CONSTRUCTION

STORMWATER GENERAL

PERMIT

WAR312679



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

July 17, 2023

Anita Fichthorn
NWSA/Port of Tacoma
PO Box 1837
Tacoma, WA 98401

RE: Coverage under the Construction Stormwater General Permit

Permit number: WAR312679
Site Name: Port of Tacoma EB01 Paving and Restrooms
Location: 2940 Alexander Ave
Tacoma, WA County: Pierce
Disturbed Acres: 3.77

Dear Anita Fichthorn:

The Washington State Department of Ecology (Ecology) received your Notice of Intent for coverage under Ecology's Construction Stormwater General Permit (CSWGP). This is your permit coverage letter. Your permit coverage is effective July 17, 2023.

Retain this letter as an official record of permit coverage for your site. You may keep your records in electronic format if you can easily access them from your construction site. You can get the CSWGP, permit forms, and other information at Ecology's [CSWGP eCoverage Packet webpage](#)¹. Contact your Permit Administrator, listed below, if you want a copy of the CSWGP mailed to you. Please read the permit and contact Ecology if you have any questions.

Electronic Discharge Monitoring Reports (WQWebDMR)

This permit requires you to submit monthly discharge monitoring reports (DMRs) for the full duration of permit coverage (from the first full month of coverage to termination). Your first sampling and reporting period will be for the month of **August** and your first DMR must be submitted by **September 15, 2023**.

You must submit your DMRs electronically using Ecology's secure online system, WQWebDMR. To sign up for WQWebDMR go to Ecology's [WQWebPortal guidance webpage](#)². If you have

¹ <http://www.ecology.wa.gov/eCoverage-packet>

² <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance>

Anita Fichthorn

July 17, 2023

Page 2

questions, contact the portal staff at (360) 407-7097 (Olympia area), or (800) 633-6193/Option 3, or email WQWebPortal@ecy.wa.gov.

Appeal Process

You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB). Appeals must be filed within 30 days of the date of receipt of this letter. Any appeal is limited to the general permit's applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2). For more information regarding your right to appeal, please reference Ecology's Focus Sheet: [Appeal of General Permit Coverage](#)³.

Annual Permit Fees

RCW 90.48.465 requires Ecology to recover the costs of managing the permit program. Permit fees are invoiced annually until the permit is terminated. Termination conditions are described in the permit. For permit fee related questions, please contact the Water Quality Fee Unit at wqfeeunit@ecy.wa.gov or (800) 633-6193/Option 2. You can also visit [Water Quality Permit Fees Webpage](#)⁴ for more information.

Ecology Field Inspector Assistance

If you have questions regarding stormwater management at your construction site, please contact your Regional Inspector, Joseph McCord of Ecology's Southwest Regional Office in Lacey at joseph.mccord@ecy.wa.gov, or (360) 791-5017.

Questions or Additional Information

Ecology is here to help. Please review our [Construction Stormwater General Permit webpage](#)⁵ for more information. If you have questions about the Construction Stormwater General Permit, please contact your Permit Administrator, Melinda Wilson at melinda.wilson@ecy.wa.gov, or (360) 870-8290.

Sincerely,



Jeff Killelea, Manager
Permit and Technical Services Section
Water Quality Program

³ <https://apps.ecology.wa.gov/publications/summarypages/1710007.html>

⁴ <https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-permits/Fees>

⁵ www.ecology.wa.gov/constructionstormwaterpermit

Issuance Date: November 18, 2020
Effective Date: January 1, 2021
Expiration Date: December 31, 2025

CONSTRUCTION STORMWATER GENERAL PERMIT

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge
General Permit for Stormwater Discharges Associated with Construction Activity

State of Washington
Department of Ecology
Olympia, Washington 98504

In compliance with the provisions of
Chapter 90.48 Revised Code of Washington
(State of Washington Water Pollution Control Act)
and
Title 33 United States Code, Section 1251 et seq.
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified, or revoked, Permittees that have properly
obtained coverage under this general permit are authorized to discharge in accordance
with the special and general conditions that follow.



Vincent McGowan, P.E.
Water Quality Program Manager
Washington State Department of Ecology

TABLE OF CONTENTS

LIST OF TABLES	ii
SUMMARY OF PERMIT REPORT SUBMITTALS.....	1
SPECIAL CONDITIONS	3
S1. Permit Coverage	3
S2. Application Requirements	7
S3. Compliance with Standards	9
S4. Monitoring Requirements, Benchmarks, and Reporting Triggers	10
S5. Reporting and Recordkeeping Requirements.....	17
S6. Permit Fees	20
S7. Solid and Liquid Waste Disposal	20
S8. Discharges to 303(D) or TMDL Waterbodies	20
S9. Stormwater Pollution Prevention Plan	23
S10. Notice Of Termination	32
GENERAL CONDITIONS	34
G1. Discharge Violations.....	34
G2. Signatory Requirements	34
G3. Right of Inspection and Entry.....	35
G4. General Permit Modification and Revocation	35
G5. Revocation of Coverage Under tPermit.....	35
G6. Reporting a Cause for Modification	36
G7. Compliance with Other Laws and Statutes.....	36
G8. Duty to Reapply.....	36
G9. Removed Substance.....	36
G10. Duty to Provide Information	36
G11. Other Requirements of 40 CFR	37
G12. Additional Monitoring.....	37
G13. Penalties for Violating Permit Conditions.....	37
G14. Upset.....	37
G15. Property Rights	37
G16. Duty to Comply	37
G17. Toxic Pollutants.....	38
G18. Penalties for Tampering.....	38
G19. Reporting Planned Changes.....	38
G20. Reporting Other Information.....	38
G21. Reporting Anticipated Non-Compliance	38

G22.	Requests to Be Excluded From Coverage Under the Permit	39
G23.	Appeals.....	39
G24.	Severability.....	39
G25.	Bypass Prohibited	39
APPENDIX A – DEFINITIONS.....		42
APPENDIX B – ACRONYMS.....		50

LIST OF TABLES

Table 1	Summary of Required Submittals.....	1
Table 2	Summary of Required On-site Documentation	2
Table 3	Summary of Primary Monitoring Requirements	12
Table 4	Monitoring and Reporting Requirements	14
Table 5	Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters	22
Table 6	pH Sampling and Limits for 303(d)-Listed Waters.....	22

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

Table 1 Summary of Required Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S5.A and S8	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours
S5.B	Discharge Monitoring Report	Monthly*	Within 15 days following the end of each month
S5.F and S8	Noncompliance Notification – Telephone Notification	As necessary	Within 24 hours
S5.F	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non-compliance
S9.D	Request for Chemical Treatment Form	As necessary	Written approval from Ecology is required prior to using chemical treatment (with the exception of dry ice, CO ₂ or food grade vinegar to adjust pH)
G2	Notice of Change in Authorization	As necessary	
G6	Permit Application for Substantive Changes to the Discharge	As necessary	
G8	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
S2.A	Notice of Permit Transfer	As necessary	
G19	Notice of Planned Changes	As necessary	
G21	Reporting Anticipated Non-compliance	As necessary	

NOTE: *Permittees must submit electronic Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology monthly, regardless of site discharge, for the full duration of permit coverage. Refer to Section S5.B of this General Permit for more specific information regarding DMRs.

Table 2 Summary of Required On-site Documentation

Document Title	Permit Conditions
Permit Coverage Letter	See Conditions S2, S5
Construction Stormwater General Permit (CSWGP)	See Conditions S2, S5
Site Log Book	See Conditions S4, S5
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions S5, S9
Site Map	See Conditions S5, S9

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

A. Permit Area

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal operators and Indian Country as specified in Special Condition S1.E.3 and 4.

B. Operators Required to Seek Coverage Under this General Permit

1. Operators of the following construction activities are required to seek coverage under this CSWGP:
 - a. Clearing, grading and/or excavation that results in the disturbance of one or more acres (including off-site disturbance acreage related to construction-support activity as authorized in S1.C.2) and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.
 - i. This category includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State (that is, forest practices that prepare a site for construction activities); and
 - b. Any size construction activity discharging stormwater to waters of the State that the Washington State Department of Ecology (Ecology):
 - i. Determines to be a significant contributor of pollutants to waters of the State of Washington.
 - ii. Reasonably expects to cause a violation of any water quality standard.
2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b, above):
 - a. Construction activities that discharge all stormwater and non-stormwater to groundwater, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.
 - b. Construction activities covered under an Erosivity Waiver (Special Condition S1.F).
 - c. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

C. Authorized Discharges

1. ***Stormwater Associated with Construction Activity.*** Subject to compliance with the terms and conditions of this permit, Permittees are authorized to discharge stormwater associated with construction activity to surface waters of the State or to a storm sewer system that drains to surface waters of the State. (Note that “surface waters of the

State” may exist on a construction site as well as off site; for example, a creek running through a site.)

2. ***Stormwater Associated with Construction Support Activity.*** This permit also authorizes stormwater discharge from support activities related to the permitted construction site (for example, an on-site portable rock crusher, off-site equipment staging yards, material storage areas, borrow areas, etc.) provided:
 - a. The support activity relates directly to the permitted construction site that is required to have an NPDES permit; and
 - b. The support activity is not a commercial operation serving multiple unrelated construction projects, and does not operate beyond the completion of the construction activity; and
 - c. Appropriate controls and measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) for the discharges from the support activity areas.
3. ***Non-Stormwater Discharges.*** The categories and sources of non-stormwater discharges identified below are authorized conditionally, provided the discharge is consistent with the terms and conditions of this permit:
 - a. Discharges from fire-fighting activities.
 - b. Fire hydrant system flushing.
 - c. Potable water, including uncontaminated water line flushing.
 - d. Hydrostatic test water.
 - e. Uncontaminated air conditioning or compressor condensate.
 - f. Uncontaminated groundwater or spring water.
 - g. Uncontaminated excavation dewatering water (in accordance with S9.D.10).
 - h. Uncontaminated discharges from foundation or footing drains.
 - i. Uncontaminated or potable water used to control dust. Permittees must minimize the amount of dust control water used.
 - j. Routine external building wash down that does not use detergents.
 - k. Landscape irrigation water.

The SWPPP must adequately address all authorized non-stormwater discharges, except for discharges from fire-fighting activities, and must comply with Special Condition S3. At a minimum, discharges from potable water (including water line flushing), fire hydrant system flushing, and pipeline hydrostatic test water must undergo the following: dechlorination to a concentration of 0.1 parts per million (ppm) or less, and pH adjustment to within 6.5 – 8.5 standard units (su), if necessary.

D. Prohibited Discharges

The following discharges to waters of the State, including groundwater, are prohibited:

1. Concrete wastewater
2. Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.
3. Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.2 (See Appendix A of this permit).
4. Slurry materials and waste from shaft drilling, including process wastewater from shaft drilling for construction of building, road, and bridge foundations unless managed according to Special Condition S9.D.9.j.
5. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
6. Soaps or solvents used in vehicle and equipment washing.
7. Wheel wash wastewater, unless managed according to Special Condition S9.D.9.
8. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to Special Condition S9.D.10.

E. Limits on Coverage

Ecology may require any discharger to apply for and obtain coverage under an individual permit or another more specific general permit. Such alternative coverage will be required when Ecology determines that this CSWGP does not provide adequate assurance that water quality will be protected, or there is a reasonable potential for the project to cause or contribute to a violation of water quality standards.

The following stormwater discharges are not covered by this permit:

1. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site has undergone final stabilization.
2. Non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance, from which there is natural runoff as excluded in 40 CFR Subpart 122.
3. Stormwater from any federal operator.
4. Stormwater from facilities located on **Indian Country** as defined in 18 U.S.C. §1151, except portions of the Puyallup Reservation as noted below.

Indian Country includes:

- a. All land within any Indian Reservation notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. This includes all federal, tribal, and Indian and non-Indian privately owned land within the reservation.
- b. All off-reservation Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.
- c. All off-reservation federal trust lands held for Native American Tribes.

Puyallup Exception: Following the *Puyallup Tribes of Indians Land Settlement Act of 1989*, 25 U.S.C. §1773; the permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

5. Stormwater from any site covered under an existing NPDES individual permit in which stormwater management and/or treatment requirements are included for all stormwater discharges associated with construction activity.
6. Stormwater from a site where an applicable Total Maximum Daily Load (TMDL) requirement specifically precludes or prohibits discharges from construction activity.

F. Erosivity Waiver

Construction site operators may qualify for an Erosivity Waiver from the CSWGP if the following conditions are met:

1. The site will result in the disturbance of fewer than five (5) acres and the site is not a portion of a common plan of development or sale that will disturb five (5) acres or greater.
2. Calculation of Erosivity “R” Factor and Regional Timeframe:
 - a. The project’s calculated rainfall erosivity factor (“R” Factor) must be less than five (5) during the period of construction activity, (See the CSWGP homepage <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html> for a link to the EPA’s calculator and step by step instructions on computing the “R” Factor in the *EPA Erosivity Waiver Fact Sheet*). The period of construction activity starts when the land is first disturbed and ends with final stabilization. In addition:
 - b. The entire period of construction activity must fall within the following timeframes:
 - i. For sites west of the Cascades Crest: June 15 – September 15.
 - ii. For sites east of the Cascades Crest, excluding the Central Basin: June 15 – October 15.
 - iii. For sites east of the Cascades Crest, within the Central Basin: no timeframe restrictions apply. The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches. For a map of the Central Basin (Average Annual Precipitation Region 2), refer to: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/resourcesguidance.html>.
3. Construction site operators must submit a complete Erosivity Waiver certification form at least one week before disturbing the land. Certification must include statements that the operator will:
 - a. Comply with applicable local stormwater requirements; and
 - b. Implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.
4. This waiver is not available for facilities declared significant contributors of pollutants as defined in Special Condition S1.B.1.b or for any size construction activity that could

reasonably expect to cause a violation of any water quality standard as defined in Special Condition S1.B.1.b.ii.

5. This waiver does not apply to construction activities which include non-stormwater discharges listed in Special Condition S1.C.3.
6. If construction activity extends beyond the certified waiver period for any reason, the operator must either:
 - a. Recalculate the rainfall erosivity “R” factor using the original start date and a new projected ending date and, if the “R” factor is still under 5 *and* the entire project falls within the applicable regional timeframe in Special Condition S1.F.2.b, complete and submit an amended waiver certification form before the original waiver expires; *or*
 - b. Submit a complete permit application to Ecology in accordance with Special Condition S2.A and B before the end of the certified waiver period.

S2. APPLICATION REQUIREMENTS

A. Permit Application Forms

1. *Notice of Intent Form*

- a. Operators of new or previously unpermitted construction activities must submit a complete and accurate permit application (Notice of Intent, or NOI) to Ecology.
- b. Operators must apply using the electronic application form (NOI) available on Ecology’s website (<http://ecy.wa.gov/programs/wq/stormwater/construction/index.html>). Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper NOI.

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, Washington 98504-7696

- c. The operator must submit the NOI at least 60 days before discharging stormwater from construction activities and must submit it prior to the date of the first public notice (See Special Condition S2.B, below, for details). The 30-day public comment period begins on the publication date of the second public notice. Unless Ecology responds to the complete application in writing, coverage under the general permit will automatically commence on the 31st day following receipt by Ecology of a *completed* NOI, or the issuance date of this permit, whichever is later; unless Ecology specifies a later date in writing as required by WAC173-226-200(2). See S8.B for Limits on Coverage for New Discharges to TMDL or 303(d)-Listed Waters.
- d. If an applicant intends to use a Best Management Practice (BMP) selected on the basis of Special Condition S9.C.4 (“demonstrably equivalent” BMPs), the applicant must notify Ecology of its selection as part of the NOI. In the event the applicant selects BMPs after submission of the NOI, the applicant must provide notice of the

selection of an equivalent BMP to Ecology at least 60 days before intended use of the equivalent BMP.

- e. Applicants must notify Ecology if they are aware of contaminated soils and/or groundwater associated with the construction activity. Provide detailed information with the NOI (as known and readily available) on the nature and extent of the contamination (concentrations, locations, and depth), as well as pollution prevention and/or treatment BMPs proposed to control the discharge of soil and/or groundwater contaminants in stormwater. Examples of such detail may include, but are not limited to:
 - i. List or table of all known contaminants with laboratory test results showing concentration and depth,
 - ii. Map with sample locations,
 - iii. Related portions of the Stormwater Pollution Prevention Plan (SWPPP) that address the management of contaminated and potentially contaminated construction stormwater and dewatering water,
 - iv. Dewatering plan and/or dewatering contingency plan.

2. *Transfer of Coverage Form*

The Permittee can transfer current coverage under this permit to one or more new operators, including operators of sites within a Common Plan of Development, provided:

- i. The Permittee submits a complete Transfer of Coverage Form to Ecology, signed by the current and new discharger and containing a specific date for transfer of permit responsibility, coverage and liability (including any Administrative Orders associated with the permit); and
- ii. Ecology does not notify the current discharger and new discharger of intent to revoke coverage under the general permit. If this notice is not given, the transfer is effective on the date specified in the written agreement.

When a current discharger (Permittee) transfers a portion of a permitted site, the current discharger must also indicate the remaining permitted acreage after the transfer. Transfers do not require public notice.

3. *Modification of Coverage Form*

Permittees must notify Ecology regarding any changes to the information provided on the NOI by submitting an Update/Modification of Permit Coverage form in accordance with General Conditions G6 and G19. Examples of such changes include, but are not limited to:

- i. Changes to the Permittee's mailing address,
- ii. Changes to the on-site contact person information, and
- iii. Changes to the area/acreage affected by construction activity.

B. Public Notice

For new or previously unpermitted construction activities, the applicant must publish a public notice at least one time each week for two consecutive weeks, at least 7 days apart, in a newspaper with general circulation in the county where the construction is to take place. The notice must be run after the NOI has been submitted and must contain:

1. A statement that *“The applicant is seeking coverage under the Washington State Department of Ecology’s Construction Stormwater NPDES and State Waste Discharge General Permit.”*
2. The name, address, and location of the construction site.
3. The name and address of the applicant.
4. The type of construction activity that will result in a discharge (for example, residential construction, commercial construction, etc.), and the total number of acres to be disturbed over the lifetime of the project.
5. The name of the receiving water(s) (that is, the surface water(s) to which the site will discharge), or, if the discharge is through a storm sewer system, the name of the operator of the system and the receiving water(s) the system discharges to.
6. The statement: *Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology’s action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320. Comments can be submitted to: Department of Ecology, PO Box 47696, Olympia, Washington 98504-7696 Attn: Water Quality Program, Construction Stormwater.*

S3. COMPLIANCE WITH STANDARDS

- A. Discharges must not** cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), groundwater quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the Federal water quality criteria applicable to Washington. (40 CFR Part 131.45) Discharges that are not in compliance with these standards are prohibited.
- B. Prior to the discharge** of stormwater and non-stormwater to waters of the State, the Permittee must apply All Known, Available, and Reasonable methods of prevention, control, and Treatment (AKART). This includes the preparation and implementation of an adequate SWPPP, with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- C. Ecology presumes** that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully:

1. Comply with all permit conditions, including; planning, sampling, monitoring, reporting, and recordkeeping conditions.
 2. Implement stormwater BMPs contained in stormwater management manuals published or approved by Ecology, or BMPs that are demonstrably equivalent to BMPs contained in stormwater management manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the *Phase I Municipal Stormwater Permit* are approved by Ecology.)
- D. Where construction sites** also discharge to groundwater, the groundwater discharges must also meet the terms and conditions of this CSWGP. Permittees who discharge to groundwater through an injection well must also comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC.

S4. MONITORING REQUIREMENTS, BENCHMARKS, AND REPORTING TRIGGERS

A. Site Log Book

The Permittee must maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

B. Site Inspections

Construction sites one (1) acre or larger that discharge stormwater to surface waters of the State must have site inspections conducted by a Certified Erosion and Sediment Control Lead (CESCL). Sites less than one (1) acre may have a person without CESCL certification conduct inspections. (See Special Conditions S4.B.3 and B.4, below, for detailed requirements of the Permittee's CESCL.)

Site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points under the Permittee's operational control.

1. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL (sites one acre or more) or inspector (sites less than one acre) must have the skills to assess the:
 - a. Site conditions and construction activities that could impact the quality of stormwater; and
 - b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. The SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times. The CESCL (sites one (1) acre or more) must obtain this certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology. (See BMP C160 in the manual, referred to in Special Condition S9.C.1 and 2.)
2. The CESCL or inspector must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. BMP effectiveness must be evaluated to

determine if it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges.

Based on the results of the inspection, the Permittee must correct the problems identified, by:

- a. Reviewing the SWPPP for compliance with Special Condition S9 and making appropriate revisions within 7 days of the inspection.
 - b. Immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs, within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.
 - c. Documenting BMP implementation and maintenance in the site log book.
3. The CESCL or inspector must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one (1) day do not require daily inspections. For example, if a stormwater pond discharges continuously over the course of a week, only one (1) inspection is required that week.) Inspection frequency may be reduced to once every calendar month for inactive sites that are temporarily stabilized.
4. The Permittee must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. At a minimum, each inspection report or checklist must include:
 - a. Inspection date and time.
 - b. Weather information.
 - c. The general conditions during inspection.
 - d. The approximate amount of precipitation since the last inspection.
 - e. The approximate amount of precipitation within the last 24 hours.
 - f. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.
 - g. A description of:
 - i. BMPs inspected (including location).
 - ii. BMPs that need maintenance and why.
 - iii. BMPs that failed to operate as designed or intended, and
 - iv. Where additional or different BMPs are needed, and why.
 - h. A description of stormwater discharged from the site. The Permittee must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.

- i. Any water quality monitoring performed during inspection.
- j. General comments and notes, including a brief description of any BMP repairs, maintenance, or installations made following the inspection.
- k. An implementation schedule for the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the SWPPP and the permit.
- l. A summary report of the inspection.
- m. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement:
I certify that this report is true, accurate, and complete to the best of my knowledge and belief.

Table 3 Summary of Primary Monitoring Requirements

Size of Soil Disturbance ¹	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling ²	CESCL Required for Inspections?
Sites that disturb less than 1 acre, but are part of a larger Common Plan of Development	Required	Not Required	Not Required	Not Required	No
Sites that disturb 1 acre or more, but fewer than 5 acres	Required	Sampling Required – either method ³		Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required ⁴	Required	Yes

¹ Soil disturbance is calculated by adding together all areas that will be affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

² If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of concrete or recycled concrete placed or poured over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer stormwater collection system that drains to other surface waters of the State, the Permittee must conduct pH sampling in accordance with Special Condition S4.D.

³ Sites with one or more acres, but fewer than 5 acres of soil disturbance, must conduct turbidity or transparency sampling in accordance with Special Condition S4.C.4.a or b.

⁴ Sites equal to or greater than 5 acres of soil disturbance must conduct turbidity sampling using a turbidity meter in accordance with Special Condition S4.C.4.a.

C. Turbidity/Transparency Sampling Requirements

1. Sampling Methods

- a. If construction activity involves the disturbance of five (5) acres or more, the Permittee must conduct turbidity sampling per Special Condition S4.C.4.a, below.
- b. If construction activity involves one (1) acre or more but fewer than five (5) acres of soil disturbance, the Permittee must conduct either transparency sampling *or* turbidity sampling per Special Condition S4.C.4.a or b, below.

2. Sampling Frequency

- a. The Permittee must sample all discharge points at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state (for example, a creek running through a site); sampling is not required on sites that disturb less than an acre.
- b. Samples must be representative of the flow and characteristics of the discharge.
- c. Sampling is not required when there is no discharge during a calendar week.
- d. Sampling is not required outside of normal working hours or during unsafe conditions.
- e. If the Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly Discharge Monitoring Report (DMR).
- f. Sampling is not required before construction activity begins.
- g. The Permittee may reduce the sampling frequency for temporarily stabilized, inactive sites to once every calendar month.

3. Sampling Locations

- a. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state (for example, a creek running through a site).
- b. The Permittee may discontinue sampling at discharge points that drain areas of the project that are fully stabilized to prevent erosion.
- c. The Permittee must identify all sampling point(s) in the SWPPP and on the site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.
- d. Sampling is not required for discharge that is sent directly to sanitary or combined sewer systems.
- e. The Permittee may discontinue sampling at discharge points in areas of the project where the Permittee no longer has operational control of the construction activity.

4. Sampling and Analysis Methods

- a. The Permittee performs turbidity analysis with a calibrated turbidity meter (turbidimeter) either on site or at an accredited lab. The Permittee must record the results in the site log book in nephelometric turbidity units (NTUs).
- b. The Permittee performs transparency analysis on site with a 1¾ inch diameter, 60 centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm).

Table 4 Monitoring and Reporting Requirements

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value
Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs
Transparency	Cm	Manufacturer instructions, or Ecology guidance	Weekly, if discharging	33 cm

5. Turbidity/Transparency Benchmark Values and Reporting Triggers

The benchmark value for turbidity is 25 NTUs. The benchmark value for transparency is 33 centimeters (cm). Note: Benchmark values do not apply to discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus; these discharges are subject to a numeric effluent limit for turbidity. Refer to Special Condition S8 for more information and follow S5.F – Noncompliance Notification for reporting requirements applicable to discharges which exceed the numeric effluent limit for turbidity.

- a. Turbidity 26 – 249 NTUs, or Transparency 32 – 7 cm:

If the discharge turbidity is 26 to 249 NTUs; or if discharge transparency is 32 to 7 cm, the Permittee must:

- i. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs, and no later than 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
- ii. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
- iii. Document BMP implementation and maintenance in the site log book.

- b. Turbidity 250 NTUs or greater, or Transparency 6 cm or less:

If a discharge point's turbidity is 250 NTUs or greater, or if discharge transparency is less than or equal to 6 cm, the Permittee must complete the reporting and adaptive

management process described below. For discharges which are subject to a numeric effluent limit for turbidity, see S5.F – Noncompliance Notification.

- i. Within 24 hours, telephone or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) number (or through Ecology's Water Quality Permitting Portal [WQWebPortal] – Permit Submittals when the form is available), in accordance with Special Condition S5.A.
 - **Central Region** (Okanogan, Chelan, Douglas, Kittitas, Yakima, Klickitat, Benton): (509) 575-2490
 - **Eastern Region** (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400
 - **Northwest Region** (Kitsap, Snohomish, Island, King, San Juan, Skagit, Whatcom): (425) 649-7000
 - **Southwest Region** (Grays Harbor, Lewis, Mason, Thurston, Pierce, Clark, Cowlitz, Skamania, Wahkiakum, Clallam, Jefferson, Pacific): (360) 407-6300

These numbers and a link to the ERTS reporting page are also listed at the following website: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>.

- ii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
- iii. Sample discharges daily until:
 - a) Turbidity is 25 NTUs (or lower); or
 - b) Transparency is 33 cm (or greater); or
 - c) The Permittee has demonstrated compliance with the water quality standard for turbidity:
 - 1) No more than 5 NTUs over background turbidity, if background is less than 50 NTUs, or
 - 2) No more than 10% over background turbidity, if background is 50 NTUs or greater; or

*Note: background turbidity in the receiving water must be measured immediately upstream (upgradient) or outside of the area of influence of the discharge.
 - d) The discharge stops or is eliminated.
- iv. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within seven (7) days of the date the discharge exceeded the benchmark.

- v. Document BMP implementation and maintenance in the site log book.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with permit benchmarks.

D. pH Sampling Requirements – Significant Concrete Work or Engineered Soils

If construction activity results in the disturbance of 1 acre or more, *and* involves significant concrete work (significant concrete work means greater than 1000 cubic yards placed or poured concrete or recycled concrete used over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer system that drains to surface waters of the State, the Permittee must conduct pH sampling as set forth below. Note: In addition, discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for high pH are subject to a numeric effluent limit for pH; refer to Special Condition S8.

1. The Permittee must perform pH analysis on site with a calibrated pH meter, pH test kit, or wide range pH indicator paper. The Permittee must record pH sampling results in the site log book.
2. During the applicable pH monitoring period defined below, the Permittee must obtain a representative sample of stormwater and conduct pH analysis at least once per week.
 - a. For sites with significant concrete work, the Permittee must begin the pH sampling period when the concrete is first placed or poured and exposed to precipitation, and continue weekly throughout and after the concrete placement, pour and curing period, until stormwater pH is in the range of 6.5 to 8.5 (su).
 - b. For sites with recycled concrete where monitoring is required, the Permittee must begin the weekly pH sampling period when the recycled concrete is first exposed to precipitation and must continue until the recycled concrete is fully stabilized with the stormwater pH in the range of 6.5 to 8.5 (su).
 - c. For sites with engineered soils, the Permittee must begin the pH sampling period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.
3. The Permittee must sample pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.
4. The benchmark value for pH is 8.5 standard units. Anytime sampling indicates that pH is 8.5 or greater, the Permittee must either:
 - a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters of the state; *or*
 - b. If necessary, adjust or neutralize the high pH water until it is in the range of pH 6.5 to 8.5 (su) using an appropriate treatment BMP such as carbon dioxide (CO₂) sparging, dry ice or food grade vinegar. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO₂ sparging, dry ice or food grade vinegar.

S5. REPORTING AND RECORDKEEPING REQUIREMENTS

A. High Turbidity Reporting

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTUs or more (or transparency less than or equal to 6 cm), high turbidity reporting level, the Permittee must notify Ecology within 24 hours of analysis either by calling the applicable Ecology Region's Environmental Report Tracking System (ERTS) number by phone or by submitting an electronic ERTS report (through Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals when the form is available). See the CSWGP website for links to ERTS and the WQWebPortal. (<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>) Also, see phone numbers in Special Condition S4.C.5.b.i.

B. Discharge Monitoring Reports (DMRs)

Permittees required to conduct water quality sampling in accordance with Special Conditions S4.C (Turbidity/Transparency), S4.D (pH), S8 (303[d]/TMDL sampling), and/or G12 (Additional Sampling) must submit the results to Ecology.

Permittees must submit monitoring data using Ecology's WQWebDMR web application accessed through Ecology's Water Quality Permitting Portal.

Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR at:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

Permittees who obtain a waiver not to use WQWebDMR must use the forms provided to them by Ecology; submittals must be mailed to the address above. Permittees must submit DMR forms to be received by Ecology within 15 days following the end of each month.

If there was no discharge during a given monitoring period, all Permittees must submit a DMR as required with "no discharge" entered in place of the monitoring results. DMRs are required for the full duration of permit coverage (from the first full month following the effective date of permit coverage up until Ecology has approved termination of the coverage). For more information, contact Ecology staff using information provided at the following website: www.ecy.wa.gov/programs/wq/permits/paris/contacts.html.

C. Records Retention

The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, copy of the permit coverage letter (including Transfer of Coverage documentation) and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of five (5) years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this permit. This period of retention must be extended during

the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

D. Recording Results

For each measurement or sample taken, the Permittee must record the following information:

1. Date, place, method, and time of sampling or measurement.
2. The first and last name of the individual who performed the sampling or measurement.
3. The date(s) the analyses were performed.
4. The first and last name of the individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

E. Additional Monitoring by the Permittee

If the Permittee samples or monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S4 of this permit, the sampling results for this monitoring must be included in the calculation and reporting of the data submitted in the Permittee's DMR.

F. Noncompliance Notification

In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment (such as but not limited to spills or fuels or other materials, catastrophic pond or slope failure, and discharges that violate water quality standards), or exceed numeric effluent limitations (see S8 – Discharges to 303(d) or TMDL Waterbodies), the Permittee must, upon becoming aware of the circumstance:

1. Notify Ecology within 24 hours of the failure to comply by calling the applicable Regional office ERTS phone number (refer to Special Condition S4.C.5.b.i, or go to <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue> to find contact information for the regional offices.)
2. Immediately take action to prevent the discharge/pollution, or otherwise stop or correct the noncompliance, and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to Ecology within five (5) days of becoming aware of the violation (See S5.F.3, below, for details on submitting results in a report).
3. Submit a detailed written report to Ecology within five (5) days of the time the Permittee becomes aware of the circumstances, unless requested earlier by Ecology. The report must be submitted using Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals, unless a waiver from electronic reporting has been granted according to S5.B. The report must contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Permittee must report any unanticipated bypass and/or upset that exceeds any effluent limit in the permit in accordance with the 24-hour reporting requirement contained in 40 C.F.R. 122.41(l)(6).

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Upon request of the Permittee, Ecology may waive the requirement for a written report on a case-by-case basis, if the immediate notification is received by Ecology within 24 hours.

G. Access to Plans and Records

1. The Permittee must retain the following permit documentation (plans and records) on site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology or the local jurisdiction:
 - a. General Permit
 - b. Permit Coverage Letter
 - c. Stormwater Pollution Prevention Plan (SWPPP)
 - d. Site Log Book
 - e. Erosivity Waiver (if applicable)
2. The Permittee must address written requests for plans and records listed above (Special Condition S5.G.1) as follows:
 - a. The Permittee must provide a copy of plans and records to Ecology within 14 days of receipt of a written request from Ecology.
 - b. The Permittee must provide a copy of plans and records to the public when requested in writing. Upon receiving a written request from the public for the Permittee's plans and records, the Permittee must either:
 - i. Provide a copy of the plans and records to the requester within 14 days of a receipt of the written request; *or*
 - ii. Notify the requester within 10 days of receipt of the written request of the location and times within normal business hours when the plans and records may be viewed; and provide access to the plans and records within 14 days of receipt of the written request; *or*

Within 14 days of receipt of the written request, the Permittee may submit a copy of the plans and records to Ecology for viewing and/or copying by the requester at an Ecology office, or a mutually agreed location. If plans and records are viewed and/or copied at a location other than at an Ecology office, the Permittee will provide reasonable access to copying services for which a reasonable fee may be charged. The Permittee must notify the requester within 10 days of receipt of the request where the plans and records may be viewed and/or copied.

S6. PERMIT FEES

The Permittee must pay permit fees assessed by Ecology. Fees for stormwater discharges covered under this permit are established by Chapter 173-224 WAC. Ecology continues to assess permit fees until the permit is terminated in accordance with Special Condition S10 or revoked in accordance with General Condition G5.

S7. SOLID AND LIQUID WASTE DISPOSAL

The Permittee must handle and dispose of solid and liquid wastes generated by construction activity, such as demolition debris, construction materials, contaminated materials, and waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, in accordance with:

- A. Special Condition S3, Compliance with Standards.
- B. WAC 173-216-110.
- C. Other applicable regulations.

S8. DISCHARGES TO 303(d) OR TMDL WATERBODIES

A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-Listed Water Bodies

1. Permittees who discharge to segments of water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, must conduct water quality sampling according to the requirements of this section, and Special Conditions S4.C.2.b-f and S4.C.3.b-d, and must comply with the applicable numeric effluent limitations in S8.C and S8.D.
2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters (Category 5) that exists on January 1, 2021, or the date when the operator's complete permit application is received by Ecology, whichever is later.

B. Limits on Coverage for New Discharges to TMDL or 303(d)-Listed Waters

Construction sites that discharge to a TMDL or 303(d)-listed waterbody are not eligible for coverage under this permit *unless* the operator:

1. Prevents exposing stormwater to pollutants for which the waterbody is impaired, and retains documentation in the SWPPP that details procedures taken to prevent exposure on site; *or*
2. Documents that the pollutants for which the waterbody is impaired are not present at the site, and retains documentation of this finding within the SWPPP; *or*
3. Provides Ecology with data indicating the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data on site with the SWPPP. The operator must provide data and other technical information to Ecology that sufficiently demonstrate:
 - a. For discharges to waters without an EPA-approved or -established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; *or*
 - b. For discharges to waters with an EPA-approved or -established TMDL, that there is sufficient remaining wasteload allocation in the TMDL to allow construction stormwater discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

Operators of construction sites are eligible for coverage under this permit only after Ecology makes an affirmative determination that the *discharge will not cause or contribute to the existing impairment or exceed the TMDL*.

C. Sampling and Numeric Effluent Limits for Discharges to Water Bodies on the 303(d) List for Turbidity, Fine Sediment, or Phosphorus

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus must conduct turbidity sampling in accordance with Special Condition S4.C.2 and comply with either of the numeric effluent limits noted in Table 5 below.
2. As an alternative to the 25 NTUs effluent limit noted in Table 5 below (applied at the point where stormwater [or authorized non-stormwater] is discharged off-site), Permittees may choose to comply with the surface water quality standard for turbidity. The standard is: no more than 5 NTUs over background turbidity when the background turbidity is 50 NTUs or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTUs. In order to use the water quality standard requirement, the sampling must take place at the following locations:
 - a. Background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge.
 - b. Turbidity at the point of discharge into the 303(d)-listed receiving water, inside the area of influence of the discharge.
3. Discharges that exceed the numeric effluent limit for turbidity constitute a violation of this permit.
4. Permittees whose discharges exceed the numeric effluent limit must sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

Table 5 Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled	Unit	Analytical Method	Sampling Frequency	Numeric Effluent Limit ¹
- Turbidity - Fine Sediment - Phosphorus	Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs, at the point where stormwater is discharged from the site; OR In compliance with the surface water quality standard for turbidity (S8.C.2.a)

¹ Permittees subject to a numeric effluent limit for turbidity may, at their discretion, choose either numeric effluent limitation based on site-specific considerations including, but not limited to, safety, access and convenience.

D. Discharges to Water Bodies on the 303(d) List for High pH

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for high pH must conduct pH sampling in accordance with the table below, and comply with the numeric effluent limit of pH 6.5 to 8.5 su (Table 6).

Table 6 pH Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled/Units	Analytical Method	Sampling Frequency	Numeric Effluent Limit
High pH	pH /Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5 su

2. At the Permittee's discretion, compliance with the limit shall be assessed at one of the following locations:
 - a. Directly in the 303(d)-listed waterbody segment, inside the immediate area of influence of the discharge; *or*
 - b. Alternatively, the Permittee may measure pH at the point where the discharge leaves the construction site, rather than in the receiving water.
3. Discharges that exceed the numeric effluent limit for pH (outside the range of 6.5 – 8.5 su) constitute a violation of this permit.
4. Permittees whose discharges exceed the numeric effluent limit must sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

E. Sampling and Limits for Sites Discharging to Waters Covered by a TMDL or another Pollution Control Plan

1. Discharges to a waterbody that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL. Refer to <http://www.ecy.wa.gov/programs/wq/tmdl/TMDLsbyWria/TMDLbyWria.html> for more information on TMDLs.
 - a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges must be consistent with any specific waste load allocations or requirements established by the applicable TMDL.
 - i. The Permittee must sample discharges weekly, unless otherwise specified by the TMDL, to evaluate compliance with the specific waste load allocations or requirements.
 - ii. Analytical methods used to meet the monitoring requirements must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136.
 - iii. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.
 - b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but has not identified specific requirements, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.
 - c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.
 - d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.

S9. STORMWATER POLLUTION PREVENTION PLAN

The Permittee must prepare and properly implement an adequate Stormwater Pollution Prevention Plan (SWPPP) for construction activity in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

A. The Permittee's SWPPP must meet the following objectives:

1. To identify best management practices (BMPs) which prevent erosion and sedimentation, and to reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.
2. To prevent violations of surface water quality, groundwater quality, or sediment management standards.
3. To control peak volumetric flow rates and velocities of stormwater discharges.

B. General Requirements

1. The SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:
 - a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).
 - b. Potential erosion problem areas.
 - c. The 13 elements of a SWPPP in Special Condition S9.D.1-13, including BMPs used to address each element.
 - d. Construction phasing/sequence and general BMP implementation schedule.
 - e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.
 - f. Engineering calculations for ponds, treatment systems, and any other designed structures. When a treatment system requires engineering calculations, these calculations must be included in the SWPPP. Engineering calculations do not need to be included in the SWPPP for treatment systems that do not require such calculations.
2. The Permittee must modify the SWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:
 - a. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the inspection or investigation.
 - b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.
 - c. Document BMP implementation and maintenance in the site log book.

The Permittee must modify the SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

C. Stormwater Best Management Practices (BMPs)

BMPs must be consistent with:

1. *Stormwater Management Manual for Western Washington* (most current approved edition at the time this permit was issued), for sites west of the crest of the Cascade Mountains; *or*

2. *Stormwater Management Manual for Eastern Washington* (most current approved edition at the time this permit was issued), for sites east of the crest of the Cascade Mountains; *or*
3. Revisions to the manuals listed in Special Condition S9.C.1 & 2, or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230; *or*
4. Documentation in the SWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable stormwater management manuals, including:
 - a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.
 - b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

D. SWPPP – Narrative Contents and Requirements

The Permittee must include each of the 13 elements below in Special Condition S9.D.1-13 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.

1. Preserve Vegetation/Mark Clearing Limits
 - a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.
 - b. Retain the duff layer, native topsoil, and natural vegetation in an undisturbed state to the maximum degree practicable.
2. Establish Construction Access
 - a. Limit construction vehicle access and exit to one route, if possible.
 - b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads.
 - c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.
 - d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.
 - e. Conduct street washing only after sediment removal in accordance with Special Condition S9.D.2.d.
 - f. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.

3. Control Flow Rates

- a. Protect properties and waterways downstream of construction sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.
- b. Where necessary to comply with Special Condition S9.D.3.a, construct stormwater infiltration or detention BMPs as one of the first steps in grading. Assure that detention BMPs function properly before constructing site improvements (for example, impervious surfaces).
- c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from sedimentation during the construction phase.

4. Install Sediment Controls

The Permittee must design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must:

- a. Construct sediment control BMPs (sediment ponds, traps, filters, infiltration facilities, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.
- b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.
- c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Special Condition S9.D.3.a.
- d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
- e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.
- f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

5. Stabilize Soils

- a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion

control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

- b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.
- c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.
- d. Depending on the geographic location of the project, the Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion.

West of the Cascade Mountains Crest

During the dry season (May 1 - September 30): 7 days

During the wet season (October 1 - April 30): 2 days

East of the Cascade Mountains Crest, except for Central Basin*

During the dry season (July 1 - September 30): 10 days

During the wet season (October 1 - June 30): 5 days

The Central Basin*, East of the Cascade Mountains Crest

During the dry Season (July 1 - September 30): 30 days

During the wet season (October 1 - June 30): 15 days

***Note: The Central Basin** is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

- e. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.
- f. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.
- g. The Permittee must minimize the amount of soil exposed during construction activity.
- h. The Permittee must minimize the disturbance of steep slopes.
- i. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.

6. Protect Slopes

- a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).
- b. The Permittee must divert off-site stormwater (run-on) or groundwater away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
- c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.

- i. West of the Cascade Mountains Crest: Temporary pipe slope drains must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."
 - ii. East of the Cascade Mountains Crest: Temporary pipe slope drains must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.
- d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.
- e. Place check dams at regular intervals within constructed channels that are cut down a slope.
- 7. Protect Drain Inlets
 - a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
 - b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
- 8. Stabilize Channels and Outlets
 - a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:
 - i. West of the Cascade Mountains Crest: Channels must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "landscaped area."
 - ii. East of the Cascade Mountains Crest: Channels must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.
 - b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the outlets of all conveyance systems.

9. Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

- a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.
- b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. Minimize storage of hazardous materials on-site. Safety Data Sheets (SDS) should be supplied for all materials stored. Chemicals should be kept in their original labeled containers. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume of the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.
- c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.
- d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application, or to the sanitary sewer with local sewer district approval.
- e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.
- f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, recycled concrete stockpiles, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters. (Also refer to the definition for "concrete wastewater" in Appendix A – Definitions.)
- g. Adjust the pH of stormwater or authorized non-stormwater if necessary to prevent an exceedance of groundwater and/or surface water quality standards.
- h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete truck drums onto the ground, or into storm drains, open ditches, streets, or streams. Washout of small concrete handling equipment may be disposed of in a formed area awaiting concrete where it will not contaminate surface or groundwater. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge directly to groundwater or surface waters of the State is

prohibited. At no time shall concrete be washed off into the footprint of an area where an infiltration BMP will be installed.

- i. Obtain written approval from Ecology before using any chemical treatment, with the exception of CO₂, dry ice or food grade vinegar, to adjust pH.
- j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).

10. Control Dewatering

- a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, in conjunction with BMPs to reduce sedimentation before discharge to a sediment trap or sediment pond.
- b. Permittees may discharge clean, non-turbid dewatering water, such as well-point groundwater, to systems tributary to, or directly into surface waters of the State, as specified in Special Condition S9.D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that “surface waters of the State” may exist on a construction site as well as off site; for example, a creek running through a site.
- c. Other dewatering treatment or disposal options may include:
 - i. Infiltration
 - ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.
 - iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies (See S9.D.9.i, regarding chemical treatment written approval).
 - iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.
 - v. Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.
- d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

11. Maintain BMPs

- a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project

- a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.
- b. Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S4.
- c. Maintain, update, and implement the SWPPP in accordance with Special Conditions S3, S4, and S9.

13. Protect Low Impact Development (LID) BMPs

The primary purpose of on-site LID Stormwater Management is to reduce the disruption of the natural site hydrology through infiltration. LID BMPs are permanent facilities.

- a. Permittees must protect all LID BMPs (including, but not limited to, Bioretention and Rain Garden facilities) from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden facilities. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the facility must include removal of sediment and any sediment-laden bioretention/ rain garden soils, and replacing the removed soils with soils meeting the design specification.
- b. Permittees must maintain the infiltration capabilities of LID BMPs by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.
- c. Permittees must control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements or base materials.
- d. Permittees must clean permeable pavements fouled with sediments or no longer passing an initial infiltration test using local stormwater manual methodology or the manufacturer's procedures.
- e. Permittees must keep all heavy equipment off existing soils under LID BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

E. SWPPP – Map Contents and Requirements

The Permittee's SWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The SWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions.

1. The direction of north, property lines, and existing structures and roads.
2. Cut and fill slopes indicating the top and bottom of slope catch lines.

3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.
4. Areas of soil disturbance and areas that will not be disturbed.
5. Locations of structural and nonstructural controls (BMPs) identified in the SWPPP.
6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.
7. Locations of all surface water bodies, including wetlands.
8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface waterbody, including wetlands.
9. Location of water quality sampling station(s), if sampling is required by state or local permitting authority.
10. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
11. Location or proposed location of LID facilities.

S10. NOTICE OF TERMINATION

Partial terminations of permit coverage are not authorized.

A. The site is eligible for termination of coverage when it has met any of the following conditions:

1. The site has undergone final stabilization, the Permittee has removed all temporary BMPs (except biodegradable BMPs clearly manufactured with the intention for the material to be left in place and not interfere with maintenance or land use), and all stormwater discharges associated with construction activity have been eliminated; *or*
2. All portions of the site that have not undergone final stabilization per Special Condition S10.A.1 have been sold and/or transferred (per Special Condition S2.A), and the Permittee no longer has operational control of the construction activity; *or*
3. For residential construction only, the Permittee has completed temporary stabilization and the homeowners have taken possession of the residences.

B. When the site is eligible for termination, the Permittee must submit a complete and accurate Notice of Termination (NOT) form, signed in accordance with General Condition G2, to:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

When an electronic termination form is available, the Permittee may choose to submit a complete and accurate Notice of Termination (NOT) form through the Water Quality Permitting Portal rather than mailing a hardcopy as noted above.

The termination is effective on the 31st calendar day following the date Ecology receives a complete NOT form, unless Ecology notifies the Permittee that termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees are required to comply with all conditions and effluent limitations in the permit until the permit has been terminated.

Permittees transferring the property to a new property owner or operator/Permittee are required to complete and submit the Notice of Transfer form to Ecology, but are not required to submit a Notice of Termination form for this type of transaction.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the general permit must constitute a violation of the terms and conditions of this permit.

G2. SIGNATORY REQUIREMENTS

- A. All permit applications must bear a certification of correctness to be signed:
 - 1. In the case of corporations, by a responsible corporate officer.
 - 2. In the case of a partnership, by a general partner of a partnership.
 - 3. In the case of sole proprietorship, by the proprietor.
 - 4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.
- B. All reports required by this permit and other information requested by Ecology (including NOIs, NOTs, and Transfer of Coverage forms) must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to Ecology.
 - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.
- C. Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section must make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G3. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

- A.** To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.
- B.** To have access to and copy, at reasonable times and at reasonable cost, any records required to be kept under the terms and conditions of this permit.
- C.** To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D.** To sample or monitor, at reasonable times, any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G4. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

- A.** When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.
- B.** When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.
- C.** When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, or
- D.** When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G5. REVOCATION OF COVERAGE UNDER THE PERMIT

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the Director may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

- A.** Violation of any term or condition of this permit.
- B.** Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.
- C.** A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- D.** Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
- E.** A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
- F.** Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.

- G.** Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

The Director may require any discharger under this permit to apply for and obtain coverage under an individual permit or another more specific general permit. Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

G6. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application, or a supplement to the previous application, whenever a material change to the construction activity or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least sixty (60) days prior to any proposed changes. Filing a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G7. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G8. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit. The Permittee must reapply using the electronic application form (NOI) available on Ecology's website. Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper NOI.

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

G9. REMOVED SUBSTANCE

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G11. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment at the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G14. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Special Condition S5.F, and; 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G15. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G16. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G17. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G18. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than \$20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

G19. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, give notice to Ecology of planned physical alterations, modifications or additions to the permitted construction activity. The Permittee should be aware that, depending on the nature and size of the changes to the original permit, a new public notice and other permit process requirements may be required. Changes in activities that require reporting to Ecology include those that will result in:

- A.** The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).
- B.** A significant change in the nature or an increase in quantity of pollutants discharged, including but not limited to: a 20% or greater increase in acreage disturbed by construction activity.
- C.** A change in or addition of surface water(s) receiving stormwater or non-stormwater from the construction activity.
- D.** A change in the construction plans and/or activity that affects the Permittee's monitoring requirements in Special Condition S4.

Following such notice, permit coverage may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G20. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

G21. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least forty-five (45) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of

operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

G22. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER THE PERMIT

Any discharger authorized by this permit may request to be excluded from coverage under the general permit by applying for an individual permit. The discharger must submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons will fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director will either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to the construction stormwater general permit, the applicability of the construction stormwater general permit to that Permittee is automatically terminated on the effective date of the individual permit.

G23. APPEALS

- A.** The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.
- B.** The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.
- C.** The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G24. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

G25. BYPASS PROHIBITED

A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater events below the design criteria for stormwater management. Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, 3 or 4) is applicable.

- 1. Bypass of stormwater is consistent with the design criteria and part of an approved management practice in the applicable stormwater management manual.
- 2. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health.

3. Bypass of stormwater is unavoidable, unanticipated, and results in noncompliance of this permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
 - b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
 - c. Ecology is properly notified of the bypass as required in Special Condition S5.F of this permit.
4. A planned action that would cause bypass of stormwater and has the potential to result in noncompliance of this permit during a storm event.

The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

- a. A description of the bypass and its cause
 - b. An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
 - c. A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
 - d. The minimum and maximum duration of bypass under each alternative.
 - e. A recommendation as to the preferred alternative for conducting the bypass.
 - f. The projected date of bypass initiation.
 - g. A statement of compliance with SEPA.
 - h. A request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated.
 - i. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.
5. For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above must be considered during

preparation of the Stormwater Pollution Prevention Plan (SWPPP) and must be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

Ecology will consider the following before issuing an administrative order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve, conditionally approve, or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

APPENDIX A – DEFINITIONS

AKART is an acronym for “**All Known, Available, and Reasonable** methods of prevention, control, and Treatment.” AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge.

Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which was completed and approved by EPA before January 1, 2021, or before the date the operator’s complete permit application is received by Ecology, whichever is later. TMDLs completed after a complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

Applicant means an *operator* seeking coverage under this permit.

Benchmark means a pollutant concentration used as a permit threshold, below which a pollutant is considered unlikely to cause a water quality violation, and above which it may. When pollutant concentrations exceed benchmarks, corrective action requirements take effect. Benchmark values are not water quality standards and are not numeric effluent limitations; they are indicator values.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control stormwater associated with construction activity, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Buffer means an area designated by a local jurisdiction that is contiguous to and intended to protect a sensitive area.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Calendar Day A period of 24 consecutive hours starting at 12:00 midnight and ending the following 12:00 midnight.

Calendar Week (same as **Week**) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

Certified Erosion and Sediment Control Lead (CESCL) means a person who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (See BMP C160 in the SWMM).

Chemical Treatment means the addition of chemicals to stormwater and/or authorized non-stormwater prior to filtration and discharge to surface waters.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Common Plan of Development or Sale means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules and/or by different contractors, but still under a single plan. Examples include: 1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders); 2) a development plan that may be phased over multiple years, but is still under a consistent plan for long-term development; 3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility; and 4) linear projects such as roads, pipelines, or utilities. If the project is part of a common plan of development or sale, the disturbed area of the entire plan must be used in determining permit requirements.

Composite Sample means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots).

Concrete Wastewater means any water used in the production, pouring and/or clean-up of concrete or concrete products, and any water used to cut, grind, wash, or otherwise modify concrete or concrete products. Examples include water used for or resulting from concrete truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and road surfacing). When stormwater combines with concrete wastewater, the resulting water is considered concrete wastewater and must be managed to prevent discharge to waters of the State, including groundwater.

Construction Activity means land disturbing operations including clearing, grading or excavation which disturbs the surface of the land (including off-site disturbance acreage related to construction-support activity). Such activities may include road construction, construction of residential houses, office buildings, or industrial buildings, site preparation, soil compaction, movement and stockpiling of topsoils, and demolition activity.

Construction Support Activity means off-site acreage that will be disturbed as a direct result of the construction project and will discharge stormwater. For example, off-site equipment staging yards, material storage areas, borrow areas, and parking areas.

Contaminant means any hazardous substance that does not occur naturally or occurs at greater than natural background levels. See definition of "hazardous substance" and WAC 173-340-200.

Contaminated soil means soil which contains contaminants, pollutants, or hazardous substances that do not occur naturally or occur at levels greater than natural background.

Contaminated groundwater means groundwater which contains contaminants, pollutants, or hazardous substances that do not occur naturally or occur at levels greater than natural background.

Demonstrably Equivalent means that the technical basis for the selection of all stormwater BMPs is documented within a SWPPP, including:

1. The method and reasons for choosing the stormwater BMPs selected.
2. The pollutant removal performance expected from the BMPs selected.

3. The technical basis supporting the performance claims for the BMPs selected, including any available data concerning field performance of the BMPs selected.
4. An assessment of how the selected BMPs will comply with state water quality standards.
5. An assessment of how the selected BMPs will satisfy both applicable federal technology-based treatment requirements and state requirements to use all known, available, and reasonable methods of prevention, control, and treatment (AKART).

Department means the Washington State Department of Ecology.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Dewatering means the act of pumping groundwater or stormwater away from an active construction site.

Director means the Director of the Washington State Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration or surface waters as may be present.

Ecology means the Washington State Department of Ecology.

Engineered Soils means the use of soil amendments including, but not limited, to Portland cement treated base (CTB), cement kiln dust (CKD), or fly ash to achieve certain desirable soil characteristics.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to groundwater than BMPs selected from the SWMM.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, sediment traps, and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Federal Operator is an entity that meets the definition of "Operator" in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

Final Stabilization (same as **fully stabilized** or **full stabilization**) means the completion of all soil disturbing activities at the site and the establishment of permanent vegetative cover, or equivalent permanent stabilization measures (such as pavement, riprap, gabions, or geotextiles) which will prevent erosion. See the applicable Stormwater Management Manual for more information on vegetative cover expectations and equivalent permanent stabilization measures.

Groundwater means water in a saturated zone or stratum beneath the land surface or a surface waterbody.

Hazardous Substance means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous sub-stance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director by rule to present a threat to human health or the environment if released into the environment. The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

Injection Well means a well that is used for the subsurface emplacement of fluids. (See **Well**.)

Jurisdiction means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington State Department of Ecology.

Notice of Intent (NOI) means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

Notice of Termination (NOT) means a request for termination of coverage under this general permit as specified by Special Condition S10 of this permit.

Operator means any party associated with a construction project that meets either of the following two criteria:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

Permittee means individual or entity that receives notice of coverage under this general permit.

pH means a liquid's measure of acidity or alkalinity. A pH of 7 is defined as neutral. Large variations above or below this value are considered harmful to most aquatic life.

pH Monitoring Period means the time period in which the pH of stormwater runoff from a site must be tested a minimum of once every seven days to determine if stormwater pH is between 6.5 and 8.5.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture. (See the Fact Sheet for further explanation)

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill material discharged in accordance with a permit issued under section 404 of the CWA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process Wastewater means any non-stormwater which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. If stormwater commingles with process wastewater, the commingled water is considered process wastewater.

Receiving Water means the waterbody at the point of discharge. If the discharge is to a storm sewer system, either surface or subsurface, the receiving water is the waterbody to which the storm system discharges. Systems designed primarily for other purposes such as for groundwater drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey stormwater are considered the receiving water.

Representative means a stormwater or wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate *composite sample*, or a flow proportionate sample. Ecology's Construction Stormwater Monitoring Manual provides guidance on representative sampling.

Responsible Corporate Officer for the purpose of signatory authority means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Sanitary Sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

Sensitive Area means a waterbody, wetland, stream, aquifer recharge area, or channel migration zone.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a reasonable potential to cause a violation of surface or groundwater quality or sediment management standards.

Significant Concrete Work means greater than 1000 cubic yards placed or poured concrete or recycled concrete used over the life of a project.

Significant Contributor of Pollutants means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the State of Washington.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source Control BMPs means physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as, temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

Storm Drain means any drain which drains directly into a *storm sewer system*, usually found along roadways or in parking lots.

Storm Sewer System means a means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains designed or used for collecting or conveying stormwater. This does not include systems which are part of a *combined sewer* or Publicly Owned Treatment Works (POTW), as defined at 40 CFR 122.2.

Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface waterbody, or a constructed infiltration facility.

Stormwater Management Manual (SWMM) or Manual means the technical Manual published by Ecology for use by local governments that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Temporary Stabilization means the exposed ground surface has been covered with appropriate materials to provide temporary stabilization of the surface from water or wind erosion. Materials include, but are not limited to, mulch, riprap, erosion control mats or blankets and temporary cover crops. Seeding alone is not considered stabilization. Temporary stabilization is not a substitute for the more permanent “final stabilization.”

Total Maximum Daily Load (TMDL) means a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the waterbody can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation must also account for seasonable variation in water quality.

Transfer of Coverage (TOC) means a request for transfer of coverage under this general permit as specified by Special Condition S2.A of this permit.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

Transparency means a measurement of water clarity in centimeters (cm), using a 60 cm transparency tube. The transparency tube is used to estimate the relative clarity or transparency of water by noting the depth at which a black and white Secchi disc becomes visible when water is released from a value in the bottom of the tube. A transparency tube is sometimes referred to as a “turbidity tube.”

Turbidity means the clarity of water expressed as nephelometric turbidity units (NTUs) and measured with a calibrated turbidimeter.

Uncontaminated means free from any contaminant. See definition of “contaminant” and WAC 173-340-200.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Waste Load Allocation (WLA) means the portion of a receiving water’s loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

Water-Only Based Shaft Drilling is a shaft drilling process that uses water only and no additives are involved in the drilling of shafts for construction of building, road, or bridge foundations.

Water Quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt

waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Well means a bored, drilled or driven shaft, or dug hole whose depth is greater than the largest surface dimension. (See **Injection Well**.)

Wheel Wash Wastewater means any water used in, or resulting from the operation of, a tire bath or wheel wash (BMP C106: Wheel Wash), or other structure or practice that uses water to physically remove mud and debris from vehicles leaving a construction site and prevent track-out onto roads. When stormwater comes in contact with wheel wash wastewater, the resulting water is considered wheel wash wastewater and must be managed according to Special Condition S9.D.9.

APPENDIX B – ACRONYMS

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
CFR	Code of Federal Regulations
CKD	Cement Kiln Dust
cm	Centimeters
CPD	Common Plan of Development
CTB	Cement-Treated Base
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
ERTS	Environmental Report Tracking System
ESC	Erosion and Sediment Control
FR	Federal Register
LID	Low Impact Development
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SWMM	Stormwater Management Manual
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USC	United States Code
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality
WWHM	Western Washington Hydrology Model

APPENDIX E

CITY OF TACOMA BUILDING

PERMIT

BLDCN23-0053

APPENDIX F
CITY OF TACOMA/
TACOMA RAIL
RIGHT-of-ENTRY
PERMIT REQUIREMENTS

RIGHT OF ENTRY AGREEMENT APPLICATION

Date: _____

The following specifications for Work within the Rail Corridor are hereby submitted to the City of Tacoma for their review and approval. Work must be described and/or shown on an enclosed drawing. Application requirements must be met within 120 days of the submittal date or it will be cancelled.

A \$1500 Administrative Fee is required to process the Application.

Legal name of company or entity applying: _____

Name(s) & email(s) of person(s) with authority execute Permit: _____

Applicant's Tax ID/SSN: _____

State in which incorporated: _____

If not incorporated, correct name of owners and all partners: _____

Mailing address: _____

Contact person and telephone number: _____

After-hours emergency contact name/telephone number: _____

Location: _____ 1/4, Sec: _____ T: _____ R: _____ MP: _____ to _____

Station: _____

Name of nearest town: _____

Name of nearest road crossing the Railroad: _____

Is it within the limits of a public road/street? _____

If yes, distance from center line of street: _____

Width of road or street: _____

Start and End date of Use: _____

Type of Use: _____

Length of Right of Way Use: _____

Width of Right of Way use: _____

List any Equipment on ROW: _____

Signature: _____

Printed Name & Title: _____

Telephone number and email address: _____

Return to:

psullivan@cityoftacoma.org

or mail to:

Tacoma Public Utilities Real Property Services

3628 South 35th St.

Tacoma, WA 98409

How to Submit Your Application

Each installation requires a Right of Entry to allow their contractor to install the Facility. The Right of Entry requires an application as follows:

Right of Entry Agreement: Allows the owner's contractor to install the Facility in the Rail Corridor. Cost to process the request is **\$1,500** and is good for 1 year.

SITE DRAWINGS

Applications must include drawings, which include plan, profile, photo of the installation area, and an area map depicting the location of the installation.

DESIGN REQUIREMENTS

OVERHEAD

Follow National Electric Safety Code (NESC) - No overhead attachment shall allowed to be located lower than 23.5' above top of rail. If you move other attachments to accommodate your attachment, you can NOT attach lower than 23.5' above top of rail.

UNDERGROUND

Installations must be in steel casing and at a minimum depth of 5.5' below bottom of rail.

CONFIDENTIALITY STATEMENT

All submittals are subject to public disclosure. Proprietary or private information is not protected.

INSURANCE

Facility owner and Contractor (Permittee) must, at its sole cost and expense, procure and maintain during the life of the Permit or Right of Entry (Agreement) provide the following insurance coverages:

*****NOTE** – *Most commonly missed items are the Railroad Protective Liability – see Section d below (highlighted) and including CG2417 which removes any exclusion or other limitation for any work being done within 50 feet of railroad (see highlighted ♦ in (a) below. It is highly recommended to submit your insurance coverage policy immediately with your application as it can take 4-6 weeks to review and work with you to meet the coverage requirements. Work may not start until ROE and insurance are approved.*

(a) **Commercial General Liability Insurance.** This insurance must contain broad form contractual liability with a combined single limit of a minimum of \$1,000,000 each occurrence and an aggregate limit of at least \$2,000,000. Coverage must be purchased on a post 1998 ISO occurrence form or equivalent and include coverage for, but not limited to, the following:

- ♦ Bodily Injury and Property Damage
- ♦ Personal Injury and Advertising Injury

- ◆ Fire legal liability
- ◆ Products and completed operations

This policy must also contain the following endorsements, which must be indicated on the certificate of insurance:

- ◆ The employee and workers compensation related exclusions in the above policy shall not apply with respect to claims related to railroad employees.
- ◆ The removal of any exclusions related to the obligation of the insured under Workers' Compensation, disability benefits, or unemployment compensation law or similar law.
- ◆ The definition of insured contract must be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- ◆ The removal of any exclusions related to the explosion, collapse and underground hazards.

No other endorsements limiting coverage may be included on the policy with regard to the work being performed under this Agreement or otherwise with respect to any obligations under this Agreement.

(b) **Business Automobile Insurance.** This insurance must contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:

- ◆ Bodily injury and property damage
- ◆ Any and all vehicles owned, used or hired

(c) **Workers Compensation and Employers Liability** insurance including coverage for, but not limited to:

- ◆ Permittee's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
- ◆ Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

(d) **Railroad Protective Liability insurance naming Permittee and Railway** as the Insured with coverage of at least \$2,000,000 per occurrence and \$6,000,000 in the aggregate. The policy must be issued on a standard ISO form CG 00 35 10 93 and include the following:

- ◆ Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93)
- ◆ Endorsed to include the Limited Seepage and Pollution Endorsement
- ◆ Endorsed to include Evacuation Expense Coverage Endorsement
- ◆ No other endorsements restricting coverage may be added
- ◆ The original policy must be provided to the Railway prior to performing any work or services under this Agreement

Other Requirements:

Where allowable by law, all policies (applying to coverage listed above) must not contain an exclusion for punitive damages and certificates of insurance must reflect that no exclusion exists.

Permittee agrees to waive its right of recovery against Railway for all claims and suits against Railway. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Railway for all claims and suits. The certificate of insurance must reflect the waiver of subrogation endorsement. Permittee further waives its right of recovery, and

its insurers also waive their right of subrogation against Railway, for loss of its owned or leased property or property under its care, custody or control.

Permittee's insurance policies, through policy endorsement, must include wording which states that the policy will be primary and non-contributing with respect to any insurance carried by Railway. The certificate of insurance must reflect that the above wording is included in evidenced policies.

All policy(ies) required above (excluding Workers Compensation and if applicable, Railroad Protective) must include a severability of interest endorsement and must name Railway as additional insureds with respect to work performed under this agreement. Severability of interest and naming Railway as additional insureds must be indicated on the certificate of insurance.

Permittee is not allowed to self-insure without the prior written consent of Railway. If granted by Railway, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by Permittee in lieu of insurance. Any and all Railway liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by Permittee's insurance will be covered as if Permittee elected not to include a deductible, self-insured retention or other financial responsibility for claims. Such direct coverage by Permittee shall be in an amount equal to the amount of Permittee's actual deductible amount.

Prior to commencing the Work, Permittee must furnish to Railway an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments and referencing the contract audit/folder number if available. The policy(ies) must contain a provision that obligates the insurance company(ies) issuing such policy(ies) to notify Railway in writing at least thirty (30) calendar days' prior to any cancellation, non-renewal, substitution or material alteration. This cancellation provision must be indicated on the certificate of insurance. In the event of a claim or lawsuit involving Railway arising out of this Agreement, Permittee will make available any required policy covering such claim or lawsuit.

Any insurance policy must be written by a reputable insurance company acceptable to Railway or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.

Permittee represents that this Agreement has been thoroughly reviewed by Permittee's insurance agent(s)/broker(s), who have been instructed by Permittee to procure the insurance coverage required by this Agreement. Allocated Loss Expense must be in addition to all policy limits for coverages referenced above.

Not more frequently than once every five years, Railway may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by Permittee, Permittee must require that the subcontractor provide and maintain the insurance coverages set forth herein, naming Railway as an additional insured, and requiring that the subcontractor release, defend and indemnify Railway to the same extent and under the same terms and conditions as Permittee is required to release, defend and indemnify Railway herein.

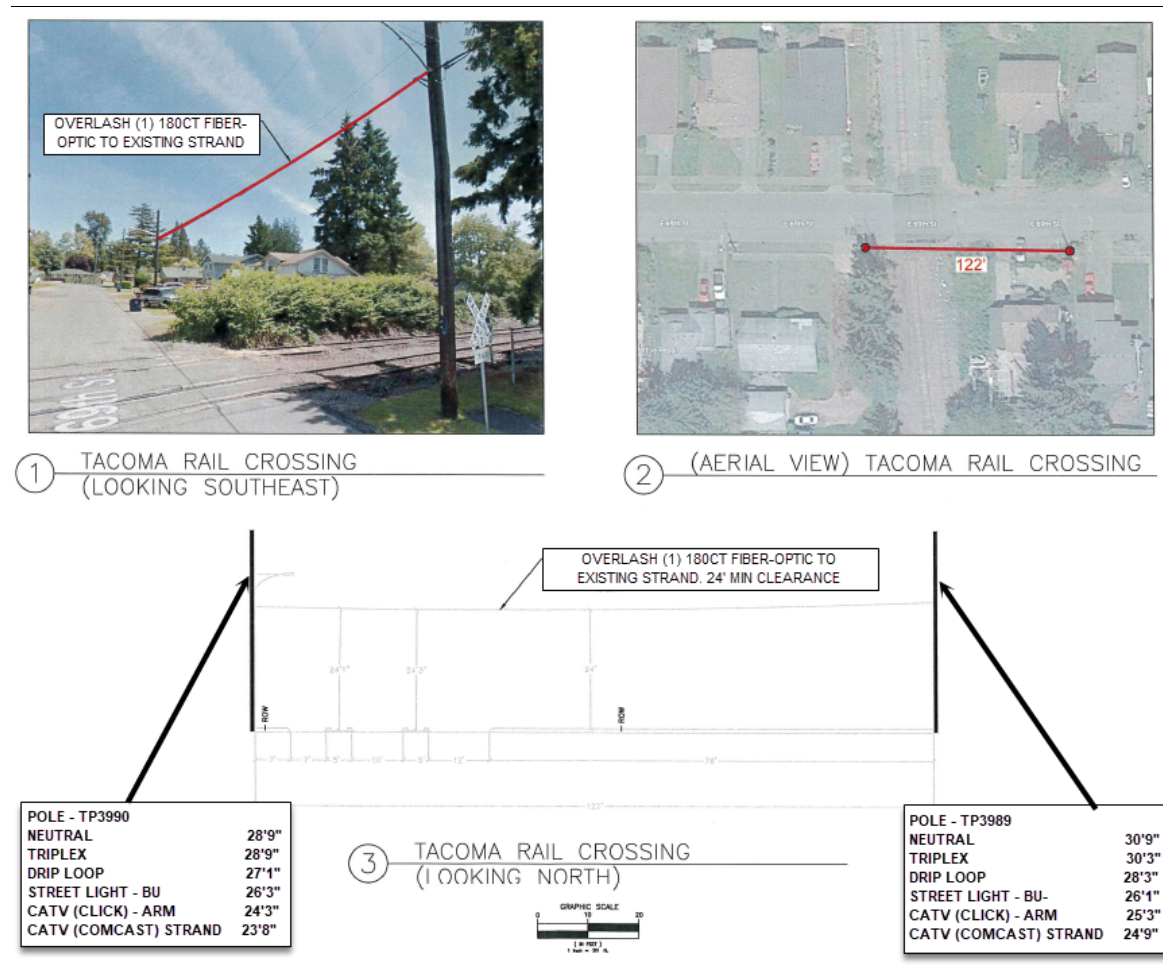
Failure to provide evidence as required by this section will entitle, but not require, Railway to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section will not operate as a waiver of Permittee's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by Permittee will not be deemed to release or diminish the liability of Permittee including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railway will not be limited by the amount of the required insurance coverage.

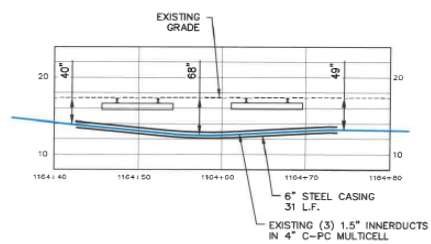
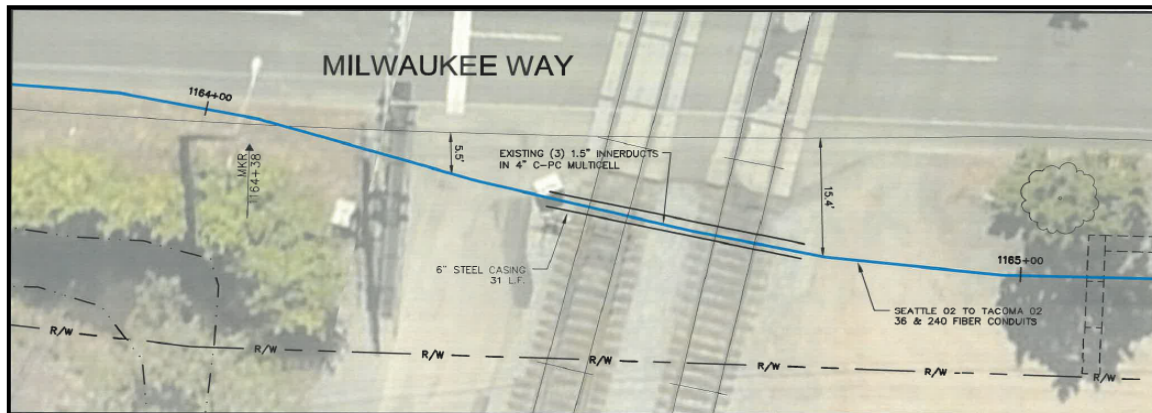
BOND REQUIREMENTS

Facility owner shall obtain a “Permit and Performance Bond to the City of Tacoma” in the amount determined by the City of Tacoma for each location. A Performance Bond form will be issued to the Permittee once the application is processed.

EXAMPLE PLAN SUBMITTAL FOR RIGHT OF ENTRY



Example Plan View



RAILROAD CROSSING PROFILE
 HORZ. SCALE: 1"=10'
 VERT. SCALE: 1"=10'

APPENDIX G

INADVERTANT DISCOVERY

PLAN



SECTION 2 - INADVERTENT DISCOVERY PLAN

(Cultural Resources Investigation Information methods/Results) In the event that cultural resources are encountered during construction-related activities, this document serves as the plan for dealing with the inadvertent discoveries of human remains, artifacts, sites, or any other cultural resources during the project.

- EB1 Pavement & Restroom Buildings Project
- Attachment A provides a project summary and contacts to call in the event of a discovery.

Instructions: Please insert responsible official in blanks.

This plan will provide the Puyallup Tribe of Indians (PTOI) employees, _____ Port of Tacoma (Port) _____ and any involved contractors and their employees with the appropriate protocols and procedures so they can:

- Utilize as guidance for treatment, Chapter 27.44 Indian Graves and Records, Chapter 27.53 Archaeological Sites and Resources, and Chapter 68.60 Section 68.60.050 Protection of Historic Graves of the Revised Code of Washington (RCW);
- Describe to regulatory and review agencies the procedures the PTOI and _____ Port _____ will follow to prepare for and deal with inadvertent discoveries; and,
- Understand and follow the procedures and protocols established in this document should an inadvertent discovery occur.

Procedures for the Discovery of Cultural Resources

1. If any PTOI or _____ Port _____ employee, contractors or subcontractors suspects the inadvertent discovery of a cultural resource, all ground disturbing, construction or other activities around the immediate area of the discovery shall cease. A cultural resource may include an archaeological or historical resource.

An **archaeological resource** is defined in RCW 27.53.040 as:

All sites, objects, structures, artifacts, implements, and locations of prehistoric or archaeological interest, whether previously recorded or still unrecognized, including, but not limited to, those pertaining to prehistoric and historic American Indian or aboriginal burials, campsites, dwellings, and habitation sites, including rock shelters and caves, their artifacts and implements of culture such as projectile points, arrowheads, skeletal remains, grave goods, basketry, pestles, mauls and grinding stones, knives, scrapers, rock carvings and paintings, and other implements and artifacts of any material that are located in, on, or under the surface of any



PUYALLUP TRIBE OF INDIANS
DEVELOPMENT & CONSTRUCTION PERMIT APPLICATION



lands or waters owned by or under the possession, custody, or control of the state of Washington or any county, city, or political subdivision of the state are hereby declared to be archaeological resources.

A **historical resource** is defined in RCW 27.53.030 (11):

. . .mean[ing] those properties which are listed in or eligible for listing in the Washington State Register of Historic Places (Washington Heritage Register [WHR]) (RCW 27.34.220) or the National Register of Historic Places (NRHP) as defined in the National Historic Preservation Act of 1966 (Title 1, Sec. 101, Public Law 89-665; 80 Stat. 915; 16 U.S.C. Sec. 470) as now or hereafter amended. Cultural resources may qualify for the WHR and/or the NRHP listing if they are intact, aged at least 50 years old, and at least one of the following:

- Are associated with events that have made a significant contribution to the broad patterns of our history; or
- Are associated with the lives of persons significant in our past; or Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

2. Upon discovery of a cultural resource, _____ Port _____ shall secure the area with a perimeter of not less than thirty (30) feet until all procedures are completed and the parties agree that activities can resume. If such a perimeter would materially impact agency functions mandated by law, related to health, safety or environmental concerns, then the secured area shall be of a size and extent practicable to provide maximum protection to the resource under the circumstances. Work in the immediate area will not resume until all procedures are completed and the parties agree that activities can resume.

3. The qualified archaeologist, in coordination with the Department of Archaeology and Historic Preservation (DAHP), will evaluate all inadvertently discovered cultural resources that may be considered eligible for listing in the National Register of Historic Places (NRHP) and recommend whether the cultural resource is eligible for listing in the NRHP. If the discovery is considered eligible, the DAHP and the concerned Indian Tribe(s) will consult to determine appropriate treatment, including but not limited to, photography, mapping, sampling, etc.

4. _____ Port _____ shall ensure that its appropriate personnel, contractors and permittees follow procedures stipulated in this Agreement and treat all human remains, cultural items and potential historic properties with respect.

Human Remains and Associated Funerary Objects

5. If human remains are found, _____ Port _____ shall immediately notify Tribal Police who will contact the tribal archaeologist, the Tacoma Police Department, and/or the County Coroner to determine whether the remains are Native American and to eliminate the



PUYALLUP TRIBE OF INDIANS
DEVELOPMENT & CONSTRUCTION PERMIT APPLICATION



site as a crime scene. Any potential or actual human remains and/or associated funerary objects shall remain in place, unwashed, un-cleaned and without analysis, with minimal disturbance and left in the original location until the remains can be determined to not be of significant cultural value by a professional archaeologist qualified to identify human skeletal remains.

6. If the human skeletal remains are determined to be Native American, PTOI will notify the DAHP and the concerned Indian Tribe(s). PTOI shall continue to maintain the remains and any associated funerary objects in place, unwashed, unexamined and undisturbed until the concerned Indian Tribe(s), the DAHP determine an appropriate treatment. All parties shall give due consideration to and honor, to the extent possible, requests by the Tribe to leave the remains and/or other cultural items undisturbed and in place. Should the Tribe request to conduct ceremonies or other traditional activities with respect to the remains at the site where the remains were found, PTOI will accommodate such requests to the maximum and practical extent possible.

7. If human remains, funerary objects and/or artifacts are inadvertently collected during any archaeological investigation and identified as Native American in the field or in the laboratory, COT will notify and return the remains, objects and/or artifacts to concerned Indian Tribe(s) within twenty-four (24) hours of the identification, to the extent possible. Such human remains, funerary objects and/or artifacts shall remain unwashed and without further analysis.

Confidentiality of Information

8. All involved parties shall make its best efforts to ensure that its appropriate personnel, contractors, and permittees keep the discovery of all inadvertent discoveries confidential, including but not limited to, refraining from contacting the media or any third party or otherwise sharing information regarding the discovery with any member of the public. Prior to any release, COT, concerned Tribe(s), and the DAHP, shall concur on the amount of information, if any, to be released to the public, any third party, and the media and the procedures for such a release, to the extent permitted by law.

CONTACT INFORMATION (Agencies, Companies, Departments)

- See Attachment A.
- In the event of a discovery, the discovering party (i.e., contractor) shall notify the Port and the Port will notify the parties listed in this IDP and Attachment A.

Signature of Applicant: _____

**Attachment A - Project Summary & Contact Information
For
Inadvertent Discovery Plan
Port of Tacoma's
EB1 Pavement & Restroom Buildings Project
Tacoma, Washington
December 6, 2023**

The EB1 Pavement and Restroom Building Project generally consists of: selective removal of asphalt pavement; installation of water, sewer, power and stormwater utilities; jack and bore sewer lines under existing railroad track; concrete treated base for existing subgrade; grading; asphalt paving; concrete placement; preparation of gravel pad and final utility connections for Port provided pre-fabricated restroom building and miscellaneous metal fabrications.

Monitoring

All ground disturbing activities 4 feet below ground surface (bgs) shall be monitored by a qualified Archaeologist. All other work will be observed by the contractor and/or project personnel. This inadvertent discovery plan (IDP) will be implemented should any cultural resources be observed. The IDP will be provided to the contractor and available onsite.

Contacts

Upon any discovery of cultural resources, the discovering party (i.e., contractor) shall immediately notify the Port and secure the area per the IDP paragraph 2. The Port shall notify the contacts in the IDP and this Attachment A.

Port of Tacoma

P.O. Box 1837, Tacoma, WA 98401

- Primary Contact: Norm Gilbert, Engineering Project Manager, 253-383-9406; ngilbert@portoftacoma.com
- Alternate Contact: Mark Rettmann, Environmental Project Manager, 253-592-6716 (desk & mobile [no text]); mrettmann@portoftacoma.com

Puyallup Tribe

Attention: Tribal Chairman, 3009 Portland Ave, Tacoma, Washington 98404

Lead Representative: Bill Sterud, Chairman, 253-370-6935

- Primary Contact: Brandon Reynon, Tribal Historic Preservation Officer (THPO), 253-573-7965 or 253-442-9361 (mobile); brandon.reynon@PuyallupTribe-nsn.gov
- Alternate Contact: Jennifer Keating, Assistant THPO, 253-382-6073 or 253-549-5397 (mobile); jennifer.m.keating@puyalluptribe-nsn.gov
- Alternate Contact: Michael Shong, Archaeologist, 253-354-9060 (mobile); Mike.Shong@PuyallupTribe-nsn.gov

Tacoma Police Department

3701 South Pine Street, Tacoma, WA 98409

Lead Representative: Avery Moore, Chief of Police, 253-287-4455

Washington Department of Archaeology and Historic Preservation

PO Box 48343, Olympia, Washington 98504-8343

Lead Representative: Allyson Brooks, State Historic Preservation Officer, 360-480-6922;

Allyson.Brooks@dahp.wa.gov

Pierce County Medical Examiner's Office

3619 Pacific Avenue, Tacoma, Washington 98418

Lead Representative: Karen Cline-Parhamovich, DO, Chief Medical Examiner, 253-798-6494

City of Tacoma Historic Preservation Office

747 Market Street, Tacoma, WA 98402

- Primary Contact: Reuben McKnight, Historic Preservation Officer, 253-591-5220
- Alternate Contact: Susan Johnson, Historic Preservation Coordinator, 253-281-7445

Port Consultants**KPFF**

2407 N 31st St

Tacoma, WA 98407

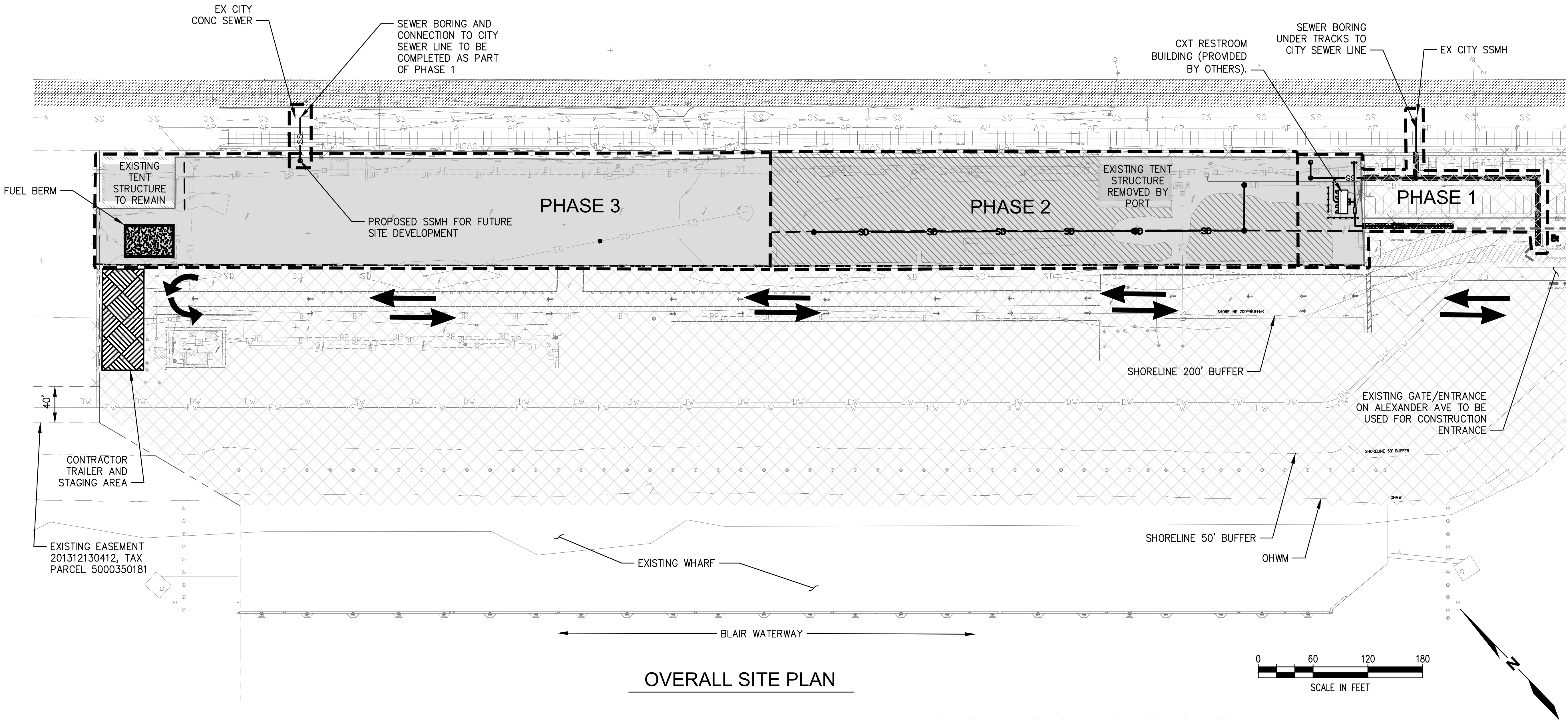
Project Manager: Tim Helbig, P.E. (tim.helbig@kpff.com; 253-396-0150)

Aqua Terra Cultural Resource Consultants

8525 Stoney Creek Ln SW

Olympia, WA 98512

Contact: Sarah Amell (Sarah@AquaTerraCRC.com; 360-754-2208)



LEGEND

	PARCEL BOUNDARY
	SHORELINE 200' BUFFER
	SHORELINE 50' BUFFER
	OHWM
	LIMITS OF WORK / PHASE BOUNDARY
	CONTRACTOR TRAILER AND STAGING AREA
	EXISTING TERMINAL PAVEMENT
	PROPOSED PAVEMENT
	REMOVE EXISTING PAVEMENT AND REPAVE
	PROPOSED SANITARY SEWER
	PROPOSED STORM DRAIN
	PROPOSED DOMESTIC WATER
	CONSTRUCTION ACCESS ROUTE THROUGH TERMINAL

NOTES

- SITE PLAN INFORMATION TAKEN FROM SURVEY PERFORMED BY KPFF IN MAY AND DECEMBER 2020, AND AS-BUILT INFORMATION FROM PREVIOUS SITE PROJECTS. SEE SHEETS G1.3-G1.5.
- ALL EXISTING FEATURES TO REMAIN UNLESS NOTED OTHERWISE.

PHASING AND SEQUENCING NOTES

- PHASE 1 WORK SHALL CONSIST OF COMPLETION OF THE WORK WITHIN THE PHASE 1 AREA NOTED ON THE PLANS. THIS SHALL INCLUDE DEMOLITION, GRADING, PAVING, INSTALLATION OF UTILITIES AND THE RESTROOM BUILDING. FOLLOWING COMPLETION OF THE PHASE 1 WORK, THE PHASE 1 AREA SHALL BE TURNED OVER TO THE PORT FOR FULL USAGE OF THE AREA.
- PHASE 2 WORK SHALL CONSIST OF COMPLETION OF THE WORK WITHIN THE PHASE 2 AREA NOTED ON THE PLANS. THIS SHALL INCLUDE DEMOLITION, GRADING, PAVING, AND INSTALLATION OF STORM DRAIN UTILITIES. FOLLOWING COMPLETION OF THE PHASE 2 WORK, THE PHASE 2 AREA SHALL BE TURNED OVER TO THE PORT FOR FULL USAGE OF THE AREA.
- PHASE 3 WORK SHALL CONSIST OF COMPLETION OF THE WORK WITHIN THE PHASE 3 AREA NOTED ON THE PLANS. THIS SHALL INCLUDE DEMOLITION, GRADING, PAVING, AND INSTALLATION OF STORM DRAIN UTILITIES. FOLLOWING COMPLETION OF THE PHASE 3 WORK, THE PHASE 3 AREA SHALL BE TURNED OVER TO THE PORT FOR FULL USAGE OF THE AREA.
- CONTRACTOR SHALL MAINTAIN DAILY COORDINATION WITH THE PORT AND TENANT, AND NOT INFRINGE ON TERMINAL ACTIVITIES.

2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162

MARK: REVISION: BY: APPR: DATE:

TJH 11/21/2023
SEK 11/21/2023

APPROVED:

DIRECTOR ENG. DATE
PRINTED BY: thebig Nov 21, 2023
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA WA, 98401-1837

6695

EB-1 PAVEMENT AND RESTROOM BUILDINGS

GENERAL SITE AND PHASING PLAN

G1.2

OF 26

3

CONT/CONS: 071907
M. ID: 201105.01
PHASE: BID SET

TOWNSHIP: 21N
DAT-HRZ: W83-SF
PARCEL: 0321354035

RANGE: 3E
PORT OF TACOMA BM#
SECTION: 36
VERT: AS SHOWN

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION