KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
STORMWATER PROJECT NO. 97003096

CLEAR CREEK FLOODPLAIN RESTORATION

HABITAT RESTORATION

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

DEPARTMENT OF ECOLOGY
State of Washington

JONATHON L. BRAND
STATE OF WASHINGTON
28997
REGISTERED
PROFESSIONAL ENGINEER
2/2/16

KITSAP COUNTY, WASHINGTON

CONTRACT PROVISIONS

KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
614 DIVISION STREET MS26
PORT ORCHARD, WASHINGTON 98366-4699
360.337.5777

JONATHON L. BRAND, P.E.
COUNTY ENGINEER

BACK OF COVER

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CALL FOR BIDS

KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
STORMWATER PROJECT NO. 97003096

CLEAR CREEK FLOODPLAIN RESTORATION
HABITAT RESTORATION
2016-106

BID OPENING: DATE: **THURSDAY MARCH 3, 2016** TIME: **3:00 PM**

Sealed bids for the project designated above will be received by Kitsap County Purchasing Office before the time and date indicated above, at which time they will be opened and publicly read aloud. Bids will be received at the fourth floor Reception Desk, Kitsap County Administration Building, 619 Division St, Port Orchard, Washington. Instructions for the delivery of bids are contained in the Special Provisions for this project. Prospective bidders are hereby notified that they are solely responsible for ensuring timely delivery of their bid to the place of bid opening.

All bid proposals shall be accompanied by a bid proposal surety bond made payable to Kitsap County Department of Public Works in an amount equal to five percent (5%) of the amount of such bid proposal. Should the successful Bidder fail to enter into such contract and furnish satisfactory performance and payment bonds within the time stated in the Special Provisions, the bid proposal bond shall be forfeited to Kitsap County Department of Public Works.

Each proposal or bid shall be completely sealed in a separate envelope, properly addressed as stated above, with the name and address of the bidder and the name of the project plainly written on the outside of the envelope. A complete bid proposal shall include the following:

(1) Proposal Form
(2) Bid Bond
(3) Bidder Responsibility Statement
(4) Statement of Qualifications for Contractor Personnel
(5) Non-Collusion Affidavit
(6) Subcontractor List
(7) M/WBE Subcontractor Form

All of the above items must be complete in all respects, including signatures (notarized where required). Bidder shall acknowledge receipt of all addendums in the spaces provided. The successful Bidder will be required to submit a photocopy of their current Washington State Contractors Registration. Failure to include all items may be cause for the bid to be considered irregular and thereby rejected.

Bids or proposals received after the time set for the opening of bids will not be considered.

Bidders are notified that all bids are likely to be rejected if the lowest responsible bid received exceeds the Engineer's estimate by an unreasonable amount.

Kitsap County reserves the right to award the bid in a manner and on a basis which will best serve the County, taking into consideration the Bidder Responsibility Statement included with the bids and the requirements of the WSDOT/APWA Standard Specifications and the Contract Provisions.

The award of the contract, if made, shall be made to the responsible Bidder submitting the lowest responsive bid, based upon the total sum of the extension of unit prices for the bid items.

The Plans and Contract Provisions for the proposed work may be downloaded from the internet at the Kitsap County Website at http://www.kitsapgov.com/purchasing/bids.htm.

DESCRIPTION OF WORK

This contract provides for the construction of the Clear Creek Floodplain Restoration in Kitsap County. The work includes creating 3,200 linear feet of new stream channel and 8.5 acres of floodplain involving excavation of approximately 29,730 cubic yards of material. Work consists of installation of two or more temporary construction access points, installing site closure signage, fish removal, channel dewatering, channel grading and reconstruction with streambed material, removal of 1,500 linear feet of existing roadbed and two culverts, installation of log structures, streambed sediment and 3 bridges, installation of a new trail, removal of invasive vegetation, replanting of disturbed banks and slopes with native plants, and erosion control.

Partial funding of this project is being provided by the Washington State Department of Ecology's (Ecology) Stormwater Grant Program. Neither the State Of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract. All parties agree that the State of Washington shall be, and is hereby, named as an express third-party beneficiary of this contract, with full rights as such.

A Mandatory Project Site Meeting for ALL prospective Contractors will be on Thursday, February 18, 2016 at 1:00 PM at the Markwick Site 11200 Silverdale Way NW,

NOTICE TO ALL PLAN HOLDERS:
The office of the Kitsap County Engineer who will show this project to prospective bidders is located at the Kitsap County Department of Public Works, 507 Austin Avenue, Port Orchard, Washington. Prospective bidders are requested to call Steve Nichols at 360-337-4637 in advance to set up an appointment to view the project. To obtain a Bid Proposal Package at no cost or to be added to the Plan Holder List, please call Colby Wattling at 360-337-7036 or email at cwattlin@co.kitsap.wa.us

KITSAP COUNTY BOARD OF COMMISSIONERS

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PROPOSAL

KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
STORMWATER PROJECT NO. 97003096

CLEAR CREEK FLOODPLAIN RESTORATION
HABITAT RESTORATION

To the Honorable Board of Commissioners
Kitsap County
614 Division Street
Port Orchard, Washington 98366

1. Pursuant to and in compliance with your Advertisement for Bids and the other documents relating thereto, the undersigned Bidder, having familiarized themselves with the terms of the project related to those items herein bid, being aware of the local conditions affecting the performance of a Contract covering the items bid, having knowledge of the cost of the work at the place where the work is to be done, having familiarized themselves with the Contract Documents, hereby proposes and agrees to perform the work and/or to furnish the equipment, and to furnish any and all of the labor, materials, tools, expendable equipment and all utility and transportation services necessary to perform a Contract covering any or all of those items herein bid and to complete in a workmanlike manner all work covered by said Contract in connection with the Owner's Improvement Project, for an amount computed upon the basis of the quantity of work actually performed at the following bid prices:

NOTE: UNIT PRICES FOR ALL ITEMS, ALL EXTENSIONS, AND THE TOTAL AMOUNT OF BID MUST BE SHOWN. All prices shall be in legible figures (not words) written in ink or typed. The proposal shall include: A unit price for each item (omitting digits more than four places to the right of the decimal point); an extension for each unit price (omitting digits more than two places to the right of the decimal point); the total Contract price (the sum of all extensions).

Table 1. Proposal

NO.	QTY	UNIT	STD ITEM NO.	ITEM (SECTION)	UNIT COST	AMOUNT
1	1	L.S.	0001	MOBILIZATION (SECTION 1-09)		
2	1	L.S.	N.S.	PROJECT SURVEYING (SECTION 1-05.4)		
3	1	L.S.	6971	PROJECT TEMPORARY TRAFFIC CONTROL (SECTION 1-10)		
4	1	L.S.	N.S.	TESC PLAN (SWPPP) (SECTION 8-01)		
5	1	L.S.	N.S.	EROSION /WATER POLLUTION CONTROL (SECTION 8-01)		
6	1	L.S.	7003	SCHEDULE TYPE B MIN. BID = $5000.00 (SECTION 1-08.3)		
7	1	L.S.	N.S.	STREAM CONSTRUCTION PLAN (SECTION 8-30)		
8	1	L.S.	N.S.	CLEARING AND GRUBBING (SECTION 2-01)		
9	85	EACH	N.S.	REMOVE TREE (SECTION 2-01)		
10	1	L.S.	N.S.	STREAM BYPASS (SECTION 8-30)		
11	1	L.S.	0405	COMMON EXCAVATION, INCLUDING HAUL AND DISPOSAL (SECTION 2-03)		
12	5,400	S.Y.	N.S.	BIODEGRADABLE EROSION CONTROL BLANKET (SECTION 8-01.3)		
13	300	L.F.	6502	COIR LOG (SECTION 8-01.3)		
14	5,900	S.F.	N.S.	STRUCTURAL EARTH WALL (MIN-CRIBLOCK) INCL. LANDSCAPING (SECTION 6-13)		
15	2,900	L.F.	N.S.	SPLIT RAIL FENCE (SECTION 8-12)		

NO.	QTY	UNIT	STD ITEM NO.	ITEM (SECTION)	UNIT COST	AMOUNT
16	820	L.F.	N.S.	WIRE FENCE TYPE 2 (SECTION 8-12)		
17	430	L.F.	N.S.	CHAIN LINK FENCE TYPE 4 WITH TOP RAIL (SECTION 8-12)		
18	9	EACH	N.S.	BOLLARD TYPE 1 (SECTION 8-12)		
19	25	L.F.	N.S.	CORRUGATED POLYETHYLENE CULVERT PIPE 12 IN. DIAM. (SECTION 7-02)		
20	7.8	ACRE	N.S.	HYDROSEED (SECTION 8-02)		
21	4.2	ACRE	N.S.	BARK OR WOOD CHIP MULCH (SECTION 8-02.3)		
22	8.9	ACRE	6482	COARSE COMPOST (SECTION 8-02)		
23	845	TON	N.S.	STREAMBED SEDIMENT (SECTION 8-30)		
24	380	TON	N.S.	STREAMBED COBBLES (SECTION 8-30)		
25	70	TON	N.S.	STREAMBED BOULDERS (SECTION 8-30)		
26	6	EACH	N.S.	GRAVITY BLOCK WALL (SECTION 6-13)		
27	272	EACH	N.S.	LOG, INSTALLED		
28	62	EACH	N.S.	ROOT WAD LOG, INSTALLED		
29	1	L.S.	N.S.	CLEAR CREEK BRIDGE NO. 1		
30	1	L.S.	N.S.	CLEAR CREEK BRIDGE NO. 2		
31	1	L.S.	N.S.	CLEAR CREEK BRIDGE NO. 3		
32	215	L.F.	4080	FURNISH AND DRIVE 8 INCH STEEL PIPE TEST PILING		

NO.	QTY	UNIT	STD ITEM NO.	ITEM (SECTION)	UNIT COST	AMOUNT
33	1,930	L.F.	N.S.	FURNISH AND DRIVE 8 INCH STEEL PIPE PILING		
34	1,850	L.F.	N.S.	PEDESTRIAN PATH		
35	1	L.S.	N.S.	NPDES CONSTRUCTION STORMWATER GENERAL PERMIT (SECTION 8-01)		
36	1	EST.	7725	REIMBURSEMENT FOR THIRD PARTY DAMAGE (SECTION 1-07)	$5.00	$5.00
37	1	CALC	7728	MINOR CHANGE (SECTION 1-04)	$50,000.00	$50,000.00
38	1	L.S.	7736	SPCC PLAN (SECTION 1-07)		
				CONTRACT SUBTOTAL		
				SALES TAX AT 8.7%		
				CONTRACT TOTAL AMOUNT		

2. BIDDER SHALL INCLUDE SALES TAX IN THE LUMP SUM AND UNIT PRICE BID ITEMS, in accordance with Section 1-07.2(1) of the Special Provisions.
3. The undersigned Bidder hereby proposes and agrees to commence work under this Contract, if awarded to them, in accordance with Sections 1-08.4 and 1-08.5 of the Special Provisions. They further agree to complete the Contract within **190 working days.**
4. The agreed liquidated damages to the Owner shall be in accordance with Liquidated Damages as described in the Standard Specifications, Amendments thereto and Special Provisions.
5. The Owner reserves the right to delete all or any portions of the work as outlined in the Contract Documents.
6. The required bid security in the amount of five percent (5%) of the total bid is hereto attached.
7. It is understood that the Contractor is responsible for obtaining and completing all required government forms.
8. Receipt of the following Addenda to the Contract Document is hereby acknowledged.

Table 2. Addenda

ADDENDUM #	DATE OF RECEIPT OF ADDENDUM	SIGNED ACKNOWLEDGMENT
1		
2		
3		
4		
5		

(Note: Failure to acknowledge receipt of the Addenda may be considered an irregularity in the proposal.)

9. Notice of Acceptance of this bid or requests for additional information should be addressed to the undersigned at the address stated below and unless otherwise notified in writing, this address shall be used by the successful Bidder during the life of the Contract for all official notices.
10. By signing the Proposal, the Bidder certifies that they have read and understand all of the Terms and Conditions of the Contract Plans, the Standard Specifications, the Amendments thereto, and these Special Provisions and agrees to comply with them.

Date: _____

Proper Name of Bidder (Type or Print): _____

By (Signature): _____

Name and Title (Type or Print Name and Title of Signatory): _____

Street Address: _____

City, State and Zip Code: _____

Telephone Number with Area Code: _____

Fax Number with Area Code: _____

Mailing Address, if different from above: _____

_____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____as Principal, and _____as Surety, are hereby held and firmly bound unto Kitsap County Department of Public Works as Owner in the penal sum of _____for payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns. Signed this_____ day of _____, 2016.

The Condition of the above obligation is such that whereas the Principal has submitted to Kitsap County Public Works a certain BID, attached hereto and made a part hereof to enter a contract in writing, for the

_____

_____

_____

NOW, THEREFORE,

(a) If said BID be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor and furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are Corporations have set their Corporation seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____
Principal

_____
Surety

By:_____

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BIDDER RESPONSIBILITY STATEMENT

Each Bidder shall prepare and submit the following information with their bid.

By signing the signature page of the Proposal, the Bidder affirms that the following information is true and correct.

Name of Bidder: _____

Business Address: _____

A) MANDATORY BIDDER RESPONSIBILITY CRITERIA (RCW 39.04.350)

1. Washington State Contractors License Number: _____

   Effective Date: _____

2. State of Washington Unified Business Identifier (UBI) No.: _____

3. Do you have industrial insurance (workers' compensation) coverage for your employees working in Washington as required by Title 51 RCW?

   Yes: ☐ No: ☐ Not Applicable: ☐

4. Washington State Employment Security Department number as required by Title 51 RCW.

   Number: ☐ Not Applicable: ☐

5. Washington State Department of Revenue state excise tax registration number as required by Title 82 RCW.

   Number: ☐ Not Applicable: ☐

6. Have you ever been disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3)?

   Yes: ☐ No: ☐

B) SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA (SPECIAL PROVISIONS SECTION 1-02.14)

1. Do you owe delinquent taxes to the State of Washington Department of Revenue?

   Yes: ☐ No: ☐

2. Are you currently debarred or suspended from bidding by the Federal government?

   Yes: ☐ No: ☐

3. Does your standard subcontract form include the subcontract responsibility language required by RCW 39.06.020?

   Yes: ☐ No: ☐

4. Do you have any record of prevailing wage violations in the last 5 years as determined by the Washington State Department of Labor and Industries?

   Yes: ☐ No: ☐

5. Have you had any claims against retainage or payment bonds for public works projects in the last 3 years?

   Yes: ☐ No: ☐

6. Has your company or its owners been convicted of a crime involving bidding on a public works contract in the last 5 years?

   Yes: ☐ No: ☐

7. Has your company had any public works contract terminated for cause or terminated for default by a government agency in the last 5 years?

   Yes: ☐ No: ☐

8. Has your company had any lawsuits with judgments entered against the company in the last 5 years?

   Yes: ☐ No: ☐

C) CONTRACTING AGENCY SPECIFIC BIDDER RESPONSIBILITY CRITERIA (SPECIAL PROVISIONS SECTION 1-02.14)

1. Gross amount of contracts currently in hand: _____

2. Provide a list of more important construction projects completed by your company in the last 5 years. Include project name, year, approximate cost, name and current phone number of project engineer or owner:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

3. Bank references: _____

_____

4. Bonding company: _____

_____

Supporting documentation verifying that the bidder meets the supplemental and Contracting Agency specific responsibility criteria stated in Sections B and C above may be requested by the Contracting Agency in accordance with Section 1-02.14 of the Special Provisions.

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STATEMENT OF QUALIFICATIONS FOR CONTRACTOR PERSONNEL

This form shall be completed in its entirety and submitted with the bid. Failure to submit and meet the requirements as stated in the Special Provisions shall be grounds for rejection of the bid.

The Kitsap County Public Works Department will be the sole judge in determining if the prospective contractor meets the minimum experience requirements.

The Contractor Project Manager and Superintendent assigned to this project shall each have a minimum of 2 successfully completed projects in excess of $500,000 that were similar in scope, time, and complexity of work within critical areas designated as wetland, stream, wetland buffer, or stream buffer, channel grading, and stream/floodplain reconstruction. These projects shall be similar in scope to this proposed project with the sensitivity of working within confined limits in an environmentally sensitive area.

Project/Construction Manager:

Name: _____
Address: _____
Phone: _____

Managed at a minimum list two (2) successfully completed floodplain, channel grading, and stream restoration/rehabilitation projects in excess of $500,000 that were similar in scope, time and complexity within the last (5) years, and with the overall responsibility for managing the schedule, submittal process, monthly pay estimates, all contract documentation, and subcontractors, as necessary for the successful completion of the project. A written summary of the Project/Construction Manager qualifications shall be submitted along with the bid proposal.

#1 Project Name: _____
Owner: _____ Contact Person: _____
Name of Contractor Employed By: _____
Completion Date: _____

#2 Project Name: _____
Owner: _____ Contact Person: _____
Name of Contractor Employed By: _____
Completion Date: _____

#3 Project Name: _____
Owner: _____ Contact Person: _____
Name of Contractor Employed By: _____
Completion Date: _____

Superintendent/Foreman

Name: _____
Address: _____
Phone: _____

The contractor stream construction superintendent/foreman who will supervise the day to day field activities associated with the stream and floodplain work and the overall construction of the project shall have personally performed the work and directly supervised the construction, at a minimum of two (2), floodplain, channel grading, and stream restoration/rehabilitation projects in excess of $500,000 that were similar in scope, time and complexity within the last five (5) years. A written summary of the Superintendent/Foreman qualifications shall be submitted along with the bid proposal.

#1 Project Name: _____
Owner: _____ Contact Person: _____
Completion Date: _____

#2 Project Name: _____
Owner: _____ Contact Person: _____
Completion Date: _____

#3 Project Name: _____
Owner: _____ Contact Person: _____
Name of Contractor Employed By: _____
Completion Date: _____

A Mandatory Project Site Meeting for ALL Prospective Contractors will be on 2/18/2016 @ 1 PM at the Markwick Site 11200 Silverdale Way NW, Silverdale WA.
Failure of the Contractor, Project Manager, and/or Superintendent to attend this meeting/walk-thru shall be grounds for rejection of the bid.

Failure to return this Declaration as part of the bid proposal package will make the bid nonresponsive and ineligible for award.

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.
2. **That by signing the signature page of this proposal, I am deemed to have signed and to have agreed to the provisions of this declaration.**

NOTICE TO ALL BIDDERS

To report rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

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Local Agency Name
Local Agency Address

LOCAL AGENCY SUBCONTRACTOR LIST

Prepared in compliance with RCW 39.30.060

To Be Submitted with the Bid Proposal

Project Name _____

Failure to list subcontractors with whom the bidder, if awarded the contract, will directly subcontract for performance of the work of heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical, as described in Chapter 19.28 RCW or naming more than one subcontractor to perform the same work will result in your bid being non-responsive and therefore void.

Subcontractor(s) with whom the bidder will directly subcontract that are proposed to perform the work of heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW **must** be listed below. The work to be performed is to be listed below the subcontractor(s) name.

To the extent the Project includes one or more categories of work referenced in RCW 39.30.060, and no subcontractor is listed below to perform such work, the bidder certifies that the work will either (i) be performed by the bidder itself, or (ii) be performed by a lower tier subcontractor who will not contract directly with the bidder.

Subcontractor Name _____
Work to be Performed _____

Subcontractor Name _____
Work to be Performed _____

Subcontractor Name _____
Work to be Performed _____

Subcontractor Name _____
Work to be Performed _____

Subcontractor Name _____
Work to be Performed _____

* Bidder's are notified that is the opinion of the enforcement agency that PVC or metal conduit, junction boxes, etc., are considered electrical equipment and therefore considered part of electrical work, even if the installation is for future use and no wiring or electrical current is connected during the project.

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DISADVANTAGED BUSINESS
ENTERPRISE UTILIZATION CERTIFICATION

To be eligible for award of this contract the bidder must fill out and submit, as part of its bid proposal, the following Disadvantaged Business Enterprise Utilization Certification relating to Disadvantaged Business Enterprise (DBE) requirements. The Contracting Agency shall consider as non-responsive and shall reject any bid proposal that does not contain a DBE Certification which properly demonstrates that the bidder will meet the DBE participation requirements in one of the manners provided for in the proposed contract. The Bidder must submit good faith effort documentation within 48 hours of bid opening ***only in the event*** the bidder's efforts to solicit sufficient DBE participation has been unsuccessful. If submitting a good faith effort bidder needs to check Box 4 agreeing to submit good faith effort within 48 hours. The successful bidder's Disadvantage Business Enterprise Utilization Certification shall be deemed a part of the resulting contract. Information on certified firms is available from OMWBE, online at: http://www.omwbe.wa.gov or Toll Free 1-866-208-1064.

_____ certifies that the Disadvantaged Business Enterprise (DBE) Firms listed below have been contacted regarding participation on this project. If this bidder is successful on this project and is awarded the contract, it shall assure that subcontracts or supply agreements are executed with named DBEs. (If necessary, use additional sheets.)

Column 1 **Name of DBE**	Column 2 * **Project Role** (Subcontractor, Subcontractor (Force Account), Manufacturer, Regular Dealer, Broker)	Column 3 **Description of Work** (Separate Force Account work from other work for Goal Participation percentage purpose; see instructions.)	Column 4 ** **Amount Subcontracted to DBE**	Column 5 *** **Amount to be Applied Towards Goal**

Disadvantaged Business Enterprise Subcontracting Goal: _____ Total DBE Commitment _____****
Box 2 Box 3

By checking Box 4 the bidder is stating that their attempts to solicit sufficient DBE participation has been unsuccessful and good faith effort will be submitted within 48 hours of bid opening.

* Regular Dealer status must be approved prior to bid submittal by the Office of Equal Opportunity, Wash. State Dept. of Transportation, on each contract.

** See the section "Crediting DBE Participation" in the Contract Document.

*** Column 5 must show a reduced or equal amount to that shown in Column 4 as appropriate for project role. See the section "Disadvantaged Business Enterprise Utilization Certification Form #272-056" in the Contract documents.

**** The Contracting Agency will utilize this amount to determine whether or not the bidder has met the goal. In the event of an arithmetic difference between this total and the sum of the individual amounts listed above in Column 4, then the sum of the amounts listed shall prevail and the total will be revised accordingly

Instructions for Disadvantaged Business Enterprise Utilization Certification Form

To be eligible for award of the contract, the bidder shall properly complete and submit a Disadvantaged Business Enterprise Utilization Certification form with the bidder's sealed Bid Proposal that demonstrates how the bidder intends to meet the DBE Condition of Award (COA) goal.

Box 1: Name of Bidder (Proposal holder) submitting a bid. Column 1: Name of the Disadvantaged Business Enterprise (DBE). Column 2: The Project Role that the DBE will be performing as follows;

Subcontractor, Subcontractor (Force Account), Manufacturer, Regular Dealer*,Broker

The role is used to determine what portion of the DBE participation may be credited toward the goal. See Crediting DBE Participation toward Meeting the Goal as described in the Disadvantaged Business Enterprise Condition of Award Participation specification.

Column 3: Description A description of the work to be performed by the DBE consistent with the eligible of Work in the OMWBE Directory of Certified DBE firms. If the DBE is to perform a portion of a bid item, then state Partial and what work is included, e.g., "Electrical (Partial) – Trenching". "Mobilization" will not be accepted as a description of work as it is not considered a distinct item of work that a DBE is certified to perform. The bidder may rely upon the descriptors listed in the Directory of Certified DBE Firms. Force Account work must be listed separately, for the purpose of calculating Goal participation percent and to determine the responsiveness at the time of Contract Award. For the purposes of meeting the DBE COA Goal, only 50% of the Proposal amount shall be credited toward the Contractors Commitment to meet the DBE COA Goal.

Column 4: Amount to be subcontracted and this column is used for the purpose of determining the amount to be applied towards goal for Regular Dealer and Force Account work.

Column 5: The dollar amount for each DBE listed in the certification that the prime intends to apply towards meeting the DBE contract goal. It may be that only a portion of the amount paid to the DBE is eligible as COA participation. See *Crediting DBE Participation* in the special provisions; *Disadvantaged Business Enterprise Condition of Award Participation*.

Box 2: The goal stated in the contract in terms of a dollar amount or a percentage as noted under the general special provision; *DBE Condition of Award (COA) Goal*, *Disadvantaged Business Enterprise Condition of Award Participation*. When expressed as a percentage it is a percentage of the sum total of all bid items as submitted in the bidder's proposal.

Box 3: The total for column 5. This value must equal or exceed the goal amount.

Box 4: Check Box 4 if sufficient DBE Participation <u>has been unsuccessful and a good faith effort will be</u> <u>submitted</u>. Refer to the subsection titled, *Selection of Successful Bidder/Good Faith Efforts (GFE)* in the special provision, *DBE Condition of Award (COA) Goal*, *Disadvantaged Business Enterprise Condition of Award Participation*.

* Note: In accordance with 49 CFR 26.55(e)(2)(i), if the materials or supplies are purchased from a DBE Regular Dealer, the amount to be counted towards the DBE will be sixty percent (60%) of the cost of the materials or supplies, e.g., Material cost: $100,000, allowable amount toward DBE goal; $60,000.

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AGREEMENT

This agreement, made and entered into this _____ day of _____, 2016 between Kitsap County, through the BOARD OF COUNTY COMMISSIONERS of Kitsap County, State of Washington, hereinafter referred to as County, and, _____ _____, a general Contractor licensed by the State of Washington, for themselves, their heirs, executors, administrators, successors, and assigns, hereinafter called Contractor.

WITNESSETH:

WHEREAS, the County desires to make Habitat Improvements to the Clear Creek Floodplain in the Silverdale vicinity of central Kitsap County and

WHEREAS, the Contractor has been selected by competitive bid as the "lowest responsible bidder" as that term is defined in RCW 39.04.010:

NOW THEREFORE, the County and Contractor mutually agree as follows:

CONTRACT DOCUMENTS:
The Agreement between the parties is expressed in the Contract Documents which includes the Invitation for Bids, the accepted Proposal, the Non-Collusion Declaration, Statement of Bidders Qualifications, Bid Bond, Project Plans, Standard Specifications, Special Provisions and this Agreement.

1) DESCRIPTION OF WORK:

This contract provides for the construction of the Clear Creek Floodplain Restoration in Kitsap County. The work includes creating 3,200 linear feet of new stream channel and 8.5 acres of floodplain involving excavation of approximately 29,730 cubic yards of material. Work consists of installation of two or more temporary construction access points, installing site closure signage, fish removal, channel dewatering, channel grading and reconstruction with streambed material, removal of 1,500 linear feet of existing roadbed and two culverts, installation of log structures, streambed sediment and 3 bridges, installation of a new trail, removal of invasive vegetation, replanting of disturbed banks and slopes with native plants, and erosion control.

2) BINDING EFFECT:

The covenants and conditions contained in this Agreement shall apply to and bind the parties, heirs, legal representatives and assigns of the parties.

3) TIME IS OF THE ESSENCE:

The Contractor agrees to work promptly and fully complete the work within the limits as described in the Contract Documents. Failure to complete within the allowed time limit will subject the Contractor to the payment of liquidated damages, as described in the State of Washington Standard Specifications for Road, Bridge and Municipal Construction, in Section 1-08.9, PROSECUTION AND PROGRESS.

4) TIME FOR COMPLETION:

The work to be performed under this Agreement shall commence in accordance with Sections 1-08.4 and 1-08.5 of the Special Provisions and shall be physically completed within **190 working days**.

5) COMPENSATION:

The County agrees to pay the Contractor for the work described and completed according to the Contract Documents the sum of $ _____. This sum shall include state sales tax.

6) INDEPENDENT CONTRACTOR:

The Contractor shall perform the services under this agreement as an independent Contractor and not as an agent, employee or servant of the County. The parties agree that the Contractor is not entitled to any benefits or rights enjoyed by employees of the County. Contractor shall comply with all laws regarding workers' compensation.

7) DISCRIMINATION AND AMERICANS WITH DISABILITIES ACT (ADA):

The Contractor agrees to comply with all provisions of the Americans with Disabilities Act and all regulations interpreting or enforcing said Act. The Contractor agrees to comply with all Federal, State and County laws and regulations in effect pertaining to non-discrimination. Violation of this section may be treated as a breach of this Agreement.

8) LIABILITY FOR NEGLIGENCE:

The Contractor shall be liable for any additional expenses incurred by the County as a result of carelessness or negligence on the part of the Contractor, the Contractor's agents, or the Contractor's employees. The Contractor agrees that the County may deduct such additional costs on its own behalf from monies due, or to become due, to the Contractor.

9) TERMINATION:

This contract may be terminated by the officials or agents of the County authorized to contract for or supervise the execution of such work in accordance with Section 1-08.10 of the Standard Specifications for Road, Bridge, or Municipal Construction.

10) MODIFICATION

There shall be no modification of this agreement, except in writing, executed with the same formalities as this present instrument. Change Orders totaling less than 10% of the total contract amount may be executed by the Director of Public Works or their authorized agent. Change Orders that exceed 10% of the total Contract amount shall be valid provided they are executed by the Chair of the Board of County Commissioners or their authorized agent.

11) HOLD HARMLESS:

The Contractor shall indemnify and hold the County and its officers and employees harmless from, and shall process and defend at its own expense, all claims, demands or suits at law or equity arising in whole or in part from the Contractor's performance of any of its obligations under this Agreement; provided that nothing herein shall require the Contractor to indemnify the County against and hold harmless the County from claims, demands, or suits based upon the sole negligence of the County, its agents, officers, and employees; and provided further that if claims or suits are caused by or result from the concurrent negligence of (a) the Contractor or Contractor's agents or employees, and (b) the County or County's agents, officers, or employees, this indemnity provision shall be valid and enforceable only to the extent of the Contractor's negligence or the negligence of the Contractor's agents or employees.

The Contractor expressly assumes potential liability for actions brought by the Contractor's own employees against the County; and, solely for the purpose of this indemnification and defense, the Contractor specifically waives any immunity under the state industrial insurance law, Title 51 RCW. The Contractor recognizes that this waiver was specifically entered into pursuant to the provisions of RCW 4.24.115 and was subject of mutual negotiation.

12) INSURANCE REQUIREMENTS:

Section 1-07.18 of the Special Provisions shall govern this contract.

13) VENUE AND CHOICE OF LAW:

Any action at law, suit in equity, or other judicial proceeding for the enforcement of this contract or any provisions thereof shall be instituted as provided for in RCW 36.01.050. It is mutually understood and agreed that this contract shall be governed by the laws of the State of Washington, both as to interpretation and performance.

14) INTEGRATION CLAUSE:

This instrument embodies the whole agreement of the parties. There are no promises, terms, conditions or obligations other than those contained herein; and this contract shall supersede all previous communications, representations or agreements, either verbal or written, between parties.

15) CONTRACT BOND:

Payment and performance bonds for this project have been issued by
_____, Surety Company of_____
Street address:_____City:_____
Telephone:_____Contact Person:_____
in the amount of_____.

16) THIRD-PARTY BENEFICIARY:

All parties agree that the State of Washington shall be, and is herby, named as an express third-party beneficiary of this contract, with full rights as such.

IN WITNESS WHEREOF, the said Contractor has executed this instrument, and the said Board of County Commissioners of aforesaid County pursuant to resolution duly adopted has caused this instrument to be executed by and in the name of said Board by its Chair, duly attested by its Clerk, the day and year first above written, and the seal of said Board to be hereunto affixed on the date this instrument first above written.

CONTRACTOR	BOARD OF COUNTY COMMISSIONERS KITSAP COUNTY, WASHINGTON
_____	
BY _____	_____ Edward E. Wolfe, Chair
TITLE _____	
	_____ Charlotte Garrido, Commissioner
	_____ Robert Gelder, Commissioner
	Foregoing contract approved and ratified:
	_____ ATTEST
	_____ DANA DANIELS, Clerk of the Board

PUBLIC WORKS PAYMENT BOND

to [City of _____or _____County], WA

Bond No._____

The [City of _____ or _____ County], Washington ([City or County]) has awarded to _____(Principal), a contract for the construction of the project designated as _____ ,Project No. _____, in [location], Washington (Contract), and said Principal is required under the terms of that Contract to furnish a payment bond in accord with Title 39.08 Revised Code of Washington (RCW) and (where applicable) 60.28 RCW.

The Principal, and _____(Surety), a corporation organized under the laws of the State of _____ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the [City or County], in the sum of _____ US Dollars ($_____) Total Contract Amount, subject to the provisions herein.

This statutory payment bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW 39.08, 39.12, and 60.28 including all workers, laborers, mechanics, subcontractors, and materialmen, and all person who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and all taxes incurred on said Contract under Titles 50 and 51 RCW and all taxes imposed on the Principal under Title 82 RCW; and if such payment obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any changes, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two (2) original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the office executing on behalf of the surety.

PRINCIPAL		SURETY	
Principal Signature	Date	Surety Signature	Date
Printed Name	Date	Printed Name	Date
Title		Title	

Name, address, and telephone of local office/agent of Surety Company is:

Approved as to form:

Signature	Title	Date

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PERFORMANCE BOND

to [City of _____or _____County], WA

Bond No._____

The [City of _____ or _____ County], Washington ([City or County]) has awarded to _____(Principal), a contract for the construction of the project designated as _____ ,Project No. _____, in [location], Washington (Contract), and said Principal to furnish a bond for performance of all obligations under the Contract.

The Principal, and _____(Surety), a corporation, organized under the laws of the State of_____ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the [City or County], in the sum of _____ US Dollars ($_____) Total Contract Amount, subject to the provisions herein.

This statutory performance bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform al of the Principal's obligation under the Contract and fulfill all terms and conditions of all duly authorized modifications, additions, and changes to said Contract that may hereafter be made, at the time in the manner therein specified; and if such performance obligations have not been fulfilled, this bond shall remain in force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any changes, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two (2) original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the office executing on behalf of the surety.

PRINCIPAL		SURETY	
Principal Signature	Date	Surety Signature	Date
Printed Name	Date	Printed Name	Date
Title		Title	

Name, address, and telephone of local office/agent of Surety Company is:

Approved as to form:

Signature	Title	Date

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WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER GRANT SPECIFICATIONS

General

Partial funding of this project is being provided by the Washington State Department of Ecology's (Ecology) Stormwater Grant Program.

Compliance with State and Local Laws

The construction of the project, including the letting of subcontracts in connection therewith, shall conform to the applicable requirements of state and local laws and ordinances.

State Interest Exclusion

It is anticipated that this project will be funded in part by the Washington State Department of Ecology . Neither the State Of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract.

Third Party Beneficiary

Partial funding of this project is being provided through the Washington State Department of Ecology Stormwater Grant Program. All parties agree that the State of Washington shall be, and is hereby, named as an express third-party beneficiary of this contract, with full rights as such.

Access to the construction site and to records

The contractor shall provide for the safe access to the construction site and to the contractor's records by Washington State Department of Ecology personnel.

The Contractor shall maintain accurate records and accounts to facilitate the Owner's audit requirements and shall ensure that all subcontractors maintain auditable records.

These Project records shall be separate and distinct from the Contractor's other records and accounts.

All such records shall be available to the Owner and to Washington State Department of Ecology personnel for examination. All records pertinent to this project shall be retained by the Contractor for a period of three (3) years after the final audit.

Protection of the Environment

No construction related activity shall contribute to the degradation of the environment, allow material to enter surface or ground waters, or allow particulate emissions to the atmosphere, which exceed state or federal standards. Any actions that potentially allow a discharge to state waters must have prior approval of the Washington State Department of Ecology.

Project Signs

The Contractor shall display Ecology's logo in a manner that informs the public that the project received financial assistance from the Washington State Stormwater Grant Program.

Utilization of Minority and Women Business Enterprises

All bidders are encouraged to utilize certified minority-owned and women-owned businesses to the extent possible in the performance of this contract. All prospective bidders or persons submitting qualifications should take the following steps, when possible.

1. Include qualified minority and women's businesses on solicitation lists.
2. Assure that qualified minority and women's businesses are solicited whenever they are potential sources of services or supplies.
3. Divide the total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by qualified minority and women's businesses.
4. Establish delivery schedules, where work requirements permit, which will encourage participation of qualified minority and women's businesses.
5. Use the services and assistance of the State Office of Minority and Women's Business Enterprises (OMWBE) and the Office of Minority Business Enterprises of the U.S. Department of Commerce, as appropriate.

All prospective bidders must provide a list of the MBE/WBE subcontractors they intend to use during the project. This list must be provided with the bid package.

Revised 3/29/12

AMENDMENTS TO THE STANDARD SPECIFICATIONS

INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2016 Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

The following Amendments to the Standard Specifications are made a part of this contract and supersede any conflicting provisions of the Standard Specifications. For informational purposes, the date following each Amendment title indicates the implementation date of the Amendment or the latest date of revision.

Each Amendment contains all current revisions to the applicable section of the Standard Specifications and may include references which do not apply to this particular project.

Section 1-06 Control of Material
January 4, 2016

This section is supplemented with the following new section and subsections:

1-06.6 Recycled Materials

The Contractor shall make their best effort to utilize recycled materials in the construction of the project; the use of recycled concrete aggregate as specified in Section 1-06.6(1)A is a requirement of the Contract.

The Contractor shall submit a Recycled Material Utilization Plan as a Type 1 Working Drawing within 30 calendar days after the Contract is executed. The plan shall provide the Contractor's anticipated usage of recycled materials for meeting the requirements of these Specifications. The quantity of recycled materials will be provided in tons and as a percentage of the Plan quantity for each material listed in Section 9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material. When a Contract does not include Work that requires the use of a material that is included in the requirements for using materials the Contractor may state in their plan that no recycled materials are proposed for use.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT Form 350-075 Recycled Materials Reporting.

1-06.6(1) Recycling of Aggregate and Concrete Materials

1-06.6(1) A General

The minimum quantity of recycled concrete aggregate shall be 25 percent of the total quantity of aggregate that is incorporated into the Contract for those items listed in Section

9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material that allow the use of recycled concrete aggregate. The percentage of recycled material incorporated into the project for meeting the required percentage will be calculated in tons based on the quantity of recycled concrete used on the entire Contract and not as individual items.

If the Contractor's total cost for Work with recycled concrete aggregate is greater than without the Contractor may choose to not use recycled concrete aggregate. When the Contractor does not meet the minimum requirement of 25 percent recycled concrete aggregate for the Contract due to costs or any other reason the following shall be submitted:

1. A cost estimate for each material listed in Section 9-03.21(1)E that is utilized on the Contract. The cost estimate shall include the following:

    a. The estimated costs for the Work for each material with 25 percent recycled concrete aggregate. The cost estimate shall include for each material a copy of the price quote from the supplier with the lowest total cost for the Work.

    b. The estimated costs for the Work for each material without recycled concrete aggregate.

The Contractor's cost estimates shall be submitted as an attachment to the Recycled Materials Reporting form.

Section 1-07 Legal Relations and Responsibilities to the Public
January 4, 2016

1-07.1 Laws to be Observed
In the second to last sentence of the third paragraph, "WSDOT" is revised to read "Contracting Agency".

Section 1-08 Prosecution and Progress
January 4, 2016

1-08.1(1) Prompt Payment, Subcontract Completion and Return of Retainage Withheld
In item number 5 of the first paragraph, "WSDOT" is revised to read "Contracting Agency".

Section 5-02 Bituminous Surface Treatment
January 4, 2016

5-02.3(2) Preparation of Roadway Surface
This section is supplemented with the following new subsection:

5-02.3(2) E Crack Sealing
Where shown in the Plans, seal cracks and joints in the pavement in accordance with Section 5-04.3(5) C.

Section 5-04 Hot Mix Asphalt
January 4, 2016

5-04.2 Materials
The first paragraph is supplemented with the following new items:

Hot Poured Sealant	9-04.2(1) A
Sand Slurry	9-04.2(1) B

This section is supplemented with the following new paragraph:

The requirements of Section 1-06.6 do not apply to the portland cement and fine aggregate used in sand slurry.

5-04.3(5) C Crack Sealing
This section's content is deleted and replaced with the following new subsections:

5-04.3(5) C1 General
When the Proposal includes a pay item for crack sealing, all cracks and joints ¼ inch in width and greater shall be sealed. Cracks and joints shall be thoroughly clean, dry and free of all loose and foreign material when filled with crack sealant material. Immediately prior to filling a crack or joint with the sealant material a hot air lance shall be used to dry and warm the pavement surfaces within the crack or joint. Pavement shall not be overheated and direct flame dryers shall not be used. Routing cracks and joints is not required.

Where cracks and joints are to be filled with sand slurry thoroughly mix the components and pour the mixture into the cracks and joints until full. Additional CSS-1 emulsified asphalt may be added to the sand slurry as needed for the mixture to be workable to completely fill the crack or joint. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Cracks or joints that were not completely filled shall be topped off with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

Where cracks and joints are to be filled with hot poured sealant the material shall be applied in accordance with these requirements and the manufacturer's recommendations. The manufacturer's recommendations shall be furnished to the Engineer prior to the start of work and shall include recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range.

Crack sealing with hot poured sealants shall be controlled to confine the material within the crack or joint. Any overflow of sealant shall be cleaned from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks and joints with hot poured sealant results in an excessive amount of material on the pavement surface, the operation shall be stopped and corrected to eliminate the excess material.

5-04.3(5) C2 Crack Sealing Areas Prior to Paving
In areas where HMA will be placed the cracks and joints shall be filled with sand slurry.

5-04.3(5) C3 Crack Sealing Areas Not to be Paved
In areas where HMA will not be placed the cracks and joints shall be filled as follows:

1. Cracks ¼ inch to 1 inch in width shall be filled with hot poured sealant.

2. Cracks and joints greater than 1 inch in width shall be filled with sand slurry.

5-04.3(5) C4 Crack Sealing Areas Prior to a Bituminous Surface Treatment
In areas where a BST will be placed the cracks and joints shall be filled per Section 5-04.3(5) C3.

5-04.4 Measurement
The following new paragraph is inserted after the third paragraph:

Crack Sealing-LF will be measured by the linear foot along the line of the crack.

5-04.5 Payment
The Bid item "Crack Sealing" is revised to read "Crack Sealing-FA".

The following is inserted after the paragraph following the Bid item "Crack Sealing-FA", by force account (after the preceding Amendment is applied):

"Crack Sealing-LF", per linear foot.
The unit Contract price per linear foot for "Crack Sealing-LF" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(5)C.

Section 6-02 Concrete Structures
January 4, 2016

6-02.3(2) A1 Contractor Mix Design for Concrete Class 4000D
The following new sentence is inserted after the second sentence of the last paragraph:

> Mix designs using shrinkage reducing admixture shall state the specific quantity required.

The following new sentence is inserted before the last sentence of the last paragraph:

> Testing samples of mixes using shrinkage reducing admixture shall use the admixture amount specified in the mix design submittal.

6-02.3(26) D2 Test Block Dimensions
The first sentence is revised to read:

> The dimensions of the test block perpendicular to the tendon in each direction shall be the smaller of twice the minimum edge distance or the minimum spacing specified by the special anchorage device manufacturer, with the stipulation that the concrete cover over any confining reinforcing steel or supplementary skin reinforcement shall be appropriate for the project-specific application and circumstances.

Section 6-14 Geosynthetic Retaining Walls
January 4, 2016

6-14.5 Payment
The bid item “Concrete Fascia Panel”, per square foot, and the paragraph following this bid item are revised to read:

> “Concrete Fascia Panel for Geosynthetic Wall”, per square foot.
>
> All costs in connection with constructing the concrete fascia panels as specified shall be included in the unit Contract price per square foot for “Concrete Fascia Panel For Geosynthetic Wall”, including all steel reinforcing bars, premolded joint filler, polyethylene bond breaker strip, joint sealant, PVC pipe for weep holes, exterior surface finish, and pigmented sealer (when specified), constructing and placing the concrete footing, edge beam, anchor beam, anchor rod assembly, and backfill.

Section 6-19 Shafts
January 4, 2016

6-19.4 Measurement
The first paragraph is revised to read:

> Soil excavation for shaft, including haul, will be measured by the cubic yards of shaft excavated. The cubic yards will be computed using the shaft diameter, top of shaft elevation and bottom of shaft elevation shown in the Plans, less all rock excavation measured as specified for rock excavation. Excavation between the existing ground line

and the top of shaft elevation is considered incidental to soil excavation for shaft and will not be measured.

The second paragraph is deleted.

6-19.5 Payment

The paragraph following the bid item “Soil Excavation for Shaft Including Haul”, per cubic yard is revised to read:

> The unit Contract price per cubic yard for “Soil Excavation For Shaft Including Haul” shall be full pay for performing the work as specified, including all costs in connection with furnishing, mixing, placing, maintaining, containing, collecting, and disposing of all mineral, synthetic, and water slurry, and disposing of groundwater collected by the shaft excavation, and the incidental excavation of soils between the top of shaft elevation shown in the Plans and the existing ground line.

Section 8-01 Erosion Control and Water Pollution Control
January 4, 2016

8-01.2 Materials
This section is supplemented with the following new paragraph:

> Recycled concrete, in any form, shall not be used for any Work defined in Section 8-01.

Section 8-10 Guide Posts
January 4, 2016

8-10.3 Construction Requirements
The last sentence of the second paragraph is deleted.

Section 8-22 Pavement Marking
January 4, 2016

8-22.4 Measurement
The first two sentences of the fourth paragraph are revised to read:

> The measurement for “Painted Wide Lane Line”, “Plastic Wide Lane Line”, “Profiled Plastic Wide Lane Line”, “Painted Barrier Center Line”, “Plastic Barrier Center Line”, “Painted Stop Line”, “Plastic Stop Line”, “Painted Wide Dotted Entry Line”, or “Plastic Wide Dotted Entry Line” will be based on the total length of each painted, plastic or profiled plastic line installed. No deduction will be made for the unmarked area when the marking includes a broken line such as, wide broken lane line, drop lane line, wide dotted lane line or wide dotted entry line.

8-22.5 Payment
The following two new Bid items are inserted after the Bid item “Plastic Crosshatch Marking”, per linear foot:

> “Painted Wide Dotted Entry Line”, per linear foot.
>
> “Plastic Wide Dotted Entry Line”, per linear foot.

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Section 9-03 Aggregates
January 4, 2016

9-03.21(1) B Concrete Rubble
This section, including title, is revised to read:

9-03.21(1)B Recycled Concrete Aggregate
Recycled concrete aggregates are coarse and fine aggregates manufactured from hardened concrete mixtures.

Recycled concrete, in any form, shall not be placed below the ordinary high water mark of any water of the State.

Section 9-04 Joint and Crack Sealing Materials
January 4, 2016

9-04.2(1) Hot Poured Joint Sealants
This section's content is deleted and replaced with the following new subsections:

9-04.2(1) A Hot Poured Sealant
Hot poured sealant shall be sampled in accordance with ASTM D5167 and tested in accordance with ASTM D5329. Hot poured sealant shall have a minimum Cleveland Open Cup Flash Point of 205°C in accordance with AASHTO T 48.

9-04.2(1) A1 Hot Poured Sealant for Cement Concrete Pavement
Hot poured sealant for cement concrete pavement shall meet the requirements of ASTM D6690 Type IV, except for the following:

1. The Cone Penetration at 25°C shall be 130 maximum.

2. The extension for the Bond, non-immersed, shall be 100 percent.

9-04.2(1) A2 Hot Poured Sealant for Bituminous Pavement
Hot poured sealant for bituminous pavement shall meet the requirements of ASTM D6690 Type II.

9-04.2(1)B Sand Slurry for Bituminous Pavement
Sand slurry is mixture consisting of the following components measured by total weight:

1. Twenty percent CSS-1 emulsified asphalt,

2. Two percent portland cement, and

3. Seventy-eight percent fine aggregate meeting the requirements of 9-03.1(2) B Class 2. Fine aggregate may be damp (no free water).

Section 9-07 Reinforcing Steel
January 4, 2016

9-07.1(1) A Acceptance of Materials

The first sentence of the first paragraph is revised to read:

> Reinforcing steel rebar manufacturers shall comply with the National Transportation Product Evaluation Program (NTPEP) Work Plan for Reinforcing Steel (rebar) Manufacturers.

The first sentence of the second paragraph is revised to read:

> Steel reinforcing bar manufacturers use either English or a Metric size designation while stamping rebar.

SPECIAL PROVISIONS

INTRODUCTION TO THE SPECIAL PROVISIONS

(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the Standard Specifications for Road, Bridge and Municipal Construction, 2016 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition

Contractor shall obtain copies of these publications, at Contractor's own expense.

DIVISION 1 GENERAL REQUIREMENTS

Description of Work

This contract provides for the construction of the Clear Creek Floodplain Restoration in Kitsap County. The work includes creating 3,200 linear feet of new stream channel and 8.5 acres of floodplain involving excavation of approximately 29,730 cubic yards of material. Work consists of installation of two or more temporary construction access points, installing site closure signage, fish removal, channel dewatering, channel grading and reconstruction with streambed material, removal of 1,500 linear feet of existing roadbed and two culverts, installation of log structures,

streambed sediment and 3 bridges, installation of a new trail, removal of invasive vegetation, replanting of disturbed banks and slopes with native plants, and erosion control.

Partial funding of this project is being provided by the Washington State Department of Ecology's (Ecology) Stormwater Grant Program. Neither the State Of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract. All parties agree that the State of Washington shall be, and is hereby, named as an express third-party beneficiary of this contract, with full rights as such.

1-01 Definitions and Terms

1-01.3 Definitions

(January 4, 2016 APWA GSP)

Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

> **Dates**
> ***Bid Opening Date***
> The date on which the Contracting Agency publicly opens and reads the Bids.
> ***Award Date***
> The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.
> ***Contract Execution Date***
> The date the Contracting Agency officially binds the Agency to the Contract.
> ***Notice to Proceed Date***
> The date stated in the Notice to Proceed on which the Contract time begins.
> ***Substantial Completion Date***
> The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.
> ***Physical Completion Date***
> The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.
> ***Completion Date***
> The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.
> ***Final Acceptance Date***
> The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications, Amendments, or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive
A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond
The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents
See definition for “Contract”.

Contract Time
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award

The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency's acceptance of the Bid Proposal.

Notice to Proceed
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

1-02 Bid Procedures and Conditions

1-02.1 Prequalification of Bidders
Delete this section and replace it with the following:

1-02.1 Qualifications of Bidder
(January 24, 2011 APWA GSP)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible Bidder and qualified to be awarded a public works project.

Add the following new sections:

1-02.1(1) Supplemental Qualifications Criteria
(January 4, 2016 APWA GSP)

In addition, the Contracting Agency has established Contracting Agency-specific and/or project-specific supplemental criteria, in accordance with RCW 39.04.350(2), for determining Bidder responsibility, including the basis for evaluation and the deadline for appealing a determination that a Bidder is not responsible. These criteria are contained in Section 1-02.14 Option C of these Special Provisions.

1-02.1(2) Project Specific Supplemental Qualifications Criteria

The Contractor shall submit a "Statement of Qualifications" with this bid for work in critical areas and habitat restoration.

The forms shall be completed in their entirety and submitted with the bid for all workers listed, including any relief personnel if needed for a second shifts. (Use additional copies of this form for a second shift of personnel, if necessary**). Failure to submit the completed forms and meet the requirements as stated in Section 1-02.1 of the Special Provisions shall be grounds for rejection of bid.**

1-02.2 Plans and Specifications
(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	5	Furnished automatically upon award.
Contract Provisions	5	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	5	Furnished only upon request.

Additional plans and Contract Provisions may be obtained by the Contractor from the source state in the Call for Bids, at the Contractor's own expense.

1-02.4 Examination of Plans, Specifications and Site of Work

1-02.4(2) Subsurface Information
Supplement this section with the following:

(March 8, 2013 APWA GSP)
The second sentence in the first paragraph is revised to read:

The Summary of Geotechnical Conditions and the boring logs, <u>if and when included</u> as an appendix to the Special Provisions, shall be considered as part of the Contract.

Supplement the preceding section with the following:

The geotechnical report for this project is attached to these Contract Provisions.

1-02.5 Proposal Forms
(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's D/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal

(June 27, 2011 APWA GSP)
Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last paragraph, and replace it with the following:

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any D/M/WBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any D/W/MBE requirements are to be satisfied through such an agreement.

1-02.7 Bid Deposit
(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as oblige;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

Supplement the preceding section with the following:

Bidders shall use the Bid Bond form included with these Contract Provisions.

A bid deposit in the form of cash or check will not be accepted.

1-02.9 Delivery of Proposal
(August 15, 2012 APWA GSP, Option A)

Delete this section and replace it with the following:

Each proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

If the project has FHWA funding and requires DBE Written Confirmation Documents or Good Faith Effort Documentation, then to be considered responsive, the Bidder shall submit with their Bid Proposal, written Confirmation

Documentation from each DBE firm listed on the Bidder's completed DBE Utilization Certification, form 272-056A EF, as required by Section 1-02.6.

The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids.

1-02.12 Public Opening of Proposals

Supplement this section with the following:

Date of Opening Bids
The bid opening date for this project shall be **MARCH 3, 2016**. The bids will be publicly opened and read after **3:00 P.M** on this date in the Port Madison Conference Room, fourth floor of the Kitsap County Administration Building located at the address shown below.

Sealed bids shall be received at or before the specified time at:

Kitsap County Purchasing Office
Fourth Floor Administration Building
619 Division Street
Port Orchard, Washington

Bids delivered in person or by private carrier (UPS, FEDEX, etc.) shall be addressed and delivered to the above location. Bids delivered by US Postal Service shall be addressed to:

Kitsap County Purchasing Office
614 Division Street, MS-07
Port Orchard WA 98366

Bidders are advised that bids not delivered in person may be subject to delay or loss. It is the bidder's sole responsibility to ensure timely delivery of their bid to the place of bid opening. Bids not received at the place of bid opening at or before the appointed time will not be considered, and shall be returned unopened to the bidder.

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

1-02.13 Irregular Proposals
(January 4, 2016 APWA GSP)

Delete this section and replace it with the following:

1. A proposal will be considered irregular and will be rejected if:

a. The Bidder is not prequalified when so required;
b. The authorized proposal form furnished by the Contracting Agency is not used or is altered;
c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
e. A price per unit cannot be determined from the Bid Proposal;
f. The Proposal form is not properly executed;
g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
i. The Bidder fails to submit written confirmation from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidders DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
j The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
k. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
l. More than one proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be rejected if:
   a. The Proposal does not include a unit price for every Bid item;
   b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
   c. Receipt of Addenda is not acknowledged;
   d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

Delete this Section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet the following Supplemental Criteria:

1. Delinquent State Taxes

A. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue unless they have a payment plan which has been approved by the Washington State Department of Revenue.

B. Documentation: The Bidder shall not be listed as delinquent by the Washington State Department of Revenue or if they are so listed, must submit a written copy of their payment plan approved by the Department of Revenue to the Contracting Agency within 2 business days following the bid opening.

2. Federal Debarment

A. Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.

B. Documentation: The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

3. Subcontractor Responsibility

A. Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. Prevailing Wages

A. Criterion: The Bidder shall not have a record of prevailing wage violations as determined by WA Labor & Industries in the five years prior to the bid submittal date that demonstrates a pattern of failing to pay workers prevailing wages, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of all prevailing wage violations in the five years prior to the bid submittal date, along with an explanation of

each violation and how it was resolved. The Contracting Agency will evaluate these explanations and the resolution of each complaint to determine whether the violation demonstrate a pattern of failing to pay its workers prevailing wages as required.

5. Claims Against Retainage and Bonds

A. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

6. Public Bidding Crime

A. Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

7. Termination for Cause / Termination for Default

A. Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there

are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

8. Lawsuits

A. Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts.

9. Contracting Agency Specific Criteria

A. Criterion:
Bidders shall supply the following information:

- Dollar amount of contracts currently held by the bidder
- List of more important construction projects completed by your company in the last 5 years.
- Bank References
- Bonding Company

B. Documentation:
The required information shall be included in Section C of the Bidder Responsibility Statement.

The Contracting Agency reserves the right to request additional documentation from all Bidders and to request further documentation as needed to assess Bidder responsibility. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may (but is not required to) consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1-02.15 Pre Award Information
(August 14, 2013 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 Award and Execution of Contract

1-03.1 Consideration of Bids
(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.3 Execution of Contract
(October 1, 2005 APWA GSP)

Revise this section to read:

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond
(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
    a. Is registered with the Washington State Insurance Commissioner, and
    b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
    a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
    b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers,

mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;

4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review
(July 23, 2015 APWA GSP)
Revise this section to read:

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction.

1-04 Scope of Work

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda
(March 13, 2012 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Amendments to the Standard Specifications,
6. Standard Specifications,
7. Contracting Agency's Standard Plans or Details (if any), and
8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-05 Control of Work

1-05.3 Plans and Working Plans

Supplement this section with the following:

The County will provide the contractor with hard copies and electronic (CAD) versions of the engineering Plans to use as a basis for the record Plans. The contractor is responsible for filling out the information on the record Plans.

Record Plans shall show the size and location of stream construction limits and its features. All record drawing information shall be shown in station, offset and elevation. The Plans shall also show the size, type and composition of the features as appropriate.

These plans shall be kept current during the course of construction, kept on-site at the contractor's site office, and be available for review by the engineer at all times. Record Plans shall be updated daily and changes occurring on any day shall be entered on the record Plans by noon on the next working day.

Prior to acceptance of the completed project, the contractor shall furnish the engineer one legible and neatly marked set of full-sized plans. All record Plans and disks shall be delivered to the Engineer in acceptable form prior to final payment.

The production of record Plans shall be considered incidental to and included in the cost for other items in the contract. A pay submittal shall not be considered complete or payable if the record Plans are not current as required by this section.

1-05.4 Conformity With and Deviations From Plans and Stakes

Supplement this section with the following:

Copies of the Contracting Agency provided primary survey control data are shown on the Plans. The Contractor shall provide all surveying required to complete the project. The Contractor shall be responsible for setting, maintaining, and resetting all stakes for the Work. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility. All setting and resetting of monuments, property corners, and primary control, shall be completed by or under the direct supervision of a Washington State Registered Professional Land Surveyor (PLS).

At the Contractor's request the Contracting Agency will provide the electronic CAD base files. Electronic files are provided for the Contractor's convenience and are not part of the Contract. Calculations shall be made from the Plans. The Contractor is advised to field verify the electronic files prior to their use in staking or other activities. If the signed and stamped Plans and electronic files differ, the signed and stamped Plans control. The Contractor shall not rely on the electronic files and no claim by the Contractor shall be based on the electronic files or any difference between the electronic files and the signed and stamped Plans or site conditions.

The Contractor shall maintain detailed survey records, including a description of the work performed on each shift, the methods utilized, and the control points used. The records shall be adequate to allow the survey to be reproduced. A copy of each day's

record shall be provided to the Engineer within three business days of Engineer's request.

The survey work shall include but not be limited to the following:

1. Primary and Secondary Control: Verify and use the primary horizontal and vertical control furnished by the Contracting Agency, and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency. The description shall include horizontal coordinates, station, offset and elevations of all secondary control points. Provide the Contracting Agency an electronic copy of the secondary control points. Vertical secondary control shall be established using spirit levels, not a GPS system.

2. The Contractor shall stake Right-of-Way, easements, clearing limits and centerline stationing one week prior to commencement of on-site construction activities. The Contractor shall allow for at least two working days for the Engineer to approve the layout after staking. The Contractor shall assume full responsibility for detailed dimensions, elevations, and excavation slopes measured from these stakes and marks, regardless of Engineer's review and approval.

3. Clearing Limits: Clearing limits shall be marked at major angle points and at intermediate points at approximately 100 foot intervals. Staking of clearing limits is not required if the limits are defined by existing features (i.e. fence, edge of pavement) shown on the Plans and which will not be removed during construction. The clearing limits shall generally be located 5 feet beyond the toe of the fill and 10 feet beyond the top of the cut unless otherwise shown on the Plans.

4. Protected Areas: Wetland boundaries, easements, and other areas to be protected shall be marked at major angle points and at intermediate points at approximately 50 foot intervals. Staking is not required if the limits are defined by existing features (i.e. fence, edge of pavement) shown on the Plans and which will not be removed during construction.

5. Grading Limits (Slope Stakes): Grading limits shall be staked on the centerline at 50 foot intervals. Contractor shall establish offset reference to all slope stakes.

6. Culvert Pipes: Culvert pipes shall be staked at each end of the culvert and at horizontal and vertical angle points.

7. Subgrade and Finished Grade: Subgrade and surfacing elevations shall be set at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections and 25 feet in curve sections with a radius less than 300 feet, and at 10-foot intervals in intersection radii with a radius of less than 10 feet.

8. Concrete Retaining, Rock, and Block Walls. Walls shall be staked with a single offset line to the bottom face of wall; at the beginning and end of the wall, horizontal angle points/curves, points of bottom and top of wall changes in elevations, and at approximately 50-foot intervals. The Contractor shall be responsible for verifying points of bottom and top of wall changes in elevations and coordinating adjustments with the Engineer.

9. Monuments: The Contractor shall establish the locations of monuments shown on the Plans. The Contractors shall be responsible for locating and preserving existing monuments within the right-of-way, which shall include existing property corners in the right-of-way lines. The Contractors shall maintain a complete and accurate reference of all survey markers, monuments, property corners, on this project. The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans. All monuments shall be protected throughout the length of the project or be replaced at the Contractor's expense, unless marked on the Plans as to be removed and reset. In the event the Contractor disturbs or destroys any survey marker during the course of construction, not indicated to be removed/replaced on the Plans, the Contractor shall bear all costs of survey, resetting, legal claims, and filing state forms.

10. For all other types of construction included in the Contract (including but not limited to channelization and pavement marking, conduits, junction boxes, control/service cabinets, fences, signing, landscaping, irrigation facilities, and sawcuts) , provide staking and layout as required to adequately locate, construct, and check the specific construction activity.

The Contractor shall establish all surveyed points by placing hubs and tacks with marked stakes in unpaved areas or P.K. nails with painted markings in paved areas. All surveying stakes shall be marked in accordance with WSDOT Standard Plan A-10.10-00.

The Contractor shall ensure a surveying accuracy within the following tolerances:

	Vertical	**Horizontal**
Slope Stakes	±0.1 foot	±0.10 foot
Subgrade Grade Stakes Set 0.04 foot Below Grade	±0.01 foot	±0.5 foot (parallel to alignment) ±0.1 foot (normal to alignment)
Stationing on Roadway	N/A	±0.1 foot
Alignment on Roadway	N/A	±0.04 foot
Surfacing Grade Stakes	±0.01 foot	±0.1 foot (parallel to alignment) ±0.1 foot (normal to alignment)

Roadway Paving Pins for Surfacing or Paving	±0.01 foot	±0.1 foot (parallel to alignment) ±0.05 foot (normal to alignment)
Alignment of sewer and storm manholes and catch basins	±0.01 foot	±0.1 foot
Walls	±0.01 foot	±0.04 foot
Curb and Gutter	±0.01 foot	±0.01 foot

When staking roadway alignment and stationing, the Contractor's PLS shall perform independent checks from different secondary control to ensure that the points staked are within the specified survey accuracy tolerances.

The Contracting Agency may spot-check the Contractor's surveying. These spot-checks shall not change the requirements for accuracy by the Contractor.

If errors are found, or the Engineer determines that the survey Work is insufficient for the project, the Contractor shall correct the errors and/or resolve insufficiencies, which may include removal and replacement of incorrectly installed improvements. All costs incurred to correct or complete the Work shall be at the Contractor's expense, in accordance with Section 1-05.7.

Payment

Payment will be made in accordance with Section 1-04.1 for the following bid item, when included in the proposal:

“Project Surveying”, per Lump Sum.

The unit contract price for “Project Surveying”, by Lump Sum, shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts as described above, as shown on the Plans, and herein specified, including resetting markers and/or monuments purposely moved as part of the Work.

1-05.6 inspection of Work and Materials

Supplement this section with the following:

> The Contractor shall provide for the safe access to the construction site and to the Contractor’s records by Washington State Department of Ecology personnel.

The Contractor shall maintain accurate records and accounts to facilitate the Contracting Agency's audit requirements and shall ensure that all subcontractors maintain auditable records.

These Project records shall be separate and distinct from the Contractor's other records and accounts.

All such records shall be available to the Contracting Agency and to Washington State Department of Ecology personnel for examination. All records pertinent to this project shall be retained by the Contractor for a period of three (3) years after the final audit.

1-05.7 Removal of Defective and Unauthorized Work
(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing
(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefor.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will

continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.
The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.13 Superintendents, Labor and Equipment of Contractor
(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.14 Cooperation with Other Contractors

Supplement this section with the following:

The Contractor shall be responsible for the coordination of his work with the work of others, including the work in the vicinity of this project by other contractors. The Owner will not be responsible for any damage suffered or extra costs incurred by the Contractor resulting directly or indirectly from any other contract(s) or work.

1-05.15 Method of Serving Notices
(March 25, 2009 APWA GSP)
Revise the second paragraph to read:

> All correspondence from the Contractor shall be directed to the Project Engineer. <u>All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.</u>

Add the following new section:

> **1-05.16 Water and Power**
> (October 1, 2005 APWA GSP)
>
> The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.
>
> **1-05.17 Oral Agreements**
>
> No oral agreement or conversation with any officer, agent, or employee of the Contracting Agency, either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the contract. Such oral agreement or conversation shall be considered as unofficial information and in no way binding upon the Contracting Agency, unless subsequently put in writing and signed by the Contracting Agency.

1-06 Control of Materials

1-06.6 Recycled Materials

Delete this section in its entirety.

1-07 Legal Regulations and Responsibilities to the Public

1-07.1 Laws to be Observed
(October 1, 2005 APWA GSP)

Supplement this section with the following:

> In cases of conflict between different safety regulations, the more stringent regulation shall apply.
>
> The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).
>
> The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.
>
> The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.2 State Taxes

Delete this section, including its sub-sections, in its entirety and replace it with the following:

> **1-07.2 State Sales Tax**

(June 27, 2011 APWA GSP)

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply 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. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real

property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.6 Permits and Licenses

Supplement this section with the following:

(August 3, 2009 WSDOT GSP)
The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. All contacts with the permitting agency concerning the below-listed permit(s) shall be through the Engineer. The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable bid items for the work involved.

NAME OF DOCUMENT	PERMITTING AGENCY	PERMIT REFERENCE #
Hydraulic Project Approval	WDFW	2015-6-216+01
NWP-27 Letter of Auth	Seattle District, Corps of Engineers	NWS-2015-28
SDAP Plan Acceptance	Kitsap Dept. of Community Development	SDAP 15 00081
Temp Access Break Request Memorandum	WSDOT	Oct 29, 2014
NPDES Permit	Dept. of Ecology	<in process>

1-07.7 Load Limits

Supplement this section with the following:

If the sources of materials provided by the Contractor necessitates hauling over roads other than County roads, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

1-07.9 Wages

1-07.9(1) General

Supplement this section with the following:

This contract is subject to the minimum wage requirements of RCW39.12. The schedule of the prevailing wage rates for this Contract is included in the Appendix

1-07.15 Temporary Water Pollution / Erosion Control

Supplement this section with the following:

Protection of the Environment: No construction related activity shall contribute to the degradation of the environment, allow material to enter surface or ground waters, or allow particulate emissions to the atmosphere, which exceed state or federal standards. Any actions that potentially allow a discharge to state waters must have prior approval of the Washington State Department of Ecology.

1-07.17 Utilities and Similar Facilities

Supplement this section with the following new section:

The Contractor shall not be entitled to an extension of time or to any claim for damages because of hindrances, delays and complications caused by or resulting from requirements imposed by the owners of the utility systems.
Locations and dimensions shown in the plans for existing buried facilities are in accordance with available information obtained without uncovering, measuring or other verification. Failure of the County to show the existence of subsurface objects or installation on the plans shall not relieve the Contractor from its responsibility to make an independent check on the ground, nor relieve him from all liability for damages resulting from its operations.

The Contractor shall give proper notification to affected utilities at least one (1) week in advance of beginning work that could affect their facilities or operations. If the Contractor is required to disrupt individual utility services, they shall provide 48-hour prior written notice to the affected property owner and the Engineer. No interruption of utility service will be allowed without prior written approval of the utility.

The Contractor shall be responsible for any breakage of utilities or services resulting from his operations and shall cooperate with the utility to restore any

service accidentally damaged or disrupted by the Contractor's activities. The Contractor shall hold the County and its agents harmless from any claims resulting from disruption of, or damage to same.

1-07.18 Public Liability and Property Damage Insurance
Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance
(January 4, 2016 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall <u>not</u> satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

$1,000,000	Each Occurrence
$2,000,000	General Aggregate
$2,000,000	Products & Completed Operations Aggregate
$1,000,000	Personal & Advertising Injury each offence
$1,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

$1,000,000	Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.23 Public Convenience and Safety

Supplement this section with the following:

The Contractor shall maintain safe pedestrian passage through the work area at all times.

The Contractor shall notify the Project Engineer one week before and at the time activities involving traffic detours, traffic control revisions, limited access, and traffic delays and shall include the locations, times and specific days that traffic may be altered or delayed. No street shall be closed without the Project Engineer's approval.

1-07.23(1) Construction Under Traffic
Supplement this section with the following:

Complaints received by the Owner or Engineer concerning public inconvenience or safety hazards will be referred to the Contractor for immediate corrective action. In addition to normal working hours, corrective actions shall be taken on Saturday, Sunday, holidays, and at other times outside normal work hours.

Upon determination that a public inconvenience or safety hazard exists and upon inability to contact the Contractor after reasonable effort to do so, or upon failure of the Contractor to immediately correct the unsatisfactory condition, the County may without notice to the Contractor or his Surety correct the unsatisfactory condition and deduct the costs thereof from any payments due or coming due to the Contractor.

Emergency traffic such as police, fire and disaster units, shall be provided unrestricted access at all times. In addition, the Contractor shall coordinate Contractor activities with all disposal firms and transit bus service, which may be operating in the project area. Safe and convenient access to bus zones shall be provided and maintained at all times by the Contractor. The Contractor shall be liable for any damages, which may result from failure to provide reasonable access or coordination.

Existing traffic control and street name signs which interfere with construction shall be relocated or removed by the Contractor and temporarily stored in a safe place. When "Stop", "Yield", and "One-Way" signs are removed, they shall be relocated immediately. Existing signs shall not be removed until the Contractor has provided temporary measures sufficient to safeguard and direct traffic after the existing signs have been removed.

As work progresses and permits, temporarily relocated or removed traffic and street name signs shall be reset in their permanent location by the Contractor. Signs and other traffic control devices damaged or lost by the Contractor shall be replaced or repaired by the Contractor at no cost to the Owner. The option of whether a sign can be repaired or must be replaced shall be the Engineer's and

such decision shall be final and binding on the Contractor. All new permanent signs shall be paid for under the corresponding bid item.

Where, in the opinion of the Engineer, parking is a hazard to through traffic, or to the construction work, parking may be restricted either entirely or during the time when it creates a hazard. Signs for restricting parking shall be approved by the Owner and placed by the Contractor. The Contractor shall be responsible for and shall maintain the signs, if they are used in any street, which is directly involved in the construction work. If parking signs are used beyond the confines of the work area, such as in another street being used as a detour, the signs will be the responsibility of the Contractor. The placement of signs restricting parking shall be as approved by the Engineer.

1-07.24 Rights of Way
(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

Add the following new sections:

1-07.28 Third-Party Beneficiary

Partial funding of this project is being provided through the Washington State Department of Ecology Stormwater Grant program. All parties agree that the State of Washington shall be, and is hereby named as an express third-party beneficiary of this contract, with full rights as such.

1-07.29 State Interest Exclusion Clause

It is anticipated that this project will be funded in part by the Washington State Department of Ecology. Neither the State of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract.

1-08 Prosecution and Progress

Add the following new section:

1-08.0 Preliminary Matters
(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference
(October 10, 2008 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

Add the following new section:

1-08.0(2) Hours of Work
(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 2 days prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

1-08.3(2)B Type B Progress Schedule
(March 13, 2012 APWA GSP)

Revise the first paragraph to read:

> The Contractor shall submit a preliminary Type B Progress Schedule <u>at or prior to the preconstruction conference</u>. The preliminary Type B Progress Schedule shall comply with all of these requirements and the requirements of Section 1-08.3(1), except that it may be limited to only those activities occurring within the first 60-working days of the project.

Revise the first sentence of the second paragraph to read:

> The Contractor shall submit one copy of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the <u>preconstruction conference</u>.

1-08.4 Prosecution of Work

Delete this section in its entirety, and replace it with the following:

> **1-08.4 Notice to Proceed and Prosecution of Work**
> (July 23, 2015 APWA GSP)
> Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the

Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.5 Time for Completion
(August 14, 2013 APWA GSP, Option A)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the <u>Notice to Proceed Date</u>.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. <u>If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.</u>

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (per Section 1-07.9(5)).
   b. Material Acceptance Certification Documents
   c. Quarterly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification
   e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
   f. Property owner releases per Section 1-07.24

(March 13, 1995 WSDOT GSP, Option 7)
Supplement this section with the following:

This project shall be physically completed within **190 working days**.

1-08.9 Liquidated Damages
(August 14, 2013 APWA GSP)

Revise the fourth paragraph to read:

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 Measurement and Payment

1-09.2(1) General Requirements for Weighing Equipment

(July 23, 2015 APWA GSP, Option 2)

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's Daily Report, unless the printed ticket contains the same information that is on the Scaleman's Daily Report Form. The scale operator must provide AM and/or PM tare weights for each truck on the printed ticket.

1-09.6 Force Account

(October 10, 2008 APWA GSP)

Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

1-09.9 Payments

(March 13, 2012 APWA GSP)

Delete the first four paragraphs and replace them with the following:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

1-09.13(3)A Administration of Arbitration
(July 23, 2015 APWA GSP)

Revise the third paragraph to read:

> The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of <u>the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.05 shall control venue and jurisdiction of the Superior Court</u>. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 Temporary Traffic Control

1-10.2 Traffic Control Management

1-10.2(1) General

(December 1, 2008 WSDOT GSP)
Section 1-10.2(1) is supplemented with the following:

Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035

Evergreen Safety Council
401 Pontius Ave. N.
Seattle, WA 98109
1-800-521-0778 or
(206) 382-4090

The American Traffic Safety Services Association
15 Riverside Parkway, Suite 100
Fredericksburg, Virginia 22406-1022
Training Dept. Toll Free (877) 642-4637
Phone: (540) 368-1701

1-10.2(2) Traffic Control Plans (TCP)

Supplement this section with the following:

Development of Traffic Control Plans
Development of a Traffic Control Plan shall be the responsibility of the Contractor. Example Standard Plans have been attached to this document for the Contractor's use in developing this Plan. The Contractor shall submit their Traffic Control Plan for the Engineer's review 5 working days prior to the Preconstruction Meeting. The Engineer shall review the Plan and at the Preconstruction Meeting give written approval or discuss the revisions required. Subsequent reviews or revisions, if required, shall be accomplished by the Engineer within 5 working days after submittal. No work shall be undertaken until the Contractor has written approval of the Traffic Control Plan.

1-10.4 Measurement

1-10.4(1) Lump Sum Bid for Project (No Unit Items)
(August 2, 2004 WSDOT GSP)

Supplement this section with the following:

> The proposal contains the item “Project Temporary Traffic Control”, per lump sum. The provisions of Section 1-10.4(1) shall apply.

KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
STORMWATER PROJECT NO. 97003096

CLEAR CREEK FLOODPLAIN RESTORATION

HABITAT RESTORATION

The Professional Engineer's seal(s) and signature(s) affixed hereon indicates this Engineer's preparation of Divisions 2 through 9 of these Special Provisions.

Sections pertaining to bridges
prepared by:
Shearer Design
3613 Phinney Ave N #B
Seattle, Wa 98103

SHEARER DESIGN LLC

DAVID R. SHEARER
STATE OF WASHINGTON
23026
STRUCTURAL ENGINEER
PROFESSIONAL ENGINEER

1/25/16

Sections pertaining to pedestrian path
prepared by:
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1/25/16

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DIVISION 2 EARTHWORK

2-01 Clearing, Grubbing and Roadside Cleanup

2-01.1 Description

Replace the first paragraph with the following:

> The Contractor shall limit clearing and grubbing to the minimum area required for construction. The Contractor shall not clear and/or grub areas beyond the clearing limits shown on the Plans unless approved by the Engineer.
> The Contractor shall be responsible for the protection and preservation of all existing trees, shrubs, bushes, and other objects outside of the clearing limits. Any existing tree, shrub, and bush located outside of the clearing limits that is damaged or destroyed during construction shall be replaced by the Contractor in like type and size as indicated by the Engineer at no cost to the County.

2-01.2 Disposal of Usable Material and Debris

Revise the second paragraph to read as follows:

> The Contractor shall use Disposal Method No. 2 or No. 3. Disposal Method No. 1, Open Burning, will not be allowed.

2-01.2(3) Disposal Method No. 3 – Chipping

Replace this section with the following:

> Wood chips generated from trees cleared from the site (including cherry laurel) and meeting the requirements of Section 9-14.4(3) may be used as wood chip mulch. All shrubs, vines (including but not limited to ivy and blackberry), and noxious weeds shall not be chipped.
>
> Chipping shall be done by machines that can grind debris into wood chips. Wood chips to be sold may be of any size. Wood chips for use on the project shall meet the requirements of Section 9-14.4(3).

2-01.3 Construction Requirements

Supplement this section with the following:

> All invasive vegetation (including but not limited to cherry laurel, ivy, blackberry, holly, and Japanese knotweed) shall be removed within all identified planting areas. Roots of invasive plants (excluding cherry laurel) shall be grubbed from the soil. Cherry laurel roots shall remain intact and in the ground for erosion control purposes. All grubbed invasive plant material shall be buried within the fill site according to design plan instructions, until available volume within the fill site is

depleted. Any remaining invasive vegetation shall be hauled and disposed of offsite per Section 2-01.2.

2-01.3(1) Clearing Limits Flagging

Supplement this section with the following:

The Contractor shall stake and flag the clearing limits of the project area at least 5 days prior to any earth-disturbing activity.

Clearing limits flagging shall be high-visibility orange survey tape installed on 3 foot long wood lathe stakes at 20 foot maximum spacing. Clearing limits flagging shall be installed at the Clearing Limit lines as shown on the Plans. Contractor shall inform Engineer when the clearing limits flagging is installed. Engineer will inspect and approve clearing limits flagging. No earth disturbing activity shall occur prior to Engineer's approval of the clearing limits flagging.

Contractor shall not disturb the area outside of the clearing limits flagging – including the vegetation – unless approved by the Engineer.
Location of some clearing limits flagging may have to be moved based on actual grading limits. Contractor shall not move clearing limits flagging without prior approval by Engineer.

Trees smaller than 12" diameter may be cleared with Engineer's approval if needed to obtain access to the channel. These trees shall be incorporated into log structures or channel construction as directed by Engineer. Trees greater than 12" diameter shall be protected from damage. Equipment shall not pass within the dripline of protected trees unless specifically permitted and supervised by Engineer. All costs for the work required to clear trees smaller than 12" diameter and incorporate them within log structures or channel construction shall be considered incidental to the Bid Item Clearing and Grubbing.

Contractor shall remove all clearing limits flagging and stakes at the completion of the construction.

Supplement this section with the following new section:

2-01.3(6) Remove Trees

Trees noted as "remove tree" on the drawings and existing fallen (downed) trees/logs/rootwads that lie within the clearing limits shall be carefully removed and stockpiled in locations not conflicting with subsequent channel construction. During channel construction, the trees/logs/rootwads shall be incorporated within the log structures and within the channel in random locations and placement angles as directed by Engineer.

Trees noted as "remove tree" on the drawings and existing fallen trees/logs/rootwads broken by the Contractor or otherwise not possible to be reset

as specified shall be reset along the edge of the channel or top of bank, as directed by Engineer.

2-01.4 Measurement
Supplement this section with the following:

Remove Tree will be measured per each tree removed and reset as directed by engineer.

No unit of measurement shall apply to the lump sum price for Clearing and Grubbing.

2-01.5 Payment
Payment will be made in accordance with Section 1-04.1, for each of the following bid items that are included in the proposal:

“Remove Tree”, per each.

The unit contract price for “Remove Tree” shall be full compensation for all costs incurred for removing tree, preserving roots and branches intact, cutting tree to appropriate lengths, stockpiling, staging, transportation, installation in creek and/or chipping as directed.

“Clearing and Grubbing”, lump sum.

The unit contract price per lump sum for “Clearing and Grubbing” shall constitute full payment for all materials, labor, and equipment necessary to locate, install, maintain, re-locate, and remove the clearing limits flagging, site clearing as well as invasive removal and disposal, protection of trees larger than 12” diameter, incorporation of trees smaller than 12” diameter, incorporating slash, tops and limbs into log structures and removal and resetting of existing fallen trees.

2-02 Removal of Structures and Obstructions

2-02.3 Construction Requirements

Supplement this section with the following:

Miscellaneous existing man-made debris within the construction, access, and staging areas shall be removed and disposed of at a permitted disposal site. Materials to be removed include, but are not limited to trash, automobile parts, batteries, and household debris including portable electronic devices. Disposal of man-made debris, recyclables, or hazardous materials shall be in accordance with current law.

2-02.5 Payment

Deleted and replaced this section with the following:

All work specified in this section will be incidental to the bid items included in the proposal and no separate measurement or payment will be made.

2-03 Roadway Excavation and Embankment

2-03.3(7) Disposal of Surplus Material

This section is deleted and replaced with the following:

A waste site has not been provided by the Contracting Agency for the disposal of excess materials and construction debris. The Contractor shall be solely responsible for loading, hauling and the disposal of all surplus material and construction debris in a manner complying with all local, state and federal statutes and regulations.

All costs involved in the loading, hauling and the disposal of all surplus material and construction debris shall be included in the unit contract price shown on the proposal for Clearing and Grubbing and no further payment will be made.

Supplement this section with the following new section:

2-03.3(19) Common Excavation Including Haul and Disposal

All excavation on this site shall be paid for as Common Excavation Incl. Haul and Disposal, which shall include that excavation for roadway excavation, channel excavation, foundation excavation, and all other types of excavation performed in the course of the project. An on-site disposal site has been provided for the excavated materials. All permanent fill placed on the site shall be compacted to a minimum of 90% per ASTM D 1557 (modified proctor); this includes all material placed on the fill disposal site, within the northern east fork channel and as backfill over logs and log structures. The final course (12” thick) of fill placed over the fill disposal site may be placed at approximately 85% compaction to permit vegetation installation.

2-03.4 Measurement

Supplement this section with the following:

Measurement for “Common Excavation Including Haul and Disposal” will be by the lump sum. There are approximately 29,730 bank cubic yards of material to be excavated to create the project, plus minor excavation for installation of the logs, streambed gravel, mini-crib block and gravity block walls.

2-03.5 Payment

Supplement this section with the following:

"Common Excavation Including Haul and Disposal", per lump sum.

The lump sum price for "Common Excavation, Including Haul and Disposal" shall be full compensation for all costs incurred for excavating, temporary stockpiling, grading, loading, hauling, and locally disposing of the material within the project site including compaction. Payment shall be made based on percent complete for the work area, referencing the approximate quantity identified in 2-03.4.

2-12 Construction Geosynthetic

2-12.1 Description

Supplement this section with the following:

The Contractor shall furnish and construct Biaxial Geogrid in accordance with the details shown in the Plans, these specifications, or as directed by the Engineer.

2-12.2 Materials

Supplement this section with the following:

Biaxial Geogrid shall meet the properties of Table 10.

Table 10:

Product Properties

Index Properties	Units	MD Values[1]	XMD Values[1]
▪ Aperture Dimensions[2]	mm (in)	25 (1.0)	33 (1.3)
▪ Minimum Rib Thickness[2]	mm (in)	1.27 (0.05)	1.27 (0.05)
▪ Tensile Strength @ 2% Strain[3]	kN/m (lb/ft)	6.0 (410)	9.0 (620)
▪ Tensile Strength @ 5% Strain[3]	kN/m (lb/ft)	11.8 (810)	19.6 (1,340)
▪ Ultimate Tensile Strength[3]	kN/m (lb/ft)	19.2 (1,310)	28.8 (1,970)
Structural Integrity			
▪ Junction Efficiency[4]	%	93	
▪ Flexural Stiffness[5]	mg-cm	750,000	
▪ Aperture Stability[6]	m-N/deg	0.65	
Durability			
▪ Resistance to Installation Damage[7]	%SC / %SW / %GP	95 / 93 / 90	
▪ Resistance to Long Term Degradation[8]	%	100	
▪ Resistance to UV Degradation[9]	%	100	

Dimensions and Delivery

The biaxial geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 3.0 meters (9.8 feet) or 4.0 meters (13.1 feet) in width and 50.0 meters (164 feet) in length. A typical truckload quantity is 160 to 210 rolls.

Notes

1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM D4759-02. Brief descriptions of test procedures are given in the following notes.
2. Nominal dimensions.
3. Determined in accordance with ASTM D6637-10 Method A.
4. Load transfer capability determined in accordance with ASTM D7737-11 using a 10% per min. strain rate.
5. Resistance to bending force determined in accordance with ASTM D7748-12, using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs, and of length sufficiently long to enable measurement of the overhang dimension.
6. Resistance to in-plane rotational movement measured by applying a 20 kg-cm (2 m-N) moment to the central junction of a 9 inch x 9 inch specimen restrained at its perimeter in accordance with GRI GG9.
7. Resistance to loss of load capacity or structural integrity when subjected to mechanical installation stress in clayey sand (SC), well graded sand (SW), and crushed stone classified as poorly graded gravel (GP). The geogrid shall be sampled in accordance with ASTM D5818-06 and load capacity shall be determined in accordance with ASTM D6637-01.
8. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EPA 9090 immersion testing.
9. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.

2-12.3 Construction Requirements
Supplement this section with the following:

The Contractor shall direct all surface runoff from adjacent areas away from the reinforced slope construction site.

The geogrid shall be installed per manufacturer's recommendations.

Prior to backfilling, contractor to obtain geotechnical engineers approval for installation.

Should the Geogrid be damaged or the splices disturbed, the backfill around the damaged or displaced area shall be removed and the damaged strip of Geogrid replaced by the Contractor at no expense to the Contracting Agency.

DIVISION 5 SURFACE TREATMENTS AND PAVEMENTS

5-04 Hot Mix Asphalt

5-04.3 Construction Requirements

5-04.3(3)A Material Transfer Device / Vehicle
(January 16, 2014 APWA GSP)
The first paragraph of this section is revised to read:

Additionally, a material transfer device or vehicle (MTD/V) is not required.

5-04.3(7)A2 Statistical or Nonstatistical Evaluation
(January 16, 2014 APWA GSP)
Delete this section and replace it with the following;

5-04.3(7)A2 Nonstatistical and Commercial Evaluation
Mix designs for HMA accepted by Nonstatistical or Commercial evaluation shall;

- Be submitted to the Project Engineer on WSDOT Form 350-042
- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2) and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with WSDOT Test Method T 718 or based on historic anti-strip and aggregate source compatibility from WSDOT lab testing. Anti-strip evaluation of HMA mix designs utilized that include RAP will be completed without the inclusion of the RAP.

At or prior to the preconstruction meeting, the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The proposed mix design indicated on a WSDOT mix design/anti-strip report that is within one year of the approval date.
- The proposed HMA mix design submittal (Form 350-042) with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The proposed mix design by a qualified City or County laboratory mix design report that is within one year of the approval date.

The mix design will be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO Material Reference Laboratory (AMRL) program.

At the discretion of the Engineer, agencies may accept mix designs verified beyond the one year verification period with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Evaluation of anti-strip additives are to be provided as part of the mix design acceptance criteria. Acceptable anti-strip evaluations include:

1) A WSDOT validated mix design showing the validated anti-strip additive and dosage;
2) An historic anti-strip determination from WSDOT not greater than two (2) calendar years old or;
3) A passing TSR test at the anti-strip dosage proposed by the Contractor.

No paving shall begin prior to Contracting Agency approval of the Contractor provided mix design.

5-04.3(8)A1 General
(January 16, 2014 APWA GSP)
Delete this section and replace it with the following:

5-04.3(8)A1 General
Acceptance of HMA shall be as defined under nonstatistical or commercial evaluation.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Project Engineer and must be made in accordance with Section 9-03.8(7).

Commercial evaluation may be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. Commercial HMA can be accepted by a contractor certificate of compliance letter stating the material meets the HMA requirements defined in the contract.

5-04.3(8)A4 Definition of Sampling Lot and Sublot
(January 16, 2014 APWA GSP)
Supplement this section with the following:

For HMA in a structural application, sampling and testing for total project quantities less than 400 tons is at the discretion of the engineer. For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed:

i. If test results are found to be within specification requirements, additional testing will be at the engineers discretion.

ii. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF shall be performed.

5-04.3(8)A5 Test Results
(January 16, 2014 APWA GSP)
The first paragraph of this section is deleted.

5**-04.3(8)A6 Test Methods**
(January 16, 2014 APWA GSP)
Delete this section and replace it with the following;

5-04.3(8)A6 Test Methods
Testing of HMA for compliance of Va will be at the option of the Contracting Agency. If tested, compliance of Va will be use WSDOT Standard Operating Procedure SOP 731. Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308. Testing for compliance of gradation will be by WAQTC FOP for AASHTO T 27/T 11.

5-04.5(1)B Price Adjustments for Quality of HMA Compaction
(January 16, 2014 APWA GSP)
Delete this section and replace it with the following:

The maximum CPF of a compaction lot is 1.00

For each compaction lot of HMA when the CPF is less than 1.00, a Nonconforming Compaction Factor (NCCF) will be determined. THE NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of the NCCF, the quantity of HMA in the lot in tons and the unit contract price per ton of the mix. Testing of HMA for compliance of Va will be at the option of the Contracting Agency. If tested, compliance of Va will be use WSDOT Standard Operating Procedure SOP 731. Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308. Testing for compliance of gradation will be by WAQTC FOP for AASHTO T 27/T 11.

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DIVISION 6 STRUCTURES

6-01 General Requirements for Structures

6-01.2 Foundation Data

Supplement this section with the following:

The attached log of test boring pages in Appendix A are reproductions of the original Log of Test Boring for the test holes shown in the Plans.

The Contractor should review the geotechnical recommendations report prepared for this project. Copies of the geotechnical recommendations report are available for review by prospective bidders at the location specified in Section 1-02.4 as supplemented in these Special Provisions.

6-02.3(2)A1 Contractor Mix Design for Concrete Class 4000D

Delete this section and replace with the following:

The use of fly ash is required for Class 4000D, except that ground granulated blast furnace slag may be substituted for fly ash at a 1:1 ratio. The minimum Cementitious content shall be 660 pounds with a minimum replacement of Fly Ash or Ground Granulated Blast furnace slag for Portland cement shall be 10 percent and a maximum replacement of fly ash for Portland cement of 20 percent and a maximum replacement of ground granulated blast furnace slag for Portland cement of 30 percent. When both fly ash and ground granulated blast furnace slag are included in the concrete mix, the total weight of both these materials is limited to 40 percent by weight of the cementitious material.

6-02.3(20) Grout for Anchor Bolts and Bridge Bearings

Supplement this section with the following:

The Contractor shall furnish and place the grout specified herein at the following locations:

1. Under bridge bearings

The grout shall be a workable mix with flowability suitable for the intended application.

For the proposed prepackaged grout, a request for approval of material sources shall be submitted. The Contractor shall receive approval from the Engineer before using the grout.

Before placing grout, the concrete on which it is to be placed shall be thoroughly cleaned, roughened, and wetted for twelve (12) hours with water to

ensure proper bonding. The grout pad shall be kept continuously wet with water until strength of 2,500 psi is attained.

6-02.5 Payment
Supplement this section with the following:

(June 26, 2000 WSDOT GSP)
Bridge and Structures Minor Items
For the purpose of payment, such bridge and Structures items as grout for bearings, anchor bolts, bridge expansion joint plates etc., for which there is no pay item included in the Proposal, are considered as bridge and Structures minor items. All costs in connection with furnishing and installing these bridge and Structures minor items as shown and noted in the Plans and as outlined in Section 8.28 of these Specifications and in the Standard Specifications shall be included in the *** lump sum bid items “Clear Creek Bridge No. 1” “Clear Creek Bridge No. 2” or “Clear Creek Bridge No. 3” ***

6-05 Piling

6-05.1 Description
Supplement this section with the following:

This item includes furnishing and driving 8 inch diameter steel pipe piling at the bridges. This item includes all pile, sleeved couplers for splice joints, top plates and studs.

6-05.2 Materials
Supplement this section with the following:

The pipe pile shall be 8 inch diameter, schedule 80 ASTM, A-252, Grade 2 pipe. Piling driven in nominal sections and connected with compression fitted sleeved couplers.

Sleeved couplers shall meet the requirements of ASTM A53 Grade “A.”

Top plates shall meet the requirements of ASTM A-36.

Shear studs shall meet the requirements of section 9-06.15.

Materials for test piles shall be the same as specified for the production piles.

The Contractor shall furnish test pile material sufficient to drive to 10 feet past the estimated pile length shown on the plans. Test piles shall include all splices, top plates and other parts as required for the final production piles. If test piles are

approved for production piles they shall be cut off and finished as shown in the plans for the typical production pile.

6-05.3 Construction Requirements
Supplement this section with the following:

Submittals
Prior to driving, the contractor shall submit for review and approval:

Proposed driving equipment
Material Certifications for all piling
Material order lengths
Coupler details
Top plate details

Construction Requirements
Piles shall be driven open ended and shall be located as shown on the plans.

Pipes driven to refusal shall use a minimum of a 3,000 pound hydraulic hammer. Refusal is defined as less than one inch of penetration in 10 seconds of continuous driving.

All piling installation requires a special inspection by the geotechnical engineer.

Piles shall be driven into the underlying bearing layer of medium stiff glaciolacustrine and dense glaciofluvial deposits. The bearing layer shall be identified in the field by driving resistance as noted by the site geotechnical inspector. The minimum length shown on the plans may be reduced with approval from the Engineer.

Due the varying thickness of the existing fill and depth of the bearing layer at the bridge locations, and innate uncertainty of the soil between soil explorations, the total estimated pile length could vary by ±30% and individual pile lengths could vary even more.
Piles shall be driven as nearly as possible in one continuous operation, in accordance with Section 6-05.3(11) of the Standard Specifications.

Piles shall be driven to a pile length necessary to produce the ultimate resistance shown on the plans as verified by the completed test pilings, and driven to the minimum length shown on the plans for acceptance.

Sleeved couplers, if used, shall be connected by a tight compression fit, and must be sized such that a tight fit is achieved between the respective items and the piles. Assemble and install the sleeved couplers and top plates per the manufacturer's instructions. Welded splices may be used in accordance with

Section 6-05.3(6) of the Standard Specifications. Top plates shall be fully welded to the pile after cut off.

Compression only couplers will not be allowed in the upper 20 feet of the pile. Any couplers located in this zone must be full penetration welded. Splices, welding and top plates shall be incidental to the cost of the pile.

6-05.3(10) Test Piles

Supplement this section with the following:

Load testing shall be performed on a minimum of one pile per bridge abutment. In addition to the minimum required testing, the Engineer may direct load testing of up to 6 additional piles. Load testing is used to verify axial capacity and to establish acceptable driving criteria. Test piles shall be placed at the locations in each footing as directed by the Engineer. Test piles may be used as production piles, providing their capacities are verified as acceptable. The number of production piles required for this project will be reduced by the number of additional accepted test piles.

Test piles shall be driven to refusal then load tested. Test piles shall be driven at least as far as the minimum length shown on the plans and farther as necessary to provide an ultimate end bearing of 22 tons as in accordance with the Quick Load Test Method in ASTM D-1143-81. All testing shall be under the direction of a qualified geotechnical engineer.

Equipment for driving piles shall be in accordance with the section “Furnish and Drive 8 Inch Diameter Steel Pipe Piling”.

If the specified bearing capacity is not achieved, additional piling may be required at the Engineer’s direction.

At the Engineer’s direction, the Contractor may be required to secure the services of a qualified pile driving analysis firm to dynamically analyze the test pilings for adequate bearing in accordance with AASHTO test procedure T-298. The Contractor shall then complete driving of the production piles based on the recommendations of the pile driving analysis. If pile driving analysis and/or further driving is required, adjustments will be made in accordance with the following:

FOR:	THE CONTRACTOR SHALL RECEIVE:
Pile driving analysis	Reimbursement for the consultant’s invoice costs plus ten percent markup for all overhead.
Additional test pile driving (if necessary)	Payment at the contract price for “Furnish and Drive 8 Inch Pipe Test Piling” for each foot of test piling driven beyond the estimated pile length.

Delay to procedure	An adjustment in contract time will be made for all non-working days caused as a direct result of the need for pile driving analysis, not to exceed the time in work days elapsed between completion of test piling and such time as analysis is complete.

6-05.4 Measurement
Supplement this section with the following:

Measurement for "Furnish & Drive 8 Inch Diameter Steel Pipe Test Piling" shall be by the linear foot of piling driven below the top cut-off elevation, at the location shown in the plans and to the length required by test pile data.

Measurement for "Furnish & Drive Steel 8 Inch Diameter Steel Pipe Piling" shall be by the linear foot of piling driven below the top cut-off elevation, at the location shown in the plans and to the length required by test pile data.

6-05.5 Payment
Supplement this section with the following:

The payment noted above for pile driving analysis, if necessary will be made under “Minor Changes.”

The unit contract price per foot for "Furnish and Drive 8 Inch Diameter Steel Pipe Test Piling" shall include all costs for labor, materials, tools and equipment necessary to supply and drive to the specified pile length to bearing, and complete the pile load test as specified herein. Included shall be all pipe material, sleeved couplers, top plates and studs.

The unit contract price per linear foot for "Furnish and Drive Steel 8 Inch Diameter Steel Pipe Piling" shall include all costs for labor, materials, tools and equipment necessary to supply and install the pile including all welding, couplers, top plate fabrications and other items to otherwise be required for a complete system meeting the requirements of this section.

6-13 Structural Earth Walls

6-13.2 Materials
Supplement this section with the following:

Materials shall be Mini-Criblock™ precast retaining walls, single-depth system. No substitution, or "approved equal", is allowed. Materials shall be furnished and installed per the manufacturer’s specifications, as indicated on the Drawings and

specified herein including all plants indicated for installation within the Mini-Criblock. Vendor contact information is:

Retaining Walls Northwest, Inc.
1299 156th Avenue, Suite 150
Bellevue, WA 98007
Office 425-747-0956
Fax 425-747-5892; pbenedict@retainingwallsnw.com

6-13.3(2) SUBMITTALS
Supplement this section with the following:

Design calculations for the Mini-Criblock™ wall are to be submitted to the Engineer for review prior to the Contractor obtaining the materials.

6-13.3(7) Backfill
Supplement this section with the following:

Backfill shall be placed per the plans, as modified by manufacturer's recommendations, incorporating plants as noted.

6-13.5 Payment
Supplement this section with the following:

Payment will be made in accordance with Section 1-04.1 for the following bid item: "Structural Earth Wall (Mini-Criblock) Incl. Landscaping", per square foot.

The unit Contract price per square foot for "Structural Earth Wall (Mini Crib) Incl. Landscaping" shall be full payment for all costs to perform the Work in connection with construction structural earth walls, including procurement, delivery and installation of all associated materials, including but not limited to procurement and installation of concrete units, site preparation, temporary shoring (if needed), 2"-4" spalls, compaction, gravel backfill for walls, fine compost, procuring and blending fine compost with Topsoil Type B and procurement and installation of plants within the structure.

DIVISION 7 DRAINAGE STRUCTURES, STORM SEWERS, STORM SEWERS, SANITARY SEWERS, WATERMAINS AND CONDUITS

7-02 Culverts

7-02.3 Construction Requirements

Supplement this section with the following:

Culverts, including beveled end and quarry spalls, shall be installed in accordance with Kitsap County Road Standard Figure 4-1.

7-02.4 Construction Requirements

Supplement this section with following:

No separate measurement will be made for quarry spalls installed at the beveled end of the culvert.

7-02.5 Construction Requirements

Deleted the sixteenth paragraph and replace with following:

The unit Contract price per linear foot for “Corrugated Polyethylene Culv. Pipe __” shall be full payment for all costs for the specified Work including excavation, removal of existing culvert pipe, haul and disposal of excavated material, installation of culvert pipe, backfill, beveled pipe ends, and quarry spalls.

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DIVISION 8 MISCELLANEOUS CONSTRUCTION

8-01 Erosion Control and Water Pollution Control

8-01.1 Description

Supplement this section with the following:

This work shall include the preparation and implementation of a Temporary Erosion and Sedimentation Control (TESC) Plan by the Contractor for this Contract.

Kitsap County is applying for a Washington State Department of Ecology NPDES Construction Stormwater General Permit for this project. The County anticipates the permit to be issued prior to the start of construction. The Contractor shall assume and include in the bid full compliance and administration with the requirements of the General Permit for this Project.

8-01.3 Construction Requirements

8-01.3(1) General

Supplement this section with the following:

The Contractor shall perform all work in compliance with the NPDES Construction Stormwater General Permit. The County will provide a copy of the finalized permit to the Contractor upon award of the Contract.

The permit shall be transferred to the Contractor prior to issuance of a Notice to Proceed and terminated upon completion of the project per the following:

1. The County will provide the Contractor with a Transfer of Coverage form prior to issuing a Notice to Proceed.
2. The Contractor shall sign and return the Transfer of Coverage form to the County.
3. The County will process the transfer and pay any associated transfer fees to the Department of Ecology.
4. Once the transfer is complete and a Notice to Proceed has been issued, the Contractor is responsible for performing all work in compliance with the permit.

Upon completion of the project, the Contractor shall submit a Notice of Termination to the Department of Ecology and provide the County documentation that the termination is effective.

8-01.3(1)A Submittals

Delete the first sentence and replace it with the following:

The Contractor shall submit a Temporary Erosion and Sediment Control (TESC) Plan (this is also known as the Stormwater Pollution Prevention Plan [SWPPP]

necessary to meet the requirement for the NPDES permit) at least 5 days prior to the preconstruction meeting.

8-01.3(4) Placing Compost Blanket
Supplement this section with the following:

Within areas indicated as floodplain and floodplain swale, the compost blanket shall be placed within 7 days of grading.

8-01.4 Measurement
Supplement this section with the following:

No unit of measurement shall apply to the lump sum price for “TESC Plan”.

No unit of measurement shall apply to the lump sum price, “NPDES Construction Stormwater General Permit”

8-01.5 Payment
Supplement this section with the following:

“TESC PLAN (SWPPP)”, per lump sum.
The lump sum payment shall be full compensation for all costs incurred in the development of the TESC Plan.

“NPDES Construction Stormwater General Permit”, per Lump Sum.
The lump sum contract price for “NPDES Construction Stormwater General Permit” shall be full pay for all costs, including but not limited to, transferring the permit, sampling, monitoring, reporting, coordinating, inspecting, fees and any other expenses, materials and labor necessary to fully comply with the requirements of the permit and terminate it upon completion of the project.

8-02 Roadside Restoration

8-02.5 Payment
Supplement this section with the following:

“Hydroseed”, per acre
The unit contract price per acre for “Hydroseed” shall be full pay for furnishing and applying the material, including seed as shown on the Plans, tackifier and mulch, and installation including water and equipment on areas shown on the Plans.

8-12 Chain Link and Wire Fence

8-12.14 Measurement
Supplement this section with the following:

Split rail fence will be measured by the linear foot of completed fence, along the ground line, exclusive of openings.

Bollard Type 1 will be measured per each for the bollards furnished and installed complete in place.

8-12.15 Measurement
Supplement this section with the following:

"Chain Link Fence Type 4, Including Top Rail", per linear foot
The unit price for "Chain Link Fence Type 4, Including Top Rail" shall be full payment for all costs for the specified Work including brake post installation and top rail as shown on the Plans and all other requirements of Section 8-12 for Chain Link Fence, unless covered in a separate Bid Item in this section.

"Split Rail Fence", per linear foot
The unit price for "Split Rail Fence" shall be full payment for all costs for the specified Work including excavation for posts and compaction of backfill around the posts as shown on the Plans.

"Bollard Type 1", per each
The unit price for "Bollard Type 1" shall be full payment for all costs for the specified Work including site preparation, excavation, placement of concrete and installation of reflective tape as shown on the Plans.

8-24 Rock and Gravity Block Wall

8-24.2 Materials
Supplement this section with the following:

Gravity Block Wall shall be Redi-Rock gravity block wall with a sealed gray ledgestone finish or approved equal. Vendor contact information is as follows:

Puget Sound Precast *www.psprecast.com*
REDI-ROCK Design and Sales *www.redi-rock.com*
DAVID EARL
P 253-531-2656
F 253-531-2689
C 253-606-2988

Gravel Backfill for Foundations shall meet the requirements of 9-03.12(1)A.

Gravel Backfill for Walls shall meet the requirements of 9-03.12(2).

Geotextile for Separation shall be nonwoven meeting the requirements of 9-33.2.

8-24.3 Construction Requirements

Supplement this section with the following:

Gravity Block Wall bottom blocks shall be placed on 6 inch minimum leveling pad of compacted Gravel Backfill for Foundations Class A.

Redi-Rock Gravity Block Wall units shall be installed in accordance with the manufacturer's recommendations.

8-24.5 Payment

Replace the sixth paragraph of this section with the following:

"Gravity Block Wall", per each.

The unit contract price for "Gravity Block Wall" shall be full payment for furnishing and placing the gravity block wall including excavation and haul, placing and compaction of the foundation materials and backfill and installation of geotextile for separation as shown the plans.

Supplement this section with the following new sections:

8-28 Pre-Engineered Bridges

8-28.1 Description

This Work consists of designing, furnishing, and installing a fully engineered clear span bridge of welded steel construction for the superstructures of Clear Creek Bridge No. 1, Clear Creek Bridge No. 2 and Clear Creek Bridge No. 3. Included is furnishing and installing the concrete foundation as shown on the plans. Furnishing and driving the steel pipe piling are separate items as specified in section 6-05.

8-28.2 Materials

Materials for the clear span bridges shall meet the requirements of the following:

Substructure	Concrete Class 4000*	6-02.1
Deck	Concrete Class 4000D*	6-02.3(2)A1 of these provisions.
Epoxy Coated Steel Reinforcing	ASTM A615 Grade 60	9-07
Steel Inserts	ASTM A36	
Weld Material	AWS D1.5	
Gravel Backfill for Walls		9-03.12(2)

Elastomeric Bearing Pads 9-31.1

*All concrete shall have a minimum 4% air entrainment.

All structural members shall have a minimum thickness of material of at least 5/16" in accordance with AASHTO Section 6.7.3.

Bridges shall be unpainted Weathering Steel fabricated from ASTM A709 Grade 50W steel for plates, structural shapes, and tubular sections. Minimum yield (Fy) shall be 50,000 psi.

Field splices shall be bolted with High Strength ASTM A325 bolts; Type 3 bolts are required for weathering steel bridges.

Concrete stay in place deck forms shall be hot dipped galvanized.

Welding materials shall be in strict accordance with the American Welding Society (AWS) Structural Welding Code, D1.1. for tubular members and ANSI/AASHTO/AWS D1.5 Bridge Welding Code for structural steel members.

Welders shall be certified in accordance with the weld process to be used.

8-28.3 Construction Requirements

8-28.3(1) Design Requirements

Design Criteria

The design of the bridge shall be in accordance with the American Association of State Highway Transportation Officials LRFD Pedestrian Bridge Design Specifications, 2nd Edition, and LRFD Bridge Design Specifications, current edition with interim revisions (herein referred to as “AASHTO”). Tubular members and their connections shall be designed per the AISC “Hollow Structural Sections Connections Manual” latest edition.

Half through truss bridges shall be designed per AASHTO Section 6.14.2.9 and by a Professional Engineer experienced in pony truss bridge design and top chord stability criteria utilizing elastic lateral restraints.

In addition to normal dead loads, the bridge shall be designed for the following:

Uniform Live Load

Pedestrian traffic shall be 90 psf non concurrent with the vehicular load.

Vehicle Loads

The bridge shall be designed for service vehicle (10 tons). For the Strength I combination with a live load factor of 1.75. Dynamic allowance may be neglected for this vehicle.

Wind Load
The bridge Structure shall be designed for wind loads in accordance AASHTO Section 3.8.1.2.

Seismic
Per AASHTO Section 4.7.4.2. Single Span Bridges and Section 3.10.9

Site Class	= D
Peak Ground Acceleration, PGA	= 0.440 g
Site Coefficient, F_{pga}	= 1.06
Site Coefficient, F_a	= 1.11
Site Coefficient, F_v	= 1.72

Deck
The deck shall be reinforced concrete and designed as non-composite with any stay in place forms and not rely on the forms for final strength.

8-28.3(2) Qualified Suppliers

Qualified Suppliers Requirements
Proposed suppliers must have at least five (5) years experience designing and fabricating this type of pedestrian and vehicular structure and a minimum of five (5) successful bridge projects of similar style and construction as specifically written in these Specifications and Plans. Each successful project must have been in service at least three (3) years. List the location, bridge size, owner, and a contact for reference for each project.

The bridge fabricator shall be certified by the American Institute of Steel Construction (AISC) to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for “Conventional Steel Structures and Major Steel Bridges.”

The bridge fabricator shall have the “Sophisticated Paint Endorsement and Fracture Critical Endorsement” as set forth in the AISC Certification Program.

Proposed suppliers must have current AISC Shop Certification.

Bid Proposal Requirements
The Contractor must provide the following documentation, with their bridge submittals

- Name and address of supplier
- Product literature
- AISC Shop Certification
- Experience project information record and contacts

The Contracting Agency will evaluate and verify the accuracy of the submittal that is submitted. If the Contracting Agency determines that the qualifying criteria have not been met, the Contractor's proposed supplier shall be rejected. This ruling shall be final.

8-28.3(3) Warranty

The manufacturer shall provide a warranty against defects in material and workmanship for a period of ten (10) years.

8-28.3(4) Bridge Type

The bridge required will be a one lane "H" Thru Truss. The top and bottom chords of the truss shall be parallel.

The top and bottom chord of the truss shall be fabricated from HSS steel and cambered for dead load on a smooth radius.

The bridge truss shall include a safety railing. Continuous rails shall be located on the inside face of the trusses and be in accordance with AASHTO Section 13.8.1.

Superstructure depth measured from the bridge deck surface to bottom of steel shall be maintained as indicated in the Plans for each individual bridge. In no case shall the bottom chord be lower than the 100-year flood elevation noted in the Plans.

Depth measured from deck level to the top of the top chord shall be a minimum of 54 inches.

The bridge shall be manufactured with zero skew, and no super elevation to comply with the Plans.

Concrete abutment back-wall height as shown in the Plans is approximate. Final anchor bolt locations and back-wall height shall be set to match the approved final bridge design. Changes to quantities due to adjustments for the back-wall height to match the approved final bridge design, including but not limited to concrete, reinforcement, structure excavation, and backfill, will not be reason for adjustment to the contractor's payment.

The concrete abutments shown in the Plans are conducive to the bridge shown in the Plans. Any changes needed to modify abutments for alternate bridge types and details must be designed and sealed by a registered Professional Engineer in the state of Washington at no additional cost to the Contracting Agency. Except, decreasing the back wall height will not require an engineer, providing the same bar size and spacing is provided as shown in the plans.

All formwork for concrete deck, side forms and end dams along with deck pans shall be supplied by the bridge manufacturer. If holes are provided in the deck pan for shipping,

lifting or other uses, these holes shall be sealed with deck pan material and welded all around prior to deck placement.

The bridge deck shall include a steel cover plate that covers any gap between the bridge deck and the abutment back-wall. The cover plate shall be flush with the top of the deck and the abutment back-wall to eliminate any tripping hazard.

8-28.3(5) Dimensions

Width
Inside clear width of the bridge shall be 15’-0”.

Span
Face of back wall to face of back wall shall be as shown in the Plans.

Camber
The bridge shall be cambered to offset dead load and have a final upward camber (after placement of the concrete deck) at mid span equal to 1% of the bridge length. All vertical truss members shall be perpendicular to the bottom chord of the truss after the bridge is erected and all dead loads applied.

8-28.3(6) Submittals

Prior to installation of the bridge, the Contractor shall submit the following:

Design calculations prepared by a Professional Engineer registered in the State of Washington.

Shop Drawings describing all elements of the proposed bridge, bridge deck, bearings, and anchor bolts.

Fabrication shall not begin until Shop Drawings have been reviewed and approved by the Engineer. The Contractor shall be responsible for verification of all field dimensions prior to bridge fabrication

At a minimum, the bridge Shop Drawings shall include:

Steel construction materials
Fabrication welding processed
Finishes
Overall dimensions (Plan & Section)
Bearing details
Railing details
Deck details
Design calculations

Erection Plan

8-28.3(7) Fabrication and Quality Control

The bridge fabricator shall be the designer and supplier of the bridge and shall not assign, sublet, or subcontract any part of bridge fabrication.

The bridge fabricator shall maintain a full-time Certified Welding Inspector (CWI) on staff for inspecting bridge fabrication, maintaining accurate records, and other necessary aspects of bridge fabrication to ensure consistently high quality fabrication.

Workmanship, fabrication, and shop connections shall be in accordance with American Association of State Highway and Transportation Officials Specifications (AASHTO).

Concrete deck shall be cured in accordance with Section 6-02 of the Standard Specifications.

Welding
Welding operators shall be properly accredited experienced operators, each of whom shall submit satisfactory evidence of experience and skill in welding structural steel with the kind of welding to be used in the Work, and who have demonstrated the ability to make uniform good welds meeting the size and type of weld required.

All welding shall utilize E70 or E80 series electrodes. The weld process used shall be Flux Core Arc Welding (FCAW) or Gas Metal Arc Welding (GMAW) or Shielded Manual Arc Welding (SMAW) per AWS D1.1 or ANSI/AASHTO/AWS D1.5 “Bridge Welding Code.”

All welds shall be visually inspected by a Certified Welding Inspector. All complete penetration chord member welds shall be Magnetic Particle (MT) inspected and 10% of all other welds shall be MT tested.

8-28.3(8) Finishes

Steel
All exposed surfaces of steel shall be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning, SSPC-SP7 latest edition. Exposed surfaces of steel shall be defined as those surfaces seen from the deck and from outside of the Structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below deck and bottom face of the bottom chord need not be blasted. All Blast Cleaning shall be done in the fabricator’s OSHA approved indoor facility. Blast operations shall use Best Management Practices and exercise environmentally friendly blast media recovery systems.

Concrete Deck

Concrete decks shall have a transverse combed surface finish.

8-28.4 Measurement

"Clear Creek Bridge No. 1", "Clear Creek Bridge No. 2" & "Clear Creek Bridge No. 3" *** each contain the same quantities of material. The quantities and work for a single bridge are as follows:

Class 4000 Concrete for Substructure	15 C.Y.
Epoxy coated Steel Reinforcing Bar Grade 60 (Substructure)	3075 Lbs.
Class 4000D Concrete for Bridge Deck	12 C.Y.
Epoxy coated Steel Reinforcing Bar Grade 60 (Deck)	2140 Lbs.
Gravel Backfill for Walls	19 C.Y.
Structural Excavation Class A	38 C.Y.
39'-0" (Bearing to Bearing) x 15 foot Pre-Engineered Steel Truss Bridge	1 Each
Elastomeric Bearings	4 Each
Anchor Bolts	Per Manufacturer

The quantities are listed only for the convenience of the Contractor in determining the volume of Work involved and are not guaranteed to be accurate. The prospective Bidders shall verify these quantities before submitting a Bid. No adjustments other than for approved changes will be made in the lump sum Contract price for **** "Clear Creek Bridge No. 1" "Clear Creek Bridge No. 2" or "Clear Creek Bridge No. 3" *** even though the actual quantities required may deviate from those listed.

8-28.5 Payment

Payment will be made in accordance with Section1-04.1, for the following Bid Items when included in the Proposal:

"Clear Creek Bridge No. 1", lump sum.
"Clear Creek Bridge No. 2", lump sum.
"Clear Creek Bridge No. 3", lump sum.

The lump sum Contract price for ""Clear Creek Bridge No. 1" Clear Creek Bridge No. 2" or Clear Creek Bridge No. 3" shall be full pay for performing the Work as specified, including all labor, materials and equipment as required to furnish and install each bridge as shown on the plans. Included shall be the cost for all design, required shop drawings,

excavation, backfill, cast-in-place concrete foundation, concrete deck, steel reinforcing, gravel backfill for walls, steel truss, safety rails, bearings ,anchor bolts, warranty and other items as required for complete system.

8-29 Pedestrian Path

8-29.1 Description

This work consists of furnishing and installing a pedestrian path as shown in the Plans.

8-29.2 Materials

Materials for the pedestrian path are as shown on the Plans and in the relevant sections of Division 5.

8-29.3 Construction Requirements

Construction requirements for the pedestrian path are as shown in the Plans and in the relevant sections of Division 5.

8-29.4 Measurement

“Pedestrian Path”, (1851 LF), contains the following approximate quantities of material and work:

HMA Class 1/2” PG 64-28	390 TN
Crushed Surfacing Top Course	260 CY
Gravel Base	590 CY
Construction Geotextile (Biaxial Geogrid)	1,300 SY

The quantities are listed only for the convenience of the Contractor in determining the volume of Work involved and are not guaranteed to be accurate. No adjustments other than for approved changes will be made in the unit price for Pedestrian Path even though the actual quantities required may deviate from those listed.

8-29.5 Payment

Payment will be made in accordance with Section1-04.1, for the following Bid Items when included in the Proposal:

“Pedestrian Path”, per linear foot

The unit price for “Pedestrian Path” shall be full pay for performing the Work as specified, including all labor, materials and equipment as required to furnish and install the pedestrian path as shown on the plans, including all site preparation, delivery and installation of materials, compaction, paving and installation of all signage shown in the Plans.

8-30 Streambed Construction

8-30.1 Description

This work shall consist of constructing new locations for segments of the stream. The work includes establishing the new alignment for the stream; excavation; providing, hauling and placing fill materials, including till, topsoil, streambed sediment, boulders, and providing, hauling, and placing logs, rootwads and boulders for stream channel creation.

The location of single logs, log structures, grade control structures, streambed sediment and boulders are shown approximately on the Plans. Their final locations, orientation, and degree of burial will be directed by the Engineer.

The construction of the stream channel may be monitored by regulatory agencies. Although they will not have direct contact with the Contractor, they will advise the Engineer when the intent of the plans is not being implemented. The agencies that may be monitoring the work include the Washington State Department of Fish and Wildlife, the Washington State Department of Ecology and the US Army Corps of Engineers

8-30.2 Materials

Materials shall meet the requirements of the following sections:

Streambed Sediment	9-03.11(1)
Streambed Cobbles	9-03.11(2)
Streambed Boulders	9-03.11(3)
Bark or Wood Chips	9-14.4(3)

The Contractor shall, a minimum of three weeks in advance of construction, provide submittals showing the proposed gradation for all streambed sediment and streambed cobbles to be used for the stream construction, including source of material. In addition to submittals showing the actual gradation for each material, prepare 5 to 10 cubic yard samples of actual composite material that is proposed for the stream streambed sediment and cobbles. The Contractor shall provide a 5-gallon bucket sample of wood chip mulch for inspection by the Engineer. The Contractor shall notify the Engineer when samples of the composite gradations of streambed sediment and cobbles are available for inspection at the processing plant. Production processing of the material shall not begin until each material is approved by the Engineer in writing.

8-30.3 Construction Requirements

8-30.3(1) Permit Requirements

The Contractor shall comply with all applicable requirements of all permits obtained for this project and with all applicable requirements of local, state, and federal agencies.

8-30.3(3) Temporary Construction Access and Restoration

Machine access to the stream channel shall only be via the construction entrances shown on the Plans. The Contractor may propose alternate material delivery method or configurations to facilitate the proposed construction methods, which must be approved by the Engineer prior to clearing and grading. Temporary fill used in the construction of an access route shall be removed following completion of the instream work.

The areas and slopes outside permanent stream restoration limits that are disturbed for temporary access shall be completely restored to pre-construction conditions, not to exceed existing slopes, and planted in accordance with Plans and section 8-02. Gates and/or fences removed to provide access shall be re-installed or replaced with like kind of materials. Additional areas disturbed beyond those shown in the Plans shall be restored and replanted at the Contractor's sole expense. On-site utilities exist within the access routes and include, but are not limited to, electrical lines, water lines, sewer lines and stormwater lines. The Contractor shall install protection methods such as steel plates to ensure the existing utilities are not damaged. Trees exist in close proximity to the access routes and shall be protected from damage by boards and flagging to prevent equipment from coming in contact with the trees. Any removal of limbs required to establish and maintain access shall be flagged for review and approval by Engineer (and landowner where appropriate) before any limbs are removed.

The Contractor shall keep the premises clean, free of excess soils, and other materials, including refuse and debris, resulting from work throughout the operation. The Contractor shall maintain at a minimum a single lane of continuous vehicle access along Silverdale Way and Schold Road and shall not stockpile materials or park equipment in any manner that may create hazards or obstacles to these roadways. At the end of each workday, the right of way shall be re-opened for two-way traffic, neatly dressed and all surrounding walks and paved areas shall be cleaned to the satisfaction of the Engineer. Cleaning by flushing into sewers will not be allowed. The costs to keep the right of way clean as specified will be included in the various items of work included in the proposal.

The Contractor shall restore the areas used for temporary access at the conclusion of the work. This work shall include excavation and removal of any materials used for the access road and access path(s), removing surplus soils, materials, flagging, stakes, geotextile, and debris from the construction site and leaving the project in a clean condition and soils fully stabilized using erosion control measures including planting and/or lawn.

8-30.3(4) Stream Construction Plan

The Contractor shall prepare a Stream Construction Plan describing the planned construction sequence for the stream. The following presents an example general stream construction sequence, it does not address all work required for the project. The Contractor is not bound to follow this specific sequence, but shall provide a construction

sequence plan that demonstrates, at a minimum, equivalent safeguards for protecting the environment and completing the project.

1. Develop and submit schedule of construction activities for the entire project duration, including stakeout, clearing & grubbing, installation of erosion control materials, construction of access path(s), installation of stream bypass, material staging, stream construction, planting and final site closure. This schedule shall identify type, duration and schedule of traffic control measures required to satisfy requirements in Section 8-02.3(1).
2. Stake out clear and grub limits and review with Engineer
3. Survey and stake stream channel stationing and stakes for floodplain creation. Set and maintain offset (reference) stakes at minimum interval of 50 ft. Set offset stakes beyond the limits of excavation and fill for reference and control of construction. Maintain offset stakes until the work is completed. Install construction flagging and tree protection.
4. Inform the Engineer that the stream channel stationing stakes are installed. Within 3 working days, the Engineer will review the stakes and shall indicate changes if deemed necessary.
5. Install erosion control measures.
6. Install temporary access routes within the project area.
7. Remove vegetation within the grading limits. Stockpile trees that meet the requirements for logs.
8. Begin staging stream materials – identify sequence of material staging through project
9. Install dewatering wells and pumps.
10. Install stream bypass system in the Mainstem Channel, including performing fish exclusion.
11. Starting on the Mainstem Channel approximately at station 9+50 and moving downstream, construct the floodplain and stream channel including logs and root wad logs and stream streambed sediment.
12. Install Bridge 3 in conjuction with creation of Mainstem stream channel.
13. Install stream bypass system in East Fork and West Fork Channels, including performing fish exclusion.
14. Install logs and root wad logs along upper West Fork
15. Starting on the West Fork Channel approximately at station 23+25 and moving downstream, construct the floodplain and stream channel including logs and root wad logs and stream streambed sediment through the confluence area and into the Crid 4 wetlands area.
16. Install Bridge 2 in conjunction with creation of stream channel outlet into Crid 4 wetlands area
17. Remove Schold Road within the project limits and road prism fill down to approximately proposed floodplain grading elevations.
18. Starting at the East Fork Channel at approximately Station 100+00 and moving upstream construct the floodplain and stream channel including logs and root wad logs and stream streambed sediment.
19. Install Bridge 1 in conjunction with creation of stream channel.

20. Introduce water into new stream channel in the West and East Fork Channels.
21. Create new trail network, including retaining walls, trail subgrade and paving.
22. Remove un-needed temporary erosion control measures around stockpile areas.
23. Install wood mulch, erosion control blankets, and plantings as appropriate during construction.
24. Install remaining topsoil, compost, erosion control blankets and plantings. Remove all construction flagging.
25. Remove access paths and restore slope.
26. Remove erosion control measures.
27. Repair any damage to roadway surfaces caused by construction activities.

The stream construction shall occur within the permitted construction time period. Do not perform any work in the existing stream until the required stream bypass system is in place as approved by the Engineer.

Contractor may place material in any appropriate sequence, however once logs are placed, no heavy machinery shall be permitted to travel over them.

Contractor shall install and maintain erosion and streambed sediment control facilities as shown in the Plans and in accordance with Section 8-01.

8-30.3(5) Stream Bypass

Bypass stream flow around the construction area as necessary to construct the project. Stream bypass shall be in accordance with the Plans, these Specifications, and the requirements of the permits.

Develop a Stream Bypass Plan that includes details for stream bypass and dewatering. The plan shall conform to the Washington Department of Ecology water quality standards and meet requirements defined in the Washington Department of Fish and Wildlife Hydraulic Project Approval (HPA). Submit the Stream Bypass Plan to the Engineer for review and approval as a distinct section of the TESC Plan.

The temporary stream bypass system shall include, at a minimum, a diversion dam, a diversion pipe, and the discharge from the diversion pipe back into the channel at the downstream end of the project. A stream bypass pump may be required. The stream bypass system shall be designed to prevent erosion of the channel at the downstream end of the stream bypass. The Stream Bypass Plan shall detail the locations, sizes of, and materials for the facilities and shall include the calculations done to size those facilities. The Contractor shall provide the stream bypass around the construction area for the duration of in-stream work. This activity shall conform to the requirements of the Hydraulic Project Approval (HPA). The temporary stream bypass shall be appropriately sized to manage the daily flows shown on the Plans, plus sufficient additional capacity to bypass flow from small rainfall events. The contractor is responsible for properly sizing the stream bypass pumps. The Contractor shall be prepared and have materials on site to secure the area from impacts of heavy rainfall with appropriate BMPs (such as plastic sheeting) to prevent flows greater than the capacity of the stream bypass from

contacting disturbed soils within the channel. The temporary stream bypass system shall be completely removed when no longer required.

Prior to dewatering, fish must be captured and removed from segments of the creek to be diverted. Fish capture and removal shall be performed according to *WSDOT Fish Exclusion Protocols and Standards*. An exception to these guidelines is that the directing biologist does not have to be under contract with WSDOT, but shall be commensurate in experience and approved by the site engineer.

8-30.3(6) Dewatering

Test pits borings were done for this project, indicating groundwater will likely be encountered during the earthwork. Dewater by installing dewatering wells and pumps to ensure a fully dry construction area. Dispose of dewatering water in accordance with Section 8-01.3(1)C. All costs for dewatering will be included in the bid item "Erosion/Water Pollution Control".

8-30.3(7) Stream Channel excavation and Grading

Prior to beginning any earthwork, survey and stake the stream channel alignment. Set and maintain offset (reference) stakes at each point. Set offset stakes beyond the limits of excavation and fill for reference and control of construction. Maintain offset stakes until the work is completed. Place grade control along the alignment of the stream as shown on the Plans.

Inform the Engineer that the stream channel centerlines are staked. Within 5 working days, the Engineer will review the stream channel alignment and shall indicate changes in the stream alignment.

Clear and grub in accordance with Section 2-01.3. Remove vegetation, stumps, downed logs, and debris within the grading limits. Stockpile all trees removed from within the grading limits that meet the requirements for logs and root wads.

Prepare stream bed for placement of logs and log structures. Remove all water from area where stream materials are to be placed. If conditions become wet, cease all work until dry conditions are re-established. Control erosion at all times. Distribute and spread materials as required. Construct final channel slopes as shown in the Plans and as directed by the Engineer.

The Contractor shall construct the stream channel in a manner that prevents erosion and loss of streambed sediment.

8-30.3(8) Placement of Streambed Sediement, Streambed Cobbles, Logs, and Root Wad Logs

Place streambed sediment, streambed cobbles, logs and root wad logs at the locations as shown in the Plans and as directed by the Engineer. Locations and minor installation

details may be field modified by the Engineer but number of structures will remain consistent with plans. Logs, root wad logs, streambed cobbles and streambed sediment shall be installed following installation of adjacent structures. Logs shall be sufficiently buried so the log is securely buried and unlikely to move as called out on the Plans. Burial depths shown on plans are minimum depths – a longer segment of the log may be buried than shown and/or the log may be buried deeper than shown as directed by the engineer to ensure log stability. Place logs, logs with root wads and streambed sediment at the locations identified by the Engineer. At the pre-construction meeting a complete listing of number, length and diameter of the logs and root wad logs will be provided by the County.

8-30.3(9) Vegetation Protection During Construction

Protect existing vegetation that is outside of the grading limits against injury and damage, including but not limited to cutting; breaking; skinning of roots, trunk, and branches; smothering by stockpiled materials; and compaction by equipment.

Keep all equipment outside of the drip lines of all trees to remain. Avoid damage to root systems.

Notify Engineer immediately if a conflict arises between construction activity and protection of the vegetation. Alter construction as directed by the Engineer.

8-30.3(10) Soil Removal and Disposal

The soil to be removed from the site shall be identified by the Engineer. The soil shall be removed from the construction area and hauled to the disposal site shown on the Plans. Those soils containing knotweed roots or stems shall be handled and disposed of separately from other project soils to prevent cross-contamination and spread of knotweed.

8-30.4 Measurement

No unit of measurement shall apply to the lump sum price for Stream Bypass.

“Stream Construction Plan”, per Lump Sum.

“Streambed Sediment” will be measured by the ton actually placed.

“Streambed Cobbles” will be measured by the ton actually placed.

“Streambed Boulders” will be measured by the ton actually placed.

“Log, Installed” will be measured per each.

“Root Wad Log, Installed” will be measured per each.

No separate measurement will be made for temporary fill.

No separate measurement will be made for dewatering.

8-30.5 Payment

Payment will be made in accordance with Section 1-04.1 for each of the following bid items that are included in the Proposal:

"Stream Bypass", lump sum.

The contract price per lump sum shall include all costs for, but is not limited to, all labor, materials, tools, equipment, and incidentals required to furnish, install, maintain, and remove temporary stream bypass, all in accordance with these Specifications, the Contract Plans, the project permits, and as directed by the Engineer.

The contract price bid shall include, but not limited to, all costs for:

- Initial fish removal, and subsequent fish removal from the work site if fish block nets are breached due to clogging, and/or knocked over by storm flows,
- designing, installing, maintaining, and removing the temporary stream bypass system, including gravel bag cofferdam, inlet sump, stream bypass pump and piping, outfall energy dissipator, dewatering sump, and installation and daily cleaning of the fish block net, and
- implementing invasive species decontamination and control measures as required by permits.

"Stream Construction Plan", per lump sum.

The lump sum payment shall be full compensation for all costs incurred in the development of the Stream Construction Plan.

"Streambed Sediment", per ton.

The unit contract price per ton for "Streambed sediment" shall constitute full payment for all costs incurred for furnishing, hauling, placing, and compacting the material including excavation to place the material.

"Streambed Cobbles", per ton.

The unit contract price per ton for "Streambed Cobbles" shall constitute full payment for all costs incurred for furnishing, hauling, placing, and compacting the material including excavation to place the material.

"Streambed Boulders", per ton.

The unit contract price per ton for “Streambed Boulders” shall constitute full payment for all costs incurred for furnishing, hauling and placing the material including excavation to place the material.

“Log, Installed”, per each.

The unit contract price per each for “Log, Installed” shall constitute full payment for relocating the logs provided by the County from the on-site staging location to the installation location, installing the logs, furnishing and installing log anchors and associated appurtenances, furnishing and installing the cable, cable, wire clamp and all other incidental items as shown in the Plans and as indicated in these Specifications. Cost per log shall be the same regardless of diameter and length. Posts shall be paid for as Log, Installed, per each. Costs associated with cutting of logs to fit site conditions and installing logs as Posts shall be incidental to the unit cost. The unit price of “log, Installed” shall apply to the original log length in the stockpile of logs provided by the County; if that log is cut and installed in two or more pieces they shall be paid for as a single log.

“Root Wad Log, Installed”, per each.

The unit contract price per each for “Root Wad Log, Installed” shall constitute full payment for relocating the root wad logs provided by the County from the on-site staging location to the installation location, installing the root wad logs, furnishing and installing log anchors and associated appurtenances, furnishing and installing the cable, cable, wire clamp and all other incidental items as shown in the Plans and as indicated in these Specifications. Cost per root wad log shall be the same regardless of diameter and length. The unit price of “Root Wad Log, Installed” shall apply to the original root wad log length in the stockpile of logs provided by the County; if that root wad log is cut and installed in two or more pieces they shall be paid for as a single root wad log.

All work specified for temporary fill will be incidental to the bid items included in the Proposal and no separate measurement or payment will be made.

All work specified for managing on-site groundwater and/or seeps will be incidental to the bid items included in the Proposal and no separate measurement or payment will be made.

DIVISION 9 MATERIALS

9-03 Aggregates

9-03.8(2) HMA Test Requirements

Supplement this section with the following:

ESAL's
The number of ESAL's for the design and acceptance of the HMA shall be in the range of more than 300,000 to less than 3 million.

9-03.8(7) HMA Tolerances and Adjustments

Supplement this section with the following:

Item 1 is deleted and replaced with:

1. Job Mix Formula Tolerances. After the JMF is determined as required in 5-04.3(7)A, the constituents of the mixture at the time of acceptance shall conform to the following tolerances:

	Nonstatistical Evaluation	**Commercial Evaluation**
	Aggregate, percent passing	
1", ¾", ½" and ⅜" sieves	±6.0%	±8.0%
U.S. No. 4 sieve	±6.0%	±8.0%
U.S. No. 8 sieve	±6.0%	±8.0%
U.S. No. 200 sieve	±2.0%	±3.0%
Asphalt Binder	±0.5%	±0.7%
Air Voids	2.5% Minimum and 5.5% Maximum	

9-03.11(1) Streambed Sediment

Delete this section and replace with the following:

The Streambed Sediment shall meet the following requirements for grading when placed in hauling vehicles for delivery to the project or during manufacture and placement into temporary stockpile. The point of acceptance shall be at the point of manufacture per 8-30.2.

Sieve Size	Percent Passing
4 inch	100
3 inch	85 - 100
1 1/2 inch	60 - 85
3/4 inch	40 - 65

3/8 inch	30 - 50
No 4 Sieve	20 - 40
No 40 Sieve	16 max

9-03.11(2) Streambed Cobbles
Delete this section and replace with the following:

The Streambed Cobbles shall meet the requirements for grading when placed in hauling vehicles for delivery to the project or during manufacture and placement into temporary stockpile. The point of acceptance shall be at the point of manufacture per 8-30.2. The material shall meet the specifications for 12” cobbles as summarized by the sizing distribution. Size shall be determined and confirmed by the Engineer using the methodology in the Standard Specifications.

Approximate Size	Percent Passing
12”	100
8”	75 max
4”	45 max
¾”	10 max

9-14 Erosion Control and Roadside Planting

9-14.4(2) Hydraulically Applied Erosion Control Products
Supplement this section with the following:

> “Hydroseed”, shall be Moderate-Term Mulch and comply with the conditions of 9-14.4(2). Seed shall be of the mix specified and be applied at the application rate shown on Sheet 69 of the Plans.

9-14.4(3) Bark or Wood Chip Mulch
Replaced this section with the following:

> Wood chip mulch shall be composed of Douglas Fir Bark and wood cambium with chips no larger than 3”; is weed and seed free; does not contain resin, tannin, or other compounds that would be a detriment to plant life; or a similar approved equivalent. A compatible wood chip mulch can be obtained from Brady Trucking Company in Shelton, WA.

Sieve Size	Percent Passing	
	Minimum	Maximum
12”	95	100
8”	70	100
4”	0	50
¾”	0	30

9-14.5(2) Biodegradable Erosion Control Blanket
Replace this section with the following:

Biodegradable Erosion Control Blanket shall Coir 900 series, made of coconut fibers with a material weight of 900 grams/square meter of material, be manufactured by the following approved vendors in minimum roll widths of 3 meters (10 ft):

1. Geocoir/Dekowe 900, manufactured by Belton Industries, Inc.
   Local Distributor: Northwest Linings
   21000 - 77th Ave. S.
   Kent, WA 98032
   206-872-0223

2. Koir Mat 900, manufactured by Nedia Enterprises
   1-888-NEDIA 02
   718-740-5171
   Local Warehouse: Seatac, WA

Other biodegradable erosion control blankets will be considered provided their properties meet or exceed those of the approved products.

Biodegradable erosion control blankets shall be held in place with wood eco-stakes staples, min. 12” length

9-14.6 Plant Materials

9-14.6(1) Description
Supplement this section with the following:

Plant species, sizes, and count shall be consistent with the re-vegetation notes in the plans. Satisfactory plants are plants that are in a vigorous or thriving condition. Satisfactory plants shall also be alive, they shall exhibit less than 10 percent crown (branches and top) die-back, they shall not be infested with insects nor shall be diseased. They shall be without a significant amount of dead, spotty, discolored, or otherwise non-vigorous foliage during the peak of the growing season (plants entering dormancy are excluded from this component of the definition) and they shall not have been eaten by animals (including those that have been girdled at the base). Satisfactory plants shall also meet the requirements listed in the Plans unless the Contractor has received written prior approval from the Engineer for such species substitutions.

Supplement with the following new section:

9-37 Miscellaneous Stream Construction Materials

9-37.1 Logs for Stream Construction

All logs for this project have been provided and are staged on site. Diameter of each log shall be as indicated in the Plans and shall be diameter at breast height (DBH) of the log. If the diameter is not indicated in the Plans, minimum diameter shall be 8 inches DBH. Length of each log shall be as shown in the Plans. Length of each log shall be as shown in the Plans and such that the minimum length of burial will be achieved. Roots do not have to be cleaned of loose soil prior to installation.

STANDARD PLANS
(January 4, 2016 WSDOT GSP)
The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 15-048, effective August 3, 2015 is made a part of this contract.

The Standard Plans are revised as follows:

A-30.15
DELETED

A-50.10
Sheet 2 of 2, Plan, with Single Slope Barrier, reference C-14a is revised to C-70.10

A-50.20
Sheet 2 of 2, Plan, with Anchored Barrier, reference C-14a is revised to C-70.10

A-50.30
Sheet 2 of 2, Plan (top), reference C-14a is revised to C-70.10

B-10.20 and B-10.40
Substitute “step” in lieu of “handhold” on plan

B-15.60
Table, Maximum Knockout Size column, 120” Diam., 42” is revised to read; 96”

B-25.20
Add Note 7. See Standard Specification Section 8-04 for Curb and Gutter requirements

B-55.20
Metal Pipe elevation, title is revised to read; “Metal Pipe and Steel Rib Reinforced Polyethylene Pipe”

B-90.40
Offset & Bend details, add the subtitle, “Plan View” above titles

C-8b
Section A, callout, was – “Grout” is revised to read; “Grout ~ 2” (IN) MAX., callout, was – “Anchor Bolt (TYP.) ~ See Detail” is revised to read; “Anchor Bolt or Rod (TYP.) ~ See Detail”, Sheet 2, Detail “A”, callout, was – “Anchor Bolt (TYP.) ~ See Detail”, is revised to read; “Anchor Bolt or Rod (TYP) ~ See Detail”. Anchor Bolt Detail, DELETED – Headed Bolt DETAIL portion of the ANCHOR BOLT DETAIL. Dimension, “5 1/2" MIN. Threads” is deleted. Add dimension, “1” MAX.” from top of barrier to bottom of the nut, Callout, was – “1” Diam. Threaded Rod ~ ASTM A 419” is revised to read; “1” (IN) Diam. Threaded Full Length Rod or Bolt ~ ASTM

F 1554, Grade 105". Note (Below Title), was – "Galvanize Exposed Anchor Rod End 1' – 9" Min." is revised to read; "Galvanized Anchor Bolt Full Length according to ASTM F 2329". Subtitle – was "Threaded Rod" is revised to read; "Threaded Rod or Bolt", Sheet 2, Anchor Plate detail, callout, was – 1" DIAM. HOLE (TYP.)" IS REVISED TO READ; "1 1/8" (IN) DIAM. HOLE (TYP.)" , callout, was – "/2" Plate" is revised to read;"1/2" (IN) Plate ~ ASTM A36

C-1
Assembly Detail, Steel Post, (post) callout – was - "W6 x 9 or W6 x 15" is revised to read; "W6 x 8.5 or W6 x 9 or W6 x 15"

C-10
General Note 1, first sentence, was – "Length of W8 x 35 and W6 x 9 shall be determined by measurement from top of ground to top of grout pad." Is revised to read; "Length of W8 x 35 and W6 x 8.5 or W6 x 9 shall be determined by measurement from top of ground to top of grout pad."
Sheet 1, Post Base Plate Detail, callout, was – "W6 x 9" is revised to read; "W6 x 8.5 or W6 x 9"

Sheet 1, Box Culvert Guardrail Steel Post Type 2 detail, callout, was – "W6 x 9 Steel Post" is revised to read;" "W6 x 8.5 or W6 x 9 Steel Post"
Sheet 1, Post Anchor Attachment Detail, callout, was – "W6 x 9 ~ See Note 1" is revised to read; "W6 x 8.5 or W6 x 9 ~ See Note 1"

Sheet 1, Detail A, callout, was – "W6 x 9 Steel Post ~ See Note 1" is revised to read; "W6 x 8.5 or W6 x 9 Steel Post ~ See Note 1"

Sheet 2, Box Culvert Guardrail Steel Post Type 1, callout, was – "W6 x 9 x 27.5" Steel Post" is revised to read; "W6 x 8.5 x 27.5" (IN) or W6 x 9 x 27.5" (IN) Steel Post"

Sheet 2, Detail B, callout, was – "W6 x 9 x 27.5" Steel Post" is revised to read; "W6 x 8.5 x 27.5" (IN) or W6 x 9 x 27.5" (IN) Steel Post"

C-16a
Note 1, reference C-28.40 is revised to C-20.10
C-16b
Note 3, reference C-28.40 is revised to C-20.10

C-22.14
Plan, callout, was – "Location of Post (Without Block) ~ W6 x 9 Steel Post Only" is revised to read; "Location of Post (Without Block) ~ W6 x 8.5 or W6 x 9 Steel Post Only"

Elevation, callout, was – “Location of Post (Without Block) ~ W6 x 9 Steel Post Only” is revised to read; “Location of Post (Without Block) ~ W6 x 8.5 or W6 x 9 Steel Post Only”

C-22.45

Note 1, was – “This Terminal is FHWA accepted at Test Level Two (TL-2) and may be used in applications with speeds of 40 MPH or less.” Is revised to read: “This Terminal is FHWA accepted at Test Level Two (TL-2) and may be used in applications with speeds of 45 MPH or less.” Plan Title, was – “Beam Guardrail Type 31 Non – Flared Terminal Steel Posts (Posted Speed ~ 40 MPH and Below)” is revised to read: “Beam Guardrail Type 31 Non – Flared Terminal Steel Posts (Posted Speed ~ 45 MPH and Below

D-10.10

Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.15

Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.20

Wall Type 3 may be used in all cases. The last sentence of Note 6 on Wall Type 3 shall be revised to read: The seismic design of these walls has been completed using a site adjusted (effective) peak ground acceleration of 0.32g.

D-10.25

Wall Type 4 may be used in all cases. The last sentence of Note 6 on Wall Type 4 shall be revised to read: The seismic design of these walls has been completed using a site adjusted (effective) peak ground acceleration of 0.32g.

D-10.30

Wall Type 5 may be used in all cases.

D-10.35

Wall Type 6 may be used in all cases.

D-10.40

Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.45
Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the revisions stated in the 11/3/15 Bridge Design memorandum.

D-15.10
STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.20
STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.30
STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

F-10.12
Section Title, was – "Depressed Curb Section" is revised to read: "Depressed Curb and Gutter Section"

F-10.40
"EXTRUDED CURB AT CUT SLOPE", Section detail - Deleted

F-10.42
DELETE – "Extruded Curb at Cut Slope" View

G-24.40
Sheet 1, Elevation (upper left corner), callout, was – "Sign Brace~ 36" (IN) or larger in width required (See Standard Plan G-50.10)" is revised to read; "Sign Brace (See Standard Plan G-50.10)" Sheet 3, Elevation (upper left corner), callout, was – "Sign Brace~ 36" (IN) or larger in width required (See Standard Plan G-50.10)" is revised to read; "Sign Brace (See Standard Plan G-50.10)"

H-70.20
Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is revised to H-70.10

I-80.10
Stabilized Construction Entrance, Isometric View, add Note to read; "Note: At the discretion of the contractor, smaller rock may be used to fill in voids between the quarry spalls to create a walking pathway for crossing the construction entrance."

J-3
DELETED

J-3b
DELETED

J-3C
DELETED

J-10.21
Note 18, was – “When service cabinet is installed within right of way fence, see Standard Plan J-10.22 for details.” Is revised to read; “When service cabinet is installed within right of way fence, or the meter base is mounted on the exterior of the cabinet, see Standard Plan J-10.22 for details.”

J-10.22
Key Note 1, was – “Meter base per serving utility requirements~ as a minimum, the meter base shall be safety socket box with factory-installed test bypass facility that meets the requirements of EUSERC drawing 305.” Is revised to read; “Meter base per serving utility requirements~ as a minimum, the meter base shall be safety socket box with factory-installed test bypass facility that meets the requirements of EUSERC drawing 305. When the utility requires meter base to be mounted on the side or back of the service cabinet, the meter base enclosure shall be fabricated from type 304 stainless steel.”

Key Note 4, “Test with (SPDT Snap Action, Positive close 15 Amp – 120/277 volt “T” rated). Is revised to read: “Test Switch (SPDT snap action, positive close 15 amp – 120/277 volt “T” rated).”

Key Note 14, was – “Hinged dead front with ¼ turn fasteners or slide latch.” Is revised to read; “Hinged dead front with ¼ turn fasteners or slide latch. ~ Dead front panel bolts shall not extend into the vertical limits of the breaker array(s).”
Key Note 15, was – “Cabinet Main Bonding Jumper. Buss shall be 4 lug tinned copper. See Cabinet Main bonding Jumper detail, Standard Plan J-3b.“ is revised to read; “Cabinet Main Bonding Jumper Assembly ~ Buss shall be 4 lug tinned copper ~ See Standard Plan J-10.20 for Cabinet Main Bonding Jumper Assembly details.”

J-20.10
Add Note 5, “5. One accessible pedestrian signal assembly per pedestrian pushbutton post.”

J-20.11
Sheet 2, Foundation Detail, Elevation, callout – “Type 1 Signal Pole” is revised to read: “Type PS or Type 1 Signal Pole”

Sheet 2, Foundation Detail, Elevation, add note below Title, “(Type 1 Signal Pole Shown)”

Add Note 6, “6. One accessible pedestrian signal assembly per pedestrian pushbutton post.”

J-20.26
Add Note 1, “1. One accessible pedestrian pushbutton station per pedestrian pushbutton post.”

J-20.16
View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10
Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR.. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.

Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.

Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.

Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.

J-21.15
Partial View, callout, was – LOCK NIPPLE ~ 1 ½” DIAM., is revised to read; CHASE NIPPLE ~ 1 ½” (IN) DIAM.

J-21.16
Detail A, callout, was – LOCKNIPPLE, is revised to read; CHASE NIPPLE

J-22.15
Ramp Meter Signal Standard, elevation, dimension 4’ - 6” is revised to read; 6’-0” (2x) Detail A, callout, was – LOCK NIPPLE ~ 1 ½” DIAM. is revised to read; CHASE NIPPLE ~ 1 ½” (IN) DIAM.

J-28.45

Steel Light Standard Elbow Detail, dimension, was – “1-1/2” MAX.” is revised to read; 2” MAX.. callout, was – “1.00 – 8 UNC x 8” (IN) long bolt threaded full length (ASTM A325 or F1554 GR. 105) with two heavy hex nuts, two plate washers, and a round washer (Typ.) (Galvanized AASHTO M232)”is revised to read; “1.00 – 8 UNC x 8 1/2” (IN) long bolt threaded full length (ASTM A325 or F1554 GR. 105) with two heavy hex nuts, two plate washers, and a round washer (Typ.) (Galvanized per AASHTO F2329)”. callout, was – “3/16” (IN) thick preformed “Fabreeka” fabric pad with 5” (IN) diam. hole ~ cement to flange plate and trim outside edge flush” is revised to read; “3/16” (IN) or 1/4” (IN) thick preformed “Fabreeka” fabric pad with 5” (IN) diam. hole ~ cement to flange plate and trim outside edge flush”. Exploded Isometric View, callout, was – “1” (IN) Diam. Heavy Hex Bolt (Typ.)” is revised to read;1” Diam. Bolt (Typ.). Section B, callout, was – “3 1/2” (IN) x 3/16” (IN)(17” (IN)…” is revised to read; “4” (IN) x 3/16” (IN)(17” (IN)…”. Typical Sections, two traffic barrier views, add dimension [from the top of the pole base plate to the bottom of the Hand Hole]”6” MIN.”. all three views, callout, was – “1” (IN) Diam. H. S. bolt w/ hardened lock washer and nut (Typ.) (ASTM A325 or F1554 GR. 105)” is revised to read; “1” (IN) Diam. H. S. bolt w/ hardened lock washer and nut (Typ.) (ASTM A449 or F1554 GR. 105)”.

J-28.50

Section D, callout, was – Backup Strip (ref. to key note 3) is revised to read; “Continuous Backup Strip (ref. to key note 3)”

Key Note 3, was – ¼” Thick, or No thinner than pole wall thickness. Tack weld or seal weld to Base plate. Is revised to read; “1/4” Thick, or No thinner than Pole wall thickness. Tack weld in root or continuous seal weld to Base plate or Pole wall.”

J-28.60

Section B, callout, was – “Continuous Back-up ring – 1/4” or no thinner than pole wall thickness ~ tack weld to plate” is revised to read; “Continuous Back-up ring ~ 1/4” or no thinner than pole wall thickness ~ tack weld in root or continuous seal weld to base plate or pole wall”

J-28.70

Detail C, dimension, 2” MAX. is revised to read: 1” MAX.
Detail D, dimension, 2” MAX. is revised to read: 1” MAX.

J-29.10

Galvanized Welded Wire Mesh detail, callout – “Drill and Tap for ¼” Diam. Cap Screw, 3 Places, @ 9” center, all 4 edges S.S. Screw, ASTM F593 and washer”
Is revised to read;

“*Drill and Tap ¼” (IN) Diam. x 1” (IN) Cap Screw with washer ~ space approx.. 9” o.c. ~ Liberally coat threads with Anti-seize compound (TYP.)”

Add Boxed note: * Bolts, Nuts, and washers ~ ASTM F593 or A193 Type 304 or Type 316 Stainless Steel (S.S.)

J-29.15
Title, “Camera Pole Standard” is revised to read; “Camera Pole Standard Details”

J-29-16
Title, “Camera Pole Standard Details” is revised to read; “Camera Pole Details”

J-40.10
Sheet 2 of 2, Detail F, callout, “12 – 13 x 1 ½” S.S. PENTA HEAD BOLT AND 12” S. S. FLAT WASHER” is revised to read; “12 – 13 x 1 ½” S.S. PENTA HEAD BOLT AND 1/2” (IN) S. S. FLAT WASHER”

J-60.14
All references to J-16b (6x) are revised to read; J-60.11

J-90.10
Section B, callout, “Hardware Mounting Rack ~ S. S. 1-5/8” Slotted Channel” is revised to read: “Hardware Mounting Rack (Typ.) ~ Type 304 S. S. 1-5/8” Slotted Channel”

J-90.20
Section B, callout, “Hardware Mounting Rack (Typ.) ~ S. S. 1-5/8” Slotted Channel” is revised to read: “Hardware Mounting Rack (Typ.) ~ Type 304 S. S. 1-5/8” Slotted Channel”

K-80.10
Sign Installation (Fill Section), dimension, 6’ TO 12’ MIN. is revised to read: 12’ MIN.

Sign Installation (Sidewalk and Curb Section), dimension, 6’ TO 12’ MIN. is revised to read: 12’ MIN.

Sign Installation (Behind Traffic Barrier Section), Delete dimensions - 6’ TO 12’ MIN. and 6’ MIN.

Sign with Supplemental Plaque Installation (Fill Section), dimension, 6’ TO 12’ MIN. is revised to read: 12’ MIN.

Sign Installation (Ditch Section), dimension, 6’ TO 12’ MIN. is revised to read: 12’ MIN. Delete dimension – 6’ MIN.

K-80.30

In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std. Plan K-80.35

M-11.10
Layout, dimension (from stop bar to "X"), was – 23' is revised to read; 24'

M-20.30
Sheet 2, Plan View, One-Way Roadway Recessed Pavement Marker Details, ONE-WAY TRAFFIC arrow symbol, is revised to point in the opposite direction (towards the rpm)

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-10.10-00.....8/7/07
A-10.20-00.....10/5/07
A-10.30-00.....10/5/07
A-20.10-00.....8/31/07
A-30.10-00.....11/8/07
A-30.30-01.....6/16/11
A-30.35-00.....10/12/07
A-40.00-00.....8/11/09
A-40.10-03.....12/23/14
A-40.15-00.....8/11/09
A-40.20-03.....12/23/14
A-40.50-02.....12/23/14
A-50.10-00...11/17/08
A-50.20-01…....9/22/09
A-50.30-00…..11/17/08
A-50.40-00…..11/17/08
A-60.10-03.....12/23/14
A-60.20-03.....12/23/14
A-60.30-00.....11/8/07
A-60.40-00.....8/31/07

B-5.20-01.....6/16/11
B-5.40-01.....6/16/11
B-5.60-01.....6/16/11
B-10.20-01.....2/7/12
B-10.40-00.....6/1/06
B-10.60-00.....6/8/06
B-15.20-01.....2/7/12
B-15.40-01.....2/7/12
B-15.60-01.....2/7/12
B-20.20-02.....3/16/12
B-20.40-03.....3/16/12
B-20.60-03.....3/15/12
B-25.20-01.....3/15/12
B-25.60-00.....6/1/06
B-30.10-01.....4/26/12
B-30.20-02.....4/26/12
B-30.30-01.....4/26/12
B-30.40-01.....4/26/12
B-30.50-01.....4/26/12
B-30.70-03.....4/26/12
B-30.80-00.....6/8/06
B-30.90-01.....9/20/07
B-35.20-00.....6/8/06
B-35.40-00.....6/8/06
B-40.20-00.....6/1/06
B-40.40-01.....6/16/10
B-45.20-00.....6/1/06
B-45.40-00.....6/1/06
B-50.20-00.....6/1/06
B-55.20-00.....6/1/06
B-60.20-00.....6/8/06
B-60.40-00.....6/1/06
B-65.20-01.....4/26/12
B-65.40-00.....6/1/06
B-70.20-00.....6/1/06
B-70.60-00.....6/1/06
B-75.20-01.....6/10/08
B-75.50-01.....6/10/08
B-75.60-00.....6/8/06
B-80.20-00.....6/8/06
B-80.40-00.....6/1/06
B-82.20-00.....6/1/06
B-85.10-01.....6/10/08
B-85.20-00.....6/1/06
B-85.30-00.....6/1/06
B-85.40-00.....6/8/06
B-85.50-01.....6/10/08
B-90.10-00.....6/8/06
B-90.20-00.....6/8/06
B-90.30-00.....6/8/06
B-90.40-00.....6/8/06
B-90.50-00.....6/8/06
B-95.20-01.....2/3/09
B-95.40-00.....6/8/06

C-1.....6/16/11
C-1a.....7/14/15
C-1b.....7/14/15
C-1c.....5/30/97
C-6.....5/30/97
C-6a.....10/14/09
C-6c.....1/6/00
C-6d.....5/30/97
C-23.60-03.....6/11/14
C.24.10-01.....6/11/14
C-25.18-05.....7/14/15
C-25.20-06.....7/14/15

C-1d.....10/31/03
C-2.....1/6/00
C-2a.....6/21/06
C-2b.....6/21/06
C-2c.....6/21/06
C-2d.....6/21/06
C-2e.....6/21/06
C-2f.....3/14/97
C-2g.....7/27/01
C-2h.....3/28/97
C-2i.....3/28/97
C-2j.....6/12/98
C-2k.....7/27/01
C-2n.....7/27/01
C-2o.....7/13/01
C-2p.....10/31/03
C-3.....7/2/12
C-3a.....10/4/05
C-3b.....6/27/11
C-3c.....6/27/11
C-4b.....6/8/06
C-4e.....10/23/14
C-4f.....7/2/12

C-6f.....7/25/97
C-7.....6/16/11
C-7a.....6/16/11
C-8.....2/10/09
C-8a.....7/25/97
C-8b.....6/27/11
C-8e.....2/21/07
C-8f.....6/30/04
C-10.....6/3/10
C-16a.....6/3/10
C-16b.....6/3/10
C-20.10-03.....7/14/15
C-20.14-03.....6/11/14
C-20.15-02.....6/11/14
C-20.18-02.....6/11/14
C-20.19-02.....6/11/14
C-20.40-05.....7/14/15
C-20.41-01.....7/14/15
C-20.42-05.....7/14/15
C-20.45.01.....7/2/12
C-22.14-03.....6/11/14
C-22.16-05.....7/14/15
C-22.40-04.....10/23/14
C-22.41-01.....10/23/14
C-22.45-01.....10/23/14

C-25.22-05.....7/14/15
C-25.26-03.....7/14/15
C-25.80-03.....6/11/14
C-40.14-02.....7/2/12
C-40.16-02.....7/2/12
C-40.18-02.....7/2/12
C-70.10-01.....6/17/14
C-75.10-01.....6/11/14
C-75.20-01.....6/11/14
C-75.30-01.....6/11/14
C-80.10-01.....6/11/14
C-80.20-01.....6/11/14
C-80.30-01.....6/11/14
C-80.40-01.....6/11/14
C-80.50-00.....4/8/12
C-85.10-00.....4/8/12
C-85.11-00.....4/8/12
C-85.14-01.....6/11/14
C-85.15-01.....6/30/14
C-85.16-01.....6/17/14
C-85-18-01.....6/11/14
C-85.20-01.....6/11/14
C-90.10-00.....7/3/08

D-2.04-00.....11/10/05
D-2.06-01.....1/6/09
D-2.08-00.....11/10/05
D-2.14-00.....11/10/05
D-2.16-00.....11/10/05
D-2.18-00.....11/10/05
D-2.20-00.....11/10/05
D-2.32-00.....11/10/05
D-2.34-01.....1/6/09
D-2.36-03.....6/11/14
D-2.42-00.....11/10/05
D-2.44-00.....11/10/05
D-2.60-00.....11/10/05
D-2.62-00.....11/10/05
D-2.46-01.....6/11/14

D-2.48-00.....11/10/05
D-2.64-01.....1/6/09
D-2.66-00.....11/10/05
D-2.68-00.....11/10/05
D-2.80-00.....11/10/05
D-2.82-00.....11/10/05
D-2.84-00.....11/10/05
D-2.86-00.....11/10/05
D-2.88-00.....11/10/05
D-2.92-00.....11/10/05
D-3.09-00.....5/17/12
D-3.10-01……5/29/13
D-3.11-03……6/11/14
D-3.15-02……6/10/13
D-3.16-02……5/29/13

D-3.17-01……5/17/12
D-4.....12/11/98
D-6.....6/19/98
D-10.10-01....12/2/08
D-10.15-01.....12/2/08
D-10.20-00.....7/8/08
D-10.25-00.....7/8/08
D-10.30-00.....7/8/08
D-10.35-00.....7/8/08
D-10.40-01....12/2/08
D-10.45-01....12/2/08
D-15.10-01....12/2/08
D-15.20-02.....6/2/11
D-15.30-01...12/02/08

E-1.....2/21/07
E-2.....5/29/98

E-4.....8/27/03
E-4a.....8/27/03

F-10.12-03.....6/11/14
F-10.16-00.....12/20/06
F-10.18-00.....6/27/11
F-10.40-02.....6/21/12
F-10.42-00.....1/23/07
F-10.62-02.....4/22/14
F-10.64-03.....4/22/14
F-30.10-03.....6/11/14
F-40.12-02.....6/20/13
F-40.14-02.....6/20/13
F-40.15-02.....6/20/13
F-40.16-02.....6/20/13
F-45.10-01.....6/21/12
F-80.10-03.....6/11/14

G-10.10-00.....9/20/07
G-20.10-02.....6/23/15
G-22.10-03.....7/10/15
G-24.10-00.....11/8/07
G-24.20-01.....2/7/12
G-24.30-01.....2/7/12
G-24.40-05.....6/23/15
G-24.50-03.....6/17/14
G-24.60-04.....6/23/15
G-25.10-04....6/10/13
G-30.10-04.....6/23/15
G-50.10-02.....6/23/15
G-60.10-03.....6/18/15
G-60.20-02.....6/18/15
G-60.30-02.....6/18/15
G-70.10-03.....6/18/15
G-70.20-02....6/10/13
G-70.30-02.....6/10/13
G-90.10-01..5/11/11
G-90.20-03..7/10/15
G-90.30-02….3/22/13
G-90.40-01.10/14/09
G-95.10-01.....6/2/11
G-95.20-02.....6/2/11
G-95.30-02.....6/2/11

H-10.10-00.....7/3/08
H-10.15-00.....7/3/08
H-30.10-00....10/12/07
H-32.10-00.....9/20/07
H-60.10-01.....7/3/08
H-60.20-01.....7/3/08
H-70.10-01.....2/7/12
H-70.20-01.....2/16/12
H-70.30-02.....2/7/12

I-10.10-01.....8/11/09
I-30.10-02.....3/22/13
I-30.15-02.....3/22/13
I-30.16-00.....3/22/13
I-30.17-00.....3/22/13
I-30.20-00.....9/20/07
I-30.30-01.....6/10/13
I-30.40-01.....6/10/13
I-30.60-00.....5/29/13
I-40.10-00.....9/20/07
I-40.20-00.....9/20/07
I-50.20-01.....6/10/13
I-60.10-01.....6/10/13
I-60.20-01.....6/10/13
I-80.10-01.....8/11/09

J-10.....7/18/97
J-10.10-03……6/3/15
J-10.15-01.....6/11/14
J-10.16-00…….6/3/15
J-10.17-00…….6/3/15
J-10.18-00…….6/3/15
J-10.20-00……..6/3/15
J-10.21-00……..6/3/15
J-10.22-00.....5/29/13
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J-15.15-02……7/10/15

J-20.10-03.....6/30/14
J-20.11-02.....6/30/14

J-26.15-01…..5/17/12
J-26.20-00…..6/11/14
J-27.10-00…..3/15/12
J-27.15-00…..3/15/12
J-28.10-01.....5/11/11
J-28.22-00.....8/07/07
J-28.24-01.....6/3/15
J-28.26-01....12/02/08
J-28.30-03.....6/11/14
J-28.40-02.....6/11/14
J-28.42-01.....6/11/14
J-28.43-00.....6/11/14
J-28.45-02.....6/11/14
J-28.50-02.....6/2/11
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J-40.40-00……5/20/13

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J-50.11-00…….6/3/11
J-50.12-00…….6/3/11
J-50.15-00…….6/3/11
J-50.16-01….3/22/13
J-50.20-00…….6/3/11
J-50.25-00…….6/3/11
J-50.30-00…….6/3/11
J-60.05-00….6/16/11

J-60.11-00…....5/20/13
J-60.12-00…....5/20/13
J-60.13-00…....6/16/10

J-20.15-03.....6/30/14
J-20.16-02.....6/30/14
J-20.20-02.....5/20/13
J-20.26-01.....7/12/12

J-21.10-04.....6/30/14

J-21.15-01.....6/10/13
J-21.16-01.....6/10/13
J-21.17-01.....6/10/13
J-21.20-01.....6/10/13
J-22.15-02.....7/10/15
J-22.16-03.....7/10/15
J-26.10-02…..3/15/12

J-28.70-01.....5/11/11
J-29.10-00.....6/27/11
J-29.15-00.....6/27/11
J-29.16-01.....6/20/13
J-30.10-00…...6/18/15
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J-40.20-02…...6/11/14
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J-40.35-01…5/29/13
J-40.36-01…5/20/13
J-40.37-01…5/20/13
J-40.38-01.....5/20/13
J-40.39-00…5/20/13

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J-75.10-02……7/10/15
J-75.20-01……7/10/15
J-75.30-02….7/10/15

J-75.40-01……6/11/14
J-75.41-00……6/11/14
J-75.45-01……6/11/14
J-90.10-01….6/27/11
J-90.20-01….6/27/11
J-90.21-00……6/30/14

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K-80.10-00.....2/21/07
K-80.20-00....12/20/06
K-80.30-00.....2/21/07
K-80.35-00.....2/21/07
K-80.37-00.....2/21/07

L-10.10-02.....6/21/12
L-20.10-03.....7/14/15
L-30.10-02.....6/11/14

L-40.10-02.....6/21/12
L-40.15-01.....6/16/11
L-40.20-02.....6/21/12

L-70.10-01.....5/21/08
L-70.20-01.....5/21/08

M-1.20-03.....6/24/14
M-1.40-02.....6/3/11
M-1.60-02.....6/3/11
M-1.80-03.....6/3/11
M-2.20-03.....7/10/15
M-2.21-00……7/10/15
M-3.10-03.....6/3/11
M-3.20-02.....6/3/11
M-3.30-03.....6/3/11
M-3.40-03.....6/3/11
M-3.50-02.....6/3/11
M-5.10-02.....6/3/11
M-7.50-01.....1/30/07
M-9.50-02.....6/24/14

M-9.60-00….2/10/09
M-11.10-01.....1/30/07
M-15.10-01.....2/6/07
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M-20.10-02.....6/3/11

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M-20.30-03.....4/20/15
M-20.40-03.....6/24/14
M-20.50-02.....6/3/11
M-24.20-02.....4/20/15
M-24.40-02.....4/20/15
M-24.50-00.....6/16/11
M-24.60-04.....6/24/14

M-40.10-03.....6/24/14
M-40.20-00...10/12/07
M-40.30-00.....9/20/07
M-40.40-00.....9/20/07
M-40.50-00.....9/20/07

M-40.60-00.....9/20/07
M-60.10-01.....6/3/11
M-60.20-02.....6/27/11
M-65.10-02.....5/11/11
M-80.10-01.....6/3/11
M-80.20-00.....6/10/08
M-80.30-00.....6/10/08

ATTACHMENT A. PREVAILING WAGE RATES, BENEFIT CODE KEY & SUPPLEMENTAL TO WAGE RATES

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State of Washington
Department of Labor & Industries

Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 1/25/2016

County	Trade	Job Classification	Wage	Holiday	Overtime	Notes
Kitsap	Asbestos Abatement Workers	Journey Level	$43.95	5D	1H	
Kitsap	Boilermakers	Journey Level	$30.34		1	
Kitsap	Brick Mason	Journey Level	$52.82	5A	1M	
Kitsap	Brick Mason	Pointer-Caulker-Cleaner	$52.82	5A	1M	
Kitsap	Building Service Employees	Janitor	$9.47		1	
Kitsap	Building Service Employees	Shampooer	$9.47		1	
Kitsap	Building Service Employees	Waxer	$9.47		1	
Kitsap	Building Service Employees	Window Cleaner	$13.22		1	
Kitsap	Cabinet Makers (In Shop)	Journey Level	$23.72		1	
Kitsap	Carpenters	Acoustical Worker	$54.02	5D	4C	
Kitsap	Carpenters	Bridge, Dock And Wharf Carpenters	$54.02	5D	4C	
Kitsap	Carpenters	Carpenter	$54.02	5D	4C	
Kitsap	Carpenters	Carpenters on Stationary Tools	$54.15	5D	4C	
Kitsap	Carpenters	Creosoted Material	$54.12	5D	4C	
Kitsap	Carpenters	Floor Finisher	$54.02	5D	4C	
Kitsap	Carpenters	Floor Layer	$54.02	5D	4C	
Kitsap	Carpenters	Scaffold Erector	$54.02	5D	4C	
Kitsap	Cement Masons	Journey Level	$53.95	7A	1M	
Kitsap	Divers & Tenders	Diver	$107.22	5D	4C	8A
Kitsap	Divers & Tenders	Diver On Standby	$64.42	5D	4C	
Kitsap	Divers & Tenders	Diver Tender	$58.33	5D	4C	

Kitsap	Divers & Tenders	Surface Rcv & Rov Operator	$58.33	5D	4C	
Kitsap	Divers & Tenders	Surface Rcv & Rov Operator Tender	$54.27	5A	4C	
Kitsap	Dredge Workers	Assistant Engineer	$56.44	5D	3F	
Kitsap	Dredge Workers	Assistant Mate (Deckhand)	$56.00	5D	3F	
Kitsap	Dredge Workers	Boatmen	$56.44	5D	3F	
Kitsap	Dredge Workers	Engineer Welder	$57.51	5D	3F	
Kitsap	Dredge Workers	Leverman, Hydraulic	$58.67	5D	3F	
Kitsap	Dredge Workers	Mates	$56.44	5D	3F	
Kitsap	Dredge Workers	Oiler	$56.00	5D	3F	
Kitsap	Drywall Applicator	Journey Level	$54.02	5D	1H	
Kitsap	Drywall Tapers	Journey Level	$54.07	5P	1E	
Kitsap	Electrical Fixture Maintenance Workers	Journey Level	$31.74			1
Kitsap	Electricians - Inside	Journey Level	$51.26			1
Kitsap	Electricians - Motor Shop	Craftsman	$15.37			1
Kitsap	Electricians - Motor Shop	Journey Level	$14.69			1
Kitsap	Electricians - Powerline Construction	Cable Splicer	$69.95	5A	4D	
Kitsap	Electricians - Powerline Construction	Certified Line Welder	$63.97	5A	4D	
Kitsap	Electricians - Powerline Construction	Groundperson	$43.62	5A	4D	
Kitsap	Electricians - Powerline Construction	Heavy Line Equipment Operator	$63.97	5A	4D	
Kitsap	Electricians - Powerline Construction	Journey Level Lineperson	$63.97	5A	4D	
Kitsap	Electricians - Powerline Construction	Line Equipment Operator	$53.81	5A	4D	
Kitsap	Electricians - Powerline Construction	Pole Sprayer	$63.97	5A	4D	
Kitsap	Electricians - Powerline Construction	Powderperson	$47.55	5A	4D	
Kitsap	Electronic Technicians	Journey Level	$44.26	7E	1D	
Kitsap	Elevator Constructors	Mechanic	$82.67	7D	4A	
Kitsap	Elevator Constructors	Mechanic In Charge	$89.40	7D	4A	
Kitsap	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	$13.50			1
Kitsap	Fence Erectors	Fence Erector	$13.80			1
Kitsap	Fence Erectors	Fence Laborer	$11.60			1
Kitsap	Flaggers	Journey Level	$37.26	7A	3I	
Kitsap	Glaziers	Journey Level	$56.16	7L	1Y	
Kitsap	Heat & Frost Insulators And Asbestos Workers	Journeyman	$63.18	5J	1S	

Kitsap	Heating Equipment Mechanics	Journey Level	$72.83	7F	1E	
Kitsap	Hod Carriers & Mason Tenders	Journey Level	$45.32	7A	3I	
Kitsap	Industrial Power Vacuum Cleaner	Journey Level	$29.89			1
Kitsap	Inland Boatmen	Boat Operator	$56.78	5B	1K	
Kitsap	Inland Boatmen	Cook	$53.30	5B	1K	
Kitsap	Inland Boatmen	Deckhand	$53.30	5B	1K	
Kitsap	Inland Boatmen	Deckhand Engineer	$54.32	5B	1K	
Kitsap	Inland Boatmen	Launch Operator	$55.57	5B	1K	
Kitsap	Inland Boatmen	Mate	$55.57	5B	1K	
Kitsap	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	$9.73			1
Kitsap	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	$11.48			1
Kitsap	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	$12.78			1
Kitsap	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	$24.17			1
Kitsap	Insulation Applicators	Journey Level	$54.02	5D	4C	
Kitsap	Ironworkers	Journeyman	$63.53	7N	1O	
Kitsap	Laborers	Air, Gas Or Electric Vibrating Screed	$43.95	7A	3I	
Kitsap	Laborers	Airtrac Drill Operator	$45.32	7A	3I	
Kitsap	Laborers	Ballast Regular Machine	$43.95	7A	3I	
Kitsap	Laborers	Batch Weighman	$37.26	7A	3I	
Kitsap	Laborers	Brick Pavers	$43.95	7A	3I	
Kitsap	Laborers	Brush Cutter	$43.95	7A	3I	
Kitsap	Laborers	Brush Hog Feeder	$43.95	7A	3I	
Kitsap	Laborers	Burner	$43.95	7A	3I	
Kitsap	Laborers	Caisson Worker	$45.32	7A	3I	
Kitsap	Laborers	Carpenter Tender	$43.95	7A	3I	
Kitsap	Laborers	Caulker	$43.95	7A	3I	
Kitsap	Laborers	Cement Dumper-paving	$44.76	7A	3I	

Kitsap	Laborers	Cement Finisher Tender	$43.95	7A	3I
Kitsap	Laborers	Change House Or Dry Shack	$43.95	7A	3I
Kitsap	Laborers	Chipping Gun (under 30 Lbs.)	$43.95	7A	3I
Kitsap	Laborers	Chipping Gun(30 Lbs. And Over)	$44.76	7A	3I
Kitsap	Laborers	Choker Setter	$43.95	7A	3I
Kitsap	Laborers	Chuck Tender	$43.95	7A	3I
Kitsap	Laborers	Clary Power Spreader	$44.76	7A	3I
Kitsap	Laborers	Clean-up Laborer	$43.95	7A	3I
Kitsap	Laborers	Concrete Dumper/chute Operator	$44.76	7A	3I
Kitsap	Laborers	Concrete Form Stripper	$43.95	7A	3I
Kitsap	Laborers	Concrete Placement Crew	$44.76	7A	3I
Kitsap	Laborers	Concrete Saw Operator/core Driller	$44.76	7A	3I
Kitsap	Laborers	Crusher Feeder	$37.26	7A	3I
Kitsap	Laborers	Curing Laborer	$43.95	7A	3I
Kitsap	Laborers	Demolition: Wrecking & Moving (incl. Charred Material)	$43.95	7A	3I
Kitsap	Laborers	Ditch Digger	$43.95	7A	3I
Kitsap	Laborers	Diver	$45.32	7A	3I
Kitsap	Laborers	Drill Operator (hydraulic,diamond)	$44.76	7A	3I
Kitsap	Laborers	Dry Stack Walls	$43.95	7A	3I
Kitsap	Laborers	Dump Person	$43.95	7A	3I
Kitsap	Laborers	Epoxy Technician	$43.95	7A	3I
Kitsap	Laborers	Erosion Control Worker	$43.95	7A	3I
Kitsap	Laborers	Faller & Bucker Chain Saw	$44.76	7A	3I
Kitsap	Laborers	Fine Graders	$43.95	7A	3I
Kitsap	Laborers	Firewatch	$37.26	7A	3I
Kitsap	Laborers	Form Setter	$43.95	7A	3I
Kitsap	Laborers	Gabian Basket Builders	$43.95	7A	3I
Kitsap	Laborers	General Laborer	$43.95	7A	3I
Kitsap	Laborers	Grade Checker & Transit Person	$45.32	7A	3I
Kitsap	Laborers	Grinders	$43.95	7A	3I

Kitsap	Laborers	Grout Machine Tender	$43.95	7A	3I
Kitsap	Laborers	Groutmen (pressure)including Post Tension Beams	$44.76	7A	3I
Kitsap	Laborers	Guardrail Erector	$43.95	7A	3I
Kitsap	Laborers	Hazardous Waste Worker (level A)	$45.32	7A	3I
Kitsap	Laborers	Hazardous Waste Worker (level B)	$44.76	7A	3I
Kitsap	Laborers	Hazardous Waste Worker (level C)	$43.95	7A	3I
Kitsap	Laborers	High Scaler	$45.32	7A	3I
Kitsap	Laborers	Jackhammer	$44.76	7A	3I
Kitsap	Laborers	Laserbeam Operator	$44.76	7A	3I
Kitsap	Laborers	Maintenance Person	$43.95	7A	3I
Kitsap	Laborers	Manhole Builder-mudman	$44.76	7A	3I
Kitsap	Laborers	Material Yard Person	$43.95	7A	3I
Kitsap	Laborers	Motorman-dinky Locomotive	$44.76	7A	3I
Kitsap	Laborers	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla	$44.76	7A	3I
Kitsap	Laborers	Pavement Breaker	$44.76	7A	3I
Kitsap	Laborers	Pilot Car	$37.26	7A	3I
Kitsap	Laborers	Pipe Layer Lead	$45.32	7A	3I
Kitsap	Laborers	Pipe Layer/tailor	$44.76	7A	3I
Kitsap	Laborers	Pipe Pot Tender	$44.76	7A	3I
Kitsap	Laborers	Pipe Reliner	$44.76	7A	3I
Kitsap	Laborers	Pipe Wrapper	$44.76	7A	3I
Kitsap	Laborers	Pot Tender	$43.95	7A	3I
Kitsap	Laborers	Powderman	$45.32	7A	3I
Kitsap	Laborers	Powderman's Helper	$43.95	7A	3I
Kitsap	Laborers	Power Jacks	$44.76	7A	3I
Kitsap	Laborers	Railroad Spike Puller - Power	$44.76	7A	3I
Kitsap	Laborers	Raker - Asphalt	$45.32	7A	3I
Kitsap	Laborers	Re-timberman	$45.32	7A	3I
Kitsap	Laborers	Remote Equipment Operator	$44.76	7A	3I

Kitsap	Laborers	Rigger/signal Person	$44.76	7A	3I	
Kitsap	Laborers	Rip Rap Person	$43.95	7A	3I	
Kitsap	Laborers	Rivet Buster	$44.76	7A	3I	
Kitsap	Laborers	Rodder	$44.76	7A	3I	
Kitsap	Laborers	Scaffold Erector	$43.95	7A	3I	
Kitsap	Laborers	Scale Person	$43.95	7A	3I	
Kitsap	Laborers	Sloper (over 20)"	$44.76	7A	3I	
Kitsap	Laborers	Sloper Sprayer	$43.95	7A	3I	
Kitsap	Laborers	Spreader (concrete)	$44.76	7A	3I	
Kitsap	Laborers	Stake Hopper	$43.95	7A	3I	
Kitsap	Laborers	Stock Piler	$43.95	7A	3I	
Kitsap	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	$44.76	7A	3I	
Kitsap	Laborers	Tamper (multiple & Self-propelled)	$44.76	7A	3I	
Kitsap	Laborers	Timber Person - Sewer (lagger, Shorer & Cribber)	$44.76	7A	3I	
Kitsap	Laborers	Toolroom Person (at Jobsite)	$43.95	7A	3I	
Kitsap	Laborers	Topper	$43.95	7A	3I	
Kitsap	Laborers	Track Laborer	$43.95	7A	3I	
Kitsap	Laborers	Track Liner (power)	$44.76	7A	3I	
Kitsap	Laborers	Traffic Control Laborer	$39.84	7A	3I	8R
Kitsap	Laborers	Traffic Control Supervisor	$39.84	7A	3I	8R
Kitsap	Laborers	Truck Spotter	$43.95	7A	3I	
Kitsap	Laborers	Tugger Operator	$44.76	7A	3I	
Kitsap	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	$74.29	7A	3I	8Q
Kitsap	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	$79.32	7A	3I	8Q
Kitsap	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	$83.00	7A	3I	8Q
Kitsap	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	$88.70	7A	3I	8Q
Kitsap	Laborers	Tunnel Work-Compressed Air	$90.82	7A	3I	8Q

Kitsap	Laborers	Worker 60.01-64.00 psi Tunnel Work-Compressed Air	$95.92	7A	3I		8Q
Kitsap	Laborers	Worker 64.01-68.00 psi Tunnel Work-Compressed Air	$97.82	7A	3I		8Q
Kitsap	Laborers	Worker 68.01-70.00 psi Tunnel Work-Compressed Air	$99.82	7A	3I		8Q
Kitsap	Laborers	Worker 70.01-72.00 psi Tunnel Work-Compressed Air	$101.82	7A	3I		8Q
Kitsap	Laborers	Worker 72.01-74.00 psi Tunnel Work-Guage	$45.42	7A	3I		8Q
Kitsap	Laborers	and Lock Tender	$45.42	7A	3I		8Q
Kitsap	Laborers	Tunnel Work-Miner	$44.76	7A	3I		
Kitsap	Laborers	Vibrator	$43.95	7A	3I		
Kitsap	Laborers	Vinyl Seamer	$33.86	7A	3I		
Kitsap	Laborers	Watchman	$44.76	7A	3I		
Kitsap	Laborers	Welder	$44.76	7A	3I		
Kitsap	Laborers	Well Point Laborer	$33.86	7A	3I		
Kitsap	Laborers	Window Washer/cleaner	$43.95	7A	3I		
Kitsap	Laborers - Underground Sewer & Water	General Laborer & Topman	$44.76	7A	3I		
Kitsap	Laborers - Underground Sewer & Water	Pipe Layer	$9.47			1	
Kitsap	Landscape Construction	Irrigation Or Lawn Sprinkler Installers	$10.05			1	
Kitsap	Landscape Construction	Landscape Equipment Operators Or Truck Drivers	$12.92			1	
Kitsap	Landscape Construction	Landscaping Or Planting Laborers	$21.00			1	
Kitsap	Lathers	JOURNEY LEVEL	$52.82	5A	1M		
Kitsap	Marble Setters	Journey Level	$26.96			1	
Kitsap	Metal Fabrication (In Shop)	Fitter	$9.47			1	
Kitsap	Metal Fabrication (In Shop)	Laborer	$13.83			1	
Kitsap	Metal Fabrication (In Shop)	Machine Operator					

Kitsap	Metal Fabrication (In Shop)	Welder	$13.83			1	
Kitsap	Millwright	Journey Level	$44.89			1	
Kitsap	Modular Buildings	Cabinet Assembly	$11.56			1	
Kitsap	Modular Buildings	Electrician	$11.56			1	
Kitsap	Modular Buildings	Equipment Maintenance	$11.56			1	
Kitsap	Modular Buildings	Plumber	$11.56			1	
Kitsap	Modular Buildings	Production Worker	$9.47			1	
Kitsap	Modular Buildings	Tool Maintenance	$11.56			1	
Kitsap	Modular Buildings	Utility Person	$11.56			1	
Kitsap	Modular Buildings	Welder	$11.56			1	
Kitsap	Painters	Journey Level	$37.80	6Z	2B		
Kitsap	Pile Driver	Journey Level	$54.27	5D	4C		
Kitsap	Plasterers	Journey Level	$51.68	7Q	1R		
Kitsap	Playground & Park Equipment Installers	Journey Level	$9.47			1	
Kitsap	Plumbers & Pipefitters	Journey Level	$63.57	5A	1G		
Kitsap	Power Equipment Operators	Asphalt Plant Operators	$56.94	7A	3C		8P
Kitsap	Power Equipment Operators	Assistant Engineer	$53.57	7A	3C		8P
Kitsap	Power Equipment Operators	Barrier Machine (zipper)	$56.44	7A	3C		8P
Kitsap	Power Equipment Operators	Batch Plant Operator, Concrete	$56.44	7A	3C		8P
Kitsap	Power Equipment Operators	Bobcat	$53.57	7A	3C		8P
Kitsap	Power Equipment Operators	Brokk - Remote Demolition Equipment	$53.57	7A	3C		8P
Kitsap	Power Equipment Operators	Brooms	$53.57	7A	3C		8P
Kitsap	Power Equipment Operators	Bump Cutter	$56.44	7A	3C		8P
Kitsap	Power Equipment Operators	Cableways	$56.94	7A	3C		8P
Kitsap	Power Equipment Operators	Chipper	$56.44	7A	3C		8P
Kitsap	Power Equipment Operators	Compressor	$53.57	7A	3C		8P
Kitsap	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$56.94	7A	3C		8P
Kitsap	Power Equipment Operators	Concrete Finish Machine -laser Screed	$53.57	7A	3C		8P

Kitsap	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Conveyors	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes Friction: 200 tons and over	$58.67	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: 20 Tons Through 44 Tons With Attachments	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250â€™ of boom including jib with attachments	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: 300 tons and over or 300â€™ of boom including jib with attachments	$58.67	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: Friction cranes through 199 tons	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Crusher	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Deck Engineer/deck Winches (power)	$56.44	7A	3C	8P

Kitsap	Power Equipment Operators	Derricks, On Building Work	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Dozers D-9 & Under	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Drilling Machine	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Gradechecker/stakeman	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Guardrail Punch	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Horizontal/directional Drill Locator	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Horizontal/directional Drill Operator	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Hydralifts/boom Trucks Over 10 Tons	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	$57.51	7A	3C	8P

Kitsap	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Loaders, Overhead Under 6 Yards	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Loaders, Plant Feed	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Loaders: Elevating Type Belt	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Locomotives, All	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Material Transfer Device	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic)	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators	Motor Patrol Graders	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Pavement Breaker	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Pile Driver (other Than Crane Mount)	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Posthole Digger, Mechanical	$53.57	7A	3C	8P

Kitsap	Power Equipment Operators	Power Plant	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Pumps - Water	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Rigger And Bellman	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Rigger/Signal Person, Bellman (Certified)	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Rollagon	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Roller, Other Than Plant Mix	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Roto-mill, Roto-grinder	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Saws - Concrete	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Scrapers - Concrete & Carry All	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Service Engineers - Equipment	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Shotcrete/gunite Equipment	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$56.44	7A	3C	8P

Kitsap	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators	Slipform Pavers	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Spreader, Topsider & Screedman	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Subgrader Trimmer	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Tower Bucket Elevators	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Tower Crane Up To 175' In Height Base To Boom	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators	Tower Crane: over 175â€™ through 250â€™ in height, base to boom	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators	Tower Cranes: over 250â€™ in height from base to boom	$58.67	7A	3C	8P
Kitsap	Power Equipment Operators	Transporters, All Track Or Truck Type	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Trenching Machines	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators	Truck Mount Portable Conveyor	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators	Welder	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators	Wheel Tractors, Farmall Type	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators	Yo Yo Pay Dozer	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operators	$56.94	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Assistant Engineer	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Batch Plant Operator, Concrete	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Bobcat	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Brooms	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Bump Cutter	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cableways	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Chipper	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Compressor	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine -laser Screed	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$56.44	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Conveyors	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes Friction: 200 tons and over	$58.67	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250â€™ of boom including jib with attachments	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: 300 tons and over or 300â€™ of boom including jib with attachments	$58.67	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: Friction cranes through 199 tons	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Crusher	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Deck Engineer/deck Winches (power)	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Derricks, On Building Work	$56.94	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Drilling Machine	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Gradechecker/stakeman	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Guardrail Punch	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Locator	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Operator	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom Trucks Over 10 Tons	$56.00	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom Trucks, 10 Tons And Under	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Locomotives, All	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic)	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Motor Patrol Graders	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	$57.51	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Power Plant	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Pumps - Water	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Rigger And Bellman	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Rigger/Signal Person, Bellman (Certified)	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Rollagon	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	$56.00	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Service Engineers - Equipment	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Shotcrete/gunite Equipment	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	$56.44	7A	3C	8P

Kitsap	Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Tower Crane Up To 175' In Height Base To Boom	$57.51	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175â€™ through 250â€™ in height, base to boom	$58.10	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250â€™ in height from base to boom	$58.67	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Trenching Machines	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	$56.00	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	$56.44	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Welder	$56.94	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Wheel Tractors, Farmall Type	$53.57	7A	3C	8P
Kitsap	Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	$56.44	7A	3C	8P
Kitsap	Power Line Clearance Tree Trimmers	Journey Level In Charge	$45.75	5A	4A	
Kitsap	Power Line Clearance Tree Trimmers	Spray Person	$43.38	5A	4A	
Kitsap	Power Line Clearance Tree Trimmers	Tree Equipment Operator	$45.75	5A	4A	
Kitsap	Power Line Clearance Tree Trimmers	Tree Trimmer	$40.84	5A	4A	
Kitsap	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	$30.74	5A	4A	

Kitsap	Refrigeration & Air Conditioning Mechanics	Mechanic	$63.57	5A	1G	
Kitsap	Residential Brick Mason	Journey Level	$17.04			1
Kitsap	Residential Carpenters	Journey Level	$40.66	5D	4C	
Kitsap	Residential Cement Masons	Journey Level	$30.87			1
Kitsap	Residential Drywall Applicators	Journey Level	$40.64	5D	4C	
Kitsap	Residential Drywall Tapers	Journey Level	$20.00			1
Kitsap	Residential Electricians	Journey Level	$27.00			1
Kitsap	Residential Glaziers	Journey Level	$56.16	7L	1Y	
Kitsap	Residential Insulation Applicators	Journey Level	$13.96			1
Kitsap	Residential Laborers	Journey Level	$16.89			1
Kitsap	Residential Marble Setters	Journey Level	$17.04			1
Kitsap	Residential Painters	Journey Level	$19.52			1
Kitsap	Residential Plumbers & Pipefitters	Journey Level	$21.11			1
Kitsap	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	$17.64			1
Kitsap	Residential Sheet Metal Workers	Journey Level (Field or Shop)	$28.95			1
Kitsap	Residential Soft Floor Layers	Journey Level	$19.38			1
Kitsap	Residential Sprinkler Fitters (Fire Protection)	Journey Level	$27.74			1
Kitsap	Residential Stone Masons	Journey Level	$52.82	5A	1M	
Kitsap	Residential Terrazzo Workers	Journey Level	$9.47			1
Kitsap	Residential Terrazzo/Tile Finishers	Journey Level	$30.26			1
Kitsap	Residential Tile Setters	Journey Level	$31.14			1
Kitsap	Roofers	Journey Level	$45.71	5A	3H	
Kitsap	Roofers	Using Irritable Bituminous Materials	$48.71	5A	3H	
Kitsap	Sheet Metal Workers	Journey Level (Field or Shop)	$72.83	7F	1E	
Kitsap	Shipbuilding & Ship Repair	CARPENTER	$19.29			1
Kitsap	Shipbuilding & Ship Repair	ELECTRICIAN	$25.53			1
Kitsap	Shipbuilding & Ship Repair	Heat & Frost Insulator	$63.18	5J	1S	

Kitsap	Shipbuilding & Ship Repair	Laborer	$19.64			1	
Kitsap	Shipbuilding & Ship Repair	MACHINIST	$19.29			1	
Kitsap	Shipbuilding & Ship Repair	OPERATOR	$19.44			1	
Kitsap	Shipbuilding & Ship Repair	Painter	$37.80	6Z	2B		
Kitsap	Shipbuilding & Ship Repair	PIPEFITTER	$19.29			1	
Kitsap	Shipbuilding & Ship Repair	RIGGER	$19.29			1	
Kitsap	Shipbuilding & Ship Repair	Sheet Metal	$22.21			1	
Kitsap	Shipbuilding & Ship Repair	SHIPFITTER	$19.29			1	
Kitsap	Shipbuilding & Ship Repair	WELDER/BURNER	$19.29			1	
Kitsap	Sign Makers & Installers (Electrical)	Journey Level	$20.58			1	
Kitsap	Sign Makers & Installers (Non-Electrical)	Journey Level	$9.47			1	
Kitsap	Soft Floor Layers	Journey Level	$42.88	5A	3D		
Kitsap	Solar Controls For Windows	Journey Level	$10.31			1	
Kitsap	Sprinkler Fitters (Fire Protection)	Journey Level	$69.74	5C	1X		
Kitsap	Stage Rigging Mechanics (Non Structural)	Journey Level	$13.23			1	
Kitsap	Stone Masons	Journey Level	$52.82	5A	1M		
Kitsap	Street And Parking Lot Sweeper Workers	Journey Level	$16.00			1	
Kitsap	Surveyors	Assistant Construction Site Surveyor	$56.00	7A	3C		8P
Kitsap	Surveyors	Chainman	$55.47	7A	3C		8P
Kitsap	Surveyors	Construction Site Surveyor	$56.94	7A	3C		8P
Kitsap	Telecommunication Technicians	Journey Level	$42.07	7E	1E		
Kitsap	Telephone Line Construction - Outside	Cable Splicer	$37.60	5A	2B		
Kitsap	Telephone Line Construction - Outside	Hole Digger/Ground Person	$20.79	5A	2B		
Kitsap	Telephone Line Construction - Outside	Installer (Repairer)	$36.02	5A	2B		
Kitsap	Telephone Line Construction - Outside	Special Aparatus Installer I	$37.60	5A	2B		

Kitsap	Telephone Line Construction - Outside	Special Apparatus Installer II	$36.82	5A	2B		
Kitsap	Telephone Line Construction - Outside	Telephone Equipment Operator (Heavy)	$37.60	5A	2B		
Kitsap	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	$34.94	5A	2B		
Kitsap	Telephone Line Construction - Outside	Telephone Lineperson	$34.93	5A	2B		
Kitsap	Telephone Line Construction - Outside	Television Groundperson	$19.73	5A	2B		
Kitsap	Telephone Line Construction - Outside	Television Lineperson/Installer	$26.31	5A	2B		
Kitsap	Telephone Line Construction - Outside	Television System Technician	$31.50	5A	2B		
Kitsap	Telephone Line Construction - Outside	Television Technician	$28.23	5A	2B		
Kitsap	Telephone Line Construction - Outside	Tree Trimmer	$34.93	5A	2B		
Kitsap	Terrazzo Workers	Journey Level	$47.46	5A	1M		
Kitsap	Tile Setters	Journey Level	$47.46	5A	1M		
Kitsap	Tile, Marble & Terrazzo Finishers	Journey Level	$12.00			1	
Kitsap	Traffic Control Stripers	Journey Level	$43.73	7A	1K		
Kitsap	Truck Drivers	Asphalt Mix Over 16 Yards (W. WA-Joint Council 28)	$49.85	5D	3A		8L
Kitsap	Truck Drivers	Asphalt Mix To 16 Yards (W. WA-Joint Council 28)	$49.01	5D	3A		8L
Kitsap	Truck Drivers	Dump Truck	$19.60			1	
Kitsap	Truck Drivers	Dump Truck And Trailer	$19.60			1	
Kitsap	Truck Drivers	Other Trucks	$18.37			1	
Kitsap	Truck Drivers	Transit Mixer	$20.79			1	
Kitsap	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	$13.17			1	
Kitsap	Well Drillers & Irrigation Pump Installers	Oiler	$14.08			1	
Kitsap	Well Drillers & Irrigation Pump Installers	Well Driller	$14.40			1	

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Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.

J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.

K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

1. O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.

   P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

   Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.

   R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.

   S. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays and all other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

   U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

   V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.

   W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

   X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.

   Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.

   Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

   C. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at two times the hourly rate of wage.

Overtime Codes Continued

2. F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.

G. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

H. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

O. All hours worked on Sundays and holidays shall be paid at one and one-half times the hourly rate of wage.

R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.

U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.

W. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The first eight (8) hours worked on the fifth day shall be paid at one and one-half times the hourly rate of wage. All other hours worked on the fifth, sixth, and seventh days and on holidays shall be paid at double the hourly rate of wage.

3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at time and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay. Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar ($1.00) per hour for all hours worked that shift. The employer shall have the sole discretion to assign overtime work to employees. Primary consideration for overtime work shall be given to employees regularly assigned to the work to be performed on overtime situations. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

C. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays shall be paid at double the hourly rate of wage. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

D. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 15% over the hourly rate of wage. All other hours worked after 6:00 am on Saturdays, shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

E. All hours worked Sundays and holidays shall be paid at double the hourly rate of wage. Each week, once 40 hours of straight time work is achieved, then any hours worked over 10 hours per day Monday through Saturday shall be paid at double the hourly wage rate.

Overtime Codes Continued

3. F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.

I. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions during a five day work week (Monday through Friday,) or a four day-ten hour work week (Tuesday through Friday,) then Saturday may be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.

B. All hours worked over twelve (12) hours per day and all hours worked on holidays shall be paid at double the hourly rate of wage.

C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:
On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

Overtime Codes Continued

4. E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

   On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

   F. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 20% over the hourly rate of wage. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

   G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Holiday Codes

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).

   B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).

   C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

   D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).

   H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

   I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

   J. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, And Christmas Day (7).

   K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).

   L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).

   N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).

   P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.

Holiday Codes Continued

5. Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).

S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).

T. Paid Holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And The Day Before Or After Christmas (9).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

Holiday Codes Continued

6. A. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

E. Paid Holidays: New Year's Day, Day Before Or After New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and a Half-Day On Christmas Eve Day. (9 1/2).

G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).

H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

I. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (7).

T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

Holiday Codes Continued

7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

Holiday Codes Continued

7. B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

M. Paid Holidays: New Year's Day, The Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, And the Day after or before Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

R. Paid Holidays: New Year's Day, the day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day after or before Christmas Day (10). If any of the listed holidays fall on Saturday, the preceding Friday shall be observed as the holiday. If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

T. Paid Holidays: New Year's Day, the Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and The Day after or before Christmas Day. (10). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Note Codes

8. A. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:
Over 50' To 100' -$2.00 per Foot for Each Foot Over 50 Feet
Over 100' To 150' -$3.00 per Foot for Each Foot Over 100 Feet
Over 150' To 220' -$4.00 per Foot for Each Foot Over 150 Feet
Over 220' -$5.00 per Foot for Each Foot Over 220 Feet

C. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:
Over 50' To 100' -$1.00 per Foot for Each Foot Over 50 Feet
Over 100' To 150' -$1.50 per Foot for Each Foot Over 100 Feet
Over 150' To 200' -$2.00 per Foot for Each Foot Over 150 Feet
Over 200' -Divers May Name Their Own Price

D. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $0.75, Level B: $0.50, And Level C: $0.25.

M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: $1.00, Levels C & D: $0.50.

8. N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

P. Workers on hazmat projects receive additional hourly premiums as follows -Class A Suit: $2.00, Class B Suit: $1.50, Class C Suit: $1.00, And Class D Suit $0.50.

Q. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

R. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: $2.00, Class B Suit: $1.50, And Class C Suit: $1.00. Workers performing underground work receive an additional $0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional $0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do "pioneer" work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional $0.50 per hour.

Washington State Department of Labor and Industries
Policy Statement
(Regarding the Production of "Standard" or "Non-standard" Items)

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.

2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.

3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.

4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.

5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.

6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.

WSDOT's
Predetermined List for
Suppliers - Manufactures - Fabricator

Below is a list of potentially prefabricated items, originally furnished by WSDOT to Washington State Department of Labor and Industries, that may be considered non-standard and therefore covered by the prevailing wage law, RCW 39.12. Items marked with an X in the "YES" column should be considered to be non-standard and therefore covered by RCW 39.12. Items marked with an X in the "NO" column should be considered to be standard and therefore not covered. Of course, exceptions to this general list may occur, and in that case shall be evaluated according to the criteria described in State and L&I's policy statement.

	ITEM DESCRIPTION	YES	NO
1.	Metal rectangular frames, solid metal covers, herringbone grates, and bi-directional vaned grates for Catch Basin Types 1, 1L, 1P, and 2 and Concrete Inlets. See Std. Plans		X
2.	Metal circular frames (rings) and covers, circular grates, and prefabricated ladders for Manhole Types 1, 2, and 3, Drywell Types 1, 2, and 3 and Catch Basin Type 2. See Std. Plans		X
3.	Prefabricated steel grate supports and welded grates, metal frames and dual vaned grates, and Type 1, 2, and 3 structural tubing grates for Drop Inlets. See Std. Plans.		X
4.	Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.		X
5.	Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.		X
6.	Corrugated Steel Pipe - Steel lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, 1 thru 5.		X
7.	Corrugated Aluminum Pipe - Aluminum lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, #5.		X

	ITEM DESCRIPTION	YES	NO
8.	Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type.		X
9.	Aluminum Pedestrian Handrail - Pedestrian handrail conforming to the type and material specifications set forth in the contract plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).	X	
10.	Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.	X	
11.	Minor Structural Steel Fabrication - Fabrication of minor steel Items such as special hangers, brackets, access doors for structures, access ladders for irrigation boxes, bridge expansion joint systems, etc., involving welding, cutting, punching and/or boring of holes. See Contact Plans for item description and shop drawings.	X	
12.	Aluminum Bridge Railing Type BP - Metal bridge railing conforming to the type and material specifications set forth in the Contract Plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).		X
13.	Concrete Piling--Precast-Prestressed concrete piling for use as 55 and 70 ton concrete piling. Concrete to conform to Section 9-19.1 of Std. Spec..	X	
14.	Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.		X
15.	Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.		X
16.	Precast Catch Basin - Catch Basin type 1, 1L, 1P, and 2 With adjustment sections. See Std. Plans.		X

	ITEM DESCRIPTION	YES	NO
17.	Precast Concrete Inlet - with adjustment sections, See Std. Plans		X
18.	Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.		X
19.	Precast Grate Inlet Type 2 with extension and top units. See Std. Plans		X
20.	Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans		X
21.	Precast Concrete Utility Vaults - Precast Concrete utility vaults of various sizes. Used for in ground storage of utility facilities and controls. See Contract Plans for size and construction requirements. Shop drawings are to be provided for approval prior to casting		X
22.	Vault Risers - For use with Valve Vaults and Utilities Vaults.		X
23.	Valve Vault - For use with underground utilities. See Contract Plans for details.		X
24.	Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier.		X
25.	Reinforced Earth Wall Panels – Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab.	X	
26.	Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used	X	

	ITEM DESCRIPTION	YES	NO
27.	Precast Railroad Crossings - Concrete Crossing Structure Slabs.	X	
28.	12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
29.	Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A .	X	
30.	Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
31.	Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core slab for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A.	X	
32.	Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
33.	Monument Case and Cover See Std. Plan.		X

	ITEM DESCRIPTION	YES	NO
34.	Cantilever Sign Structure - Cantilever Sign Structure fabricated from steel tubing meeting AASHTO-M-183. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
35.	Mono-tube Sign Structures - Mono-tube Sign Bridge fabricated to details shown in the Plans. Shop drawings for approval are required prior to fabrication.	X	
36.	Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
37.	Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication		X
38.	Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.	X	
39.	Light Standards - Lighting Standards for use on highway illumination systems, poles to be fabricated to conform with methods and materials as specified on Std. Plans. See Specia Provisions for pre-approved drawings.	X	
40.	Traffic Signal Standards - Traffic Signal Standards for use on highway and/or street signal systems. Standards to be fabricated to conform with methods and material as specified on Std. Plans. See Special Provisions for pre-approved drawings	X	
41.	Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.		X

	ITEM DESCRIPTION	YES	NO
42.	Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. **NOTE:** *** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication Inspector to be installed	X	X
		Custom Message	Std Signing Message
43.	Cutting & bending reinforcing steel		X
44.	Guardrail components	X	X
		Custom End Sec	Standard Sec
45.	Aggregates/Concrete mixes	Covered by WAC 296-127-018	
46.	Asphalt	Covered by WAC 296-127-018	
47.	Fiber fabrics		X
48.	Electrical wiring/components		X
49.	treated or untreated timber pile		X
50.	Girder pads (elastomeric bearing)	X	
51.	Standard Dimension lumber		X
52.	Irrigation components		X

ITEM DESCRIPTION	YES	NO
53. Fencing materials		X
54. Guide Posts		X
55. Traffic Buttons		X
56. Epoxy		X
57. Cribbing		X
58. Water distribution materials		X
59. Steel "H" piles		X
60. Steel pipe for concrete pile casings		X
61. Steel pile tips, standard		X
62. Steel pile tips, custom	X	

Prefabricated items specifically produced for public works projects that are prefabricated in a county other than the county wherein the public works project is to be completed, the wage for the offsite prefabrication shall be the applicable prevailing wage for the county in which the actual prefabrication takes place.

It is the manufacturer of the prefabricated product to verify that the correct county wage rates are applied to work they perform.

See RCW 39.12.010
(The definition of "locality" in RCW 39.12.010(2) contains the phrase "wherein the physical work is being performed." The department interprets this phrase to mean the actual work site.

WSDOT's List of State Occupations not applicable to Heavy and Highway Construction Projects

This project is subject to the state hourly minimum rates for wages and fringe benefits in the contract provisions, as provided by the state Department of Labor and Industries.
The following list of occupations, is comprised of those occupations that are not normally used in the construction of heavy and highway projects.
When considering job classifications for use and / or payment when bidding on, or building heavy and highway construction projects for, or administered by WSDOT, these Occupations will be excepted from the included "Washington State Prevailing Wage Rates For Public Work Contracts" documents.

- Building Service Employees
- Electrical Fixture Maintenance Workers
- Electricians - Motor Shop
- Heating Equipment Mechanics
- Industrial Engine and Machine Mechanics
- Industrial Power Vacuum Cleaners
- Inspection, Cleaning, Sealing of Water Systems by Remote Control
- Laborers - Underground Sewer & Water
- Machinists (Hydroelectric Site Work)
- Modular Buildings
- Playground & Park Equipment Installers
- Power Equipment Operators - Underground Sewer & Water
- Residential *** ALL ASSOCIATED RATES ***
- Sign Makers and Installers (Non-Electrical)
- Sign Makers and Installers (Electrical)
- Stage Rigging Mechanics (Non Structural)

The following occupations may be used only as outlined in the preceding text concerning "WSDOT's list for Suppliers - Manufacturers - Fabricators"

- Fabricated Precast Concrete Products
- Metal Fabrication (In Shop)

Definitions for the Scope of Work for prevailing wages may be found at the Washington State Department of Labor and Industries web site and in WAC Chapter 296-127.

WAC 296-127-018 Agency filings affecting this section

Coverage and exemptions of workers involved in the production and delivery of gravel, concrete, asphalt, or similar materials.

(1) The materials covered under this section include but are not limited to: Sand, gravel, crushed rock, concrete, asphalt, or other similar materials.

(2) All workers, regardless of by whom employed, are subject to the provisions of chapter 39.12 RCW when they perform any or all of the following functions:

(a) They deliver or discharge any of the above-listed materials to a public works project site:

(i) At one or more point(s) directly upon the location where the material will be incorporated into the project; or

(ii) At multiple points at the project; or

(iii) Adjacent to the location and coordinated with the incorporation of those materials.

(b) They wait at or near a public works project site to perform any tasks subject to this section of the rule.

(c) They remove any materials from a public works construction site pursuant to contract requirements or specifications (e.g., excavated materials, materials from demolished structures, clean-up materials, etc.).

(d) They work in a materials production facility (e.g., batch plant, borrow pit, rock quarry, etc.,) which is established for a public works project for the specific, but not necessarily exclusive, purpose of supplying materials for the project.

(e) They deliver concrete to a public works site regardless of the method of incorporation.

(f) They assist or participate in the incorporation of any materials into the public works project.

(3) All travel time that relates to the work covered under subsection (2) of this section requires the payment of prevailing wages. Travel time includes time spent waiting to load, loading, transporting, waiting to unload, and delivering materials. Travel time would include all time spent in travel in support of a public works project whether the vehicle is empty or full. For example, travel time spent returning to a supply source to obtain another load of material for use on a public works site or returning to the public works site to obtain another load of excavated material is time spent in travel that is subject to prevailing wage. Travel to a supply source, including travel from a public works site, to obtain materials for use on a private project would not be travel subject to the prevailing wage.

(4) Workers are not subject to the provisions of chapter 39.12 RCW when they deliver materials to a stockpile.

(a) A "stockpile" is defined as materials delivered to a pile located away from the site of incorporation such that the stockpiled materials must be physically moved from the stockpile and transported to another location on the project site in order to be incorporated into the project.

(b) A stockpile does not include any of the functions described in subsection (2)(a) through (f) of this section; nor does a stockpile include materials delivered or distributed to multiple locations upon the project site; nor does a stockpile include materials dumped at the place of incorporation, or adjacent to the location and coordinated with the incorporation.

(5) The applicable prevailing wage rate shall be determined by the locality in which the work is performed. Workers subject to subsection (2)(d) of this section, who produce such materials at an off-site facility shall be paid the applicable prevailing wage rates for the county in which the off-site facility is located. Workers subject to subsection (2) of this section, who deliver such materials to a public works project site shall be paid the applicable prevailing wage rates for the county in which the public works project is located.

[Statutory Authority: Chapter 39.12 RCW, RCW 43.22.051 and 43.22.270. 08-24-101, § 296-127-018, filed 12/2/08, effective 1/2/09. Statutory Authority: Chapters 39.04 and 39.12 RCW and RCW 43.22.270. 92-01-104 and 92-08-101, § 296-127-018, filed 12/18/91 and 4/1/92, effective 8/31/92.]

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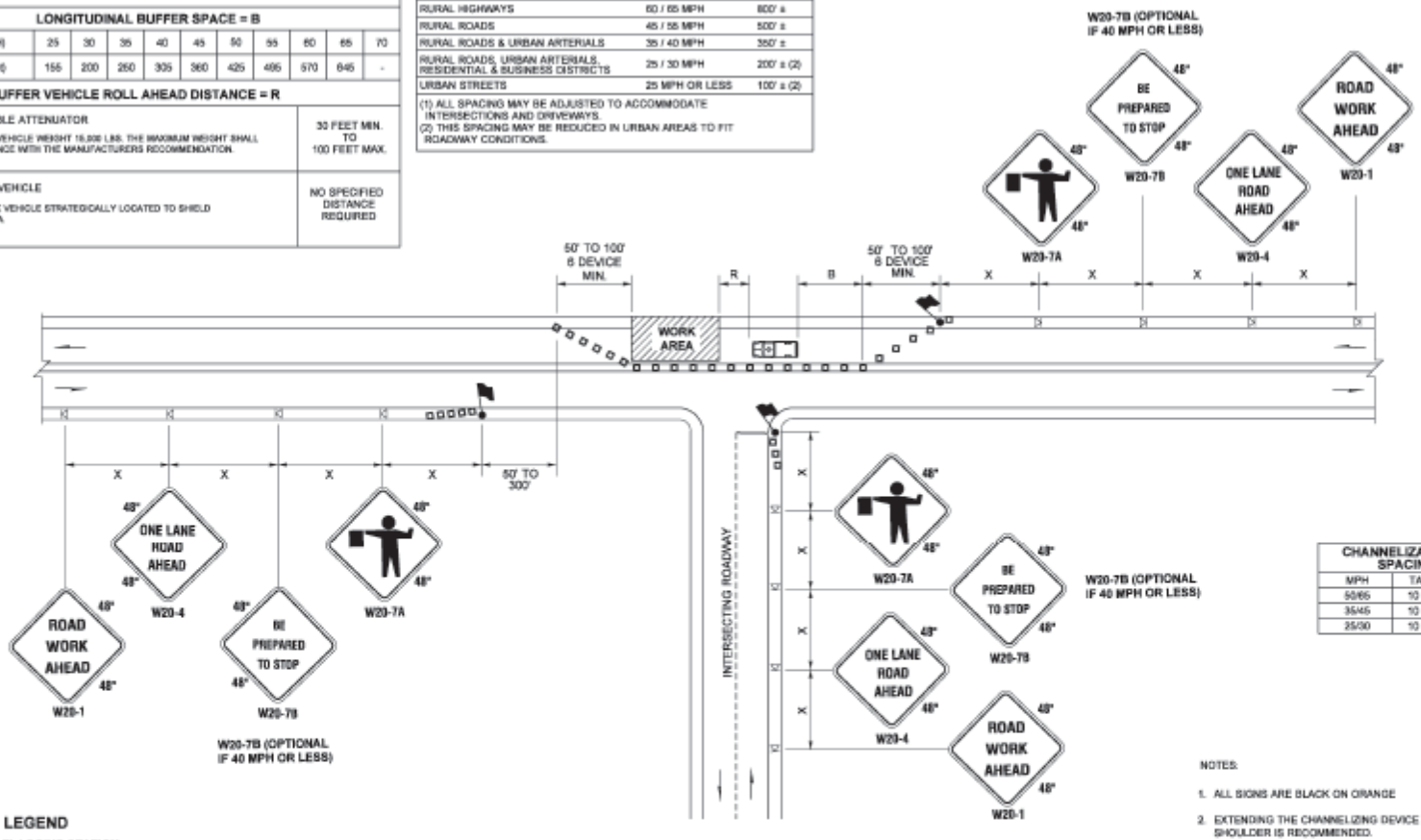
ATTACHMENT B. STANDARD PLANS FOR TRAFFIC CONTROL

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-

BUFFER VEHICLE ROLL AHEAD DISTANCE = R	
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA	NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/55	10 to 20	80
35/45	10 to 20	60
25/30	10 to 20	40

NOTES:

1. ALL SIGNS ARE BLACK ON ORANGE
2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
4. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE

ONE-LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-1\TC-1.dgn
TIME	10:39:41 AM
DATE	6/17/2013
PLOTTED BY	Cyford, L
DESIGNED BY	
ENTERED BY	
CHECKED BY	
PROJ. ENGR.	
REGIONAL ADM.	

REVISION | DATE | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

Plot 1 | TC1

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

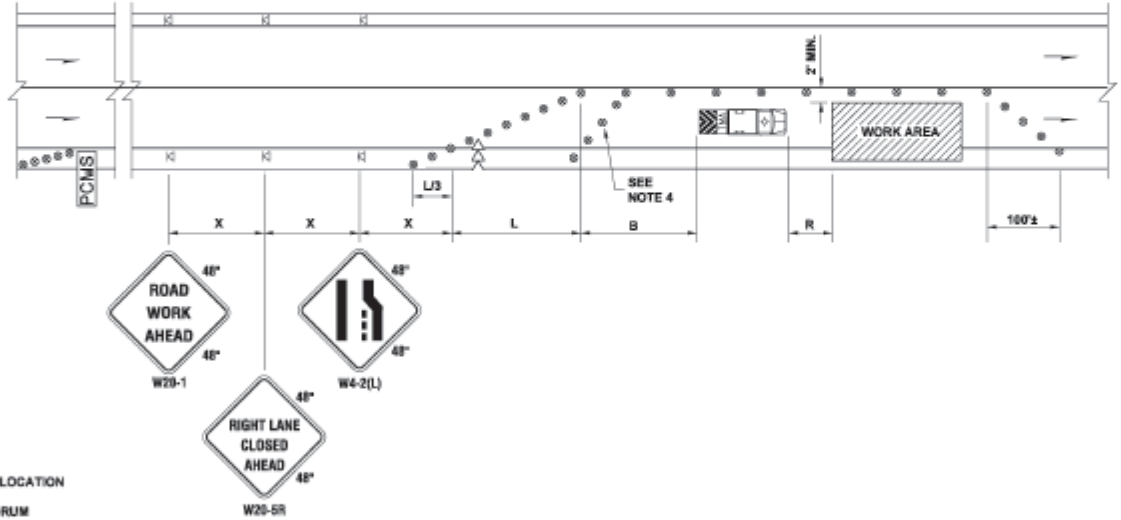
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CANALIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

BUFFER VEHICLE ROLL AHEAD DISTANCE = R

TRANSPORTABLE ATTENUATOR	
MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.



PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

NOTES:

1. NO FLAGGERS OR SPOTTERS.
2. EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.
3. DEVICES SHALL NOT ENCROACH INTO THE ADJACENT LANE.
4. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (RECOMMENDED).
5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'
6. ALL SIGNS ARE BLACK ON ORANGE.
7. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

LEGEND

- TEMPORARY SIGN LOCATION
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

SINGLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS

NOT TO SCALE

FILE NAME	S:\Design R PS 9\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-3\TC-3.dgn						
TIME	10:50:38 AM			REGION NO. 10	STATE WASH	FED.AID PROJ.NO.	
DATE	5/17/2013			JOB NUMBER			
PLOTTED BY	Cyford,						
DESIGNED BY							
ENTERED BY							
CHECKED BY				CONTRACT NO.		LOCATION NO.	
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

P.E. STAMP BOX DATE

P.E. STAMP BOX DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

Plot 1

TC3

SHEET OF SHEETS

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

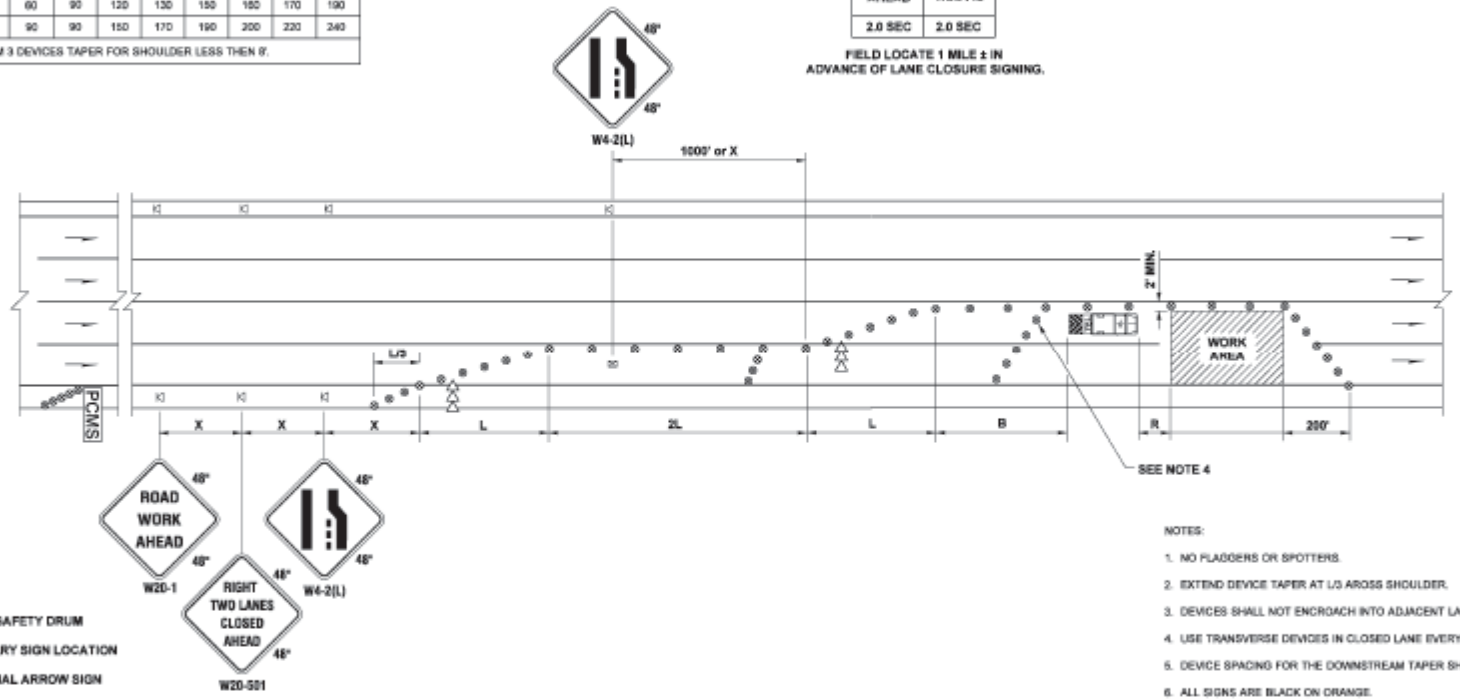
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

PCMS	
1	2
2 LANES CLOSED AHEAD	WATCH FOR SLOW TRAFFIC
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.									30 FEET MIN. TO 100 FEET MAX.	



LEGEND

- TRAFFIC SAFETY DRUM
- TEMPORARY SIGN LOCATION
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION (6' MOUNTING HEIGHT)

NOTES:

1. NO FLAGGERS OR SPOTTERS.
2. EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.
3. DEVICES SHALL NOT ENCROACH INTO ADJACENT LANES.
4. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000'. (RECOMMENDED).
5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'.
6. ALL SIGNS ARE BLACK ON ORANGE.
7. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

DOUBLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standards\3-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-4\TC-4.dgn
TIME	10:56:50 AM
DATE	6/17/2013
PLOTTED BY	Cyford, L
DESIGNED BY	
ENTERED BY	
CHECKED BY	
PROJ. ENGR.	
REGIONAL ADM.	

REVISION | DATE | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER

CONTRACT NO. | LOCATION NO.

P.E. STAMP BOX | DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

Plot 1 | TC4 | SHEET OF SHEETS

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)

SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	-	-	-	-	-	-
10'	40	60	90	90	-	-	-	-	-	-

USE A 3 DEVICES TAPER FOR SHOULDERS LESS THEN 8'

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/40	30	60
25/30	20	40

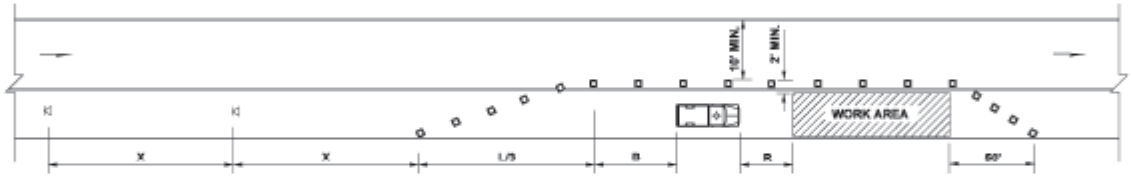
BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305						

BUFFER VEHICLE ROLL AHEAD DISTANCE = R

TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED



W20-1

W21-5

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE

SHOULDER CLOSURE - LOW SPEED

(40 MPH OR LESS)

NOT TO SCALE

NOTES:

1. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'.
2. ALL SIGNS ARE BLACK ON ORANGE.
3. NO FLAGGERS OR SPOTTERS.

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-5\TC-5.dgn				
TIME	10:58:46 AM				
DATE	6/17/2013				
PLOTTED BY	Gylondi,				
DESIGNED BY					
ENTERED BY					
CHECKED BY					
PROJ. ENGR.					
REGIONAL ADM.		REVISION	DATE	BY	

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER

CONTRACT NO. | LOCATION NO.

F.A. STAMP BOX | DATE | F.A. STAMP BOX | DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

TC5

SHEET OF SHEETS

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	-	-	-	-	450	500	550	-	-	-
11	-	-	-	-	495	550	605	660	-	-
12	-	-	-	-	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	180
10'	40	60	60	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

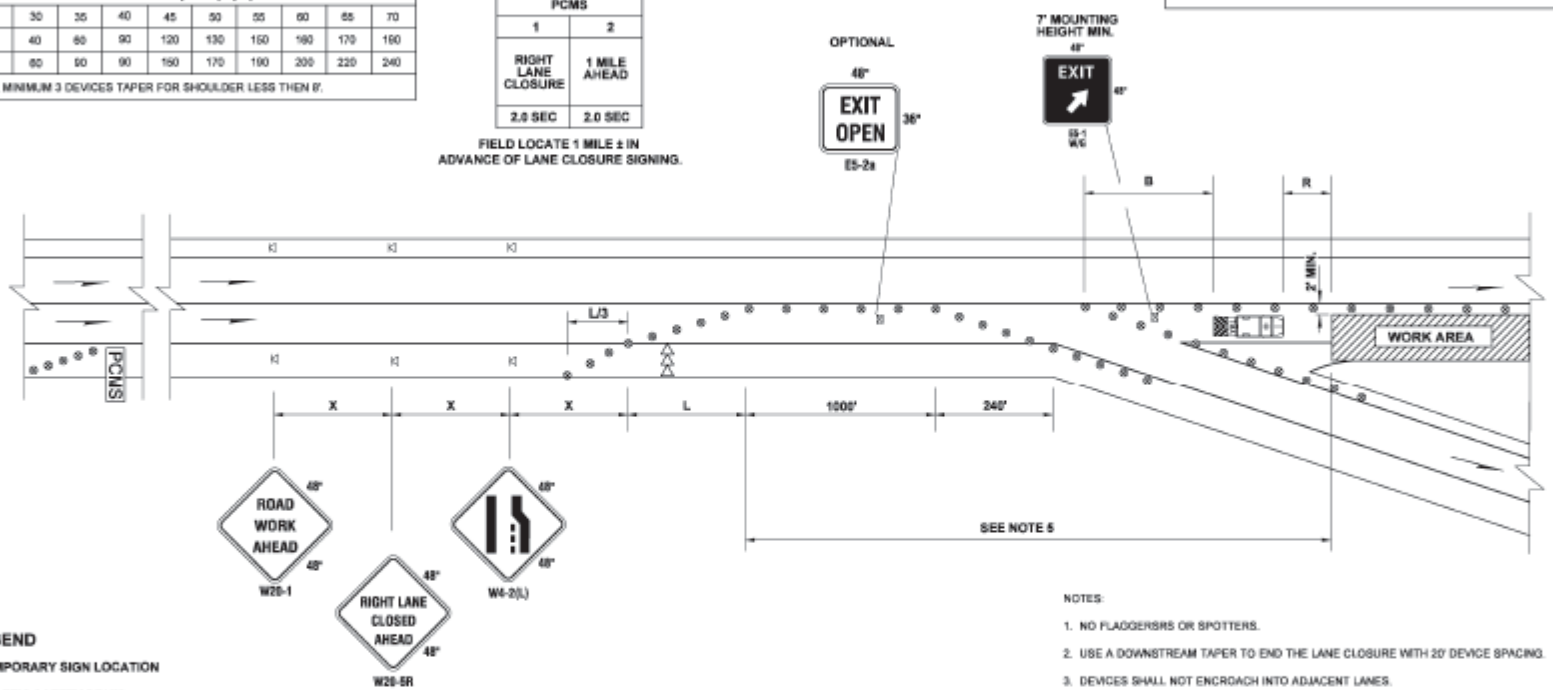
SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	50 / 55 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
45/45	30	60

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	-	-	-	-	360	425	495	570	645	730
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.										30 FEET MIN. TO 100 FEET MAX.

PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.



LEGEND

- TEMPORARY SIGN LOCATION
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

NOTES:

1. NO FLAGGERS/S OR SPOTTERS.
2. USE A DOWNSTREAM TAPER TO END THE LANE CLOSURE WITH 20' DEVICE SPACING.
3. DEVICES SHALL NOT ENCROACH INTO ADJACENT LANES.
4. USE TRANSVERSE DEVICES IN CLOSED LANES EVERY 1000'± (RECOMMENDED).
5. SEE SHEET TCXX FOR A SHORT TERM OFF-RAMP CLOSURE WHEN THE WORK AREA LOCATION RESTRICTS RAMP ACCESS.
6. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
7. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.

TEMPORARY OFF-RAMP FOR MULTI-LANE ROADWAYS

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-7\TC-7.dgn								Plot 1
TIME	11:33:57 AM								TC7
DATE	5/17/2013				10	WASH	FED.AID PROJ.NO.	Washington State Department of Transportation	
PLOTTED BY	Cylondl,								
DESIGNED BY									
ENTERED BY									
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY				TRAFFIC CONTROL PLAN	

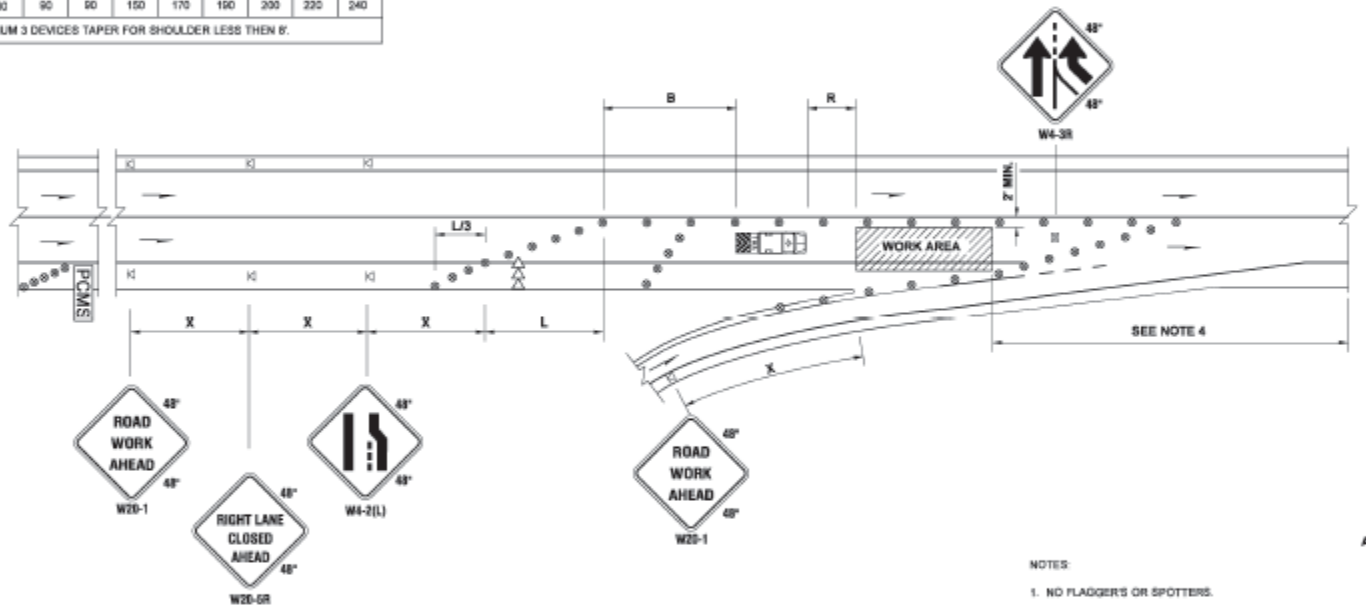
MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	-	-	-	-	450	500	550	-	-	-
11	-	-	-	-	495	550	605	660	-	-
12	-	-	-	-	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	500' ±
RURAL ROADS	45 / 55 MPH	500' ±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
40/45	30	60

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	-	-	-	-	360	425	495	570	645	730
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.										30 FEET MIN. TO 100 FEET MAX.



PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

LEGEND

PCMS

NOTES:

1. NO FLAGGER'S OR SPOTTERS.
2. DEVICES SHALL NOT ENCROACH INTO ADJACENT LANES.
3. USE TRANSVERSE DEVICES IN CLOSED LANES EVERY 1000'± (RECOMMENDED).
4. SEE SHEET TCXX FOR A SHORT TERM ON-RAMP CLOSURE WHEN THE WORK AREA LOCATION RESTRICTS RAMP ACCESS.
5. ALL SIGNS ARE BLACK ON ORANGE.
6. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.

TEMPORARY ON-RAMP FOR MULTI-LANE ROADWAYS

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-8\TC-8.dgn				
TIME	11:08:48 AM			REGION NO. / STATE	FED.AID PROJ.NO.
DATE	6/17/2013			10 / WASH	
PLOTTED BY	CyfordL			JOB NUMBER	
DESIGNED BY					
ENTERED BY				CONTRACT NO.	LOCATION NO.
CHECKED BY					
PROJ. ENGR.					
REGIONAL ADM.		REVISION	DATE	BY	

P.E. STAMP BOX DATE

P.E. STAMP BOX DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

Plot 1

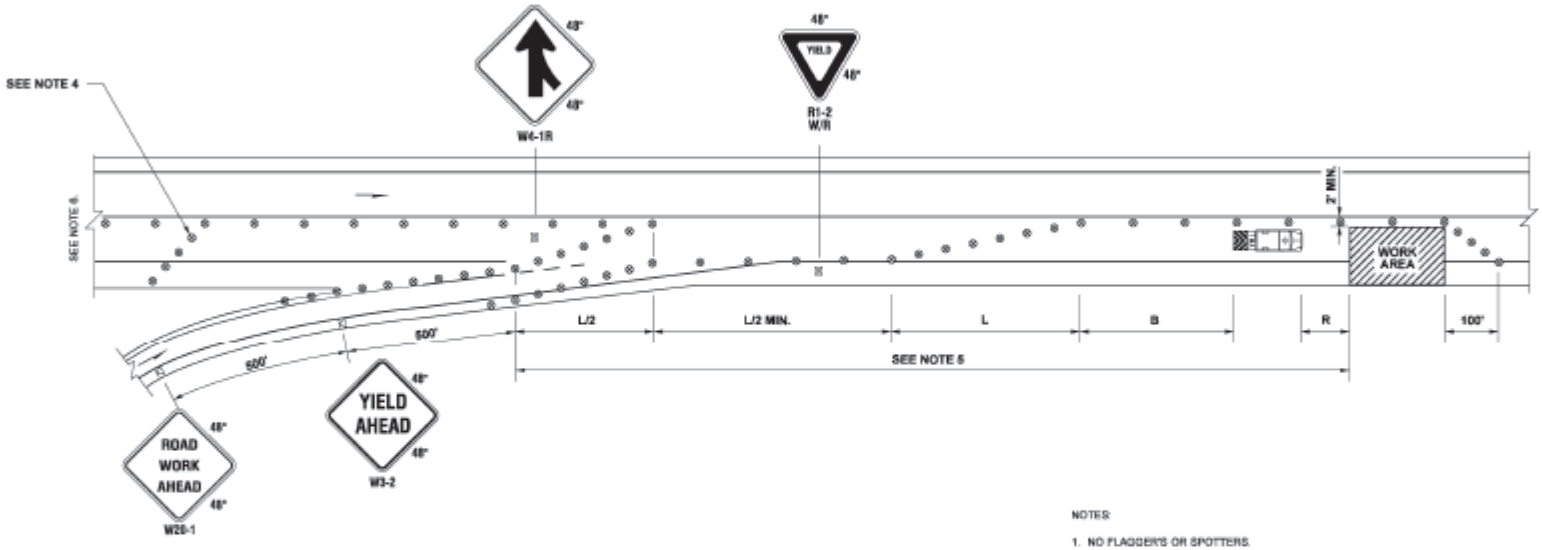
TC8

SHEET OF SHEETS

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	-	-	-	-	450	500	550	-	-	-
11	-	-	-	-	495	550	605	660	-	-
12	-	-	-	-	540	600	660	720	780	840

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
40/45	30	60

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	-	-	-	-	360	425	495	570	645	730
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.										30 FEET MIN. TO 100 FEET MAX.



LEGEND

- TEMPORARY SIGN LOCATION
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

TEMPORARY ON-RAMP FOR MULTI-LANE ROADWAYS

NOT TO SCALE

NOTES:

1. NO FLAGGER'S OR SPOTTERS.
2. USE A DOWNSTREAM TAPER TO END THE LANE CLOSURE WITH 20' DEVICE SPACING.
3. DEVICES SHALL NOT ENCROACH INTO ADJACENT LANES.
4. USE TRANSVERSE DEVICES IN CLOSED LANES EVERY 1000'± (RECOMMENDED).
5. SEE SHEET TCXX FOR A SHORT TERM ON-RAMP CLOSURE WHEN THE WORK AREA LOCATION RESTRICTS RAMP ACCESS.
6. SEE TC3 OR TC7 FOR RIGHT LANE CLOSURE.
7. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
8. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.

FILE NAME	S:\Design R F& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-RTC-9.dgn						
TIME	11:08:28 AM						
DATE	6/11/2013						
PLOTTED BY	Gylland,						
DESIGNED BY							
ENTERED BY							
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

F.A. STAMP BOX — DATE

F.A. STAMP BOX — DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

TC9

SHEET OF SHEETS

SIGN SPACING = X (1)		
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

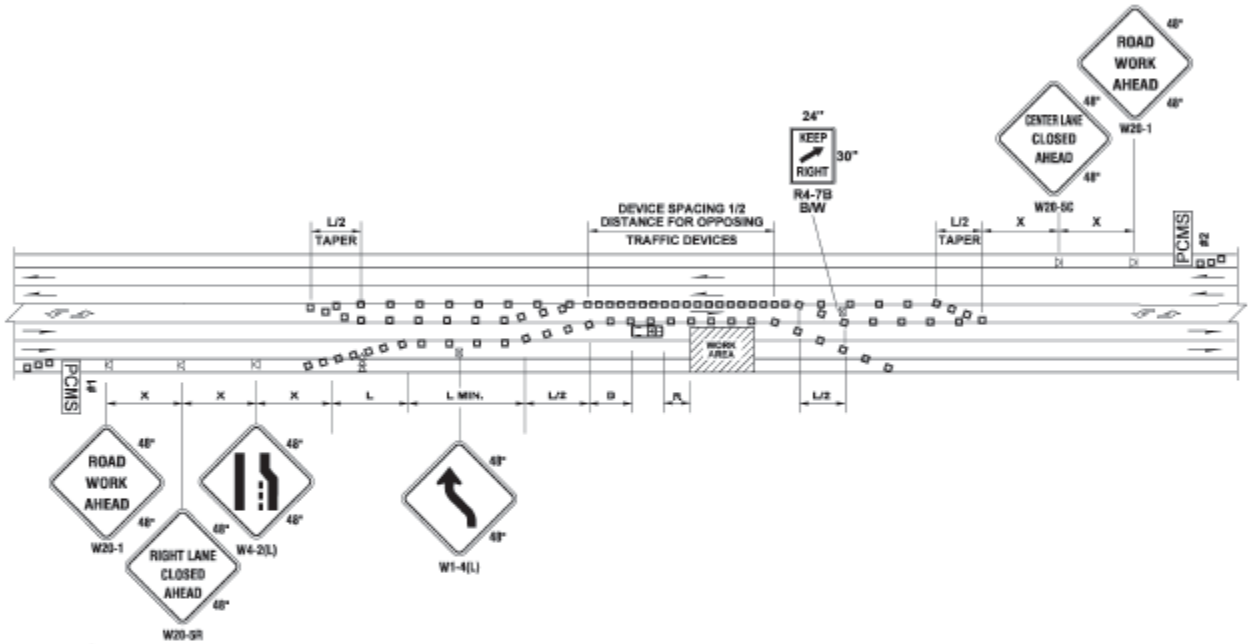
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	-	-	-	-
11	115	165	225	295	495	550	-	-	-	-
12	125	180	245	320	540	600	-	-	-	-

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80
35/45	30	60
25/30	20	40

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	-	-	-	-

BUFFER VEHICLE ROLL AHEAD DISTANCE = R	
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED



PCMS #1	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

PCMS #2	
1	2
CENTER LANE CLOSED	NO LEFT TURNING
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

NOTES:

1. NO FLAGGER'S OR SPOTTERS.
2. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
3. FOR POSTED SPEED LIMITS OF 30 MPH OR LESS, USE SIGN W1-3 IN LIEU OF SIGN W1-4.
4. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
5. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

RIGHT LANE CLOSURE WITH SHIFT - 5 LANE ROADWAY

NOT TO SCALE

FILE NAME	S:\Design R P& 9\4-Standards\2 Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-10\TC-10.dgn						
TIME	11:17:08 AM						
DATE	8/17/2013						
PLOTTED BY	Cyford.						
DESIGNED BY							
ENTERED BY							
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	

JOB NUMBER

CONTRACT NO. | LOCATION NO.

P.E. STAMP BOX DATE | P.E. STAMP BOX DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

Plot 1

TC10

SHEET OF SHEETS

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	-	-	-	-

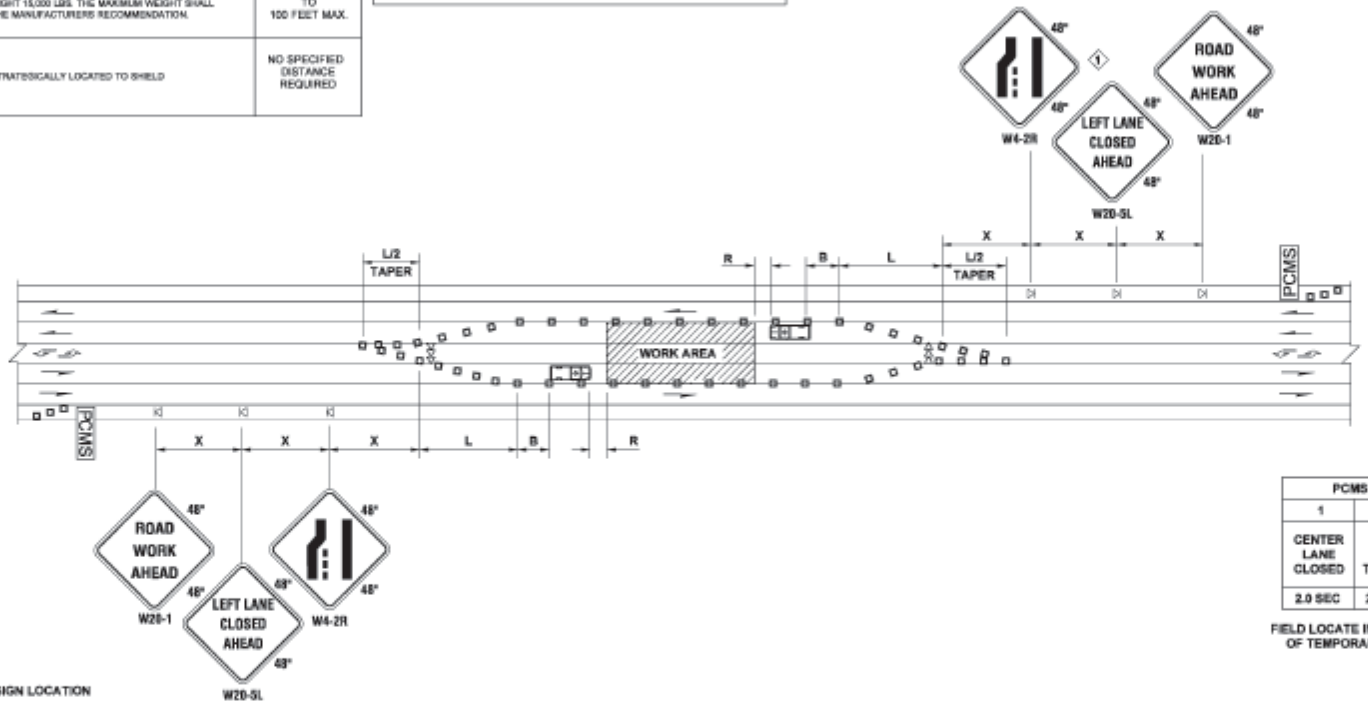
BUFFER VEHICLE ROLL AHEAD DISTANCE = R	
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)		
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	-	-	-	-
11	115	165	225	295	495	550	-	-	-	-
12	125	180	245	320	540	600	-	-	-	-

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80
35/45	30	60
25/30	20	40



PCMS	
1	2
CENTER LANE CLOSED	NO LEFT TURNING
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

LEFT LANE AND CENTER TURN LANE CLOSURE - 5 LANE ROADWAY

NOT TO SCALE

NOTES:

1. NO FLAGGER'S OR SPOTTERS.
2. ALL SIGNS ARE BLACK ON ORANGE.
3. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-11\TC-11.dgn				
TIME	11:18:45 AM				
DATE	6/17/2013				
PLOTTED BY	Cyford,				
DESIGNED BY					
ENTERED BY					
CHECKED BY					
PROJ. ENGR.					
REGIONAL ADM.		REVISION	DATE	BY	

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

TC11

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-

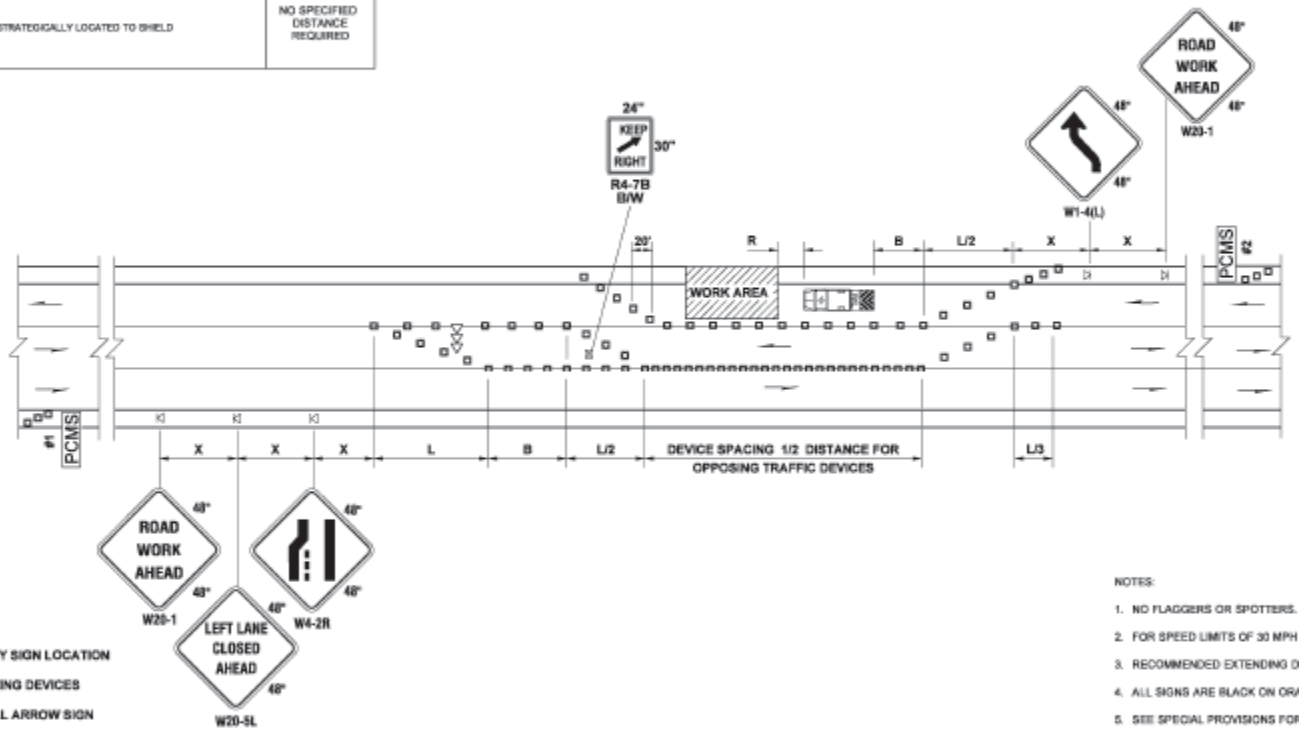
BUFFER VEHICLE ROLL AHEAD DISTANCE = R	
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 55 MPH	500' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	-

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/60	40	80
35/45	30	60
25/30	20	40



PCMS #1	
1	2
LEFT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

PCMS #2	
1	2
LANE SHIFTS LEFT	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

NOTES:

1. NO FLAGGERS OR SPOTTERS.
2. FOR SPEED LIMITS OF 30 MPH OR LESS, USE SIGN W1-3 IN LIEU OF SIGN W1-4.
3. RECOMMENDED EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
4. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
5. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

LANE SHIFT - THREE LANE ROADWAY

NOT TO SCALE

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P.E. STAMP BOX DATE

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Washington State Department of Transportation

TRAFFIC CONTROL PLAN

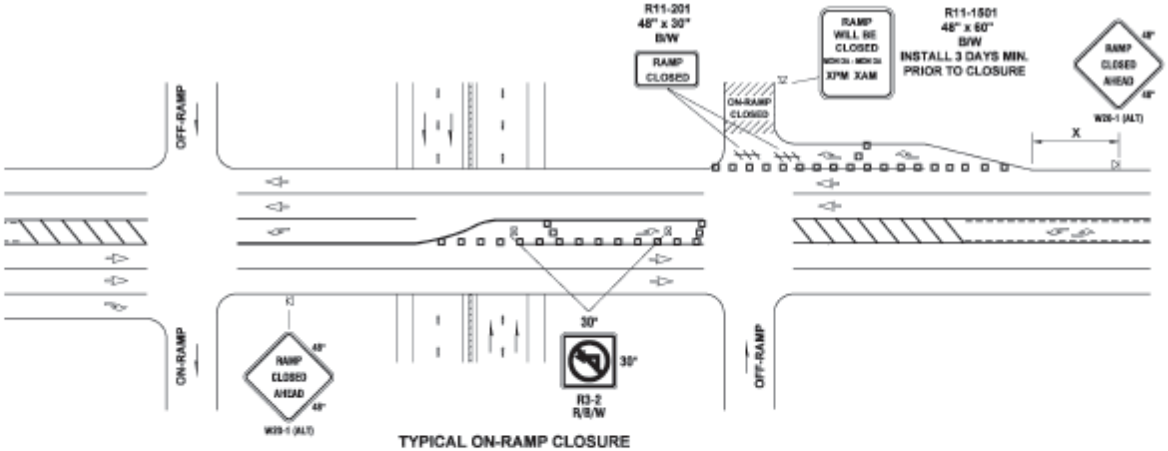
SHEET OF SHEETS

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	50 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

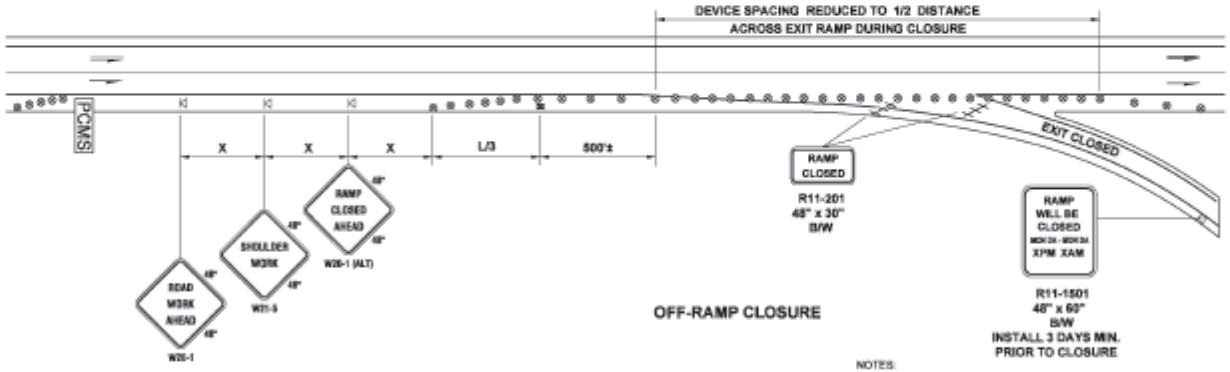
CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



TYPICAL ON-RAMP CLOSURE

PCMS	
1	2
EXIT XXX CLOSED	USE EXIT XXX
2.0 SEC	2.0 SEC

FIELD LOCATE



OFF-RAMP CLOSURE

LEGEND

- TYPE 3 BARRICADE
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- TRAFFIC SAFTY DRUM
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

SHORT TERM RAMP CLOSURES

NOT TO SCALE

NOTES:

1. NO FLAGGERS OR SPOTTERS.
2. TYPICAL APPLICATION SHOWN, ADJUST FOR SITE CONDITIONS.
3. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
4. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.

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JOB NUMBER

CONTRACT NO. | LOCATION NO.

F.A. STAMP SIGN DATE | F.A. STAMP SIGN DATE

Washington State Department of Transportation

TRAFFIC CONTROL PLAN

TC13

SHEET OF SHEETS

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-

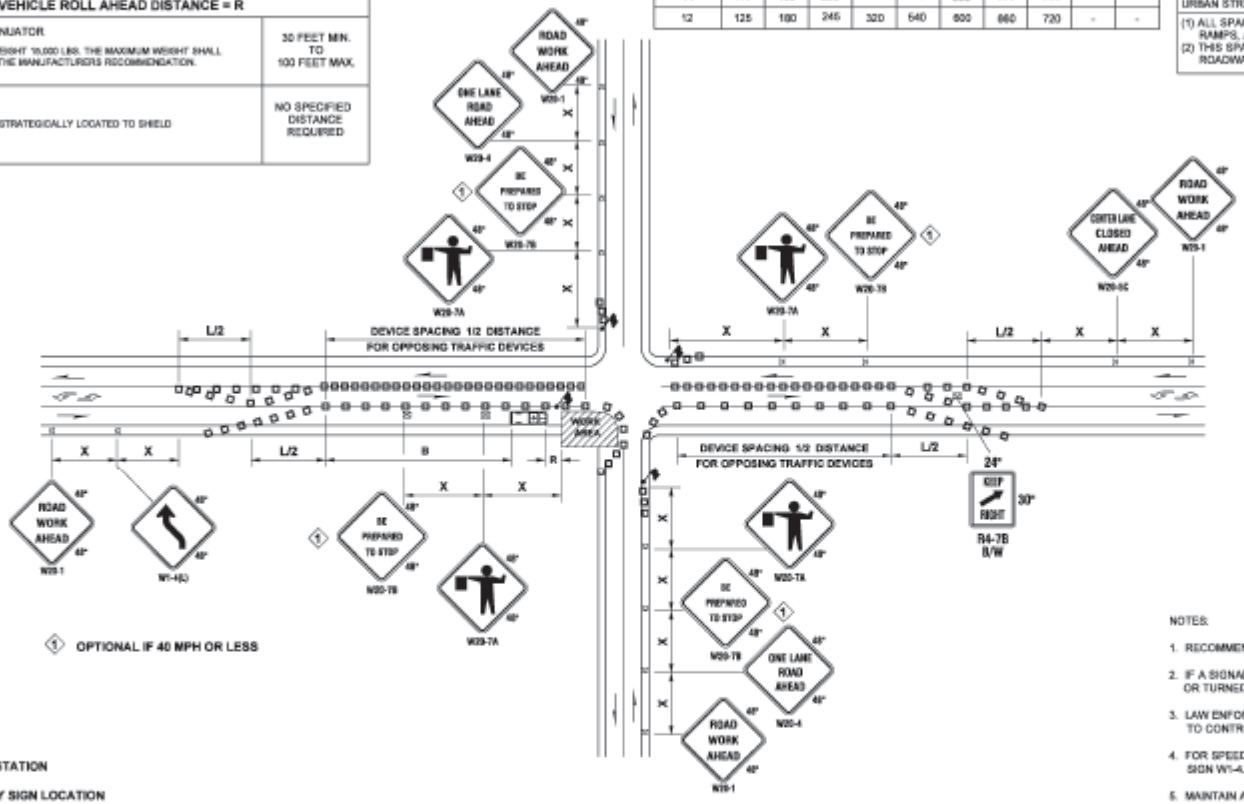
BUFFER VEHICLE ROLL AHEAD DISTANCE = R	
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 10,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	-	-

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



NOTES:

1. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
2. IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
3. LAW ENFORCEMENT OFFICER MAY BE USED IN LIEU OF FLAGGERS TO CONTROL INTERSECTION TRAFFIC.
4. FOR SPEED LIMIT OF 30 MPH OR LESS USE SIGN W1-3 IN LIEU OF SIGN W1-4.
5. MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
6. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE - RECOMMENDED
- TEMPORARY SIGN LOCTION (5' MOUNTING HEIGHT)

INTERSECTION LANE CLOSURE ~ THREE LANE ROADWAY

NOT TO SCALE

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10	WASH	

JOB NUMBER

CONTRACT NO. | LOCATION NO.

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F.A. STAMP BOX | DATE

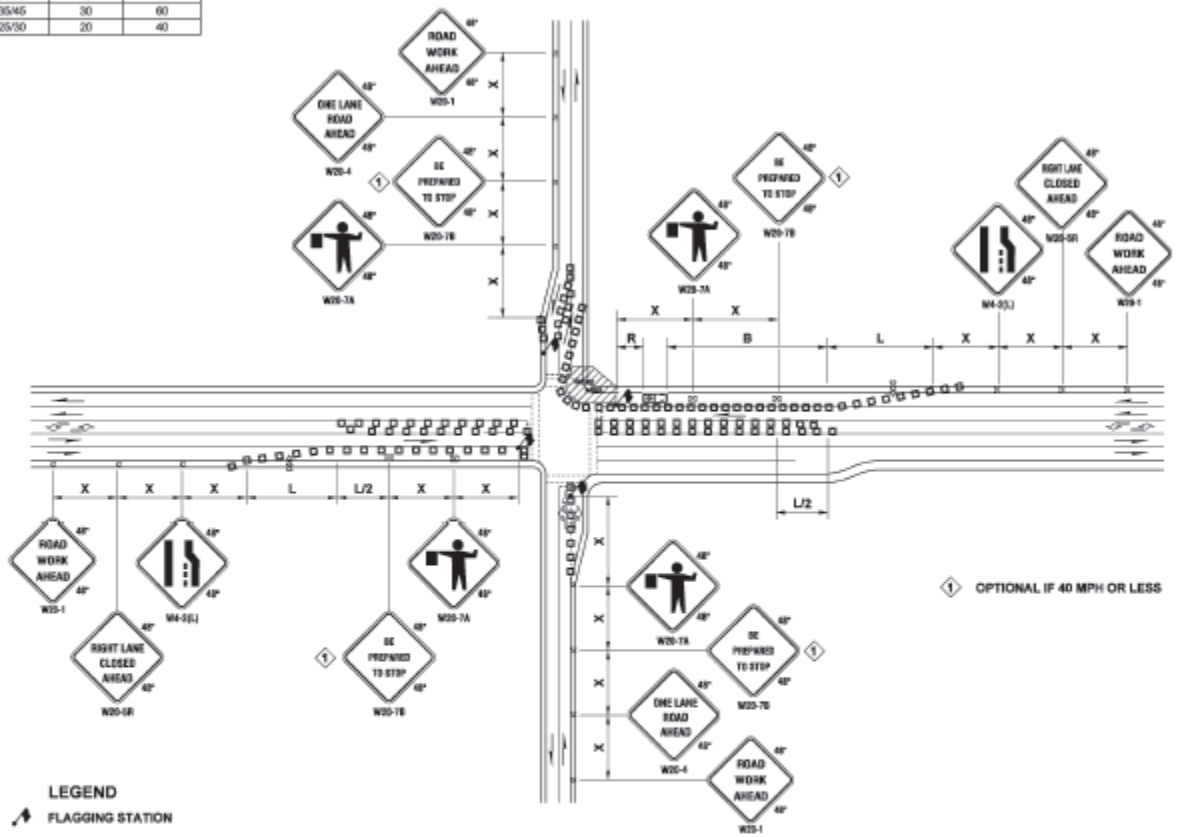
Washington State Department of Transportation

TRAFFIC CONTROL PLAN

TC14

SHEET OF SHEETS

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-

BUFFER VEHICLE ROLL AHEAD DISTANCE = R	
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	-	-

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

NOTES:

1. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
2. IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
3. LAW ENFORCEMENT OFFICER MAY BE USED IN LIEU OF FLAGGERS TO CONTROL INTERSECTION TRAFFIC.
4. MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
5. ALL SIGNS ARE BLACK ON ORANGE.

LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE - RECOMMENDED
- TEMPORARY SIGN LOCTION (5' MOUNTING HEIGHT)

INTERSECTION LANE CLOSURE ~ FIVE LANE ROADWAY

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10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

DATE
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DATE
P.E. STAMP BOX

Washington State Department of Transportation

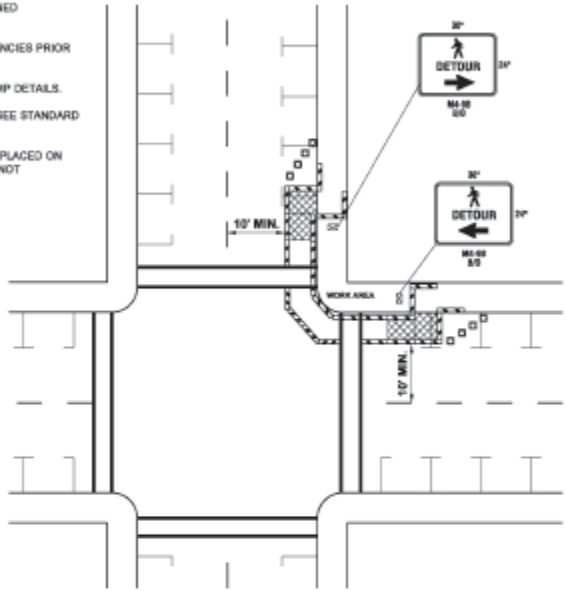
TRAFFIC CONTROL PLAN

Plot 1
TC15
SHEET OF SHEETS

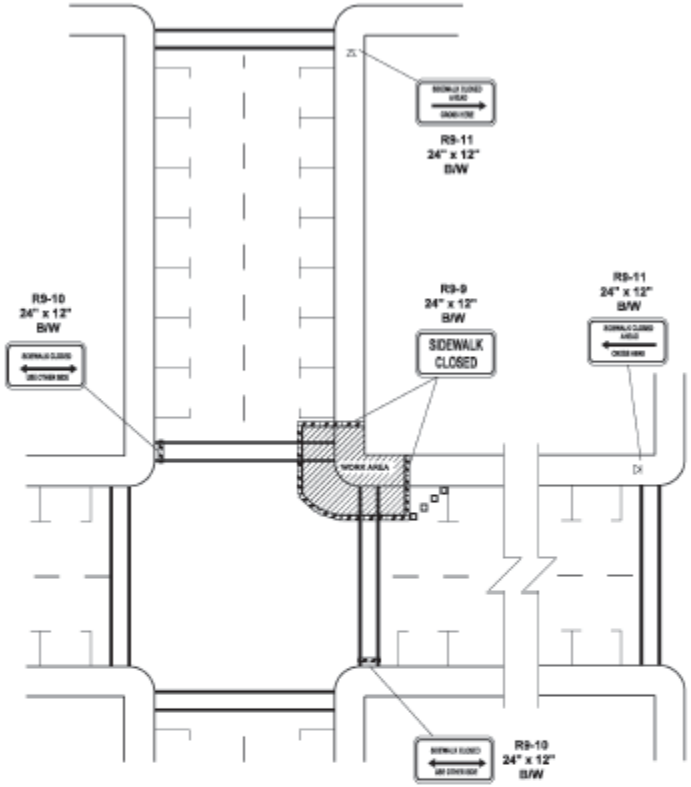
NO PARKING	R8-3 24" x 30" R/W	INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA 24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL. PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.

NOTES:

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. A 60" PEDESTRIAN PATH WIDTH SHOULD BE MAINTAINED (48" IS THE MINIMUM).
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED, SEE STANDARD SPECIFICATION 1-10.2(1)B.
6. TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.



SIDEWALK DIVERSION



SIDEWALK DETOUR

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PEDESTRIAN CHANNELIZING DEVICES
- TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

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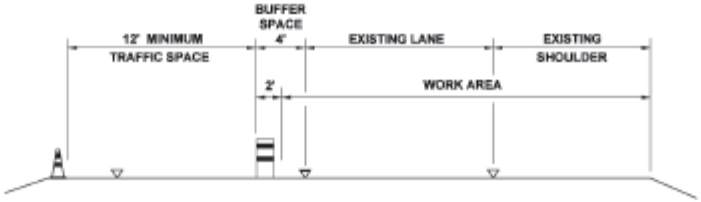
DATE	5/17/2013							
PLOTTED BY	Cyford,			JOB NUMBER				
DESIGNED BY								
ENTERED BY								
CHECKED BY				CONTRACT NO.	LOCATION NO.			
PROJ. ENGR.								
REGIONAL ADM.		REVISION	DATE	BY		F.A. STAMP BOX DATE	F.A. STAMP BOX DATE	PEDESTRIAN CONTROL AND PROTECTION	SHEET OF SHEETS

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 16,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.									30 FEET MIN. TO 100 FEET MAX.	



TYPICAL SECTION A-A

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

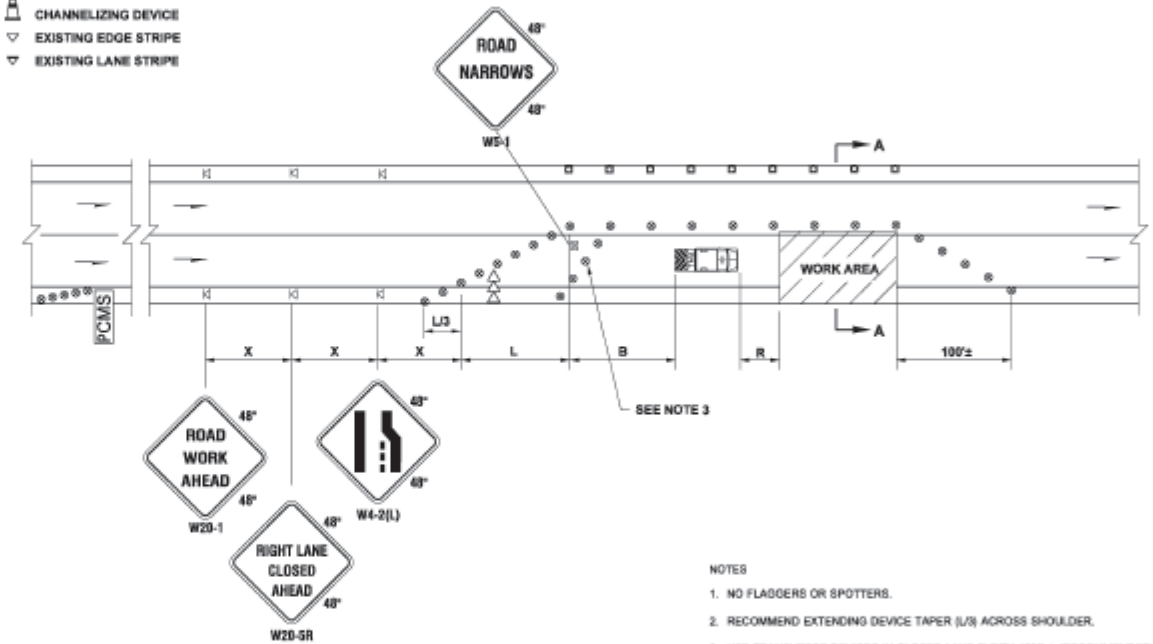
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

CHANNELIZING DEVICE
EXISTING EDGE STRIPE
EXISTING LANE STRIPE



PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

SINGLE-LANE CLOSURE WITH SHIFT

NOT TO SCALE

NOTES

1. NO FLAGGERS OR SPOTTERS.
2. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
3. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' ± (RECOMMENDED).
4. ALL SIGNS ARE BLACK ON ORANGE.
5. RECOMMEND ADVANCE NOTICE FOR ANY OVER WIDTH LOADS PRIOR TO LANE CLOSURE FOR ALTERNATE ROUTES IF APPLICABLE.
6. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

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CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY				TRAFFIC CONTROL PLAN	

ATTACHMENT C. GEOTECHNICAL REPORT

CLEAR CREEK FLOODPLAIN RESTORATION

Silverdale, Washington

Geotechnical Report

Prepared for: Natural Systems Design

Project No. 100099 • May 22, 2013

Aspect CONSULTING

earth + water

Aspect CONSULTING

CLEAR CREEK FLOODPLAIN RESTORATION

Silverdale, Washington
Geotechnical Report

Prepared for: Natural Systems Design

Project No. 100099 • May 22, 2013

Aspect Consulting, LLC

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05/22/2013

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A Subsurface Explorations

1 Introduction

This report presents the results of a geotechnical engineering study performed by Aspect Consulting, LLC (Aspect) for the Clear Creek Floodplain Restoration project in Silverdale, Washington. Our services were provided in support of an engineering study being performed by Natural Systems Design (NSD) for Kitsap County Department of Public Works Surface & Stormwater Management (County).

The project involves the restoration of the floodplain of lower Clear Creek, in Kitsap County, Washington to reduce the impact of flooding of downstream segments of the creek within the Silverdale corridor, and improve habitat quality. The project location is shown on Figure 1, *Site Location Map*.

This report summarizes the results of the completed field explorations and presents Aspect's geotechnical engineering conclusions and recommendations.

1.1 Scope of Services and Authorization

We completed this study in general accordance with our Standard Subconsultant Agreement for Professional Services with Natural Systems Design, which was authorized on May 12, 2011. This effort was in support of Kitsap County's "Clear Creek Floodplain Restoration" project.

1.2 Project Description

Lower Clear Creek, in the areas north of the Highway 303 interchange was been historically channelized and modified from the pre-historic floodplain configuration. The goal of the project is to restore the floodplain to a configuration similar to pre-historic conditions. Restoration of the floodplain will increase the flood storage capacity of the area and reduce flooding of the downstream segments of the creek. The floodplain restoration will also include water quality, stream, and floodplain riparian habitat improvements.

Our understanding of the current project layout and site features is based on review of preliminary site plans provided by NSD on July 23, 2012, and conversations with Mr. Kelvin Andrews, the NSD project manager. Approximate exploration locations targeting specific project features were selected by NSD, with input and additional exploration locations on the hillside pedestrian pathway selected by Aspect.

The area is frequented by the public via the Clear Creek Trail network. As part of the floodplain restoration project, two new pedestrian paths and three small pedestrian/light vehicle bridges will be constructed to provide access and linkage to the existing trail network. Approximately 1,000 feet of Schold Road NW and the associated embankment will be removed to accommodate the new channel alignment of the east fork of Clear Creek. We understand the proposed path and bridge locations are not yet final and may be subject to change as the project develops.

The first new pedestrian path will extend from the existing parking area off of Silverdale Way NW to Schold Road NW south of the new east for alignment channel. The pedestrian path will traverse a sloped hillside immediately west of the existing dog park. The second pedestrian path will extend from Silverdale Way NW near the intersection with Highway 303 to the County-owned property (former Markwick property east of Silverdale Way NW). The pedestrian paths will be paved and have a design traffic load equivalent to that of a lightly loaded service or emergency vehicle. We understand the proposed bridges will be single span bridges, approximately 10 feet wide by 40 feet long.

The primary focus of Aspect's study is to develop geotechnical design recommendations for the proposed pedestrian/light vehicle bridge foundations, roadway and fill embankment removal, path configurations and permanent slope construction, and assessment of fill areas and placement methods. Secondary objectives are to provide information to assist in planning and constructing the stream channels and floodplain. The layout and locations of the existing and proposed structures are illustrated on Figure 2, *Site and Exploration Plan*.

It is our understanding that the proposed construction will occur during the dry weather season and during the allowable 'in-water' work window as determined by the applicable governing agencies. Modest cuts and grading are anticipated for the proposed stream channel adjustments and construction. This work is not anticipated to require significant geotechnical design recommendations.

The project area is mapped as a Flood hazard area by the County.

For the purposes of this study, we assume that design and construction of the improvements will be in accordance with American Association of State Highway and Transportation Officials (AASHTO) and/or Washington State Department of Transportation (WSDOT) Load and Resistance Factor Design (LRFD) methodology. Construction of the proposed improvements must consider the presence of existing utilities, and existing culvert features.

2 Site Conditions

2.1 General Geology

The project area is located within the Puget Lowland, an area of ancient and ongoing tectonic subsidence flanked by two mountain ranges – the Cascades to the east and the Olympics to the west. The Lowland was further deepened when ice sheets up to 3,000 feet thick advanced from the north across the Lowland and carved out the deep marine waterways, lakes, and river valleys, and sculpted then mantled the uplands with glacial till. Much of the 'glacial' carving of the region's deep lakes and waterways and other low areas is believed to have been scoured out by the flow of meltwater beneath glacial ice. Meltwater also deposited huge volumes of outwash gravel and sand as rivers flowed from the advancing and receding ice fronts, and fine sands and silts settled into the bottoms of meltwater lakes.

During non-glacial cycles, the area was dominated by lowland forests and broad river valleys similar to the pre-development Duwamish valley. The sediments within the Puget Lowland result from repeated cycles of glacial and non-glacial deposition and erosion. Deposits from at least two of these glacial and non-glacial cycles are present in the subsurface of the project area.

The geography and geology of the project area are a reflection of this complex geologic history. The project site is north of Dyes Inlet, a glacially carved trough, and Clear Creek flows through a low area between north- to south-trending glacial hills (drumlins). This glacial carving exposed deposits dating from one or more older, glacial and non-glacial cycles.

During the retreat of the last glaciation (the late Vashon stade and Everson stade of the Fraser glaciation), stagnant ice occupied the Inlet and meltwater streams flowed into the low area and deposited a blanket of recessional outwash sand and gravel (Deeter [1979] maps the area as recessional glacial outwash). Since the last glaciation, migration and meandering of Clear Creek across the valley locally incised and removed recessional glacial deposits, exposing older soils, and flood events spread sediment across the valley width. Vegetation colonized the river-lain sediments, was buried by subsequent deposits, and then recolonized the sediment plain again. During historic periods, the project location and surrounding areas have been modified by cutting and filling for roadways and other local development.

Geologic units at the site comprise (generally from top down) highly compacted, silty artificial fill, moderately compacted sandy artificial fill, recessional glacial outwash, and Pre-Fraser non-glacial, coarse and fine grained deposits. Soil units are described in more detail below in the Subsurface Conditions section. Uplands around the site are generally composed of older glacial and nonglacial soils mantled by Vashon glacial till.

2.2 Seismicity

The site is located in a seismically active area and is prone to seismic hazards such as liquefaction, seismically-induced settlement, and amplified seismic response. The site lies approximately 3½ miles north of the Seattle fault zone, a shallow crustal tectonic structure that is considered active (meaning it has the potential to cause earthquakes in the future) and is capable of producing earthquakes of magnitude 7.3 or greater. The recurrence interval of earthquakes on this fault zones is believed to be on the order of a thousand years or more. The most recent large earthquake on this fault occurred about 1,100 years ago.

The site also lies within the zone of strong shaking from subduction zone earthquakes. The recurrence interval of these earthquakes is thought to be on the order of about 500 years. The most recent subduction zone earthquake occurred 312 years ago.

Deep intra-slab earthquakes also occur in the region every decade or two, including the 2001 Nisqually earthquake. These earthquakes are generally less severe than the shallow crustal and subduction zone earthquakes but have the potential to cause damage to older structures built before modern seismic codes were enacted, and those in liquefaction-sensitive areas.

2.3 Surface

The site is located in a moderately developed, mixed commercial and residential area in the northern portion of Silverdale, Washington. Site topography generally consists of gentle dips towards the Clear Creek floodplain with relatively flat topography across the Clear Creek floodplain. The site is bounded by Silverdale Way NW along the eastern edge, Highway 303 at the southern site boundary, and Highway 3 at the western site boundary. Elevations across the project area ranging from a high of about 57 feet near the northwest site corner to a low of about 27 feet near the southeast site corner.

The main channel (west fork) of Clear Creek enters the project area from the northwest and consists primarily of an open creek channel approximately 5 to 10 feet wide that flows in a northwest to southeast direction. The east fork of Clear Creek enters the project area from the north and generally follows the alignment of Schold Road NW. The main channel of Clear Creek flows through two existing culvert crossing underneath the terminus of Schold Road NW and Silverdale Way NW. The existing culverts consist of a 60-inch-diameter concrete culvert at Schold Road NW and a large box or 3-sided culvert/bridge at Silverdale Way NW.

A moderately steep, west-facing slope, approximately 20 to 25 feet tall, extends from the existing dog park area to Schold Road NW at inclinations of approximately 22 degrees. Topography of the site and approximate layout of the existing and proposed stream paths is illustrated on Figure 2.

2.4 Subsurface Conditions

Subsurface conditions at the project site were inferred from the completed field explorations, review of applicable geologic literature, and experience with the local

geology. More detailed soils descriptions are presented on exploration logs in Appendix A.

Stratigraphy

The following section presents more detailed subsurface information, in reverse chronological order (that is, from top to bottom). The subsurface soils, based on the completed subsurface explorations, can be grouped into five units consisting of the following: topsoil; modern, coarse-grained, compacted or uncompacted fill; recent, post-glacial, stream-deposited material (Holocene Alluvium); material deposited in glacial rivers and lakes (Glaciofluvial and Glaciolacustrine Deposits); and older inter-glacial soils (Pre-Fraser Non-Glacial Deposits).

Topsoil

Topsoil was encountered at the surface in all the borings and test pits. The topsoil comprised plants (mostly grasses) rooted in brown, silty sand.

Fill

Fill was encountered below the topsoil in the four borings and all the test pits except the two (TP-4 and TP-5) in the meadow east of Clear Creek. The fill was present to depths of 2 to 7 feet below the existing ground surface. The fill generally consisted of dry to moist, brown and gray, slightly silty to silty, trace gravel to gravelly SAND (SM)[1]. The fill was loose to medium dense in the explorations along the path in the meadow east of Clear Creek, along the east shoulder of Schold Road NW, and in the meadow east of Silverdale Way NW. The fill on the embankment west of the dog park was dense and had been apparently been aggressively, mechanically compacted during emplacement.

The fill on the lowland path areas can be expected to have low to moderate shear strength, low to moderate compressibility, moderate permeability, and low to high moisture sensitivity due to variable silt content.

Fill on the upland path can be expected to have moderate to high shear strength, low compressibility, low permeability, and high moisture sensitivity.

Holocene Alluvium

Holocene alluvium (sediment that has been deposited by rivers or streams since the recession of the most-recent glaciers) was encountered in all the explorations except the two test pits (TP-7 and TP-8) high on the embankment below the Dog Park. Holocene alluvium was moist to wet, sandy silt or silty sand (ML or SM), slightly to very gravelly. Organic content in the material varies from none to about 20% organics. The material ranged from very loose, when encountered near the surface, to medium dense or dense below 8 to 10 feet.

The Holocene alluvium can be expected to range with increasing depth from low to moderate shear strength, high to moderate compressibility due to elevated organic content, moderate permeability, and moderate moisture sensitivity.

[1] Soil Classification per the Unified Soil Classification System (USCS). Refer to ASTM D2488.

Glaciolacustrine Deposits

Glaciolacustrine deposits (sediment that was deposited in lakes associated with glaciers) were encountered at 9 to 13 feet BGS in the four borings. The glaciolacustrine material is predominantly silt (ML) that ranges from being very sandy to containing no sand. The sand, and in some locations gravel, is dispersed evenly throughout the silt, suggesting it was deposited as “dropstones” - material released from melting ice floating on the glacial lake. Glaciolacustrine deposits are soft to medium stiff.

The glaciolacustrine deposits can be expected to have low to moderate shear strength, moderate compressibility, low permeability, and high moisture sensitivity.

Glaciofluvial Deposits

Glaciofluvial deposits (sediment that was deposited by rivers that issued from glaciers) was encountered at 18 to 23 BGS in the three of the four borings. The glaciofluvial deposits encountered were silty to very silty, fine to coarse sand (SM)[1], and was medium dense to dense.

The glaciofluvial material can be expected to have moderate to high shear strength, low to moderate compressibility, low permeability, and high moisture sensitivity.

Pre-Fraser Nonglacial Deposits

Pre-Fraser nonglacial deposits were encountered below the glaciofluvial material in Boring B-1, at 32.5 feet BGS. As this material was deposited prior to the most recent glaciation (the Fraser glaciation), it has been glacially overridden and compacted by the glacial ice, resulting in the unit being dense and hard except where weathered or disturbed by post glacial processes.

Two types of Pre-Fraser nonglacial deposits were encountered: dense, wet, gray, slightly silty SAND (SW-SM,)[1] and stiff, gray and brown silt (ML)[1] with a trace of organic materials.

The Pre-Fraser nonglacial deposits can be expected to have moderate to high shear strength, low to moderate compressibility, low to moderate permeability, and low to high moisture sensitivity.

Groundwater

Groundwater was encountered at 4.5 to 5.5 feet BGS when drilling the borings. Seasonal high groundwater elevations are likely a foot or two above levels observed during drilling. Groundwater elevations fluctuate seasonally, with precipitation variations, creek stage, and with changes in groundwater usage near the site. Drilling of the borings occurred on July 24, 2012, when groundwater elevations would be expected to be about in the middle of their annual range of fluctuation. Groundwater flow direction across the site is likely toward Clear Creek and the unnamed tributary creek that currently flows southward parallel to Schold Road NW.

2.4.1 Engineering Properties

The engineering properties of the subsurface soils were generalized for engineering analysis purposes. The generalized subsurface conditions in the project area are based on limited subsurface information obtained from the completed explorations.

An assessment of the geotechnical soil parameter for each soil unit identified is summarized in Table 1.

Table 1 – Soil Engineering Properties used for Analyses

Geologic Description	USCS Classifi-cation	SPT N-Value (range & average)	Total Unit Weight (pcf)	Effective Friction Angle (degrees)	Undrained Shear Strength (psf)[1]
Fill	SM	Range: 6-16, Average: 11	120	30	N/A
Compacted Fill	SW-SM	N/A	130	34	N/A
Alluvium	SM, SP-SM, SW-SM, SP, SW, ML	Range: 3-33, Average: 11	125	32	500
Glaciolacustrine Deposits	ML	Range: 2-35, Average: 11	120	N/A	1,200
Glaciofluvial Deposits	SM, SP-SM, SW-SM,	Range: 17-39, Average: 25	130	34	N/A
Pre-Fraser Non Glacial Deposits	ML, SW-SM	Range: 36, Average: 36	130	34	3,000

Notes:
1) Applies to ML soils only.

2.5 Earthquake Engineering

2.5.1 Ground Motion

The AASHTO LRFD Bridge Design Specifications response spectra for design are based on local seismicity and soil conditions. The seismicity is represented by the peak bedrock acceleration (PBA) based on established seismic risk models. The 7 percent probability of exceedance in 75-year design event (approximately 1,000-year recurrence interval) is being considered for this project. The PBA for the 1,000-year recurrence interval ground motion is 0.440g, based on United States Geologic Survey (USGS) National Seismic Hazard Map data.

The AASHTO LRFD Bridge Design Specifications express the effects of site-specific subsurface conditions on the ground motion response in terms of the Site Factors, F_{pga}, F_a, and F_v for the Site. The Site Factors, which are determined by the Site Class, account for the seismic response of the soil profile and is based on the density and stiffness of the soil profile underlying the Site. The Site Class can be correlated to the average standard penetration resistance (NSPT) in the upper 100 feet of the soil profile. Based on our characterization of the subsurface conditions, AASHTO Site Class D should be assumed for the Site. The recommended ground motion parameters are shown below in Table 2.

Table 2 – Ground Motion Parameters

Design Parameter	Recommended Value
Site Class	D[1]
Peak Ground Acceleration (PGA)	0.440g
Short Period Spectral Acceleration (S_s)	0.976g
1-Second Period Spectral Acceleration (S_1)	0.338g
Site Coefficient F_{pga}	1.06
Site Coefficient F_a	1.11
Site Coefficient F_v	1.72
Acceleration Coefficient (A_s)	0.488g
Design Short Period Spectral Acceleration (SD_s)	1.083g
Design 1-Second Period Spectral Acceleration (SD_1)	0.582g

Notes:
1) Based on Table 3.4.2.1-1 of the AASHTO LRFD Bridge Design Specifications.

2.5.2 Seismic Hazards

Earthquake-induced hazards that are relevant to the project site include fault rupture, soil liquefaction and associated settlement, and lateral spreading. The following sections discuss these hazards.

2.5.2.1 Surficial Fault Rupture

The site is located north of the Seattle Fault Zone. The recurrence interval of movement along this fault system is still unknown, although it is hypothesized to be in excess of a thousand years. Due to the suspected long recurrence interval and offset of the site from the known rupture location, the risk of surficial ground rupture is considered to be low during the expected life of the project.

2.5.2.2 Lateral Spreading

Lateral spreading is the movement of liquefied soil in a sloped environment. The majority of the site is relatively flat and results in a low risk of lateral spread movements. Our analyses indicate some minor lateral spread movements may occur near the creek banks (free face) during the design seismic event. However, these movements are predicted to be very small and sporadic in occurrence.

2.5.2.3 Soil Liquefaction and Related Settlement

Liquefaction occurs when loose, saturated and relatively cohesionless soil deposits temporarily lose strength as a result of earthquake shaking. Potential effects of soil liquefaction include temporary loss of bearing capacity and lateral soil resistance, liquefaction-induced settlement, and sand boils, any of which could result in significant

structural damage. Primary factors controlling the development of liquefaction include intensity and duration of strong ground motion, characteristics of subsurface soil, in-situ stress conditions and the depth to groundwater.

Liquefaction evaluations were conducted with the aid of LiquefyPro, a seismically induced liquefaction and settlement analyses software program developed by CivilTech Software (2009) and WSliq, a liquefaction analysis software program that was created as part of an extended research project supported by WSDOT and authored by Kramer (2008). The evaluations are based on the data revealed by the subsurface explorations for this project.

We evaluated liquefaction potential based on the design event as summarized in Table 3. The design level event is based on the USGS National Seismic Hazard Map data to obtain the PBA and earthquake magnitude. The Peak Ground Acceleration (PGA) was determined using the methods suggested in section 6.3.4 of the Washington State Department of Transportation Geotechnical Design Manual (WSDOT GDM)(WSDOT, 2012a).

Table 3 – Design Level Earthquake Parameters

Seismic Event Return Period (years)	Peak Bedrock Acceleration (g)(1)	Peak Ground Acceleration (g) (2)	Earthquake Magnitude(1)	Mean Source-to-Site Distance (km)(1)
1,000	0.440	0.488	7.01	53.4

Notes:
1) Based on USGS Probabilistic Seismic Hazard Deaggregation
2) Based on Section 6.3.4 of WSDOT GDM

The liquefaction analyses performed indicate that liquefaction could occur across much of the project area; typically within the floodplain at depths ranging from 5 to 13 feet below the existing ground surface for the design seismic event considered. The estimated depth and elevation range where liquefaction is likely to occur at the boring locations is summarized in Table 4.

The primary consequences of liquefaction include seismically induced settlement and sand boils, which could possibly impact the planned improvements. Seismically induced settlements resulting from the design level earthquakes considered were estimated using the Liquefy Pro and WSliq programs. The results of our total settlement analyses are summarized in Table 4.

Sand boils are liquefaction-related features that result from subsurface porewater pressure relief via the path of least resistance. They manifest themselves as small (less than a few feet high) mounds on the surface of ejected soil slurry, and have the appearance of a mini volcano. They are typically on the order of about 10 to 20 feet in diameter and cause a mound on the order of 1 to 1½ feet high. Up to several cubic yards of material can be ejected. Sand boil locations appear to be fairly random, and the prediction of their occurrence is not considered practical.

Table 4 – Extents of Liquefaction and Estimates of Seismic-Induced Settlements

Soil Boring	Estimated Elevation Range where Liquefaction is Likely (ft)	Estimated Post-Liquefaction Total Settlement (inches)
B-1	26 to 34(1)	4.00
B-2	31 to 37(1)	2.00
B-3, B-4	24 to 29.5(1)	3.00

Notes:
1) Liquefaction may extend above the upper bound elevation during periods of elevated groundwater levels.

Based on the results of our analyses, liquefaction and ground settlement are likely to occur in saturated alluvium soils located within the floodplain across the project area at depths ranging from 5 to 13 feet below the existing ground surface. Liquefaction will likely be variable across the site and as a result, the anticipated differential settlements will likely approach the total settlements shown in Table 4 above. The proposed pedestrian/light vehicle bridges will need to consider the anticipated settlements as part of the foundation design. The seismically induced settlements will also result in minor differential settlements underneath the new walking paths and may result in minor shifts in the stream channel grades. The estimated settlements effecting the walking paths and stream channels are such that they could be effectively mitigated after the event by minor repairs and leveling.

3 Conclusions and Recommendations

3.1 General

In our opinion, the proposed project is feasible from a geotechnical perspective. The following sections present the results of our engineering analyses and recommendations. Applicable sections of the AASHTO LRFD Bridge Design Specifications and WSDOT GDM were utilized in our evaluations and analyses. The following recommendations are for earthwork activities, bridge foundation support, construction dewatering, and other pertinent geotechnical design issues.

3.2 Temporary Erosion and Sedimentation Control

In our opinion, erosion hazard can be minimized if the bulk of the earthwork is conducted during the dry season, generally between June and the end of September. Erosion at the Site during construction can also be minimized by prudent grading practices and judicious use of erosion control devices. Kitsap County Best Management Practices (BMPs) should be in-place for Temporary Erosion and Sedimentation Control (TESC) for the duration of the construction activities. The following recommendations are provided for mitigation of the Site erosion hazard during and following construction.

- Silt fences should be placed and maintained around the downslope sides of all proposed excavations.
- Areas stripped of natural vegetation during construction should be replanted as soon as possible or otherwise protected.
- Water should not be allowed to flow across the Site over construction surfaces. All water should be diverted, collected, and tightlined away from the construction area to an appropriate outlet.
- If precipitation is anticipated, earthwork should be performed in small areas to minimize exposure to wet weather.
- Excavation or the removal of unsuitable soils should be followed promptly by the placement and compaction of clean structural fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left un-compacted and exposed to moisture. Soils that become too wet for compaction should be removed and replaced with clean granular materials;

Long-term erosion control should be achieved by establishing new vegetation within the disturbed areas. In sloped areas, vegetation with deep penetrating roots is the preferred

choice, since the roots tend to maintain the surficial stability of slopes by mechanical effects and contribute to the drying of slopes by evapotranspiration.

3.3 Earthwork

Based on the explorations performed on Site and our understanding of the proposed project, it is our opinion that basic excavation and grading can generally be completed with standard construction equipment. Depending on the selected foundation system, temporary dewatering may be necessary to provide dry foundation excavations for the proposed bridges.

Site preparation should consist of the grubbing and removal of all existing non-structural fills, and other deleterious materials including demolition or construction debris. Exposed bearing surfaces should be evaluated by the Geotechnical Engineer. Any soft areas or area of unsuitable soils should be over-excavated to firm, undisturbed soil and backfilled with structural fill as defined below.

3.3.1 Road Embankment Removal

Approximately 1,000 feet of Schold Road NW and the associated embankment will be removed to accommodate the re-alignment of the east fork of Clear Creek. Our explorations indicated that the road embankment primarily consisted of bank run sand and gravel fill overlying native alluvium deposits. We anticipate the existing roadway and embankment can be removed with standard construction equipment. The embankment fill may be re-used as structural fill on the project provided the material is relatively free of organics and other deleterious debris.

3.3.2 Structural Fill

The site soils may be acceptable for re-use as structural fill provided the soils are relatively free of organics and other deleterious material. Ultimately, structural fill soils proposed for use should be approved by the Geotechnical Engineer.

Imported structural fill materials should consist of material meeting the requirements of Select Borrow as described in Section 9-03.14(2) of the WSDOT Standard Specifications. The upper 2 feet of structural fill underneath foundations should consist of material meeting the requirements of Crushed Surfacing Base Course as described in Section 9-03.09(3)of the WSDOT Standard Specifications. Lean mix concrete or controlled density fill (CDF) is also acceptable for use as structural fill.

Structural fill soils should be moisture conditioned to within about 3 percent of optimum moisture content, placed in loose, horizontal lifts less than 8 inches in thickness, and compacted to at least 95 percent of the maximum dry density (MDD), as determined by ASTM D 1557. If the structural fill is placed within 5 feet behind a wall, we recommend compacting the structural fill to approximately 90 percent of the MDD, as determined be ASTM D 1557. For structural fill placed underneath foundations, the fill should extend a minimum of 2 feet horizontally beyond the footprint of the foundation element. Structural fill placed in a sloped configuration should be overbuilt a minimum of 2 feet and fine graded back to the final slope configuration to ensure adequate compaction throughout the fill.

The procedure to achieve the specified minimum relative compaction depends on the size and type of compacting equipment, the number of passes, thickness of the layer being compacted, and certain soil properties. When the size of the excavation restricts the use of heavy equipment, smaller equipment can be used, but the soil must be placed in thin enough lifts to achieve the required compaction.

3.3.3 Temporary Excavation Slopes

Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the Contractor. All temporary cuts in excess of 4 feet in height that are not protected by trench boxes or otherwise shored, should be sloped in accordance with Part N of Washington Administrative Code (WAC) 296-155.

In general, the near surface soils across the Site can be categorized as OSHA Soil Classification Type B and Type C. Temporary excavation side slopes are anticipated to stand as steep as 1H:1V (Horizontal:Vertical) within the compacted fill soils and 1½H:1V within the fill and alluvium soils. The cutslope inclinations estimated above are applicable to excavations without groundwater seepage, or runoff, and assume dewatered conditions.

With time and the presence of seepage and/or precipitation, the stability of temporary unsupported cutslopes can be significantly reduced. Therefore, all temporary slopes should be protected from erosion by installing a surface water diversion ditch or berm at the top of the slope. In addition, the Contractor should monitor the stability of the temporary cutslopes and adjust the construction schedule and slope inclination accordingly. Vibrations created by traffic and construction equipment may cause caving and raveling of the trench walls. In such an event, lateral support for the trench walls should be provided by the Contractor to prevent loss of ground support.

3.3.4 Permanent Slopes

Permanent cut and fill slopes should not exceed a maximum inclination of 2H:1V. If steeper permanent slopes are required, we recommend using mechanically-reinforced earth techniques to construct the slopes.

3.3.4.1 Mechanically-Reinforced Earth (MRE) Slope

To provide additional strength to fill slopes steeper than 2H:1V, we recommend the use of geogrid reinforcement. For ease of installation, a stiff, biaxial geogrid can be used, such as Tencate Miragrid 2XT or equivalent. The geogrid should have a minimum long term design strength (LTDS) of 850 pounds per foot and should be installed in accordance with the manufacturer’s recommendations. The geogrid should be spaced evenly and consistently throughout the fill slope with a maximum vertical spacing of 12 inches. We recommend a minimum tail embedment (amount of geogrid covered by soil) of 5 feet or the width of the fill prism, whichever is greater. In areas where individual sheets of geogrid intersect, the sheets should be overlapped a minimum of 2 feet. Provided the minimum reinforcement, structural fill, and compaction standards described above are incorporated into the reinforced fill slope, the maximum slope inclination should be no steeper than 1.3H:1V or approximately 38 degrees.

The subgrade should be keyed and benched in preparation for the placement of the reinforced fill slope. Keying and benching at appropriate intervals will reduce the potential for sliding of the reinforced fill material along the existing slope surface. In general, benches should be at least 4 feet wide and with a minimum key height of 2 feet. The horizontal portion of the benches should be inclined downslope, approximately 1-inch per foot, to allow subsurface water to drain towards the toe of the slope.

Aspect can provide specific MRE slope designs if requested.

3.4 Bridge Foundations

Technically viable geotechnical options exist to support the proposed pedestrian/light vehicle bridges. Provided the bridges can accommodate the predicted seismically induced settlements presented in Table 3, shallow contact foundations may be used for support of the bridges. If the predicted seismic-induced settlements cannot be accommodated, the bridges would need to be founded on the non-liquefiable, medium stiff, glaciolacustrine deposits that were encountered between 9 and 13 feet below the existing ground surface at the proposed bridge locations. To reach the non-liquefiable strata, removal and replacement methods or small diameter pin piles are recommended.

3.4.1 Foundation Support

Based on the results of the subsurface explorations and our geotechnical analyses, shallow foundations may be used to support the proposed bridges under two scenarios:

1. The proposed bridges can tolerate the anticipated total and differential seismically induced settlements shown on Table 4. Shallow foundations will require subgrade improvements that include overexcavating the loose alluvium soils and replacing with a minimum thickness of 4 feet of structural fill.

2. The liquefiable zone of soil at each bridge foundation location is fully over-excavated (as much as 13 feet below the existing ground surface) and replaced with structural fill, resulting in foundation elements bearing on several feet of structural fill.

Scenario 2 will require excavation below the water table and as a result will likely require construction dewatering and temporary shoring considerations. If neither shallow foundation scenario is possible and/or cost effective; as an alternative, we recommend founding the bridges on small diameter pin piles, see Section 3.4.2 for details.

The foundation bearing capacities for the scenarios above were analyzed and developed in accordance with the methods presented in Section 10.6 of the AASHTO LRFD Bridge Design Specifications. Our shallow foundation design recommendations are shown below in Table 5.

Table 5 – Shallow Foundation Design Recommendations for Structural Fill Subgrade[1]

Parameter	Value
Service Limit State Bearing Pressure (q_n)[2]	3,000 psf
Service Limit State Resistance Factor ($\square_b$)	1.00
Strength Limit State Bearing Pressure (q_n) for foundations bearing on native alluvium soils	9,000 psf
Strength Limit State Resistance Factor ($\square_b$)[3]	0.45
Ultimate Coefficient of Subgrade Reaction (K_{VI}) for foundations bearing on native alluvium soils	140 pci
Ultimate Sliding Resistance Friction Factor (tanδ)[4]	0.55
Sliding Resistance Factor ($\square_\tau$)[3,5]	0.90
Sliding Resistance Factor ($\square_\tau$)[3,6]	0.80
Ultimate Passive Equivalent Fluid Pressure[7]	360 pcf
Strength Limit State Passive Resistance Factor ($\square_{ep}$)[3]	0.50
Minimum Footing Width	24 inches
Minimum Footing Embedment Below Finish Grade[8]	18 inches
Approximate Total Settlement[9]	Less than 1 inch
Approximate Differential Settlement[9,10]	Less than ½ inches

Notes:
1) For shallow foundations founded on a minimum thickness of 4 feet of structural fill.
2) Service limit state bearing pressure based on allowable total settlement of 1 inch.
3) Based on Table 10.5.5.2.2-1 of the AASHTO LRFD Bridge Design Specifications.
4) May be increased to 0.70 in underlain by Class A Gravel Backfill for Foundations.
5) For precast concrete foundations.
6) For cast-in-place concrete foundations.
7) Passive pressure should be ignored within 18 inches of the finish grade and within zones of anticipated liquefaction, see Table 4.
8) Finish grade should account for scour.
9) Settlement estimates do not include seismic-induced settlements.
10) Differential settlement between two adjacent, load-bearing components supported by carefully prepared structural fill.

The recommendations shown above apply to foundation elements placed on structural fill founded on relatively undisturbed, native soils. The settlement estimates assume the applicable construction recommendations contained herein will be incorporated in the design and construction of the project. We anticipate that the majority of the estimated settlement will occur during construction, as loads are applied. If removal and replacement of the liquefiable zone of soils or other liquefaction mitigation is not

completed, the seismic-induced settlement estimates during liquefaction from Table 3 should be added to the settlement estimates above.

Wind, earthquakes, and unbalanced earth loads will subject the proposed structure to lateral forces. Lateral forces on a structure will be resisted by a combination of sliding resistance of its base or footing on the underlying soil and passive earth pressure against the buried portions of the structure. Passive earth pressures should not be relied upon for lateral support between the anticipated elevations of liquefaction for the extreme limit state.

3.4.1.1 Subgrade Preparation

All bearing surfaces should be trimmed neat and the bottom of the excavation should be carefully prepared. All loose or softened soil should be removed from the bearing surface prior to placing reinforcing steel bars. We recommend that all bearing surfaces be observed by the Geotechnical Engineer prior to placing structural fill or steel and concrete, to verify that an appropriate bearing stratum has been exposed and that the bearing surface has been properly prepared.

If bearing surfaces are open during periods of wet weather or prone to wetness due to the relatively shallow groundwater across the site, temporary dewatering will be necessary and it may be helpful to provide a layer of crushed rock or gravel to help preserve the subgrade. If gravel is used to protect the bearing surface subgrade, it should meet the gradation requirements for Class A Gravel Backfill for Foundations, as described in Section 9-03.12(1)A of the WSDOT Standard Specifications.

3.4.2 Pin Piles

Pin piles can be used to bypass the liquefiable alluvium deposits to link foundation support from the underlying bearing stratum of medium stiff glaciolacustrine and dense glaciofluvial deposits. Normal pin piles typically consist of 2- to 6-inch-diameter steel pipe piles driven to refusal using a pneumatic or hydraulic hammer. Refusal criteria varies by the diameter of the pin pile, but is typically defined as less than 1-inch of penetration into the ground during a specified time period of continuous driving with the specified hammer. Specific refusal and load capacity information is shown below in Table 6.

Table 6 – Typical Pin Pile Capacities and Refusal Criteria

Pin Pile Diameter (in)	Hammer Weight(1) (lbs)	Ultimate Capacity(2) (kips)	Refusal Criteria(3) (sec)
2	90	8	60
3	550	24	12
4	850	40	16
6	1,100	60	20

Notes:
1) Minimum hammer weight recommended.
2) For piles greater than 2 inches in diameter, load testing is required to prove their capacity.
3) Time to drive pile less than 1-inch during continuous driving.

Spacing, lateral requirements, and structural connection to other foundation elements should be designed by the project Structural Engineer. Pin piles should be utilized for compressive support only and battered pin piles may be required to provide lateral support for the proposed bridge foundations. For pin piles greater than 2 inches in diameter, the piles should be load tested in general accordance with the Quick Load Test Method described in ASTM D-1143-81.

The pin piles should be designed to accommodate down drag forces from liquefaction during the design seismic event. The down drag forces will apply within the identified zone of liquefaction estimated to be approximately 8 feet thick. We recommend a down drag force of 250 psf be applied to the surface area of the pile within the identified zone of liquefaction for design.

Based on our limited explorations, pin piles would likely need to extend approximately 35 feet below the existing ground surface to both bypass the identified liquefaction susceptible soils and to reach refusal conditions to develop the capacities shown in Table 6. Anticipated total settlements of the bridges, if founded on pin piles installed into the bearing stratum as described above, should be on the order of ½-inch. The anticipated 35-foot depth is near the design length limits for 2-inch diameter piles. We anticipate that piles up to 6-inches in diameter can be driven at the site without requiring significant site improvements for the pile driving equipment.

If static load testing is performed on at least one pile per bridge, we recommend a resistance factor of 0.75 be used for compression resistance design. If no load testing is performed, we recommend a resistance factor of 0.50 be used for compression resistance design.

3.4.3 Scour Protection

The design scour elevation will be determined by the project design team based on a hydraulic analysis utilizing stream flow data and the proposed stream bank characteristics. If shallow foundations are used for the proposed bridges, we recommend the foundations extend a minimum of 2 feet below the design scour elevation or are otherwise protected from scour. If pile foundations are used for the proposed bridges, we recommend the pile caps be located a minimum of 5 feet below the final grades and adequate scour protection be incorporated around the pile caps. We recommend scour protection be incorporated in the project design. Scour protection may include hard or soft armoring of the creek banks, specific stream alignment considerations, or other methods.

3.4.4 Abutment Wall Considerations

Imported wall backfill materials should consist of material meeting the requirements of Gravel Backfill for Walls (Section 9-03.12(2) of the WSDOT Standard Specifications). A suitable wall drainage system should be incorporated into the design to prevent buildup of excess hydrostatic pressure. If groundwater conditions prevent the practical installation of a wall drainage system, the wall should be designed to accommodate the additional loading from unbalanced hydrostatic pressure.

The recommended lateral earth pressures for use in design of the abutment walls assume granular structural fill will be imported and placed as a horizontal backfill around the walls as described above in Sections 3.3.2.

Table 7 – Lateral Earth Pressure Parameters

Earth Pressure Condition	Earth Pressure Coefficient	Equivalent Fluid Weight[1] (pcf)	Earth Pressure[2] (psf)	Surcharge Pressure (psf)
Active (K_a)[3]	0.28	35[5]	35H[5]	0.28S[10]
At-Rest (K_o)	0.44	55[5]	55H[5]	0.44S[10]
Passive (K_p)[4]	3.0	360[6]	360D[6,7,8]	-
Active Seismic (K_{ae})[11]	0.433	-	9H	-
At-Rest Seismic (K_{ae})[12]	0.571	-	18H	-

Notes:

1) Granular backfill placed as structural fill with a unit weight of 125 pcf (120 pcf dry) is assumed.
2) Static earth pressures result in a triangular pressure distribution along the height of the wall. Seismic earth pressures result in a uniform pressure distribution along the height of the wall.
3) To invoke the active conditions the wall must rotate about the base with a lateral movement at the top of the wall of approximately 0.002H, where H is the height of the wall.
4) To invoke the passive conditions, the wall must move into the backfill with a lateral movement of approximately 0.020H.
5) If unbalanced hydrostatic conditions are anticipated, the equivalent fluid weights should be increased to 80 and 93 pcf (or earth pressures of 80H and 93H psf) for the active and at-rest conditions, respectively.
6) Ultimate passive pressures are presented, the strength limit state resistance factor as shown in Table 5 should be applied for design.
7) Where D is the depth of embedment of wall below finish grade.
8) Passive pressure should be ignored within 18 inches below finish grade and anywhere wall foundations are adjacent to alluvium soils during the extreme limit state due to liquefaction concerns.
9) Resulting uniform surcharge acting along the height of the wall, where S is the surcharge pressure.
10) The seismic pressures were calculated in accordance with Chapter 11 and Appendix A11.1.1.1 of the AASHTO LRFD Bridge Specifications using the design earthquake parameters shown in Tables 2 and 3.
11) The at-rest seismic pressure was calculated by multiplying the horizontal acceleration coefficient by 1.5 as recommended by Section 15.4.2.9 of the WSDOT GDM.
12) Seismic and surcharge pressures are typically not considered concurrently in design unless specific conditions dictate otherwise.

Over-compaction of the backfill behind walls should be avoided. We recommend compacting backfill behind walls to approximately 90 percent of MDD as determined by ASTM D-1557 (Modified Proctor). Heavy compactors and large pieces of construction equipment should not operate within 5 feet of any embedded wall to avoid the buildup of excessive lateral pressures. Compaction close to the walls should be accomplished using hand-operated vibratory plate compactors.

Lateral forces that may be induced on the wall due to unique surcharge loads, such as heavy construction equipment, should be considered on a case-by-case basis by the structural engineer.

3.5 Path Considerations

Portions of the proposed paths will be constructed over loose fill and alluvial soils. The surcharge pressures from the path will induce some settlement of the underlying soils.

Subgrade preparation and structural fill placement and compaction should be completed as described above in Sections 3.4.1.1 and 3.3.2, respectively. We estimate the maximum ultimate settlement of the finished paths will be approximately 1 to 2 inches in magnitude depending on the amount of structural fill placed for the path embankments.

The proposed path leading from the parking area west of Silverdale Way to the Clear Creek trail system will traverse a moderately steep slope. A cut/fill path configuration is the most practical way to construct the path on the slope. Permanent side slopes for the cut/fill should not exceed 2H:1V unless mechanically-reinforced as described in Section 3.3.4.1. The path surface should be graded to drain evenly. If drainage is directed to the downslope side of the path (towards the proposed new fill slope), permanent erosion protection will be needed to protect the face of the fill slope. Permanent erosion protection may consist of using clean, angular rock (rip-rap) to protect the face of the fill slope, or using coir mats and aggressive planting strategies to establish a dense vegetative ground cover on the face of the fill slope.

Considering the limited and shallow exploration data on the slope and sensitive nature of building the path on the slope, frequent observation/inspection and field engineering decisions may be required during construction of this path.

3.6 Pavement Considerations

Based on the anticipated traffic loading and pavement subgrade conditions, a pavement section with a minimum thickness of 3 inches of asphaltic-concrete (AC) over a minimum thickness of 8 inches of crushed rock base (CRB) is recommended.

The CRB should consist of materials meeting the requirements for Crushed Surfacing as described in Section 9-03.9(3) of the WSDOT Standard Specifications. The upper 4 inches of the CRB should consist of Top Course and Keystone while the lower 4 inches can consist of Base Course if necessary.

The recommended pavement section is not intended to support extensive construction traffic, such as dump truck and concrete Redi-mix trucks. Pavements subject to construction traffic may require repair.

Drainage is an essential aspect of pavement performance. We recommend providing all paved areas with positive drainage to remove surface water and water within the CRB. This will be particularly important in cut sections or at low points within the paved areas, such as at catch basins.

All pavement subgrade should be prepared as discussed in the Subgrade Preparation section of this report. Prior to placing CRB, all roadway subgrade should be observed by

the Geotechnical Engineer. Any soft areas detected should be over-excavated to firm ground and backfilled with compacted structural fill to the design subgrade elevation.

To provide for quality construction practices and materials, we recommend the pavement work conform to WSDOT standards.

3.7 Construction Dewatering

We understand that dewatering may be required for construction of the bridge foundations. We anticipate that the dewatering system will be contractor designed. This presentation is intended to provide information on feasible methods of dewatering, rough estimates of dewatering flow quantities, and other information to help assess project constructability and costs.

Potentially Feasible Dewatering Technologies

There are several potential dewatering techniques available, each suited for a unique set of hydrogeologic conditions, with its own set of limitations and relative costs. The dewatering technologies that we consider feasible for the project include the following:

Pumping Wells – Pumping wells have the ability to effectively dewater large areas in permeable sediments and may produce large amounts of water. Dewatering pumping wells typically consist of 6- to 12-inch-diameter casing installed in 8- to 36-inch-diameter boreholes. Screen designs and filter packs are specified based on the texture of the water-bearing zone. Submersible pumps are generally used;

Well Points – Typically jetted or mechanically driven into the ground, well points are particularly well-suited for dewatering fine- to medium-grained soils. Water is extracted simultaneously from multiple well points by a central vacuum system via a header and individual well point flow controls. Because the technology relies on vacuum to bring the groundwater to the surface, well points are typically not effective in depressing the water table more than 25 feet bgs.

Well points are particularly cost-effective for shallow excavations in lower permeability soils where tight well spacing may be required.

Pumps and Sumps – Temporary sumps with submersible pumps are often used inside of the excavation to control residual seepage and stormwater. The placement of sumps is usually determined on an as-needed basis by the contractor, and the location and number of sumps are often changed as the excavation is advanced.

Temporary sumps are often constructed by placing a short section of perforated corrugated steel pipe (or surplus 8- to 12-inch well screen) in a small hole excavated to approximately 3 to 5 feet below excavation subgrade. The annular space around the pipe is backfilled with drain rock, with several inches placed inside the casing to help control the pumping of fines. Submersible pumps are then placed inside the casing and connected to a central discharge pipe.

The spacing of the wells and sumps for these methods is determined by the permeability and heterogeneity of the geologic conditions, including the consideration of any significant hydraulic boundaries.

Bridge Footing Excavation Condition Assumptions

Based on the concepts developed for 30-percent engineering design, if shallow footings are used for the bridge foundations, the assumptions regarding the three bridge footing excavations include:

- Dimensions – bridge deck dimensions are approximately 40 feet long plus length for wing walls, and 10 feet wide, plus width for footings estimated at about 4- to 6-feet wide; and temporary excavation side slopes at 1.5H:1V;
- Depth – Excavation will be advanced to approximately 13 feet below grade (grade is Elevation 33 to 40 feet) to facilitate the construction or placement of pre-cast footings about 13 feet deep (Elevation 50 feet);
- Groundwater – Depth to water is approximately 5 feet below ground surface (Elevation 27 to 33 feet), and;
- Dewatering Depth – Minimum necessary dewatering drawdown in the footing excavation(s) is approximately 10 feet, which is 8 feet from the static water level to the base of the excavation plus a 2-foot safe operating margin.

Stream Channel Excavation Assumptions

Concepts and assumptions for the constructed wetland stream channel include the following:

- Maximum excavation depth required for channel construction is anticipated to range from approximately 3 to 6 feet;
- Channel cut slopes will be low angle (typically 4H:1V) and will not require active dewatering to maintain stability under seeping conditions;
- Water-quality requirements prevent discharge of turbid water. Collection and treatment for sediment and turbidity will be required before discharge;
- Active dewatering systems (wells or well points) will not be necessary or cost effective; and
- Temporary berms and sumps can be constructed and moved as necessary to control and collect seepage.

Estimate of Hydraulic Conductivity

In absence of any direct testing results, best professional judgment was applied to data developed by the subsurface drilling and sampling program (boring logs are present in Appendix A) to estimate saturated hydraulic conductivity. Based on these data, the average hydraulic conductivity of water-bearing units encountered in the culvert excavation is conservatively estimated to be 1.0×10^{-2} centimeters per second (cm/sec). This value is considered representative of a silty to clean gravelly SAND.

Conceptual Dewatering Approach

Based on our understanding of the hydrogeologic conditions, well points will likely be required to dewater the proposed culvert crossing excavation. This approach would consist of regularly spaced well points within the margin of the cut side slopes, near the proposed floor of the excavation. Unsaturated overburden may first be removed to facilitate installation and maximize drawdown and overall system effectiveness.

Dewatering of the redesigned channel and floodplain will be installed on an as-needed basis and will likely include a series of berms and sumps and pumps along specific reaches of channel alignment while they are under construction.

Culvert Excavation Flow Rates

The total volume of water required to effectively dewater the culvert excavation is directly proportional to the bulk hydraulic conductivity of each major water-bearing unit. Preliminary dewatering volumes for the excavation can be estimated by assuming an equivalent well radius equal to that of the excavation footprint. Assuming the hydraulic conductivities and excavation assumptions presented above, we estimate up to 100 gallons per minute (gpm) will seep into the excavation under steady-state conditions. Flow rates are anticipated to be higher than this during system startup.

Discharge

It is our understanding that discharge to a local sanitary sewer is not an option and that there are no storm sewers in the area. Discharge options include on site infiltration or direct discharge to local surface water bodies.

Direct discharge to any surface water body would require authorization from the Washington State Department of Ecology (Ecology) under the Construction Stormwater General Permit. Discharge water quality must meet Ecology's Water Quality Standard for Surface Waters requirements. If there are exceedances of the criteria, water may require treatment prior to discharge.

The discharge authorization will be provisioned for turbidity and pH. Therefore, on-site baffled storage tanks will be required to reduce settable solids prior to final discharge. The permit(s) will include requirements for monitoring, which may include occasional analytical testing for dissolved constituents and routine field measurements of turbidity and pH.

4 Limitations

Work for this project was performed and this report prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. It is intended for exclusive use by Natural Systems Design Inc. and Kitsap County for specific application to the referenced project.

This report, and our conclusions and interpretations should not be construed as a warranty of the subsurface conditions. Experience has shown that subsurface soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations and may not be detected by a geotechnical study.

If there is a substantial lapse of time between the submission of this report and the start of construction, or if conditions have changed due to construction operations at or near the site, it is recommended that this report be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

5 References

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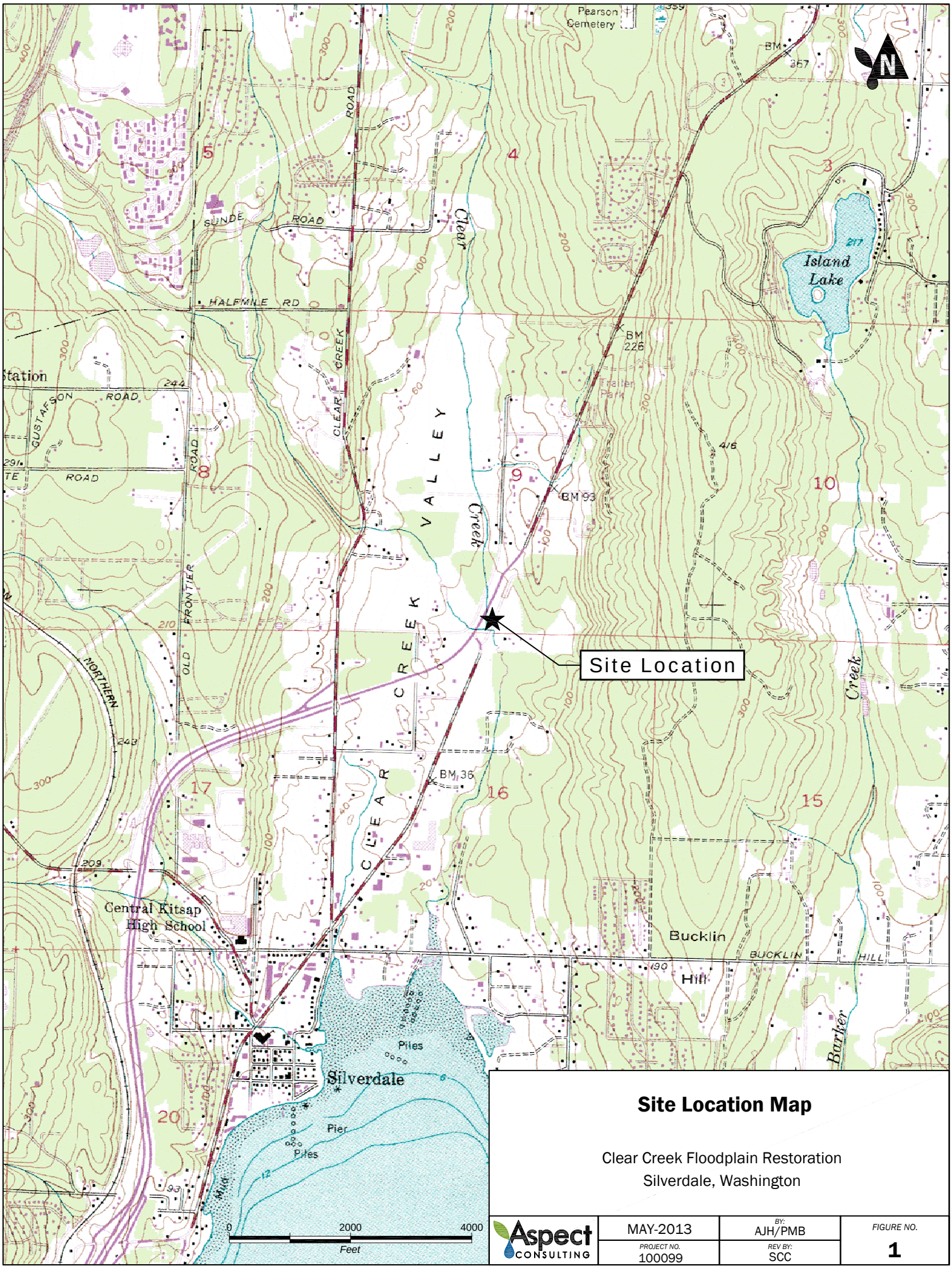
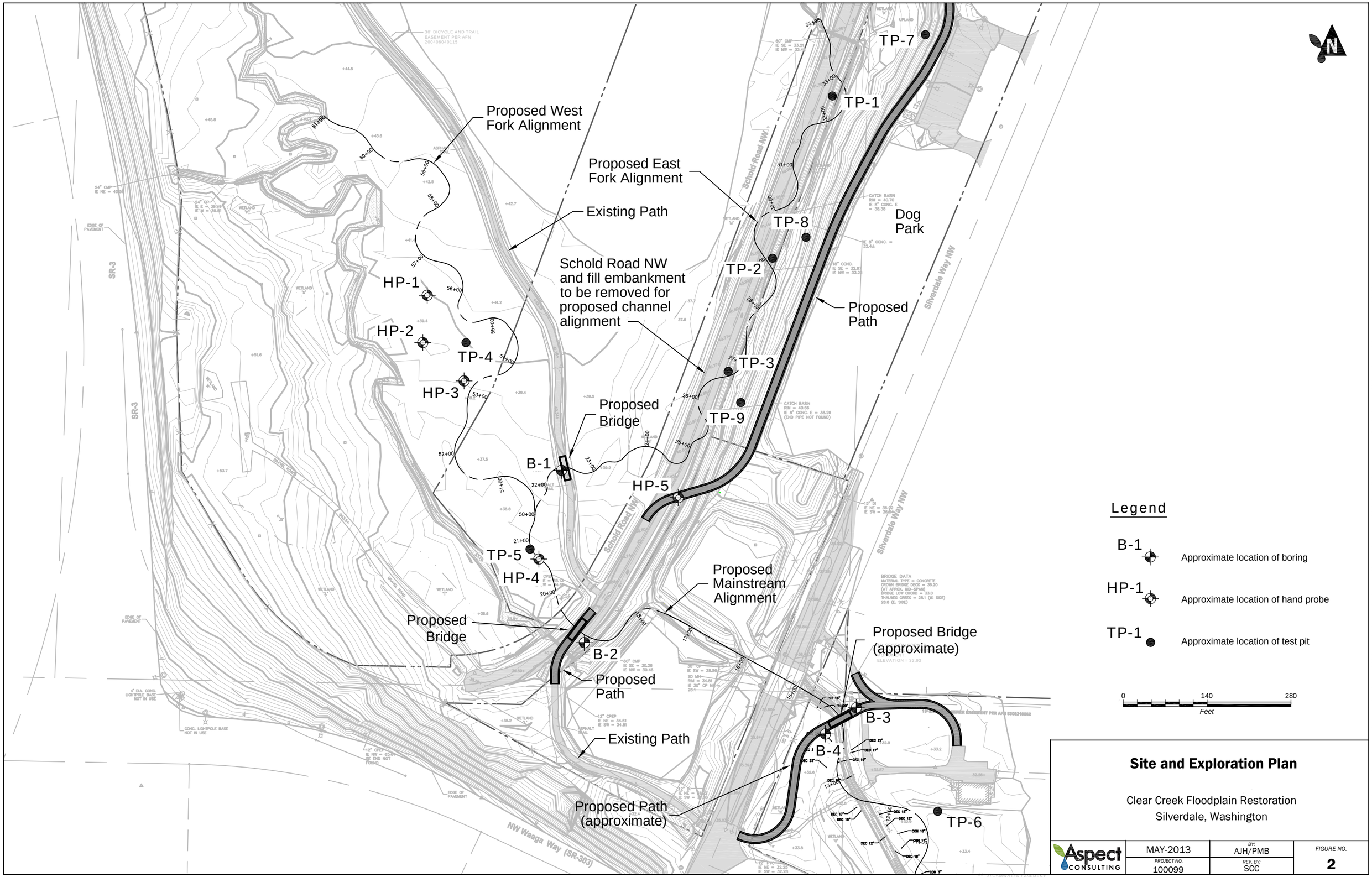


Site Location Map

Clear Creek Floodplain Restoration
Silverdale, Washington

Aspect CONSULTING	MAY-2013	BY: AJH/PMB	FIGURE NO.
	PROJECT NO. 100099	REV BY: SCC	1

CAD Path: Q:\Kitsap County\100099 Clear Creek Restoration\2013-05\100099-01.dwg Figure 1 (8.5 x 11) || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: May 22, 2013 3:20pm || User: scudd


Proposed West Fork Alignment
Proposed East Fork Alignment
Existing Path
Schold Road NW and fill embankment to be removed for proposed channel alignment
Proposed Bridge
Proposed Mainstream Alignment
Proposed Bridge
Proposed Path
Existing Path
Proposed Path (approximate)
Proposed Bridge (approximate)
Dog Park
Proposed Path
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
HP-1
HP-2
HP-3
HP-4
HP-5
B-1
B-2
B-3
B-4
Schold Road NW
Silverdale Way NW
SR-3
NW Waaga Way (SR-303)
Legend
B-1 Approximate location of boring
HP-1 Approximate location of hand probe
TP-1 Approximate location of test pit
0
140
280
Feet
Site and Exploration Plan
Clear Creek Floodplain Restoration
Silverdale, Washington
Aspect CONSULTING
MAY-2013
PROJECT NO. 100099
BY: AJH/PMB
REV. BY: SCC
FIGURE NO. 2
CAD Path: Q:\Kitsap County\100099 Clear Creek Restoration\2013-05\100099-02.dwg Figure 2 (11 x 17) || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: May 22, 2013 3:38pm || User: scudd

APPENDIX A

Subsurface Explorations

A.1 Field Exploration Program

A.1.1 Geotechnical Borings

Geotechnical borings B-1 through B-4 were drilled using hollow-stem auger drilling techniques. The drilling was subcontracted to Geologic Drill, an experienced local driller. Drilling was completed with a small track-mounted drill rig and 6-inch-diameter hollow-stem auger equipment. The locations of the four borings are shown on Figure 2.

Sampling was completed at selected depth intervals using the Standard Penetration Test (SPT) in general accordance with ASTM Method D1586. This involves driving a 2-inch outside-diameter split-barrel sampler a distance of 18 inches into the soil with a 140-pound hammer free-falling from a distance of 30 inches. The number of blows for each 6-inch interval is recorded and the number of blows required to drive the sampler the final 12 inches is known as the Standard Penetration Resistance ("N") or blow count. The resistance, or N-value, provides a measure of the relative density of granular soils or the relative consistency of cohesive soils.

An Aspect geologist was present throughout the field exploration program to observe the drilling procedure, assist in sampling, and to prepare descriptive logs of the exploration. Soils were classified in general accordance with ASTM D-2488, *Standard Practice for Description and Identification of Soils* (Visual-Manual Procedure). The summary exploration log represents our interpretation of the contents of the field logs. The stratigraphic contacts shown on the individual summary logs represent the approximate boundaries between soil types; actual transitions may be more gradual. The subsurface conditions depicted are only for the specific date and locations reported, and therefore, are not necessarily representative of other locations and times.

A.1.2 Test Pits

Test pits TP-1 through TP-9 were excavated using a small Hitachi EX 35U Mini-trackhoe provided and operated by High Meadows Excavating under the direction of Aspect. The locations of the nine test pits are shown on Figure 2. All of the test pits were advanced to depths ranging from 6 to 9 feet below the existing ground surface (bgs).

Soil density and consistency was qualitatively assessed with a ½-inch-diameter steel probe, observation of excavation difficulty, and assessment of hand samples recovered from the pits.

Grab samples of the encountered soils were taken from each test pit at select intervals. The soils encountered in the test pits were classified in general accordance with ASTM D-2488, *Standard Practice for Description and Identification of Soils* (Visual-Manual Procedure) as described above.

A1.3 Hand Probes

Hand probes HP-1 through HP-5 were excavated by Aspect using hand tools. The locations of the hand probe explorations are shown on Figure 2. The purpose of the hand probes was to characterize the surficial soils within the floodplain. The hand probes were advanced between 2 and 2.5 feet bgs and terminated in the Holocene Alluvium unit.

Soil density and consistency was qualitatively assessed with a ½-inch-diameter steel probe, observation of excavation difficulty, and assessment of hand samples recovered from the probe explorations.

The soils encountered in the hand probe explorations were classified in general accordance with ASTM D-2488, *Standard Practice for Description and Identification of Soils* (Visual-Manual Procedure) as described above.

Coarse-Grained Soils - More than 50% Retained on No. 200 Sieve (1)	Gravels - More than 50% of Coarse Fraction (1) Retained on No. 4 Sieve	≤5% Fines (5)	GW	Well-graded gravel and gravel with sand, little to no fines
			GP	Poorly-graded gravel and gravel with sand, little to no fines
		≥15% Fines (5)	GM	Silty gravel and silty gravel with sand
			GC	Clayey gravel and clayey gravel with sand
	Sands - 50% or More of Coarse Fraction (1) Passes No. 4 Sieve	≤5% Fines (5)	SW	Well-graded sand and sand with gravel, little to no fines
			SP	Poorly-graded sand and sand with gravel, little to no fines
		≥15% Fines (5)	SM	Silty sand and silty sand with gravel
			SC	Clayey sand and clayey sand with gravel
Fine-Grained Soils - 50% or More Passes No. 200 Sieve (1)	Silts and Clays Liquid Limit Less than 50		ML	Silt, sandy silt, gravelly silt, silt with sand or gravel
			CL	Clay of low to medium plasticity; silty, sandy, or gravelly clay, lean clay
			OL	Organic clay or silt of low plasticity
	Silts and Clays Liquid Limit 50 or More		MH	Elastic silt, clayey silt, silt with micaceous or diato-maceous fine sand or silt
			CH	Clay of high plasticity, sandy or gravelly clay, fat clay with sand or gravel
			OH	Organic clay or silt of medium to high plasticity
Highly Organic Soils			PT	Peat, muck and other highly organic soils

Terms Describing Relative Density and Consistency

Coarse-Grained Soils

Density	SPT (2) blows/foot
Very Loose	0 to 4
Loose	4 to 10
Medium Dense	10 to 30
Dense	30 to 50
Very Dense	>50

Fine-Grained Soils

Consistency	SPT (2) blows/foot
Very Soft	0 to 2
Soft	2 to 4
Medium Stiff	4 to 8
Stiff	8 to 15
Very Stiff	15 to 30
Hard	>30

Test Symbols

FC = Fines Content
G = Grain Size
M = Moisture Content
A = Atterberg Limits
C = Consolidation
DD = Dry Density
K = Permeability
Str = Shear Strength
Env = Environmental
PiD = Photoionization Detector

Component Definitions

Descriptive Term	Size Range and Sieve Number
Boulders	Larger than 12"
Cobbles	3" to 12"
Gravel	3" to No. 4 (4.75 mm)
Coarse Gravel	3" to 3/4"
Fine Gravel	3/4" to No. 4 (4.75 mm)
Sand	No. 4 (4.75 mm) to No. 200 (0.075 mm)
Coarse Sand	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	Smaller than No. 200 (0.075 mm)

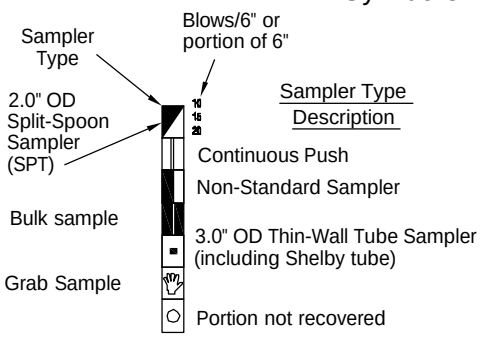
(3) Estimated Percentage

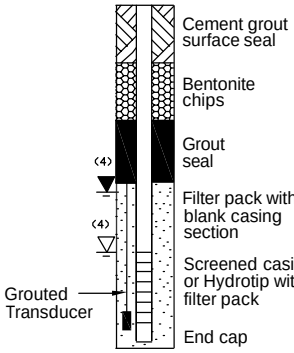
Percentage by Weight	Modifier
<5	Trace
5 to 15	Slightly (sandy, silty, clayey, gravelly)
15 to 30	Sandy, silty, clayey, gravelly)
30 to 49	Very (sandy, silty, clayey, gravelly)

Moisture Content

Dry - Absence of moisture, dusty, dry to the touch
Slightly Moist - Perceptible moisture
Moist - Damp but no visible water
Very Moist - Water visible but not free draining
Wet - Visible free water, usually from below water table

Symbols





(1) Percentage by dry weight
(2) (SPT) Standard Penetration Test (ASTM D-1586)
(3) In General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)
(4) Depth of groundwater
(5) Combined USCS symbols used for fines between 5% and 15% as estimated in General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)

▽ ATD = At time of drilling
▼ Static water level (date)
BGS = below ground surface

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

Aspect CONSULTING

Exploration Log Key

DATE:
DESIGNED BY:
DRAWN BY:
REVISED BY:

PROJECT NO.

FIGURE NO.
A-1

Q:_ACAD Standards\Standard Details\Exploration Log Key A1.dwg

Boring Log

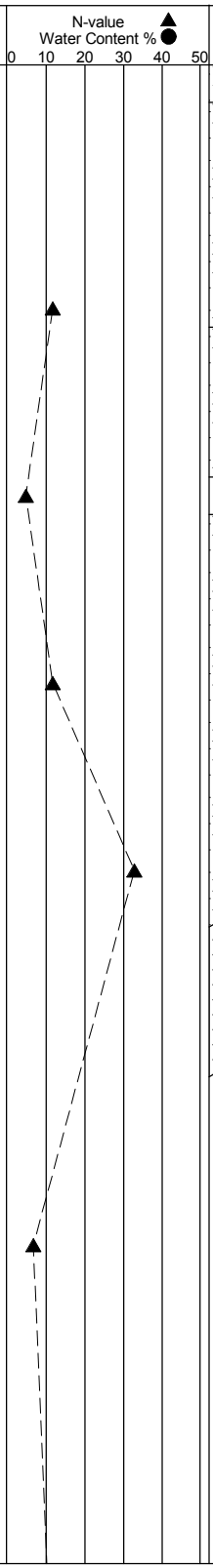
Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-1	1 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 39
Depth to Water (ft BGS): 5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Sample Type/ID	Blows/ 6"	Material Type	Description	Depth (ft)
				Topsoil	
1 – 38				**FILL** Medium dense, moist, mottled brown, gravelly, silty SAND (SM); well-graded fine-to-coarse sand, numerous organics	1
2 – 37					2
3 – 36	S-1	7 6 6			3
4 – 35				**HOLOCENE ALLUVIUM** Medium dense, moist, mottled brown, slightly gravelly, silty SAND (SM); poorly graded fine-to-medium sand, trace organics	4
5 – 34	S-2	3 3 2		Becomes wet	5
6 – 33				Medium stiff, wet, brown to black SILT (ML); numerous organics	6
7 – 32				Medium dense, wet, gray, slightly silty SAND (SM-SP); poorly graded fine-to-medium sand, interbedded with wet, gray SAND (SP)	7
8 – 31	S-3	7 5 7			8
9 – 30					9
10 – 29	S-4	8 15 18			10
11 – 28				Dense, wet, gray SAND (SW); trace silt and gravel, well-graded fine-to-coarse sand	11
12 – 27					12
13 – 26				**GLACIOLACUSTRINE** Medium stiff, wet, gray, clayey SILT (ML); trace sand, low plasticity, slow dilatency	13
14 – 25					14
15 – 24	S-5	4 3 4			15
16 – 23					16
17 – 22					17
18 – 21					18
19 – 20					19



Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 2

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-1	2 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 39
Depth to Water (ft BGS): 5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Sample Type/ID	Blows/ 6"	Description	Depth (ft)
	S-6	1 2 9	**GLACIOLACUSTRINE** Medium stiff, wet, gray, clayey SILT (ML); trace sand, low plasticity, slow dilatency	
21 – 18			**GLACIOFLUVIAL** Medium dense, wet, gray, silty SAND (SM); poorly graded fine sand	21
22 – 17				22
23 – 16			Dense, wet, gray, slightly silty SAND (SP-SM); poorly graded fine-to-medium sand, predominantly fine	23
24 – 15				24
25 – 14	S-7	11 16 17		25
26 – 13				26
27 – 12				27
28 – 11			Medium dense, wet, gray, slightly silty gravelly SAND (SW-SM); well- graded fine-to-coarse sand	28
29 – 10				29
30 – 9	S-8	12 11 6		30
31 – 8				31
32 – 7				32
33 – 6			**PRE-FRASER NON GLACIAL** Stiff, wet, gray SILT (ML)	33
34 – 5				34
35 – 4	S-9	12 15 21	Becomes hard, brown, trace organics	35
36 – 3			Dense, wet, gray, slightly silty SAND (SW-SM)	36
37 – 2			Bottom of boring at 36.5'	37
38 – 1				38
39 – 0				39

N-value ▲ / Water Content % ● (0 10 20 30 40 50)

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 2

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-2	1 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 41
Depth to Water (ft BGS): 5.5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Sample Type/ID	Blows/ 6"	Material Type	Description	Depth (ft)
				Topsoil	
1 – 40				**FILL** Medium dense, moist, mottled light and dark brown, silty SAND (SM); trace gravel	1
2 – 39					2
3 – 38	S-1	3 8 8			3
4 – 37					4
5 – 36				**HOLOCENE ALLUVIUM** Medium dense, moist to wet, gray, gravelly silty SAND (SM) interbedded with sandy SILT (ML); well-graded fine to coarse sand	5
6 – 35	S-2	2 3 5			6
7 – 34					7
8 – 33	S-3	2 5 9			8
9 – 32				Medium dense, wet, gray, slightly gravelly SAND (SW); trace silt	9
10 – 31				Medium dense, wet, gray, slightly silty, slightly gravelly SAND (SW-SM)	10
11 – 30	S-4	6 8 12			11
12 – 29					12
13 – 28				**GLACIOLACUSTRINE** Very stiff, wet, gray, slightly sandy SILT (ML); diamict fabric, well-graded fine-to-coarse sand, scattered fine gravel dropstones, low plasticity, slow dilatency	13
14 – 27					14
15 – 26					15
16 – 25	S-5	5 12 12			16
17 – 24					17
18 – 23					18
19 – 22					19

Borehole Completion: ▽

Tests: —

N-value ▲ / Water Content % ● (0 10 20 30 40 50)

Sampler Type:
- ○ No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
- HSA: Hollow Stem Auger
- MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 3

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-2	2 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 41
Depth to Water (ft BGS): 5.5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value ▲ / Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
				7			**GLACIOLACUSTRINE**	
				15			Very stiff, wet, gray, slightly sandy SILT (ML); diamict fabric, well-graded fine-to-coarse sand, scattered fine gravel dropstones, low plasticity, slow dilatency	
21 – 20		S-6		20				21
22 – 19								22
23 – 18								23
		S-7			50+		Refusal on a rock.	
							Bottom of boring at 23.5 ft	
24 – 17								24
25 – 16								25
26 – 15								26
27 – 14								27
28 – 13								28
29 – 12								29
30 – 11								30
31 – 10								31
32 – 9								32
33 – 8								33
34 – 7								34
35 – 6								35
36 – 5								36
37 – 4								37
38 – 3								38
39 – 2								39

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 3

Boring Log

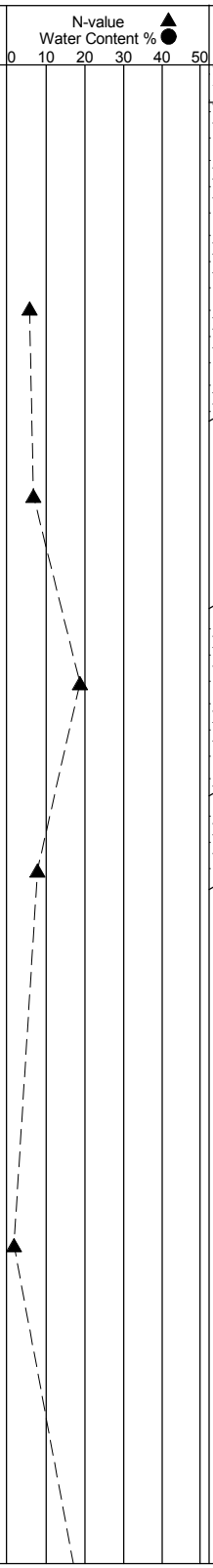
Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-3	1 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 34
Depth to Water (ft BGS): 4.5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Sample Type/ID	Blows/ 6"	Material Type	Description	Depth (ft)
				Topsoil	
				FILL Loose, moist, mottled brown, silty SAND (SM); abundant organics	
1 – 33					1
2 – 32					2
3 – 31	S-1	3 3 3			3
4 – 30					4
				HOLOCENE ALLUVIUM Medium stiff, wet, brown sandy SILT (ML); rapid dilatency	
5 – 29	S-2	8 5 2			5
6 – 28				Becomes light gray	6
7 – 27				Medium dense, wet, dark gray SAND (SP); trace silt, poorly graded fine-to-medium sand	7
8 – 26	S-3	6 7 12			8
9 – 25					9
				Loose, wet, dark gray, very silty SAND (SM); rapid dilatency	
10 – 24	S-4	2 3 5			10
				GLACIOLACUSTRINE Soft to very stiff, wet, gray, slightly sandy to very sandy SILT (ML)	
11 – 23					11
12 – 22					12
13 – 21					13
14 – 20					14
15 – 19	S-5	2 1 1			15
16 – 18					16
17 – 17					17
18 – 16					18
19 – 15					19



Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 4

Boring Log

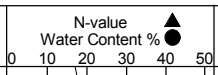
Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-3	2 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 34
Depth to Water (ft BGS): 4.5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Sample Type/ID	Blows/ 6"	Material Type	Description	Depth (ft)
		4		**GLACIOLACUSTRINE**	
		10		Soft to very stiff, wet, gray, slightly sandy to very sandy SILT (ML)	
21 – 13	S-6	10			21
22 – 12					22
23 – 11					23
				GLACIOFLUVIAL	
				Medium dense to dense, wet, gray, silty SAND (SM); poorly graded fine sand	
24 – 10					24
25 – 9		13			25
		14			
26 – 8	S-7	15			26
27 – 7					27
28 – 6					28
29 – 5					29
30 – 4		17		Becomes dense at 30 feet.	30
		18			
31 – 3	S-8	19			31
32 – 2				Bottom of boring at 31.5 ft	32
33 – 1					33
34 – 0					34
35 – -1					35
36 – -2					36
37 – -3					37
38 – -4					38
39 – -5					39



Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 4

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-4	1 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 33
Depth to Water (ft BGS): 5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Sample Type/ID	Blows/ 6"	Material Type	Description	Depth (ft)
				Topsoil	
1 – 32				**FILL** Very loose, moist, brown, silty SAND (SM); poorly graded fine to medium sand, trace organics	1
2 – 31				**HOLOCENE ALLUVIUM** Very loose, most to wet, brown and gray, silty SAND (SM); abundant organics, poorly graded fine-to-medium sand	2
3 – 30	S-1	4 2 2			3
4 – 29					4
5 – 28				Becomes wet	5
6 – 27	S-2	1 1 2			6
7 – 26				Very loose, wet, gray SAND (SP); poorly graded fine-to-medium sand, trace coarse sand, trace silt	7
8 – 25	S-3	2 2 2			8
9 – 24					9
10 – 23				**GLACIOLACUSTRINE** Soft to medium stiff, wet, gray SILT (ML); trace clay, trace sand and gravel dropstones	10
11 – 22	S-4	2 2 4			11
12 – 21					12
13 – 20					13
14 – 19					14
15 – 18					15
16 – 17	S-5	1 1 2			16
17 – 16					17
18 – 15				**GLACIOFLUVIAL** Medium dense, wet, gray, very silty SAND (SM); poorly graded fine sand, rapid dilatency	18
19 – 14					19

Borehole Completion

Tests

N-value ▲ / Water Content % ● (0 10 20 30 40 50)

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 5

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	B-4	2 of 2

Project Name: Clear Creek
Location: Silverdale, WA
Driller/Equipment: Geologic Drill / MT 51 / 6" OD HSA
Drilling Method/Hammer: SPT / 140 # /

Ground Surface Elev: 33
Depth to Water (ft BGS): 5
Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value ▲ / Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
				9 10 11			**GLACIOFLUVIAL** Medium dense, wet, gray, very silty SAND (SM); poorly graded fine sand, rapid dilatency	
21 – 12		S-6						21
22 – 11								22
23 – 10								23
24 – 9								24
25 – 8				11 17 16				25
26 – 7		S-7						26
27 – 6								27
28 – 5								28
29 – 4								29
30 – 3				13 18 21				30
31 – 2		S-8						31
32 – 1							Bottom of boring at 31.5"	32
33 – 0								33
34 – -1								34
35 – -2								35
36 – -3								36
37 – -4								37
38 – -5								38
39 – -6								39

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: Mv
Approved by: DHM
Figure No. A- 5

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-1	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 6
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					FILL Medium dense, dry, brown-grey, slightly silty, gravelly SAND (SW-SM); well-graded fine-to-coarse sand, well-graded rounded fine-to-coarse gravel	
1						1
2						2
3						3
4					Becomes moist, dense	4
	S-1					
5						5
6					Becomes wet	6
	S-2				Wet, blue-gray SAND (SW); well-graded fine to coarse sand, trace silt	
7					**HOLOCENE ALLUVIUM** Dark brown, silty SAND (SM); numerous organics	7
	S-3					
8					Bottom of test pit at 8 ft.	8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 6

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-2	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 5
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					FILL Medium dense, dry, brown-grey, slightly silty, gravelly SAND (SW-SM); well-graded fine-to-coarse sand, well-graded rounded fine-to-coarse gravel	
1						1
2						2
3						3
4	S-1				Becomes moist, dense	4
5						5
					Wet, blue-gray SAND (SW); well-graded fine to coarse sand, trace silt	
6					**HOLOCENE ALLUVIUM** Dark brown, silty SAND (SM); numerous organics	6
	S-2					
7					Bottom of test pit at 7 ft.	7
8						8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 7

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-3	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 5
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					FILL Medium dense, dry, brown-grey, slightly silty, gravelly SAND (SW-SM); well-graded fine-to-coarse sand, well-graded rounded fine-to-coarse gravel	
1						1
2						2
3	S-1					3
4					Becomes moist, dense	4
5	▽					5
					Wet, blue-gray SAND (SW); well-graded fine to coarse sand, trace silt	
6	S-2				**HOLOCENE ALLUVIUM** Dark brown, silty SAND (SM); numerous organics	6
7						7
8						8
					Bottom of test pit at 8.5 ft.	
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 8

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-4	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 5
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					HOLOCENE ALLUVIUM Loose, moist, brown, silty SAND (SM); trace organics	
1						1
2	S-1					2
3					Easy digging	3
4	S-2				Moist, dark brown, sandy SILT (ML)	4
	S-3				Moist to wet, gray with orange bands, silty SAND (SM); poorly graded fine-to-medium sand Easy digging	
5					Wet, gray SAND (SW); well-graded fine-to-coarse sand, trace silt	5
6						6
7	S-4					7
					Bottom of test pit at 7.5 ft.	
8						8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 9

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-5	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 5
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					HOLOCENE ALLUVIUM Loose, moist, brown, silty SAND (SM); numerous organics	
1						1
	S-1					
2					Easy digging	2
3						3
					8"-diameter alder log	
4						4
5						5
	S-2				Wet, gray, gravelly SAND (SW); well-graded fine to coarse sand, well-graded fine-to-coarse rounded gravel	
6						6
	S-3					
7					Bottom of test pit at 7 ft.	7
8						8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 10

_TEST PIT CLEAR CREEK.GPJ September 5, 2012

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-6	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 8
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
1					**FILL** Loose, moist, brown, silty, gravelly SAND (SM); poorly graded fine to medium sand, numerous organics	1
2	S-1					2
3					Plastic debris	3
4	S-2				**HOLOCENE ALLUVIUM** Medium dense, moist, brown, silty, gravelly SAND (SM); poorly graded fine to medium sand	4
5					Easy digging	5
					Moist, gray, slightly silty SAND (SP-SM); poorly graded fine-to-medium sand	
6	S-3				Moist to wet, gray silty SAND (SM); poorly graded fine-to-medium sand, abundant organics, organics decrease with depth	6
7					Easy digging	7
8					Wet, gray, slightly silty SAND (SW-SM); well-graded fine-to-coarse sand	8
9					Bottom of test pit at 9 ft.	9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 11

_TEST PIT CLEAR CREEK.GPJ September 5, 2012

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-7	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): Not encountered
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					FILL Dense, dry to moist, slightly silty, gravelly SAND (SW-SM); well-graded fine-to-coarse sand, rounded gravel	
1						1
2	S-1					2
3						3
4	S-2				Becomes moist	4
5						5
6	S-3					6
					Bottom of test pit at 6 ft.	
7						7
8						8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 12

_TEST PIT CLEAR CREEK.GPJ September 5, 2012

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-8	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): Not encountered
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
					FILL Dense, dry to moist, slightly silty, gravelly SAND (SW-SM); well-graded fine-to-coarse sand, rounded gravel	
1						1
2	S-1					2
3						3
4	S-2				Becomes moist	4
5						5
6	S-3				Bottom of test pit at 6 ft.	6
7						7
8						8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 13

Exploration/Test Pit

Aspect CONSULTING

Project Number	Exploration Number	Sheet
100099	TP-9	1 of 1

Project Name: Clear Creek
Location: Silverdale, WA
Contractor/Method: High Meadows / Track hoe
Sampling Method: Grab sample

Ground Surface Elev:
Depth to Water (ft BGS): 5
Start/Finish Date: 8/8/2012

Depth / Elevation (feet)	Sample Type/ID	Tests/Remarks	PID (ppm)	Material Type	Description	Depth (ft)
					Topsoil	
1	S-1				**FILL** Dense, dry to moist, slightly silty, gravelly SAND (SW-SM); well-graded fine-to-coarse sand, rounded fine-to-coarse gravel	1
2						2
3						3
4	S-2					4
5					**HOLOCENE ALLUVIUM** Wet, brown, sandy SILT (ML); abundant organics	5
6	S-3					6
					Bottom of test pit (refusal on wood) at 6.3 ft.	
7						7
8						8
9						9

Sampler Type:
- No Recovery
- Grab Sample

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)
- Groundwater Seepage (ATD)

Logged by: Mv
Approved by: DHM
Figure No. A- 14

_TEST PIT CLEAR CREEK.GPJ September 5, 2012

Hand Auger Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	HP-1	1 of 1

Project Name: Clear Creek Floodplain Restoration

Location: Silverdale, WA

Driller/Equipment: Aspect / Hand Auger

Drilling Method/Hammer: Steel T-Probe and 2.5" OD Auger

Ground Surface Elev: 40

Depth to Water (ft BGS): N/A

Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	DCPT Data	Correlated N-value ▲ Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
							TOPSOIL Very soft to soft, very moist, dark brown to gray, sandy SILT with organics (OL); low plasticity, fine sand, fibrous organics.	
1 — 39							**HOLOCENE ALLUVIUM** Loose to medium dense, very moist to wet, gray, slightly silty SAND (SM); poorly graded fine sand, trace subrounded gravel and scattered fine roots to a depth of 16-inches.	1
2 — 38							Bottom of hand probe exploration at 2 feet.	2
3 — 37								3
4 — 36								4

Sampler Type:

○ No Recovery

Drilling Method:

HSA: Hollow Stem Auger

MR: Mud Rotary

Logged by: AJH

Approved by: DHM

Figure No. A- 15

Hand Auger Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	HP-2	1 of 1

Project Name: Clear Creek Floodplain Restoration

Location: Silverdale, WA

Driller/Equipment: Aspect / Hand Auger

Drilling Method/Hammer: Steel T-Probe and 2.5" OD Auger

Ground Surface Elev: 39

Depth to Water (ft BGS): N/A

Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	DCPT Data	Correlated N-value ▲ Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
							TOPSOIL Very soft to soft, very moist to wet, dark brown, sandy SILT with organics (OL); low plasticity, poorly graded fine sand, trace subrounded gravel and scattered fibrous organics/roots to a depth of 18-inches.	
1 — 38								1
							HOLOCENE ALLUVIUM Medium dense, slightly moist, light gray, SAND (SP); poorly graded fine to medium sand, trace subrounded gravel, t-probe penetrates 4-inches.	
2 — 37								2
							Bottom of hand probe exploration at 2.33 feet.	
3 — 36								3
4 — 35								4

Sampler Type:

○ No Recovery

Drilling Method:

HSA: Hollow Stem Auger

MR: Mud Rotary

Logged by: AJH

Approved by: DHM

Figure No. A- 15

Hand Auger Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	HP-3	1 of 1

Project Name: Clear Creek Floodplain Restoration

Location: Silverdale, WA

Driller/Equipment: Aspect / Hand Auger

Drilling Method/Hammer: Steel T-Probe and 2.5" OD Auger

Ground Surface Elev: 38

Depth to Water (ft BGS): N/A

Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	DCPT Data	Correlated N-value ▲ / Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
							TOPSOIL Soft, very moist to wet, dark brown, sandy SILT with organics (OL); low plasticity, poorly graded fine sand, scattered fibrous organics/roots to a depth of 16-inches.	
1 — 37								1
							HOLOCENE ALLUVIUM Medium dense, slightly moist, light gray, SAND (SP); poorly graded fine to medium sand, trace subrounded gravel and silt, t-probe penetrates 4-inches.	
2 — 36								2
							Bottom of hand probe exploration at 2.5 feet.	
3 — 35								3
4 — 34								4

Sampler Type:

○ No Recovery

Drilling Method:

HSA: Hollow Stem Auger

MR: Mud Rotary

Logged by: AJH

Approved by: DHM

Figure No. A- 15

Hand Auger Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	HP-4	1 of 1

Project Name: Clear Creek Floodplain Restoration

Location: Silverdale, WA

Driller/Equipment: Aspect / Hand Auger

Drilling Method/Hammer: Steel T-Probe and 2.5" OD Auger

Ground Surface Elev: 36

Depth to Water (ft BGS): N/A

Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	DCPT Data	Correlated N-value ▲ Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
1 — 35							**TOPSOIL** Soft to very soft, very moist to wet, dark brown, sandy SILT with organics (OL); low plasticity, poorly graded fine sand, scattered fibrous organics/roots to a depth of 16-inches.	1
2 — 34							**HOLOCENE ALLUVIUM** Medium dense, slightly moist, light gray, SAND (SP-SM); poorly graded fine to medium sand, slightly silty, trace subrounded gravel and silt, t-probe penetrates 4-inches.	2
3 — 33							Bottom of hand probe exploration at 2.16 feet.	3
4 — 32								4

Sampler Type:

○ No Recovery

Drilling Method:

HSA: Hollow Stem Auger

MR: Mud Rotary

Logged by: AJH

Approved by: DHM

Figure No. A- 15

Hand Auger Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100099	HP-5	1 of 1

Project Name: Clear Creek Floodplain Restoration

Location: Silverdale, WA

Driller/Equipment: Aspect / Hand Auger

Drilling Method/Hammer: Steel T-Probe and 2.5" OD Auger

Ground Surface Elev: 38

Depth to Water (ft BGS): N/A

Start/Finish Date: 7/24/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	DCPT Data	Correlated N-value ▲ / Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
							ROADWAY FILL Loose to medium dense, slightly moist, tan, SAND (SW); moderately-well graded fine to coarse sand, trace subrounded gravel.	
1 — 37								1
							HOLOCENE ALLUVIUM Very soft, wet, dark brown, organic SILT (OL); low plasticity, trace fine sand, abundant organics, old creek surface.	
2 — 36								2
							Medium dense, wet, gray SAND (SP); poorly graded fine to medium sand, trace subrounded gravel and silt.	
							Bottom of hand probe exploration at 2.5 feet.	
3 — 35								3
4 — 34								4

Sampler Type:

○ No Recovery

Drilling Method:

HSA: Hollow Stem Auger

MR: Mud Rotary

Logged by: AJH

Approved by: DHM

Figure No. A- 15

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ATTACHMENT D. PERMITS, APPROVALS, AND AUTHORIZATION

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: April 03, 2015
Project End Date: September 30, 2017

Permit Number: 2015-6-216+01
FPA/Public Notice Number: N/A
Application ID: 2552

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Kitsap County Public Works ATTENTION: Christopher May 614 Division St (MS-26-A) Port Orchard, WA 98366-4614	

Project Name: Clear Creek Habitat and Floodplain Restoration

Project Description: Restore function to approximately 9 acres of floodplain for the lower segments of the east and west forks of Clear Creek, and the mainstem area east of Silverdale Way. The east fork floodplain will be restored by the removal of the lower 1,100 feet of Schold Road (both surface and prism). The creek channels will be re-meandered into approximately 2,000 feet of total linear channel in the lowered floodplains. Approximately 400 pieces of large wood will be added to the channels, and all floodplains are to be re-vegetated with native riparian and wetland species. Three pedestrian bridges will be constructed whereby two undersized culverts will be removed.

PROVISIONS

1. Work below the ordinary high water line shall only occur between July 16 and September 30 for 2015, and between August 1 and September 30 for 2016 through 2017.

2. NOTIFICATION REQUIREMENT: The Area Habitat Biologist (AHB) listed below shall receive written notification (FAX or mail) from the person to whom this Hydraulic Project Approval (HPA) is issued (permittee) or the agent/contractor no less than three working days prior to the start of construction activities. The notification shall include the permittee's name, project location, starting date for work, and the control number for this HPA.

3. POST-CONSTRUCTION NOTIFICATION REQUIREMENT: The permittee, agent or contractor shall contact the Washington Department of Fish and Wildlife by e-mail to HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98501-1091; or fax to (360) 902-2946 within seven days of completion of the work. The notification shall include the permittee's name, project location, completion date for the work, and the Hydraulic Project Approval control number. The department may conduct a compliance inspection; however, the department will notify the permittee or agent prior to the inspection.

4. Work shall be accomplished per plans and specifications approved by the Washington Department of Fish and Wildlife entitled "Clear Creek Floodplain Restoration" and dated February 26, 2015, except as modified by this Hydraulic Project Approval. A copy of these plans shall be available on site during construction.

BRIDGES

5. Removal of the existing structure shall be accomplished so the structure and associated material does not enter the stream. Material shall be disposed of so it will not re-enter the stream.

6. All earth and roadbed material shall be removed prior to removal of the culverts.

7. Excavation for the footings for the new bridges shall be completely separated from the stream by placing the footings landward of the top of the bank.

8. The bridge structure shall be placed in a manner to minimize damage to the streambed and banks.

9. The bridge shall be constructed to pass the 100-year peak flow with consideration of debris likely to be encountered.

10. Abutments, piers, piling, sills, approach fills, etc., shall not constrict the flow and cause any appreciable increase (not to exceed 0.2 feet) in backwater elevation (calculated at the 100-year flood) or channel-wide scour, and shall be aligned to cause the least effect on the hydraulics of the stream.

11. Materials used for structure protection shall be installed to withstand the 100-year peak flow.

12. Where aggregate or earth type material is used for paving or accumulates on the bridge, curbs, or wheel guards shall be installed and maintained to prevent the loss of this material into the stream.

13. Approach material shall be structurally stable and shall be composed of material that if eroded into the water shall not be detrimental to fish life.

CHANNEL

14. The new channel shall incorporate fish habitat components, streambed materials, meander configuration, and native or other approved vegetation equivalent to or greater than that which previously existed in the old channel.

15. During construction, the new channel shall be isolated from the flowing stream by plugs at the upstream and downstream ends of the new channel. These plugs shall be substantial enough to prevent flood flows from entering the new channel during construction.

16. The fish habitat log structures shall be of fir, cedar, or other approved coniferous species.

17. Under no circumstances shall a blockage to stream flow or fish passage be created. Buried logs shall not be installed flat (shall not act as weirs).

18. Streambed material should be sized to mimic the gradation found in nearby reference channel reaches. Streambed material placed in the channel shall be rounded and well graded to include 3%-10% fines with sieve size U.S. No. 200, in order to prevent the creek from going subsurface. A low-flow channel and a high-flow bench on either side shall be created.

19. The angle of the structure used to divert the stream into the new channel shall allow a smooth transition of stream flow

20. Stream diversion shall be conducted only after inspection and approval of the new channel by the Area Habitat Biologist listed below or his/her representative.

21. Bank protection material shall not constrict the flow and cause any appreciable increase (not to exceed 0.2 feet) in backwater elevation (calculated at the 100-year flood) or channel-wide scour, and shall be aligned to cause the least effect on the hydraulics of the stream.

22. Bank sloping shall be accomplished in a manner that avoids release of overburden material into the water. Overburden material resulting from the project shall be deposited so it will not re-enter the water.

23. Upon completion of the grading, the streambed shall contain no pits, potholes, or large depressions and shall have a positive return to the stream in order to avoid stranding of fish.

BY-PASS

24. A temporary bypass to divert flow around the work area shall be in place prior to initiation of work in the wetted perimeter. Flow shall be routed immediately downstream of the work area in order to prevent subsurface conditions.

25. A sandbag revetment or similar device shall be installed at the bypass inlet to divert the entire flow through the bypass.

26. A sandbag revetment or similar device shall be installed at the downstream end of the bypass to prevent backwater from entering the work area.

27. The bypass shall be of sufficient size to pass all flows and debris for the duration of the project.

28. Prior to releasing the water flow to the project area, all in water work shall be completed.

29. Upon completion of the project, all material used in the temporary bypass and temporary access shall be removed from the site and the site returned to preproject or improved conditions.

30. The permittee shall capture and safely move food fish, game fish, and other fish life from the job site. The permittee shall have fish capture and transportation equipment ready and on the job site. Captured fish shall be immediately and safely transferred to free-flowing water downstream of the project site.

31. Any device used for diverting water from a fish-bearing stream shall be equipped with a fish guard to prevent passage of fish into the diversion device pursuant to RCW 77.57.010 and 77.57.070. The pump intake shall be screened by one of the following:
a. Perforated plate: 0.094 inch (maximum opening diameter).
b. Profile bar: 0.069 inch (maximum width opening).
c. Woven wire: 0.087 inch (maximum opening in the narrow direction).
The minimum open area for all types of fish guards is 27%. The screened intake shall consist of a facility with enough surface area to ensure that the velocity through the screen is less than 0.4 feet per second. Screen maintenance shall be adequate to prevent injury or entrapment of juvenile fish and the screen shall remain in place whenever water is withdrawn from the stream through the pump intake.

EQUIPMENT RELATED

32. All equipment used on this site that will come in contact with waters of the state, including excavator, and hand tools, shall be thoroughly cleaned before arriving at the site. All equipment that came in contact with water of the state shall also be cleaned after leaving the site and before moving to a new construction site. All water and chemicals used to clean equipment should be properly disposed of to prevent the spread of invasive species.

33. Equipment used for this project may operate below the ordinary high water line, provided the drive mechanisms (wheels, tracks, tires, etc.) shall not enter or operate below the ordinary high water line prior to bypassing the streamflow around the work site.

34. Equipment used for this project shall be free of external petroleum-based products while working around the stream. Accumulation of soils or debris shall be removed from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to its working below the ordinary high water line. Equipment shall be checked daily for leaks and any necessary repairs shall be completed prior to commencing work activities along the stream.

WATER QUALITY RELATED

35. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to construct the project. Within seven calendar days of project completion, all disturbed areas shall be protected from erosion using vegetation or other means. Within one year of project completion, the banks, shall be revegetated with native or other approved woody species. Vegetation shall be planted according to the approved planting plan and maintained as necessary for three years to ensure 80 percent survival.

36. If at any time, as a result of project activities, fish are observed in distress, a fish kill occurs, or water quality problems develop (including equipment leaks or spills), immediate notification shall be made to the Washington Military Department's Emergency Management Division at 1-800-258-5990, and to the Area Habitat Biologist listed below.

37. Erosion control methods shall be used to prevent silt-laden water from entering the stream. These may include, but are not limited to, straw bales, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas.

38. Wastewater from project activities and water removed from within the work area shall be routed to an area landward of the ordinary high water line to allow removal of fine sediment and other contaminants prior to being discharged to the stream.

39. All waste material such as construction debris, silt, excess dirt or overburden resulting from this project shall be deposited above the limits of flood water in an approved upland disposal site.

40. If high flow conditions that may cause siltation are encountered during this project, work shall stop until the flow

subsides.

41. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the stream.

42. Fresh concrete or concrete by-products shall not be allowed to enter the stream at any time during this project. All forms used for concrete shall be completely sealed to prevent the possibility of fresh concrete from getting into the stream.

43. Structures containing concrete shall be sufficiently cured prior to contact with water to avoid leaching. Fresh concrete shall not be allowed to come into contact with state waters.

LOCATION #1:	Site Name: EF Clear Creek 11643 Silverdale Way NW, Silverdale, WA 98311					
WORK START:	April 3, 2015			WORK END:	September 30, 2017	
WRIA		Waterbody:			Tributary to:	
15 - Kitsap		Clear Creek			Dyes Inlet	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
S 1/2	09	25 N	01 E	47.665278	-122.686111	Kitsap
Location #1 Driving Directions						
From WA-3 S, take exit 45 to Silverdale/Bremerton and merge onto WA-303/ NE Waaga Way for 0.4 mile. Proceed 0.4 mile at which point the road becomes Kitsap Mall Blvd NW. Turn left onto NW Randall Way and proceed 0.4 mile. Turn left onto Silverdale Way and proceed 0.6 mile. Turn left into the parking lot for the park area, which includes a skateboard park and an off-leash dog area						

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

HYDRAULIC PROJECT APPROVAL

Issued Date: April 03, 2015
Project End Date: September 30, 2017

Permit Number: 2015-6-216+01
FPA/Public Notice Number: N/A
Application ID: 2552

Failure to comply with the provisions of this Hydraulic Project Approval could result in a civil penalty of up to one hundred dollars per day and/or a gross misdemeanor charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. Minor modifications do not require you to pay additional application fees or be issued a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you do not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the control number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. Do not include payment with your request. You should allow up to 45 days for the department to process your request.

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you paid an application fee for your original HPA you must pay an additional $150 for the major modification. If you did not pay an application fee for the original HPA, no fee is required for a change to it. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you do not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the control number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, payment of the application the original application was subject to an application fee, and the requestor's signature. Send your written request and payment, if applicable, by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: April 03, 2015
Project End Date: September 30, 2017

Permit Number: 2015-6-216+01
FPA/Public Notice Number: N/A
Application ID: 2552

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-110-340 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the Washington Department of Fish and Wildlife HPA Appeals Coordinator, 600 Capitol Way North, Olympia, Washington 98501-1091; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee will conduct an informal hearing and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-110-350 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the Washington Department of Fish and Wildlife HPA Appeals Coordinator, 600 Capitol Way North, Olympia, Washington 98501-1091; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: April 03, 2015
Project End Date: September 30, 2017

Permit Number: 2015-6-216+01
FPA/Public Notice Number: N/A
Application ID: 2552

Habitat Biologist	Gina.Piazza@dfw.wa.gov		for Director
Gina Piazza	360-895-3965		WDFW

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

OCT 09 2015

Regulatory Branch

Mr. Christopher May
Kitsap County Public Works
614 Division Street
Port Orchard, Washington 98366

Reference: NWS-2015-28
Kitsap County Public Works (Clear Creek Habitat and Floodplain Restoration)

Dear Mr. May:

We have reviewed your application to restore the stream channel and floodplain connectivity in Clear Creek near Silverdale, Kitsap County, Washington. Based on the information you provided to us, Nationwide Permit (NWP) 27, *Aquatic Habitat Restoration, Establishment, and Enhancement Activities* (Federal Register February 21, 2012, Vol. 77, No. 34), authorizes your proposal as depicted on the enclosed drawings dated March 11, 2015.

In order for this authorization to be valid, you must ensure the work is performed in accordance with the enclosed *NWP 27, Terms and Conditions* and the following special conditions:

a. You must implement and abide by the Endangered Species Act (ESA) requirements and/or agreements set forth in the *Restoration Programmatic Consultation Specific Project Information Form* dated December 16, 2014. The National Marine Fisheries Service (NMFS) concurred with a finding of "may affect, not likely to adversely affect" based on this document on August 4, 2015 (NMFS Reference Number WCR-2015-2469). NMFS will be informed of this permit issuance. Failure to comply with the commitments made in this document constitutes non-compliance with the ESA and your U.S. Army Corps of Engineers permit. The NMFS is the appropriate authority to determine compliance with ESA.

b. In order to meet the requirements of the Endangered Species Act you may conduct the authorized activities from August 1 through September 30 in any year this permit is valid. You shall not conduct work authorized by this permit from October 1 through July 31 in any year this permit is valid.

c. Incidents where any individuals of fish species, marine mammals and/or sea turtles listed by National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) under the Endangered Species Act appear to be injured or killed as a result of discharges of dredged or fill material into waters of the U.S. or structures or work in navigable waters of the U.S. authorized by this Nationwide Permit verification shall be reported to NOAA Fisheries, Office of Protected Resources at (301) 713-1401 and the Regulatory Office of the Seattle District of the U.S. Army Corps of Engineers at (206) 764-3495. The finder should leave the animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously injured or killed by discharge exposure or some unnatural cause. The finder may be asked to carry out instructions provided by NOAA Fisheries to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.

To satisfy the provisions of the 2008 Fish Passage and Restoration programmatic consultation in accordance with Special Condition "a" above, please be reminded that you must provide the following information upon completion of your project:

1. Project completion date.

2. Fish capture and release report for projects requiring dewatering. (For additional details, see Appendix A "Dewatering and Fish Capture Protocol" in the Specific Project Information Form you submitted).

3. Sediment monitoring report for projects requiring in-water work, including the extent and duration of downstream turbidity impacts measured every 20 minutes during construction. (For additional details, see question I.R. of the Specific Project Information Form you submitted).

4. Turbidity reporting specifically identified in the National Marine Fisheries Service's electronic approval of the project.

5. Final planting monitoring report for projects with greater than 0.5 acre native vegetation removal. Please refer to the programmatic biological assessment, page 25, general conservation measure 4.2., located on our website at: www.nws.usace.army.mil select "Regulatory Branch, Permit Information," and then "Permit Guidebook, Endangered Species."

We have reviewed your project pursuant to the requirements of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. We have determined this project complies with the requirements of these laws provided you comply with all of the permit general and special conditions.

As part of our permit application review process, we notified Native American tribes that have an interest in this area. The Suquamish Tribe had concerns with the potential for low stream flow (due to increased stream length) and high water temperature (due to lack of mature canopy) in the proposed design and its effect on fish habitat. Based on our coordination, you agreed to provide the Suquamish Tribe (contact: Alison O'Sullivan, Suquamish Tribe Fisheries Department, P.O. Box 498 Suquamish, WA 98392) and Seattle District's Regulatory Branch with copies of post construction monitoring reports. As a reminder, this is a restoration project. NWP 27 requires that restoration projects result in net increases in aquatic resource functions and services. If issues such as high water temperature or low stream flow exist, you may need to implement contingency measures to restore compliance with NWP 27 conditions.

The authorized work complies with the Washington State Department of Ecology's (Ecology) Water Quality Certification and the Coastal Zone Management Act requirements for this NWP. No further coordination with Ecology is required.

We have prepared and enclosed a *Preliminary Jurisdictional Determination* (JD) dated August 6, 2015, which is a written indication that wetlands and waterways within your project area may be waters of the U.S. Such waters will be treated as jurisdictional waters of the U.S. for purposes of computation of impact area and compensatory mitigation requirements associated with your permit application. If you believe the Preliminary JD is inaccurate, you may request an Approved JD, which is an official determination regarding the presence or absence of waters of the U.S. If one is requested, please be aware that we may require the submittal of additional information to complete an approved JD and work authorized in this letter may not occur until the approved JD has been finalized.

Upon completing the authorized work, you must fill out and return the enclosed *Certificate of Compliance with Department of the Army Permit* form. Thank you for your cooperation during the permitting process. We are interested in your experience with our Regulatory Program and encourage you to complete a customer service survey form. This form and information about our program is available on our website at www.nws.usace.army.mil select "Regulatory Branch, Permit Information" and then "Contact Us."

A copy of this letter with enclosures will be furnished to Mr. Michael Hrachovec, Natural Systems Design, 1900 North Northlake Way, Seattle, Washington 98103. If you have any questions, please contact me at brian.d.hooper@usace.army.mil or (206) 316-3975.

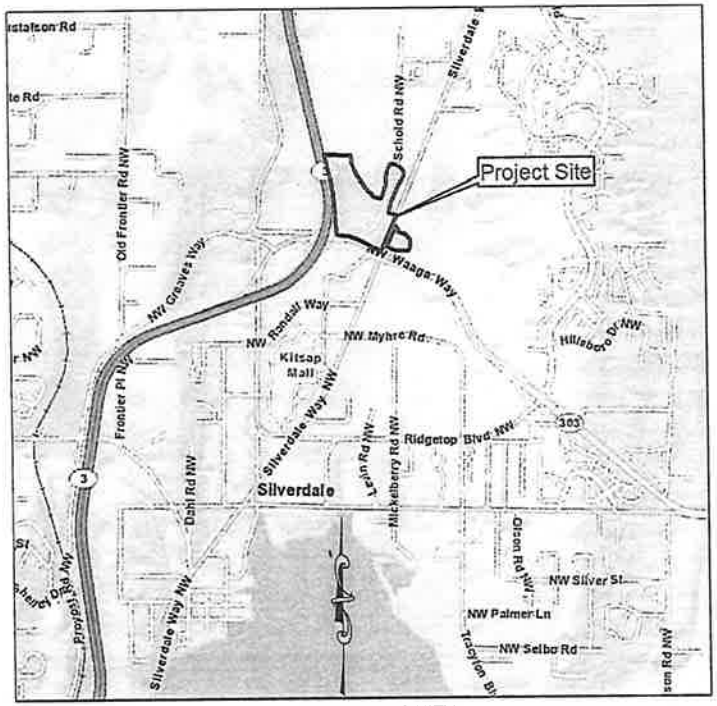
Sincerely,

Brian D. Hooper, Project Manager
Regulatory Branch

Enclosures

KITSAP COUNTY SURFACE AND STORMWATER MANAGEMENT
CLEAR CREEK FLOODPLAIN RESTORATION

SECTION 09, 16; TOWNSHIP 25 NORTH; R1 EAST; W.M.



PROJECT VICINITY

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2	GENERAL NOTES
3	CONTROL POINTS 1
4	CONTROL POINTS 2
5	LEGEND AND NOTES
6	EXISTING CONDITIONS–PROJECT SITE
7	PROPERTY AND EASEMENT BOUNDARY–NORTH
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10	TESC AND REMOVAL–WEST FORK AVULSION
11	TESC AND REMOVAL–NORTHERN WEST FORK
12	TESC AND REMOVAL–SOUTHERN WEST FORK
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14	TESC AND REMOVAL–SOUTHERN EAST FORK
15	TESC AND REMOVAL–CONFLUENCE
16	TESC AND REMOVAL–MAINSTEM WEST
17	TESC AND REMOVAL–MAINSTEM EAST
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19	TESC AND REMOVAL–DETAILS
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24	GRADING PLAN–CONFLUENCE
25	GRADING PLAN–MAINSTEM WEST
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27	GRADING PLAN–DISPOSAL AREA
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29	PROPOSED CONDITIONS–WEST FORK AVULSION
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31	PROPOSED CONDITIONS–SOUTHERN WEST FORK
32	PROPOSED CONDITIONS–NORTHERN EAST FORK
33	PROPOSED CONDITIONS–SOUTHERN EAST FORK
34	PROPOSED CONDITIONS–CONFLUENCE
35	PROPOSED CONDITIONS–MAINSTEM WEST
36	PROPOSED CONDITIONS–MAINSTEM EAST
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Received by Corps: 11 March 2015
Corps Reference: NWS-2015-28

Project Location:
North of NW Waaga Way
Between Highway 3 and
Silverdale Way NW
Latitude: 47.66528
Longitude: -122.68611

811 Know what's below. Call before you dig.

NAD 83
WASHINGTON STATE PLANE NORTH
NGVD 1929
KITSAP COUNTY BENCH MARK 1540-706 (HA-1)
ELEVATION = 34.61

BOARD OF COMMISSIONERS
EDWARD WOLFE
CHARLOTTE GARRIDO
ROBERT GELDER

PUBLIC WORKS DIRECTOR
ANDREW NELSON

APPROVED FOR CONSTRUCTION:
COUNTY ROAD ENGINEER
JONATHON L. BRAND P.E.
ASST PUBLIC WORKS DIRECTOR
DAVID TUCKER P.E.

0 Ø 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

Natural Systems Design
P.O. Box 75609
Seattle, WA 98175

REVISIONS			
No.	BY	DATE	DESCRIPTION

Received by Corps: 11 March 2015

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

MICHAEL J. HRACHOVEC
STATE OF WASHINGTON
26038
REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 18 57 WASHINGTON

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
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CLEAR CREEK
FLOODPLAIN RESTORATION

COVER
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 1 OF 73

Feb-26-2015 100% SUBMITTAL

GENERAL NOTES

1. THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF KITSAP COUNTY, HEREAFTER REFERRED TO AS "OWNER".

2. NATURAL SYSTEMS DESIGN HEREAFTER REFERRED TO AS "ENGINEER" IS RESPONSIBLE FOR THE PREPARATION OF THESE ORIGINAL PLANS AND ASSOCIATED SPECIFICATIONS; AND WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGE, OR USE, OF THESE PLANS WHICH INCLUDES ALTERATION, DELETION, OR EDITING OF THIS DOCUMENT WITHOUT EXPLICIT WRITTEN PERMISSION FROM THE ENGINEER. ANY OTHER UNAUTHORIZED USE OF THIS DOCUMENT IS PROHIBITED.

3. MINOR MODIFICATIONS ARE EXPECTED TO SUIT JOB SITE DIMENSIONS OR CONDITIONS. SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. THE OWNER, ENGINEER AND APPROPRIATE REGULATORY AGENCIES SHALL BE NOTIFIED OF ANY OWNER-AUTHORIZED CHANGE RESULTING IN MORE THAN A 10% DESIGN CHANGE OF PROPOSED FOOTPRINT OR THAT SIGNIFICANTLY AFFECTS THE INTENDED BENEFIT OR FUNCTION OF A PROJECT ELEMENT.

4. THE LOCATION OF ALL FEATURES SHOWN IS APPROXIMATE.

5. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND SPECIFICATIONS.

6. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF THE OWNER. IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD PLANS FOR CONSTRUCTION OF ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT EDITION UNLESS NOTED OTHERWISE. ALL REFERENCES TO THE "STANDARD SPECIFICATIONS" SHALL MEAN THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, CURRENT EDITION. CONSTRUCTION NOT SPECIFIED ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS OBLIGATED TO BE FAMILIAR WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS NOT DISCUSSED IN THE GENERAL NOTES. THE CONTRACT SPECIAL PROVISIONS SHALL SUPERSEDE THOSE OF THE STANDARD SPECIFICATIONS WHERE DISCREPANCIES OCCUR.

7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK; AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, GROUNDWATER, THE EQUIPMENT AND FACILITIES NEEDED FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT THEMSELVES WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE THE CONTRACTOR AND SUBCONTRACTOR(S) FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.

8. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE CONTRACT DOCUMENTS AND FOR ALL SUBMITTALS REQUIRED TO THE OWNER FOR REVIEW AND ACCEPTANCE.

PERMIT NOTES

1. EVERY REASONABLE EFFORT SHALL BE MADE TO CONDUCT THE ACTIVITIES SHOWN IN THESE PLANS, IN A MANNER THAT MINIMIZES THE ADVERSE IMPACT ON WATER QUALITY, FISH AND WILDLIFE, AND THE NATURAL ENVIRONMENT.

2. ALL WORK WILL BE IN COMPLIANCE WITH PERMIT CONDITIONS ISSUED BY PERTINENT REGULATORY AGENCIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE COPIES OF ALL PERMITS ON THE JOB SITE, UNDERSTAND AND COMPLY WITH ALL PERMIT CONDITIONS.

3. ALL WORK THAT DISTURBS THE SUBSTRATE, BANK, OR SHORE OF A WATERS OF THE STATE THAT CONTAINS FISH LIFE SHALL BE CONDUCTED ONLY DURING THE WORK PERIOD FOR THAT WATERBODY AS ALLOWED BY RELEVANT HYDRAULIC WORK PERMITS. THOSE PORTIONS OF THE PROJECT WORK THAT OCCUR OUTSIDE OR ABOVE THE ORDINARY HIGH WATER MARK (ABOVE THE USACE JURISDICTIONAL LINE) ARE NOT SUBJECT TO THE WORK PERIODS DESCRIBED ABOVE UNLESS SPECIFIED IN THE RELEVANT PERMITS.

4. ALL ACTIVITIES THAT INVOLVE WORK ADJACENT TO, OR WITHIN THE WETTED CHANNEL SHALL, AT ALL TIMES, REMAIN CONSISTENT WITH ALL APPLICABLE WATER QUALITY STANDARDS; EFFLUENT LIMITATION; AND STANDARDS OF PERFORMANCE, PROHIBITIONS, PRETREATMENT STANDARDS, AND MANAGEMENT PRACTICES ESTABLISHED PURSUANT TO THE CLEAN WATER ACT OR PURSUANT TO APPLICABLE STATE AND LOCAL LAW.

5. IF AT ANY TIME, AS A RESULT OF PROJECT ACTIVITIES, FISH ARE OBSERVED IN DISTRESS, A FISH KILL OCCURS, OR WATER QUALITY PROBLEMS DEVELOP (INCLUDING EQUIPMENT LEAKS OR SPILLS), OPERATIONS SHALL CEASE AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY.

6. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE STATE OFFICE OF HISTORIC PRESERVATION AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY.

SURVEY NOTES

1. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO OWNER A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE OWNER, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.

3. ELEVATIONS SHOWN ON THE PLANS FOR PIPE INVERTS, TOPS OF BANKS, THALWEG, GRADE CONTROLS, ETC., ARE BASED UPON THE TOPOGRAPHIC INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL NECESSARY SURFACE ELEVATIONS IN THE FIELD AND NOTIFY THE OWNER OF ANY DISCREPANCIES, WHICH MIGHT AFFECT PROPER OPERATION OF THE NEW FACILITIES BEFORE BREAKING GROUND AND PRIOR TO FACILITY INSTALLATION. THE OWNER SHALL BE CONTACTED IN THE EVENT ELEVATIONS ARE INCORRECT SO THAT THE PROPER ADJUSTMENTS CAN BE MADE BY ENGINEER PRIOR TO THE INSTALLATION OF THE FACILITIES, AS SET FORTH IN THE SPECIAL PROVISIONS.

4. TOPOGRAPHY IS BASED ON SURVEY DATA RECORDED BY N.L. OLSON & ASSOC. AND IS REPRESENTATIVE OF 2012 CONDITIONS. THE SURVEY IS BASED ON HORIZONTAL NAD83 (1991 SUPERNET) WA STATE PLANE NORTH, AND VERTICAL NGVD 1929.

EROSION, SEDIMENT CONTROL AND WATER MANAGEMENT NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.

2. A SEDIMENT AND EROSION CONTROL PLAN WILL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL BY OWNER AND/OR THE ENGINEER BEFORE ANY CONSTRUCTION MAY BEGIN. THE SEDIMENT AND EROSION CONTROL PLAN WILL IDENTIFY BEST MANAGEMENT PRACTICES TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.

3. ACTIVITIES SHALL BE DESIGNED AND CONSTRUCTED TO AVOID AND MINIMIZE ADVERSE IMPACTS TO WATERS OF THE UNITED STATES TO THE MAXIMUM EXTENT PRACTICAL THROUGH THE USE OF PRACTICAL ALTERNATIVES. ALTERNATIVES THAT SHALL BE CONSIDERED INCLUDE THOSE THAT MINIMIZE THE NUMBER AND EXTENT OF IN-WATER WORK AND EQUIPMENT CROSSINGS OF WETTED CHANNELS.

4. AT NO TIME SHALL SEDIMENT-LADEN WATER BE DISCHARGED OR PUMPED DIRECTLY INTO THE SUBJECT RIVER, STREAM, OR WETLAND. WATER SHALL BE DISCHARGED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE PROJECT PERMITS AND / OR SPECIFICATIONS.

5. IF HIGH WATER LEVEL CONDITIONS THAT CAUSE SILTATION OR EROSION ARE ENCOUNTERED DURING CONSTRUCTION, WORK SHALL STOP UNTIL THE WATER LEVEL SUBSIDES.

6. PERMIT CONDITIONS CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF EROSION AND TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED CONCENTRATIONS AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTAIN SEDIMENT ON-SITE.

7. CONTRACTOR SHALL LIMIT MACHINERY MOVEMENT TO CONSTRUCTION AREAS DEFINED ON SITE PLAN OR IDENTIFIED AS ACCEPTABLE BY THE ENGINEER OR OWNER.

8. ALL EXTERNAL GREASE AND OIL SHALL BE PRESSURE-WASHED OFF THE EQUIPMENT PRIOR TO TRANSPORT TO THE SITE.

9. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, SEDIMENTS, SEDIMENT-LADEN WATER, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE SUBJECT RIVER, STREAM, OR WETLAND.

10. THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL KIT ONSITE AT ALL TIMES.

11. NO TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS OR AS DIRECTLY SPECIFIED ON-SITE BY THE PROJECT MANAGEMENT STAFF. ALL TREES CONFLICTING WITH GRADING SHALL BE REMOVED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED UNLESS OTHERWISE APPROVED.

12. FOLLOWING CONSTRUCTION, SITE RESTORATION WILL INCLUDE ESTABLISHING LONG-TERM EROSION PROTECTION MEASURES. THESE MEASURES WILL INCLUDE PLANTINGS, EROSION CONTROL FABRIC, SEED, AND MULCH. EQUIPMENT AND EXCESS SUPPLIES WILL BE REMOVED AND THE WORK AREA WILL BE CLEANED. MAINTENANCE ACTIVITIES FOR THE NEWLY CONSTRUCTED RESTORATION PROJECTS ARE ANTICIPATED TO OCCUR PERIODICALLY.

CONSTRUCTION NOTES

1. CONTRACT DOCUMENTS REFER TO THESE PLANS.

2. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO COMPLETE ALL WORK AS INDICATED IN THE CONTRACT DOCUMENTS.

3. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 A.M. AND 6:30 P.M. UNLESS PRIOR APPROVAL IS RECEIVED FROM THE OWNER.

4. DEEPER PORTIONS OF FLOODPLAIN EXCAVATION MAY ENCOUNTER WET, GRAVELY SAND AND HIGH GROUNDWATER AND MAY REQUIRE EQUIPMENT MATS TO SUPPORT CONSTRUCTION EQUIPMENT. CONSOLIDATION OF THE GROUND SURFACE SHOULD BE EXPECTED. CONTRACTOR IS RESPONSIBLE FOR DETERMINING NEED FOR, DESIGNING, PROCURING, INSTALLING, USING AND REMOVING ANY EQUIPMENT MATS NEEDED TO ALLOW FOR EQUIPMENT OPERATION SUFFICIENT TO CONSTRUCT THE PROJECT.

5. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO PROCEEDING WITH THE WORK.

6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE BY THE OWNER OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

7. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.

8. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THIS CONTRACT.

9. THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, ROADWAY, DRAINAGE WAYS, PRIVATE BRIDGE, CULVERTS, AND VEGETATION UNTIL SUCH ITEMS ARE TO BE DISTURBED OR REMOVED AS INDICATED ON THE CONTRACT DOCUMENTS.

10. THE CONTRACTOR SHALL KEEP THE JOB SITE CLEAN AND HAZARD FREE. CONTRACTOR SHALL DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH FOR THE DURATION OF THE WORK. UPON COMPLETION OF WORK, CONTRACTOR SHALL REMOVE ALL MATERIAL AND EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY.

11. NOTES AND DETAILS ON THE PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES HEREIN.

12. DIMENSIONS CALLOUTS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE PLANS.

13. THE PLANS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF ALL CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURES, WORKS, AND THE PUBLIC DURING CONSTRUCTION.

14. MATERIAL SHALL NOT BE STORED OUTSIDE OF IDENTIFIED STAGING AREAS. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.

NOTES

1. LOCATIONS AND QUANTITIES OF BYPASS PUMPS, BYPASS PIPING, SUMP PUMPS, SUMP PUMP PIPING, AND OTHER CSEC ELEMENTS ARE IDENTIFIED FOR CONCEPTUAL UNDERSTANDING ONLY. FINAL LOCATIONS AND QUANTITIES SHALL BE DETERMINED BY CONTRACTOR AND IDENTIFIED IN THE TESC PLAN AND IN THE INCLUDED STREAM BYPASS PLAN TO BE APPROVED BY COUNTY.

2. PUMP SCREENS AND FISH EXCLUSION NETS TO CONFORM TO WDFW PERMIT REQUIREMENTS.

3. PROTECT STREAM BYPASS FROM DAMAGE BY COVERING OR BURYING WHEREVER ROUTE INTERSECTS WITH CONSTRUCTION ACTIVITIES.

4. ALL AREAS TO BE GRADED WITHIN GRADING LIMIT LINE SHALL BE CLEARED AND GRUBBED. ALL AREAS NOT TO BE GRADED BUT WITHIN CONSTRUCTION/CLEARING LIMIT SHALL BE CLEARED AND GRUBBED OF INVASIVES PLANTS ONLY. INVASIVE PLANTS AND ROOTS SHALL BE DISPOSED OF OFFSITE. INVASIVE SPECIES INCLUDE BUT ARE NOT LIMITED TO: KNOTWEED SPECIES, HIMALAYAN BLACKBERRY, EVERGREEN BLACKBERRY, YELLOW FLAG IRIS, BITTERSWEET NIGHTSHADE, HEDGE BINDWEED (MORNING GLORY), BAMBOO, POLICEMAN'S HELMET, ENGLISH IVY, AND REED CANARYGRASS.

5. PROTECT EXISTING SEWER AND MAINTENANCE HOLES FROM DAMAGE.

6. APPROXIMATE CLEAR CREEK FLOWS

RECURRANCE INTERVAL	MAINSTEM FLOW (CFS)	WEST FORK FLOW (CFS)	EAST FORK FLOW (CFS)
BASE FLOW	8.8	4.5	3.8
2-YR	167	78	85
10-YR	296	140	151
100-YR	475	226	244

NWS-2015-28

Feb-26-2015 100% SUBMITTAL

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

Natural Systems Design
P.O. Box 15609
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

Received by Corps: 11 March 2015

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(350) 337-4867

CLEAR CREEK
FLOODPLAIN RESTORATION
GENERAL NOTES

KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

STREAM CONTROL DATA – WEST FORK

STATION	NORTHING	EASTING	CENTERLINE ELEVATION	THALWEG OFFSET	THALWEG EL	TOP OF BANK EL
27+93	248919.8	1184051.1	38.3			39
27+68	248903.2	1184067.1	38			39
27+42	248879	1184058.7	37.4			39
27+10	248848.2	1184058.6	36.9			38
23+63	248600.6	1184100.8	35.4			37.1
23+43	248589.3	1184116.2	35.2	4.94'	32.6	36.9
23+22	248600.4	1184132.3	35.4			36.8
23+00	248620.5	1184142.5	35.3			36.8
22+82	248634.4	1184154	35.2			36.8
22+59	248654.8	1184162.5	35			36.7
22+46	248663	1184173	34.4	-3.18'	32.5	36.6
22+20	248657.5	1184197.3	35			36.4
22+05	248652.2	1184212.1	35			36.4
21+80	248632.4	1184226	34.8	-2.78'	32.8	36.2
21+59	248612.2	1184222.7	34.7			36.1
21+35	248588.6	1184224.9	32.3			36
20+93	248548.8	1184218.8	34.1	-4.19'	32.3	35.7
20+50	248534.5	1184179	34.1			35.7
19+96	248483.2	1184168.5	32.7			35.5
19+62	248451.4	1184181	33.8			35.2
19+37	248429.9	1184190.6	33.3	4.69'	30.2	35.2
19+08	248437.5	1184216	33.4			35
18+65	248469.2	1184243.8	33.3			34.8
18+35	248488	1184264.4	32.8	-5.84'	30.7	34.6
17+95	248452.9	1184280.4	32.9			34.3
17+60	248417.8	1184282.8	32.8			34.2
17+24	248385.1	1184268.3	32.6			34.4
16+78	248343.8	1184253.7	32.2			34.2
16+50	248326.6	1184275.3	32.2			34
16+28	248315.8	1184293.9	32			33.6
15+86	248280.1	1184310.7	31.6			33.8
15+75	248270.2	1184313.5	31.3	4.67'	29.9	33.7
15+37	248263.9	1184350.5	31.4			33.1
15+05	248264.7	1184373.6	31.3			33
14+78	248218.7	1184369.4	31.2			33.4
14+46	248187.6	1184371	30.8	5.72'	28.8	33.2
14+11	248168.6	1184400.1	31			32.8
13+80	248153.2	1184426.4	30.9			32.9

STREAM CONTROL DATA – MAINSTEM

STATION	NORTHING	EASTING	CENTERLINE ELEVATION	THALWEG OFFSET	THALWEG EL	TOP OF BANK EL
08+47	248001.2	1184468.2	28.8	7.13'	26.7	31.1
08+11	248000.1	1184904	28.8			30.8
07+70	247982.6	1184939.7	28.6	-9.76'	25.9	30.6
07+26	247943.1	1184957.6	28.5			30.4
06+88	247908.8	1184945.6	28.1	-6.55'	25.9	30.3
06+39	247884.3	1184903.4	28.2			30.3
05+96	247846.3	1184885.1	27.9	5.24'	25.2	30.1
05+41	247799.2	1184910.2	27.8			29.9
04+74	247757.7	1184957.9	27.2	7.17'	25.1	29.7
04+16	247784.9	1185005.6	27.4			29.5
03+72	247817.3	1185034.2	27.2			29.4
03+39	247821	1185066.5	26.9	-9.07'	24.5	29.3
02+95	247792.4	1185099.1	27			29.1
02+37	247739.4	1185111.4	26.4	-4.50'	24.2	28.9
01+82	247700.7	1185073.3	26.6			29
01+20	247644.5	1185065.9	26.3	6.28'	23.8	28.7
00+35	247575.9	1185102.7	26.3			28.2

STREAM CONTROL DATA – EAST FORK

STATION	NORTHING	EASTING	CENTERLINE ELEVATION	THALWEG OFFSET	THALWEG EL	TOP OF BANK EL
100+27	248314.1	1184321	31.9			33.5
100+57	248333.6	1184342.6	31.9	-6.58'	29.5	33.3
100+81	248364.3	1184331.3	31.2			33.6
101+22	248394.7	1184333.3	32			33.4
101+52	248423.9	1184336.3	31	4.16'	30.6	33.8
101+87	248438.5	1184369.4	32.1			33.8
102+41	248428.9	1184422.2	32.2	-1.84'	30.3	33.7
102+80	248447.4	1184456	30.7			34
102+99	248450.2	1184474.8	32.3			33.8
103+39	248471.5	1184504.1	32.5			34.2
103+73	248466.3	1184540.5	32.5			34.3
104+07	248445.5	1184566.8	32.5	-2.17'	30.5	34.1
104+40	248462.4	1184590.3	32.7			34.2
104+59	248479.8	1184597.2	32.7			34.4
104+93	248502.2	1184622	32.7	-3.05'	31.2	34.3
105+28	248533.5	1184609.5	32.9			34.5
105+66	248570.3	1184612.1	32.9	2.87'	31.8	34.6
105+94	248585.7	1184635.3	33.1			34.7
106+25	248594.4	1184664.5	32.3			34.6
106+71	248632.7	1184685.7	31.6			34.8
107+21	248682	1184691.3	33.3			35
107+58	248742.8	1184735.3	33.5			35
108+21	248765.8	1184732.3	32			35.1
108+83	248801.1	1184709.5	33.6			35.2
109+01	248837	1184701	32.8	2.40'	32.4	35.3
109+39	248864.9	1184724.4	33.8			35.4
109+91	248890.5	1184768	33.8	-2.31'	31.8	35.5
110+13	248916.3	1184771.8	33.9			35.6
110+45	248942.3	1184764.8	32.5			35.6
110+80	248975.5	1184775.1	34			35.7
111+11	249004	1184787.2	34.2			35.8
111+52	249017.8	1184824.6	34.2			35.9
111+92	249047.2	1184850.1	34.3	-2.22'	32.5	36
112+25	249079.1	1184846.7	34.5			36.1
112+53	249102.4	1184830.5	32.5			36.1
112+94	249142	1184826.5	34.1			36.2
113+27	249173.3	1184815.4	34.1			36.3

FLOODPLAIN CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION
FCP–1	249385.59	1183936.29	44.7
FCP–2	249112.94	1184007.62	43.4
FCP–3	249079.47	1184014.83	44.2
FCP–4	249055.93	1183980.30	43.1
FCP–5	249048.01	1184049.17	43.0
FCP–6	249033.32	1183988.34	42.8
FCP–7	249047.32	1184131.70	40.7
FCP–8	248958.05	1184176.77	40.4
FCP–9	248976.71	1184113.50	40.6
FCP–10	248968.82	1184104.57	42.6
FCP–11	248922.57	1184065.67	39.9
FCP–12	248923.05	1184160.50	40.4
FCP–13	248875.20	1184069.80	39.2
FCP–14	248844.51	1184081.02	39.1
FCP–15	248881.45	1184198.37	40.4
FCP–16	248824.39	1184189.12	39.8
FCP–17	248812.55	1184187.56	41.9
FCP–18	248758.50	1184220.27	40.0
FCP–19	248749.56	1184139.99	41.5
FCP–20	248683.33	1184128.72	38.2
FCP–21	248710.65	1184193.72	40.2
FCP–22	248730.10	1184267.94	37.3
FCP–23	248634.74	1184238.36	38.3
FCP–24	248552.97	1184164.18	34.6
FCP–25	248587.81	1184141.27	38.6
FCP–26	248587.27	1184290.78	38.2
FCP–27	248547.26	1184275.91	34.1
FCP–28	248647.95	1184331.18	38.7
FCP–29	248596.49	1184344.65	38.4
FCP–30	248560.05	1184346.87	36.2
FCP–31	248518.70	1184346.83	35.9
FCP–32	248513.16	1184354.55	39.6
FCP–33	248493.63	1184347.04	35.6
FCP–34	248498.67	1184292.23	36.6
FCP–35	248424.52	1184220.80	37.5
FCP–36	248392.13	1184233.92	33.8
FCP–37	249306.92	1184889.13	43.2
FCP–38	249200.52	1184859.85	37.9

CROSS SECTION CONTROL POINTS

CROSS SECTION	NORTHING	EASTING
A	249081.41	1184140.29
A'	249019.51	1183918.97
B	248954.59	1184220.28
B'	248848.23	1184018.68
C	248779.51	1184291.13
C'	248501.38	1184039.34
D	248585.72	1184401.03
D'	248443.61	1184101.28
E	248471.22	1184212.17
E'	248391.80	1184180.71
F	248302.31	1184391.50
F'	248299.27	1184281.62
G	248269.44	1184441.85
G'	248030.83	1184241.12
H	248199.21	1184427.99
H'	248129.98	1184370.21
I	248709.34	1183651.84
I'	248723.34	1183949.28
J	248396.57	1184392.86
J'	248466.19	1184376.12
K	248354.39	1184522.91
K'	248530.48	1184547.72
L	248591.69	1184753.80
L'	248638.10	1184571.03
M	249118.02	1185006.79
M'	249195.02	1184762.03
N	248060.68	1184908.52
N'	247965.91	1184761.05
O	248052.45	1185088.20
O'	247855.86	1184750.07
P	247894.50	1185040.80
P'	247766.48	1184833.52
Q	247825.12	1185158.46
Q'	247682.97	1184928.68
R	247669.20	1185132.75
R'	247592.64	1185008.78

CONSTRUCTION LIMIT CONTROL POINTS

POINT #	NORTHING	EASTING
CL-1	248983.0	1183644.8
CL-2	249766.6	1183487.0
CL-3	249467.2	1183520.0
CL-4	249284.6	1183806.4
CL-5	249300.6	1183631.4
CL-6	248843.0	1183740.1
CL-7	248805.7	1183655.3
CL-8	248511.7	1183687.0
CL-9	248607.9	1183735.1
CL-10	248428.6	1183744.0
CL-11	248168.4	1183924.2
CL-12	247821.9	1184612.0
CL-13	247864.4	1184634.3
CL-14	248003.9	1184386.7
CL-15	248446.5	1184707.7
CL-16	248441.9	1184618.4
CL-17	248465.0	1184809.5
CL-18	248484.5	1184733.7
CL-19	248490.6	1184720.3
CL-20	249008.8	1184537.5
CL-21	249017.7	1184985.0
CL-22	249029.2	1184972.5
CL-23	249219.1	1185047.4
CL-24	249003.6	1185011.3
CL-25	249065.7	1184958.2
CL-26	249066.0	1184937.0
CL-27	249469.2	1184903.3
CL-28	249469.7	1184903.3
CL-29	249366.8	1184901.9
CL-30	249354.1	1184898.2
CL-31	249353.5	1184884.3
CL-32	249265.3	1184830.9
CL-33	249262.6	1184781.6
CL-34	249210.2	1184754.4
CL-35	249142.7	1184803.3
CL-36	248586.7	1184588.8
CL-37	248557.2	1184581.9
CL-38	248500.5	1184378.3
CL-39	248203.1	1184855.8
CL-40	248060.4	1184938.1
CL-41	248032.6	1185194.5
CL-42	247506.3	1185160.9
CL-43	247509.8	1185105.1
CL-44	247567.7	1185003.8
CL-45	247058.1	1184958.0
CL-46	247736.7	1184847.4
CL-47	247814.1	1184669.3
CL-48	247848.5	1184681.9
CL-49	247825.0	1184711.2
CL-50	247768.6	1184660.0
CL-51	248775.6	1184657.4

NOTES:

1. CONTROL POINT COORDINATES BASED ON THE HORIZONTAL DATUM NAD83 WASHINGTON STATE PLANE NORTH ZONE (FT), AND VERTICAL DATUM NGVD 29 (FT).

NWS-2015-28

0 0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

Natural Systems Design
P.O. Box 15609
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

Received by Corps: 11 March 2015

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK
FLOODPLAIN RESTORATION
CONTROL POINTS
STREAM AND FLOODPLAIN
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 3 OF 73

Feb-26-2015 100% SUBMITTAL

LOG CONTROL POINT TABLE

LCP-#	ELEVATION	NORTHING	EASTING	STA	STRUCTURE
LCP-1	35.1	249587.5	1183585.3		LCP-1
LCP-2	40.9	249025.6	1183986.6	33+24.80	BED LOG
LCP-3		248918.4	1183949.5	32+92.60	INSTREAM LOG
LCP-4		248895.4	1183984.3	32+23.53	INSTREAM LOG
LCP-5		248888.4	1183911.5	29+69.49	INSTREAM LOG
LCP-6		248866.2	1183985.6	28+89.61	INSTREAM LOG
LCP-7		248850.9	1184062.5	27+23.90	LOG COMPLEX
LCP-8		248838.6	1184033.3	26+81.96	INSTREAM LOG
LCP-9		248792.9	1184010.7	25+21.38	INSTREAM LOG
LCP-10		248745.8	1184037.8	25+51.78	INSTREAM LOG
LCP-11		248688.1	1184029.2	24+91.16	INSTREAM LOG
LCP-12		248645.1	1184050.9	24+32.07	INSTREAM LOG
LCP-13	34.4	248581.1	1184118.6	23+41.79	CORNER STRUCTURE A
LCP-14	35.3	248616.8	1184134.1	23+04.94	BED LOG
LCP-15		248625.9	1184138.2	22+98.58	OBSTRUCTION LOG
LCP-16	34.7	248667.3	1184169.7	22+47.85	CORNER STRUCTURE B
LCP-17	34.9	248547.4	1184224.5	21+92.71	CORNER LOG
LCP-18	34.2	248589.9	1184225.4	21+36.98	LOG COMPLEX
LCP-19	34.3	248542.7	1184220.7	20+90.84	CORNER STRUCTURE B
LCP-20		248541.8	1184178.9	20+53.77	OBSTRUCTION LOG
LCP-21		248481.9	1184169.8	19+94.71	LOG COMPLEX
LCP-22	33.8	248455.5	1184174.2	19+68.35	BED LOG
LCP-23	32.6	248421.8	1184185.9	19+36.97	CORNER STRUCTURE A
LCP-24		248462.6	1184237.0	18+76.56	LOG COMPLEX
LCP-25	32.1	248499.8	1184258.5	18+35.91	CORNER STRUCTURE A
LCP-26	32.9	248468.9	1184282.9	18+09.48	BED LOG
LCP-27	32.9	248462.0	1184284.9	18+04.62	BED LOG
LCP-28	32.9	248450.1	1184281.2	17+92.21	SPANNING LOG
LCP-29	32.9	248443.6	1184282.2	17+86.02	SPANNING LOG
LCP-30		248432.7	1184291.7	17+74.13	INSTREAM LOG
LCP-31		248370.5	1184262.6	17+07.44	LOG COMPLEX
LCP-32	32.4	248358.3	1184253.2	16+92.02	BED LOG
LCP-33	32.4	248344.8	1184247.4	16+81.05	CORNER STRUCTURE B
LCP-34	32.1	248320.6	1184288.1	16+35.23	SPANNING LOG
LCP-35	32.1	248316.7	1184293.3	16+28.77	SPANNING LOG
LCP-36	31.6	248292.4	1184310.6	15+98.29	SPANNING LOG
LCP-37	31.5	248286.4	1184310.6	15+92.52	SPANNING LOG
LCP-38	31.6	248280.4	1184310.2	15+85.40	SPANNING LOG
LCP-39	31.5	248263.0	1184309.9	15+73.15	CORNER LOG
LCP-40		248255.8	1184341.3	15+47.13	OBSTRUCTION LOG
LCP-41		248270.9	1184342.3	15+43.10	OBSTRUCTION LOG
LCP-42	31.3	248270.8	1184359.5	15+32.31	BED LOG
LCP-43	31.3	248267.5	1184366.7	15+24.76	BED LOG
LCP-44	31.3	248251.1	1184378.5	15+10.03	CORNER STRUCTURE B
LCP-45	31.3	248228.5	1184371.8	14+88.43	SPANNING LOG
LCP-46	31.3	248222.2	1184370.4	14+82.05	SPANNING LOG
LCP-47	31.3	248216.5	1184370.6	14+76.31	SPANNING LOG
LCP-48	31.2	248211.2	1184361.9	14+69.16	BED LOG
LCP-49	30.1	248154.0	1184360.2	14+45.34	CORNER STRUCTURE A
LCP-50A		247981.2	1184867.4	8+41.76	MAINSTEM ELJ
LCP-50B		247969.5	1184840.5		MAINSTEM ELJ
LCP-50C		247964.1	1184895.3		MAINSTEM ELJ
LCP-50D	28.9	247967.1	1184853.0		MAINSTEM ELJ
LCP-50E	29.0	247952.9	1184882.1		MAINSTEM ELJ

LOG CONTROL POINT TABLE

LCP-#	ELEVATION	NORTHING	EASTING	STA	STRUCTURE
LCP-51A		247996.6	1184944.0	7+78.19	MAINSTEM ELJ
LCP-51B		247976.3	1184961.3		MAINSTEM ELJ
LCP-51C		248012.3	1184919.5		MAINSTEM ELJ
LCP-51D	28.6	247986.6	1184950.7		MAINSTEM ELJ
LCP-51E	28.7	248005.4	1184931.5		MAINSTEM ELJ
LCP-52A		247901.0	1184956.7	6+91.26	MAINSTEM ELJ
LCP-52B		247883.1	1184935.0		MAINSTEM ELJ
LCP-52C		247925.9	1184969.8		MAINSTEM ELJ
LCP-52D	28.4	247893.7	1184945.1		MAINSTEM ELJ
LCP-52E	28.5	247914.3	1184963.7		MAINSTEM ELJ
LCP-53A		247847.1	1184871.1	5+95.28	MAINSTEM ELJ
LCP-53B		247874.7	1184876.5		MAINSTEM ELJ
LCP-53C		247819.6	1184876.7		MAINSTEM ELJ
LCP-53D	27.0	247860.1	1184875.5		MAINSTEM ELJ
LCP-53E	28.0	247832.8	1184874.2		MAINSTEM ELJ
LCP-54A		247745.1	1184960.7	4+71.03	MAINSTEM ELJ
LCP-54B		247750.2	1184933.0		MAINSTEM ELJ
LCP-54C		247751.3	1184988.1		MAINSTEM ELJ
LCP-54D	27.0	247749.4	1184947.5		MAINSTEM ELJ
LCP-54E	27.6	247748.5	1184975.0		MAINSTEM ELJ
LCP-55A		247833.3	1185078.6	3+35.40	MAINSTEM ELJ
LCP-55B		247817.8	1185102.1		MAINSTEM ELJ
LCP-55C		247838.4	1185051.0		MAINSTEM ELJ
LCP-55D	27.1	247824.1	1185088.9		MAINSTEM ELJ
LCP-55E	27.1	247835.8	1185064.5		MAINSTEM ELJ
LCP-56A		247724.6	1185122.7	3+38.08	MAINSTEM ELJ
LCP-56B		247711.2	1185107.0		MAINSTEM ELJ
LCP-56C		247752.2	1185128.0		MAINSTEM ELJ
LCP-56D	26.8	247724.0	1185113.5		MAINSTEM ELJ
LCP-56E	26.9	247749.0	1185125.3		MAINSTEM ELJ
LCP-57A		247634.5	1185047.2	1+13.84	MAINSTEM ELJ
LCP-57B		247662.0	1185041.3		MAINSTEM ELJ
LCP-57C		247611.5	1185053.4		MAINSTEM ELJ
LCP-57D	26.4	247648.0	1185046.4		MAINSTEM ELJ
LCP-57E	26.4	247622.0	1185056.4		MAINSTEM ELJ
LCP-58		249184.0	1184817.2	113+36.33	OBSTRUCTION LOG
LCP-59		249167.9	1184812.8	113+24.60	OBSTRUCTION LOG
LCP-60	34.4	249161.9	1184820.4	113+14.57	SPANNING LOG
LCP-61	34.4	249157.5	1184827.8	113+07.90	BED LOG
LCP-62		249112.4	1184828.6	112+63.84	LOG COMPLEX
LCP-63	34.4	249054.0	1184857.5	111+99.55	CORNER STRUCTURE B
LCP-64		249008.4	1184815.3	111+40.57	OBSTRUCTION LOG
LCP-65		249018.8	1184802.4	111+31.19	OBSTRUCTION LOG
LCP-66	34.2	249017.2	1184793.5	111+22.0	BED LOG
LCP-67		248953.1	1184763.9	110+54.62	LOG COMPLEX
LCP-68		248889.9	1184769.7	109+91.01	INSTREAM LOG
LCP-69	33.8	248873.1	1184749.9	109+56.52	SPANNING LOG
LCP-70	33.8	248870.6	1184741.6	109+58.55	SPANNING LOG
LCP-71	33.8	248870.4	1184732.9	109+48.83	OBSTRCUTION LOG
LCP-72	33.6	248846.0	1184696.7	109+07.17	CORNER STRUCTURE B
LCP-73		248774.7	1184729.1	108+30.68	LOG COMPLEX
LCP-74	33.6	248735.0	1184739.1	107+91.57	CORNER STRUCTURE B
LCP-75	33.4	248722.7	1184721.2	107+70.96	BED LOG

LOG CONTROL POINT TABLE

LCP-#	ELEVATION	NORTHING	EASTING	STA	STRUCTURE
LCP-76		248710.9	1184707.8	107+52.94	OBSTRUCTION LOG
LCP-77		248642.6	1184682.9	106+81.54	LOG COMPLEX
LCP-78		248593.4	1184666.1	106+25.74	INSTREAM LOG
LCP-79	32.8	248573.5	1184658.6	105+66.39	CORNER STRUCTURE B
LCP-80		248510.5	1184616.2	105+03.02	OBSTRUCTION LOG
LCP-81		248495.3	1184621.9	104+86.35	INSTREAM LOG
LCP-82		248478.7	1184604.8	104+65.52	OBSTRUCTION LOG
LCP-83	32.7	248441.0	1184567.5	104+06.64	CORNER STRUCTURE B
LCP-84		248443.9	1184459.9	102+63.85	LOG COMPLEX
LCP-85		248427.9	1184417.3	102+36.37	INSTREAM LOG
LCP-86		248438.7	1184409.4	102+25.07	OBSTRUCTION LOG
LCP-87		248439.7	1184404.9	102+20.61	OBSTRUCTION LOG
LCP-88	31.2	248431.7	1184336.7	101+55.37	CORNER STRUCTURE B
LCP-89	32.0	248404.4	1184328.9	101+32.16	BED LOG
LCP-90	32.0	248401.0	1184328.4	101+28.93	BED LOG
LCP-91		248385.0	1184327.9	101+11.16	OBSTRUCTION LOG
LCP-92		248378.4	1184329.2	101+04.95	SPANNING LOG
LCP-93		248369.7	1184325.0	100+97.33	INSTREAM LOG
LCP-94	30.8	248323.1	1184348.9	100+54.07	CORNER STRUCTURE A

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Feb-26-2016 100% SUBMITTAL

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REVISIONS			
No.	BY	DATE	DESCRIPTION

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CLEAR CREEK
FLOODPLAIN RESTORATION
CONTROL POINTS
LOG STRUCTURES
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

NOTES
1. CONSTRUCTION SEQUENCE AND BMPS: CONSTRUCTION SEQUENCE AND SITE-SPECIFIC SWPPP TO BE DEVELOPED BY CONTRACTOR, REVIEWED BY OWNER AND PERMITTING AGENCIES AND MODIFIED AS NEEDED TO SATISFY OWNER AND PERMITTING AGENCIES. THE FOLLOWING SEQUENCE OUTLINES A POTENTIAL CONSTRUCTION SEQUENCE AND IDENTIFIES ASSOCIATED BMPS TO ACHIEVE A MINIMUM POTENTIAL LEVEL OF EFFORT THAT MAY BE ACCEPTABLE. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF BMPS TO ENSURE COMPLIANCE WITH PERMITS. ADDITIONAL BMPS BEYOND THOSE LISTED HERE MAY BE REQUIRED.

CONSTRUCTION ELEMENT	BMPS
STAKE OUT CONSTRUCTION LIMITS	CONSTRUCTION STAKING AND FLAGGING
INSTALL CONSTRUCTION ENTRANCES, TRAIL CLOSURES AND CONSTRUCTION FENCING, TREE PROTECTION, IDENTIFY MATERIAL STAGING AREAS	2 CONSTRUCTION ENTRANCES WITH PORTABLE TIRE WASH UNITS, ORANGE CONSTRUCTION FENCING ALONG PERIMETERS AND TREES TO BE PROTECTED, FOUR TRAIL CLOSURES.
INSTALL SILT FENCE ALONG DOWNSLOPE PERIMETERS OF AREAS TO BE GRADED ALONG PORTIONS CONSTRUCTION LIMIT AS SHOWN	INSTALL SILT FENCE AS PERIMETER PROTECTION BETWEEN EDGE OF EXISTING STREAM CHANNEL AND FLOODPLAIN GRADING
REMOVE FENCING, OVERHEAD POWER LINES AND POLES, CULVERTS AS SHOWN. REMOVE TRASH AND DEBRIS ENCOUNTERED DURING CLEAR AND GRUB AND/OR EXCAVATION	DISPOSE OF WASTE MATERIAL IN LEGAL DISPOSAL SITE, MAINTAINING CONSTRUCTION ENTRANCES TO ENSURE NO OFF-SITE TRACKING OF SOIL.
CLEAR TREES SHOWN TO BE REMOVED	STOCKPILE TREES LARGER THAN 12" DBH FOR INCORPORATION INTO LOG STRUCTURES, CHIP SMALLER TREES AND STOCKPILE ARBORIST WOOD CHIP MULCH TO BE APPLIED LATER
MONITOR WATER QUALITY AND SOIL EROSION/SEDIMENTATION CONDITIONS CONTINUALLY ON SITE WITHIN THE PROJECT AREA	IF TURBIDITY OCCURS WITHIN CLEAR CREEK WHICH RESULTS FROM EROSION OF SOILS WITHIN PROJECT SITE, IDENTIFY SOURCE OF SOIL EROSION AND STABILIZE SOILS TO ELIMINATE EROSION AND TRANSPORT OF SEDIMENT OFF-SITE. STOP WORK IN THE AREA ASSOCIATED WITH THE EROSION UNTIL SOILS ARE STABILIZED. MAINTAIN CONSTRUCTION ENTRANCES AND TIRE WASHES AND CLEAN VEHICLES TO ENSURE NO MATERIAL IS TRACKED OFF-SITE AND/OR ONTO SILVERDALE WAY. IF TRACKING OCCURS, SWEEP OR VACUUM MATERIAL OFF ROADWAYS - WASHING OF ROADWAYS IS NOT PERMITTED.
AVULSION AREA - GRADE STREAM CHANNEL AND INSTALL LOGS, INSTALL COIR LOGS AND REMOVE CHANNEL-BLOCKING FENCE AND DEBRIS.	INSTALL FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR. STABILIZE SOILS WHEN COMPLETE WITH GRASS SEED AND STRAW.
MAINSTEM - CLEAR INVASIVE PLANTS, GRADE FLOODPLAIN AREA, HAUL CUT TO DISPOSAL AREA, CONSTRUCT PORTIONS OF PROPOSED MAIN STEM AS POSSIBLE WITH FLOW IN EXISTING CHANNEL, THEN ACTIVATE BYPASS PUMPS AND COMPLETE CONSTRUCTION OF PROPOSED CHANNEL AND FLOODPLAIN IN DRY CONDITIONS, REMOVE ASPHALT, INSTALL BRIDGE 3, TRAIL AND ROADWAY.	LIMIT TOTAL AREA OF BARE SOILS TO 5 ACRES IN DRY MONTHS (MAY - SEPT) AND 1 ACRE IN WET MONTHS (OCT - APR). COMPACT FILL AS SPECIFIED, MAINTAIN VEGETATIVE BUFFER BETWEEN GRADING AREA AND EXISTING CHANNEL. USE TRUCK WASH AND TRUCK BRUSH-DOWNS TO ENSURE NO SOIL IS TRACKED ONTO ROADWAYS. HAUL ASPHALT TO COUNTY ASPHALT RECYCLING FACILITY AS DIRECTED. INSTALL MAINSTEM FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR. COVER FLOODPLAIN CUT AND FILL AREAS WITH COARSE COMPOST AND ARBORIST WOOD CHIP MULCH OR HYDROSEED AS SPECIFIED AS FINAL GRADE IS ACHIEVED. ENSURE NO BARE SOIL IS VISIBLE AT COMPLETION OF MULCH APPLICATION.
WEST FORK - CLEAR INVASIVE PLANTS, GRADE FLOODPLAIN AREA, HAUL CUT TO DISPOSAL AREA, HAUL IN LOGS FROM MAINSTEM AREA, CONSTRUCT PROPOSED WEST FORK AND CONFLUENCE CHANNEL IN DRY CONDITIONS, INSTALL BRIDGE 1.	LIMIT TOTAL AREA OF BARE SOILS TO 5 ACRES IN DRY MONTHS (MAY - SEPT) AND 1 ACRE IN WET MONTHS (OCT - APR). COMPACT FILL AS SPECIFIED, MAINTAIN 50 FT LONG PLUG OF SOIL BETWEEN EXISTING CHANNEL AND PROPOSED CHANNEL, MAINTAIN VEGETATIVE BUFFER BETWEEN GRADING AREA AND EXISTING CHANNEL. USE TRUCK WASH AND TRUCK BRUSH-DOWNS TO ENSURE NO SOIL IS TRACKED ONTO ROADWAYS. COVER FLOODPLAIN CUT AND FILL AREAS WITH COARSE COMPOST AND ARBORIST WOOD CHIP MULCH OR HYDROSEED AS SPECIFIED AS FINAL GRADE IS ACHIEVED. ENSURE NO BARE SOIL IS VISIBLE AT COMPLETION OF MULCH APPLICATION.
EAST FORK - CLEAR INVASIVE PLANTS, REMOVE ASPHALT AND ROAD FILL, GRADE FLOODPLAIN AREA, HAUL CUT TO DISPOSAL AREA, HAUL IN LOGS FROM MAINSTEM AREA, CONSTRUCT PROPOSED EAST FORK AND TIE INTO CONFLUENCE CHANNEL IN DRY CONDITIONS, INSTALL BRIDGE 2 AND TRAIL TO DOG PARK INCLUDING TRAIL PRISM AND MINI-CRIBLOCK STRUCTURES.	LIMIT TOTAL AREA OF BARE SOILS TO 5 ACRES IN DRY MONTHS (MAY - SEPT) AND 1 ACRES IN WET MONTHS (OCT - APR). COMPACT FILL AS SPECIFIED. HAUL ASPHALT TO COUNTY ASPHALT RECYCLING FACILITY AS DIRECTED. USE TRUCK WASH AND TRUCK BRUSH-DOWNS TO ENSURE NO SOIL IS TRACKED ONTO ROADWAYS. INSTALL EAST FORK FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR. COVER FLOODPLAIN CUT AND FILL AREAS WITH COARSE COMPOST AND ARBORIST WOOD CHIP MULCH OR HYDROSEED AS SPECIFIED AS FINAL GRADE IS ACHIEVED. ENSURE NO BARE SOIL IS VISIBLE AT COMPLETION OF MULCH APPLICATION. PAVE FINAL TRAIL SURFACES.
WEST FORK - REMOVE SOIL PLUG AND CONSTRUCT FINAL 50 FT OF CHANNEL TO TRANSFER FLOW INTO PROPOSED CHANNEL, INSTALL LOGS IN UPSTREAM SEGMENT OF EXISTING WEST FORK CHANNEL.	INSTALL WEST FORK FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR.

TESC/REMOVAL LEGEND:

- REMOVE STRUCTURE/PAVEMENT
- REMOVE TREE
- TREE TO BE PROTECTED
- CL — LIMIT OF CONSTRUCTION/ CLEARING LIMIT
- CL — LIMIT OF GRADING
- WL — DELINEATED WETLAND BOUNDARY
- OHWM — ORDINARY HIGH WATER MARK-PROPOSED
- PROPERTY BOUNDARY
- OHWM — ORDINARY HIGH WATER MARK-EXISTING
- PROJECT BOUNDARY
- PROPOSED MAJOR CONTOUR (5' INTERVALS)
- PROPOSED MINOR CONTOUR (1' INTERVALS)
- EXISTING MAJOR CONTOUR (5' INTERVALS)
- EXISTING MINOR CONTOUR (1' INTERVALS)
- EXISTING PAVED SURFACE
- NEW PAVED SURFACE
- RETAINING WALL ALONG TRAIL
- EXISTING CREEK (C/L IS APPROX.)
- EXISTING CHAIN LINK FENCE
- EXISTING BARBED WIRE FENCE
- EXISTING GUARD RAIL
- EXISTING DITCH
- EXISTING UTILITIES POLE & GUY ANCHOR
- EXISTING TRAFFIC SIGNAL
- EXISTING POWER VAULT
- EXISTING ELECTRICAL JUNCTION BOX
- EXISTING TELEPHONE RISER
- EXISTING WATER VALVE
- EXISTING WATER METER
- WETLAND FLAG NUMBER
- WETLAND SOIL BORING / TEST PIT
- BOLLARDS IN CONCRETE
- OH — OH — OVERHEAD UTILITIES LINE
- W — W — APPROX. LOCATION WATER LINE
- GAS — GAS — APPROX. LOCATION GAS LINE
- T — T — APPROX. LOCATION TELEPHONE LINE
- TREE LINE
- DEWATERING DISCHARGE
- CONSTRUCTION EASEMENT
- ORANGE CONSTRUCTION FENCE
- STREAM BYPASS
- SF — SF — SILT FENCE
- PUMP — STREAM BYPASS PUMP
- TW — TIRE WASH
- CE — CONSTRUCTION ENTRANCE
- TC — TRAIL CLOSURE
- STAGING AREA
- CONSTRUCTION ACCESS
- D — DEWATERING SUMP
- ST — SETTLING TANK
- SOIL TEST PIT LOCATION
- PI — SHORT TERM STREAM BYPASS PUMP INTAKE
- SPLIT RAIL FENCE
- FLOODPLAIN CONTROL POINT
- STREAM CENTERLINE CONTROL POINT
- 5+00 — 5+50 — STREAM CONSTRUCTION CENTERLINE
- 5+00 — STREAM THALWEG

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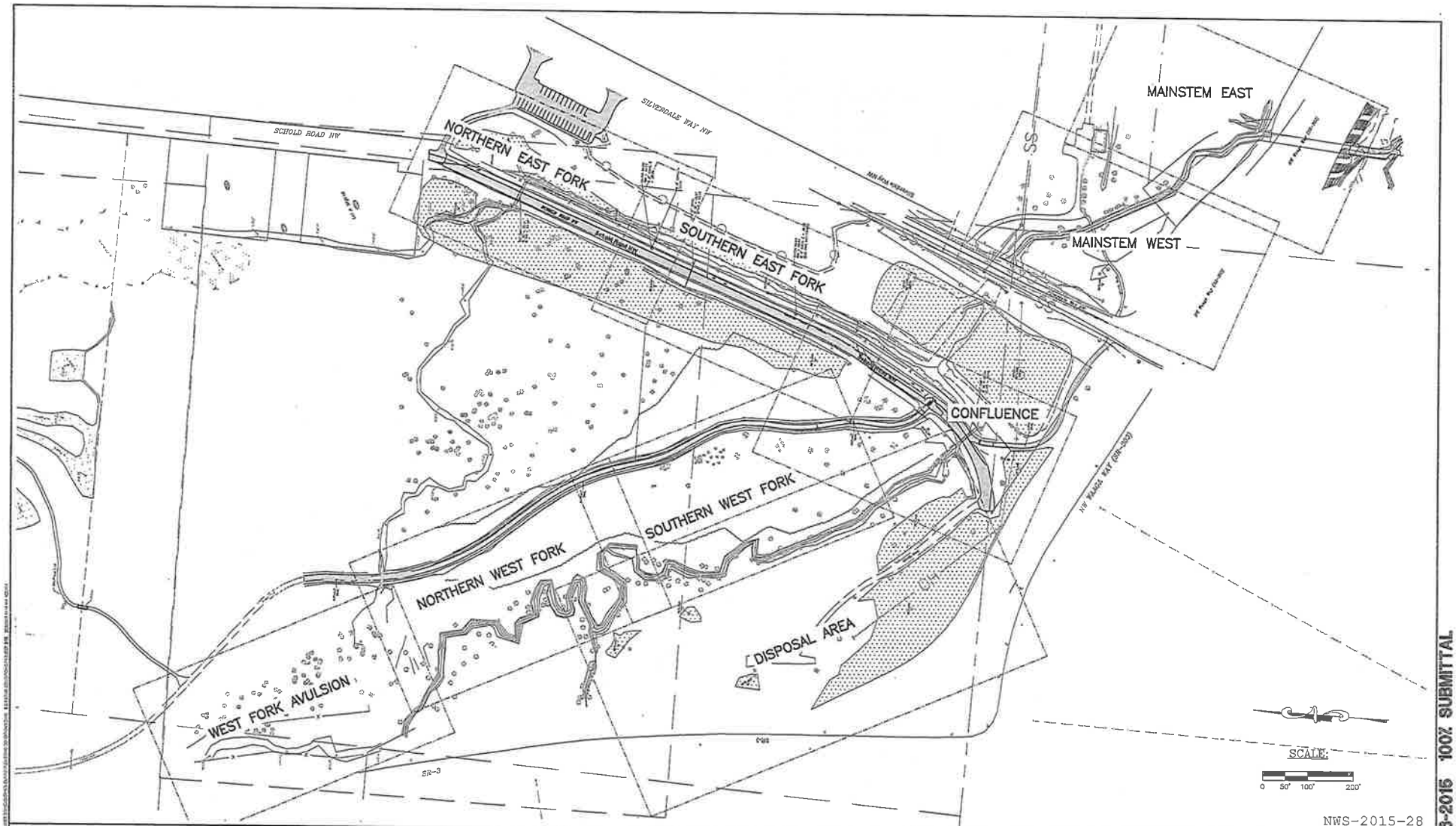
CLEAR CREEK
FLOODPLAIN RESTORATION
LEGENDS AND ABBREVIATIONS

KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 5 OF 73

Feb-26-2016 100% SUBMITTAL



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CLEAR CREEK
FLOODPLAIN RESTORATION
EXISTING CONDITIONS-
PROJECT SITE
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 6 OF 73

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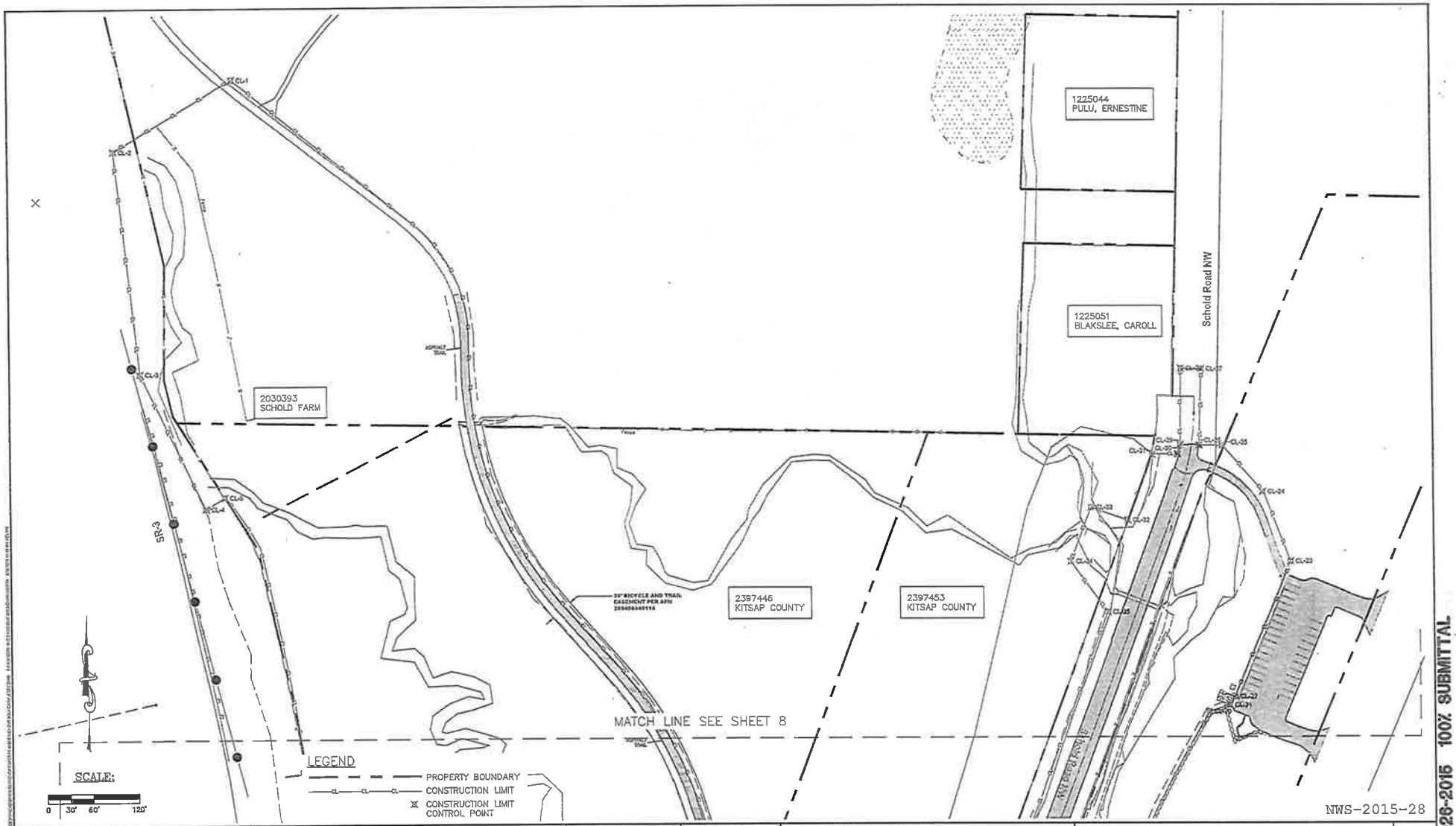

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CLEAR CREEK
FLOODPLAIN RESTORATION
PROPERTY AND EASEMENT
BOUNDARY-NORTH
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 7 OF 73

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24659
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18 57
WASHINGTON

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CLEAR CREEK
FLOODPLAIN RESTORATION
PROPERTY AND EASEMENT
BOUNDARY–CENTRAL
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 8 OF 73

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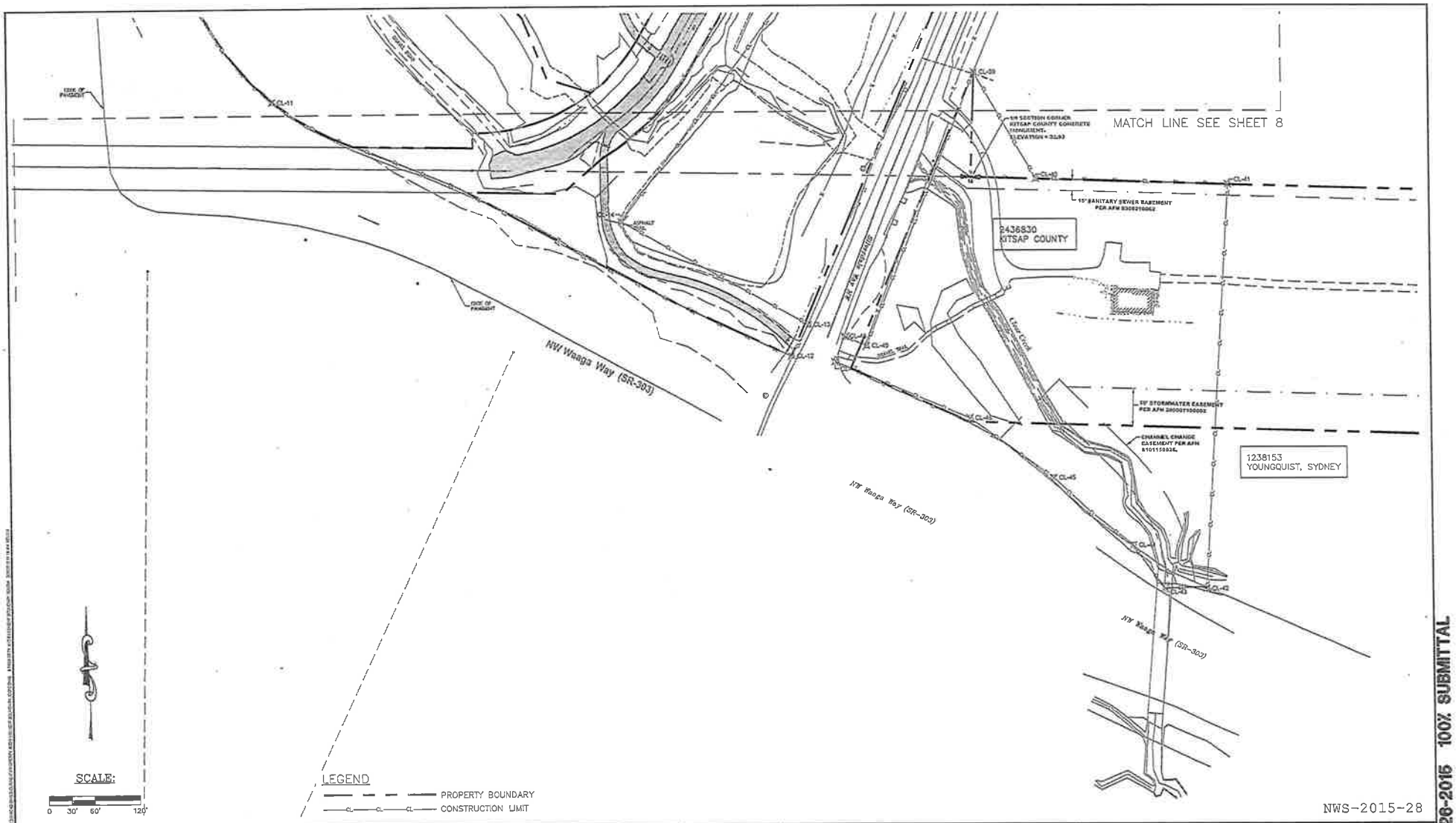

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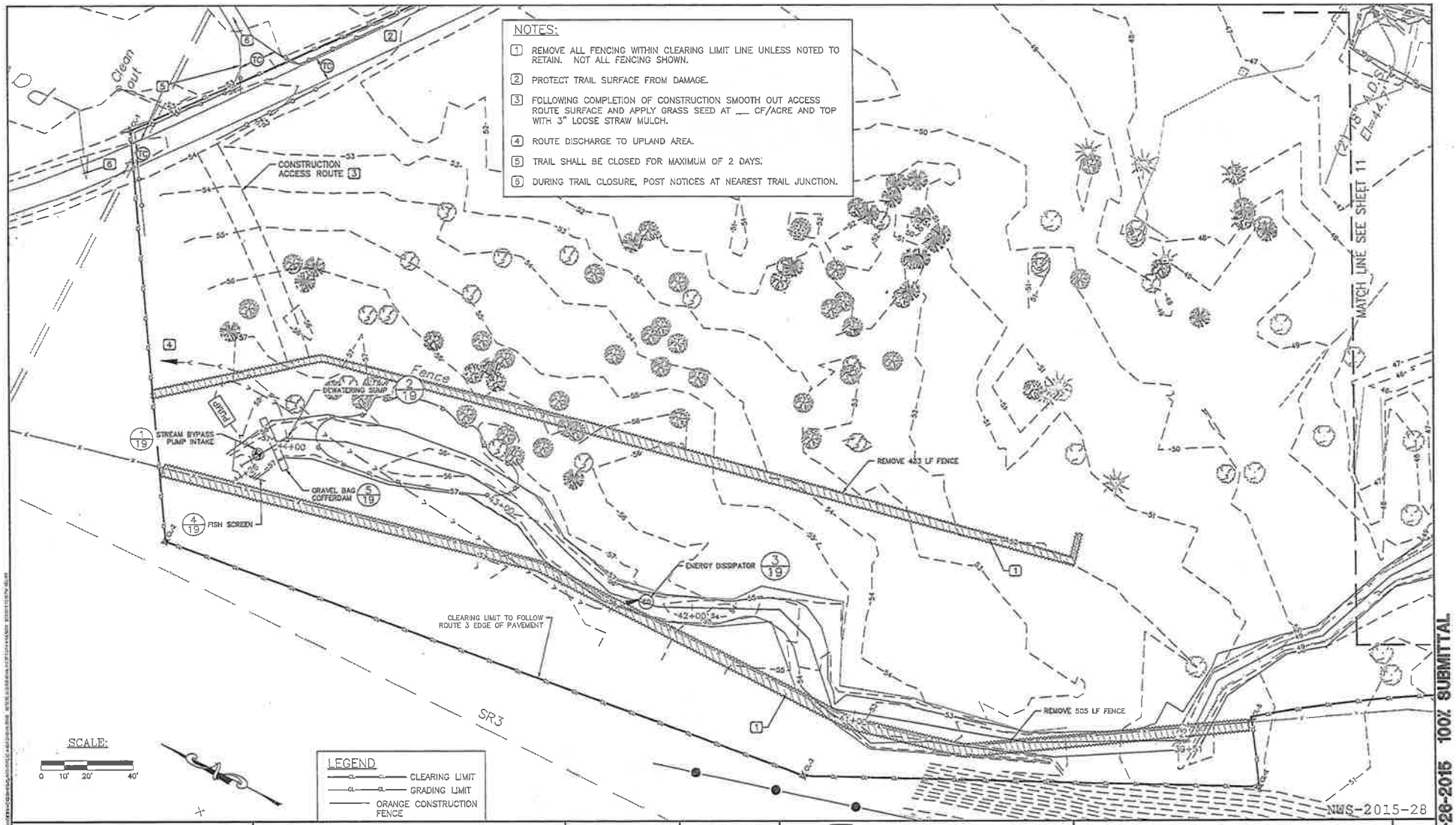
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPERTY AND EASEMENT
BOUNDARY-SOUTH
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

NOTES:

1. REMOVE ALL FENCING WITHIN CLEARING LIMIT LINE UNLESS NOTED TO RETAIN. NOT ALL FENCING SHOWN.
2. PROTECT TRAIL SURFACE FROM DAMAGE.
3. FOLLOWING COMPLETION OF CONSTRUCTION SMOOTH OUT ACCESS ROUTE SURFACE AND APPLY GRASS SEED AT ___ CF/ACRE AND TOP WITH 3" LOOSE STRAW MULCH.
4. ROUTE DISCHARGE TO UPLAND AREA.
5. TRAIL SHALL BE CLOSED FOR MAXIMUM OF 2 DAYS.
6. DURING TRAIL CLOSURE, POST NOTICES AT NEAREST TRAIL JUNCTION.



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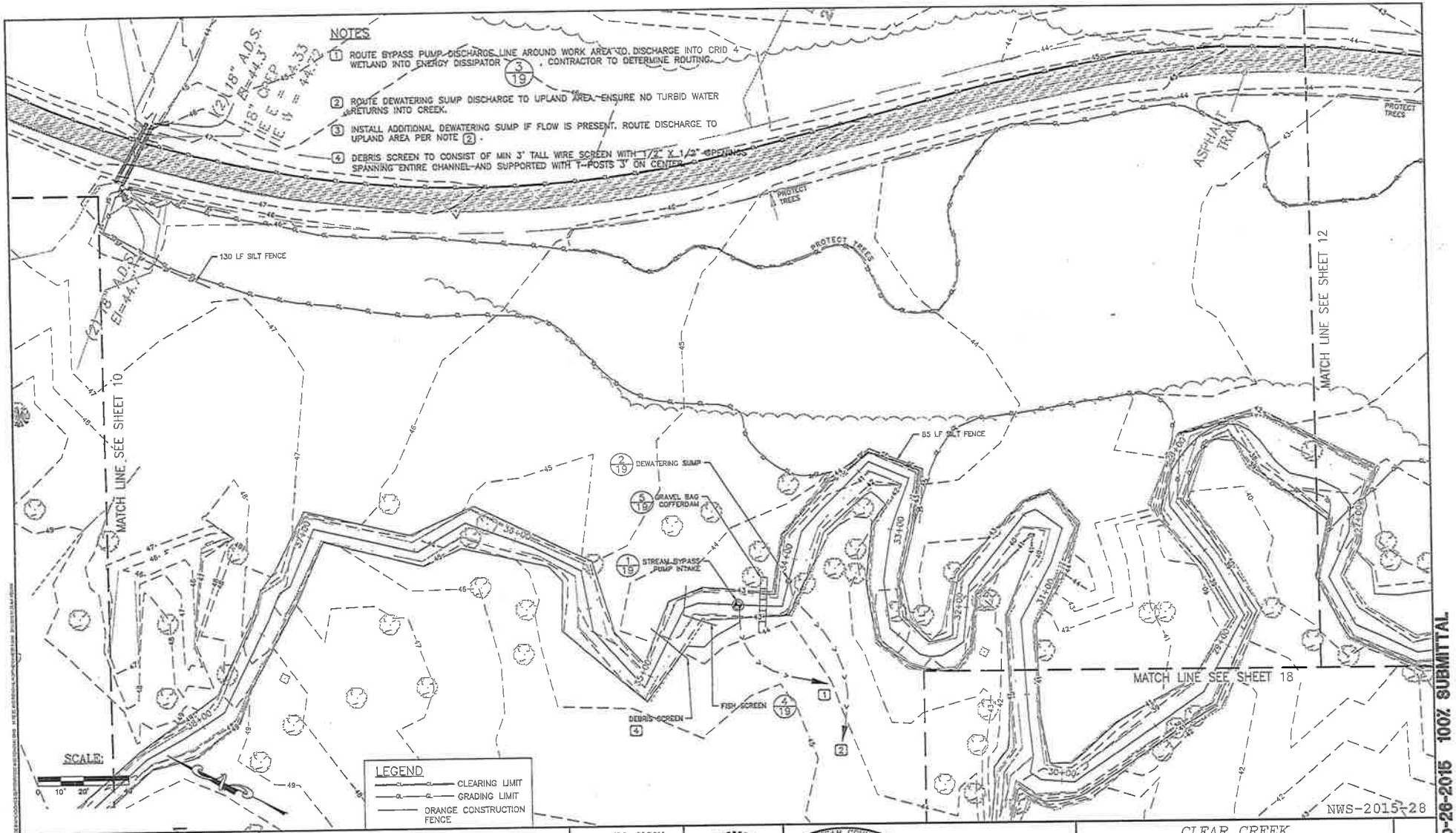
CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
WEST FORK AVULSION
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 10 OF 73



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CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
NORTHERN WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 11 OF 73

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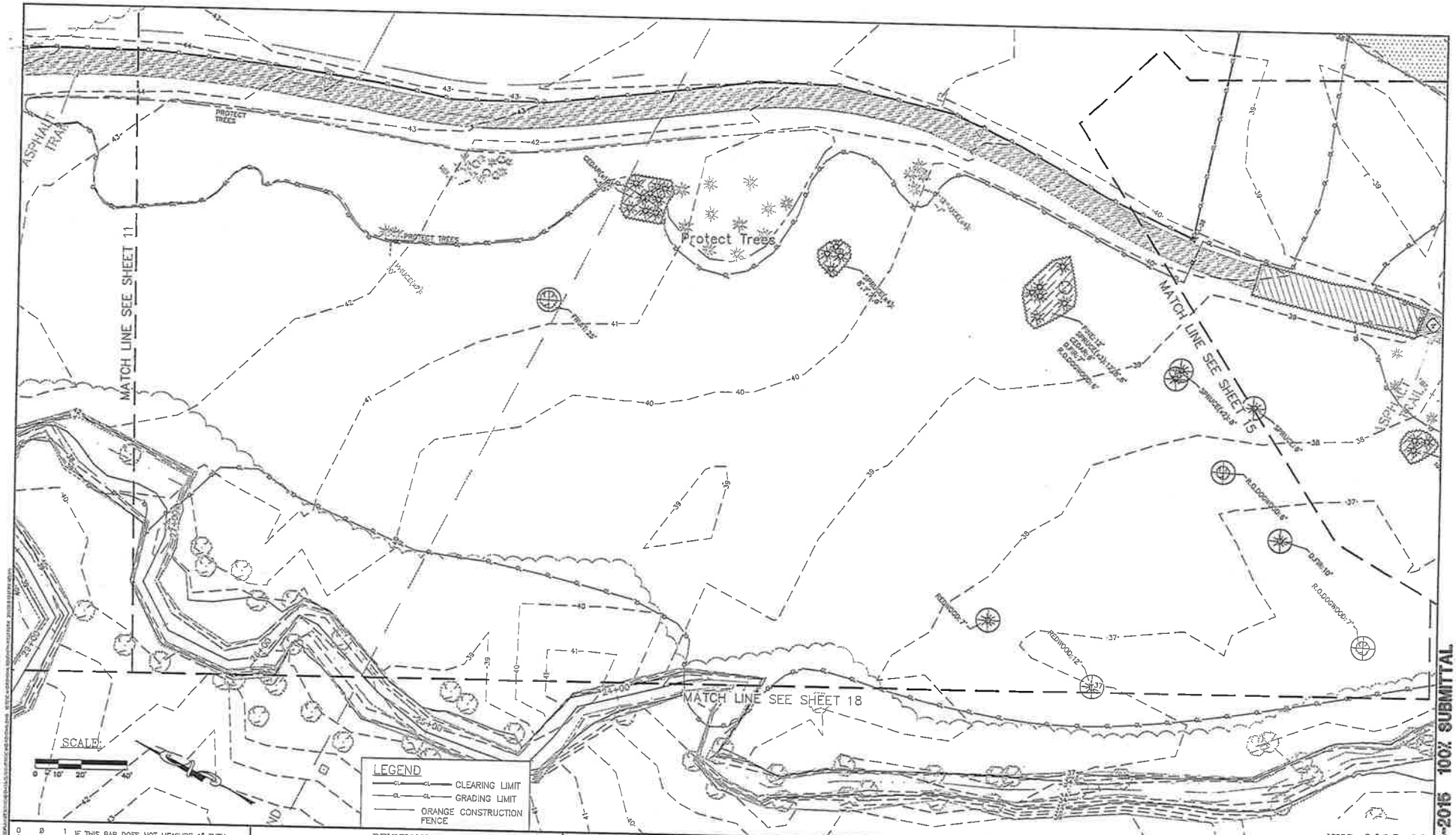

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CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
SOUTHERN WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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SHEET 12 OF 73

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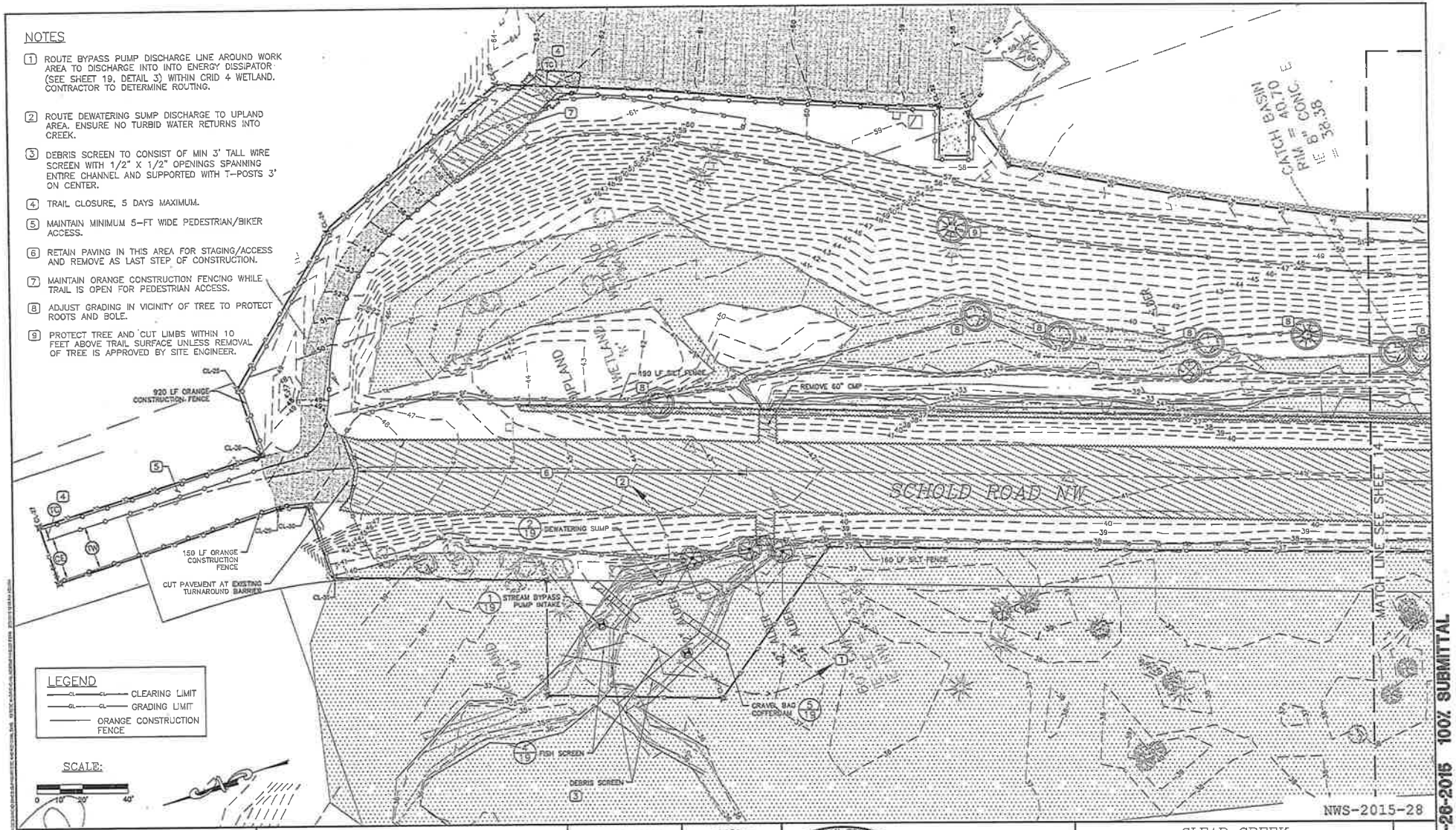
NOTES

1. ROUTE BYPASS PUMP DISCHARGE LINE AROUND WORK AREA TO DISCHARGE INTO INTO ENERGY DISSIPATOR (SEE SHEET 19, DETAIL 3) WITHIN CRID 4 WETLAND. CONTRACTOR TO DETERMINE ROUTING.
2. ROUTE DEWATERING SUMP DISCHARGE TO UPLAND AREA. ENSURE NO TURBID WATER RETURNS INTO CREEK.
3. DEBRIS SCREEN TO CONSIST OF MIN 3' TALL WIRE SCREEN WITH 1/2" X 1/2" OPENINGS SPANNING ENTIRE CHANNEL AND SUPPORTED WITH T-POSTS 3' ON CENTER.
4. TRAIL CLOSURE, 5 DAYS MAXIMUM.
5. MAINTAIN MINIMUM 5-FT WIDE PEDESTRIAN/BIKER ACCESS.
6. RETAIN PAVING IN THIS AREA FOR STAGING/ACCESS AND REMOVE AS LAST STEP OF CONSTRUCTION.
7. MAINTAIN ORANGE CONSTRUCTION FENCING WHILE TRAIL IS OPEN FOR PEDESTRIAN ACCESS.
8. ADJUST GRADING IN VICINITY OF TREE TO PROTECT ROOTS AND BOLE.
9. PROTECT TREE AND CUT LIMBS WITHIN 10 FEET ABOVE TRAIL SURFACE UNLESS REMOVAL OF TREE IS APPROVED BY SITE ENGINEER.



LEGEND

- CLEARING LIMIT
- GRADING LIMIT
- ORANGE CONSTRUCTION FENCE

SCALE: 0 10' 20' 40'

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CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
NORTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 13 OF 73

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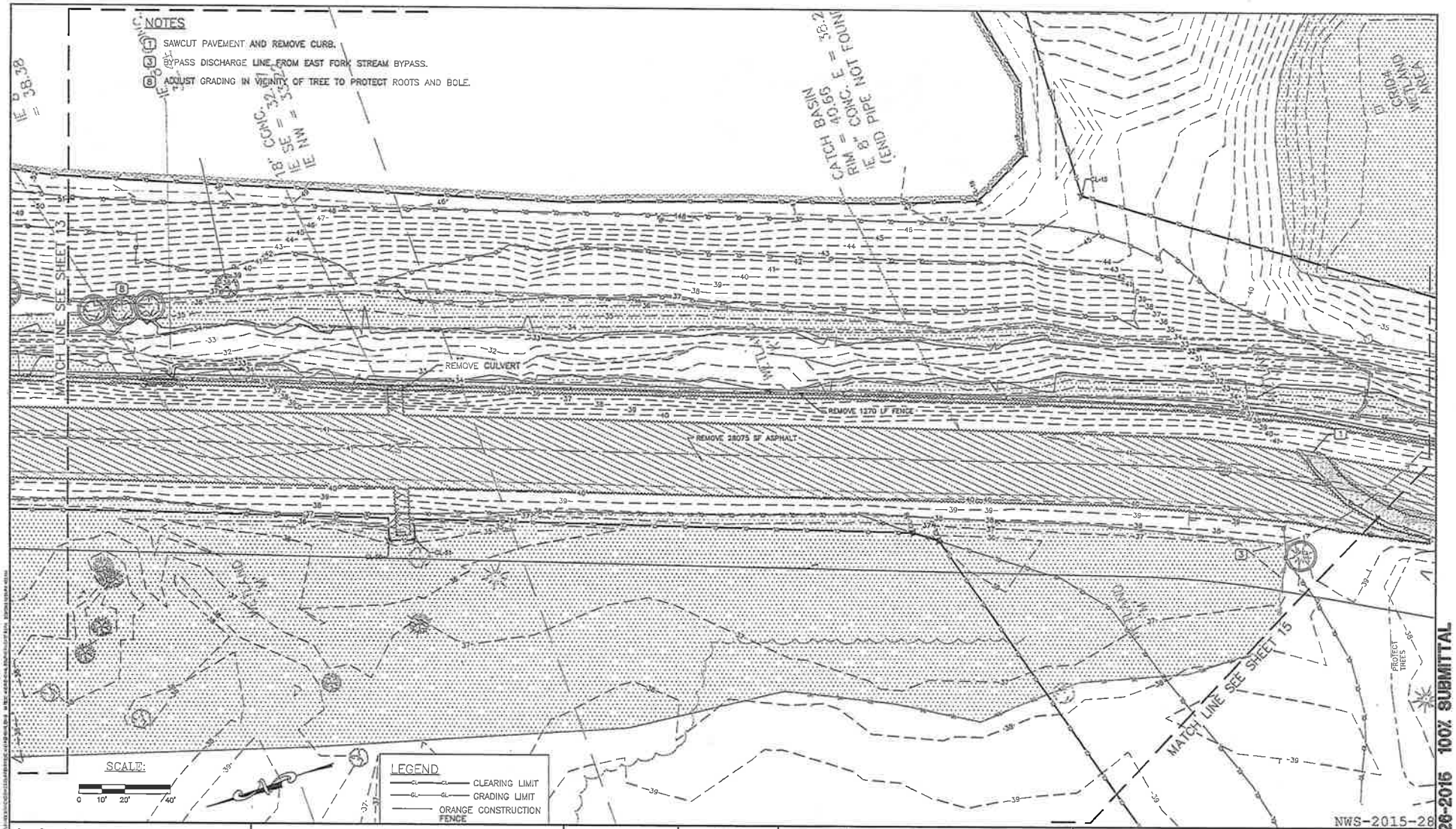

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DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

MICHAEL E. HRACHOVEC
STATE OF WASHINGTON
36039
REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY
WASHINGTON
18 57

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
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TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
SOUTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 14 OF 73

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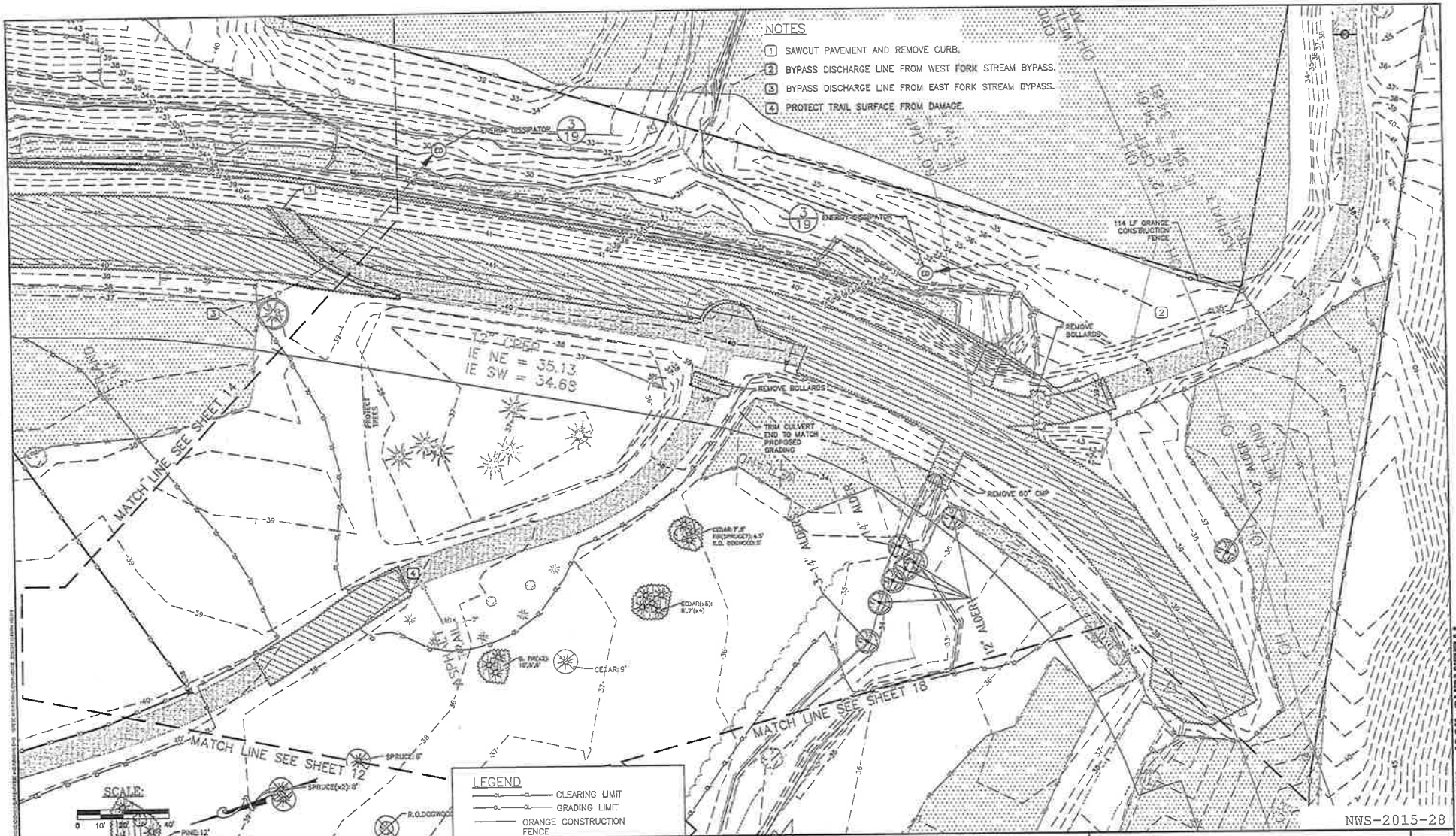

0 ø 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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Seattle, WA 98115

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MICHAEL S. HRACHOVEC, STATE OF WASHINGTON, 36033, REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 18 57 WASHINGTON

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CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
CONFLUENCE
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SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 15 OF 73

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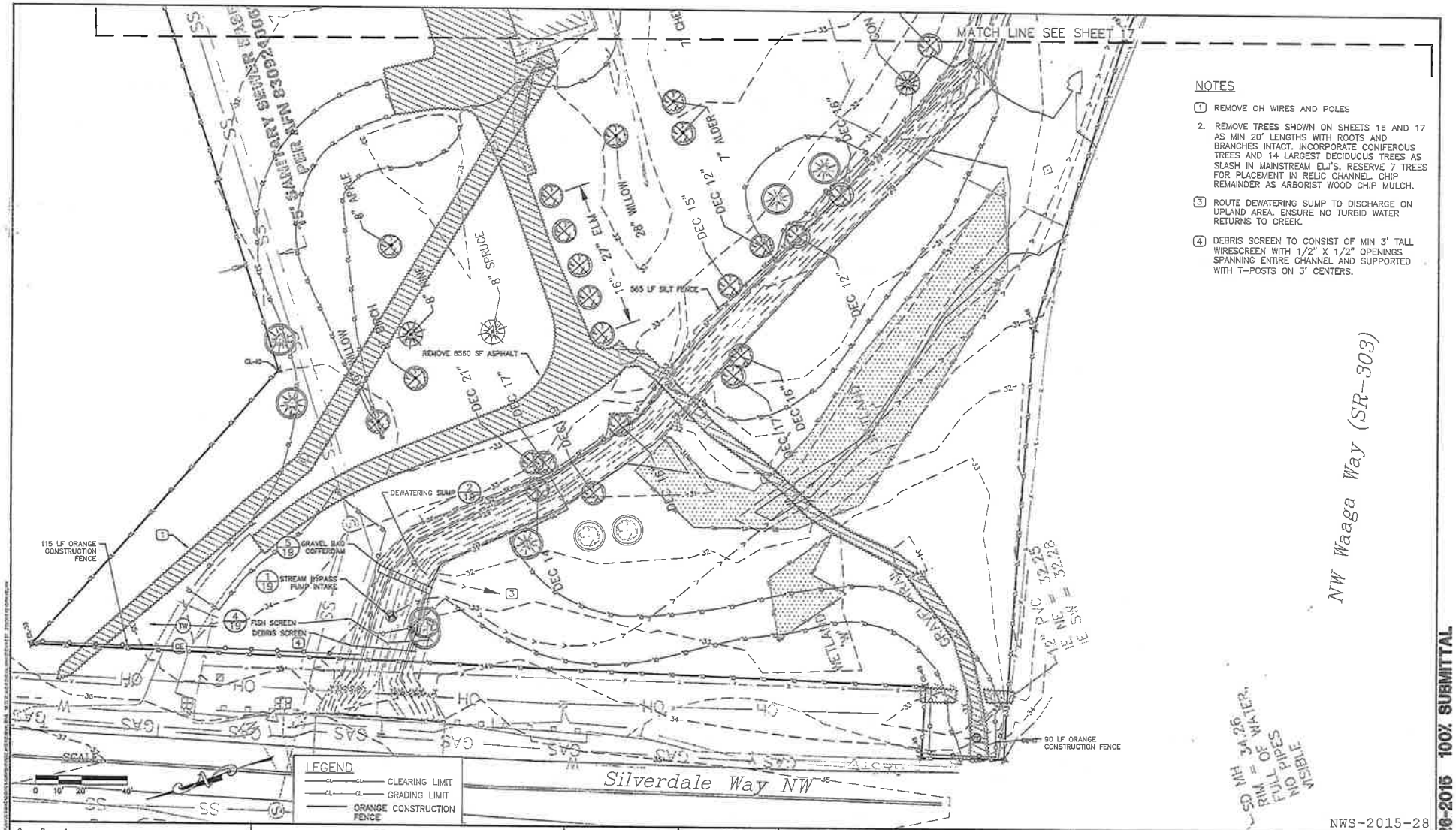

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CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
MAINSTEM WEST
KITSAP COUNTY, WASHINGTON
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SHEET 16 OF 73

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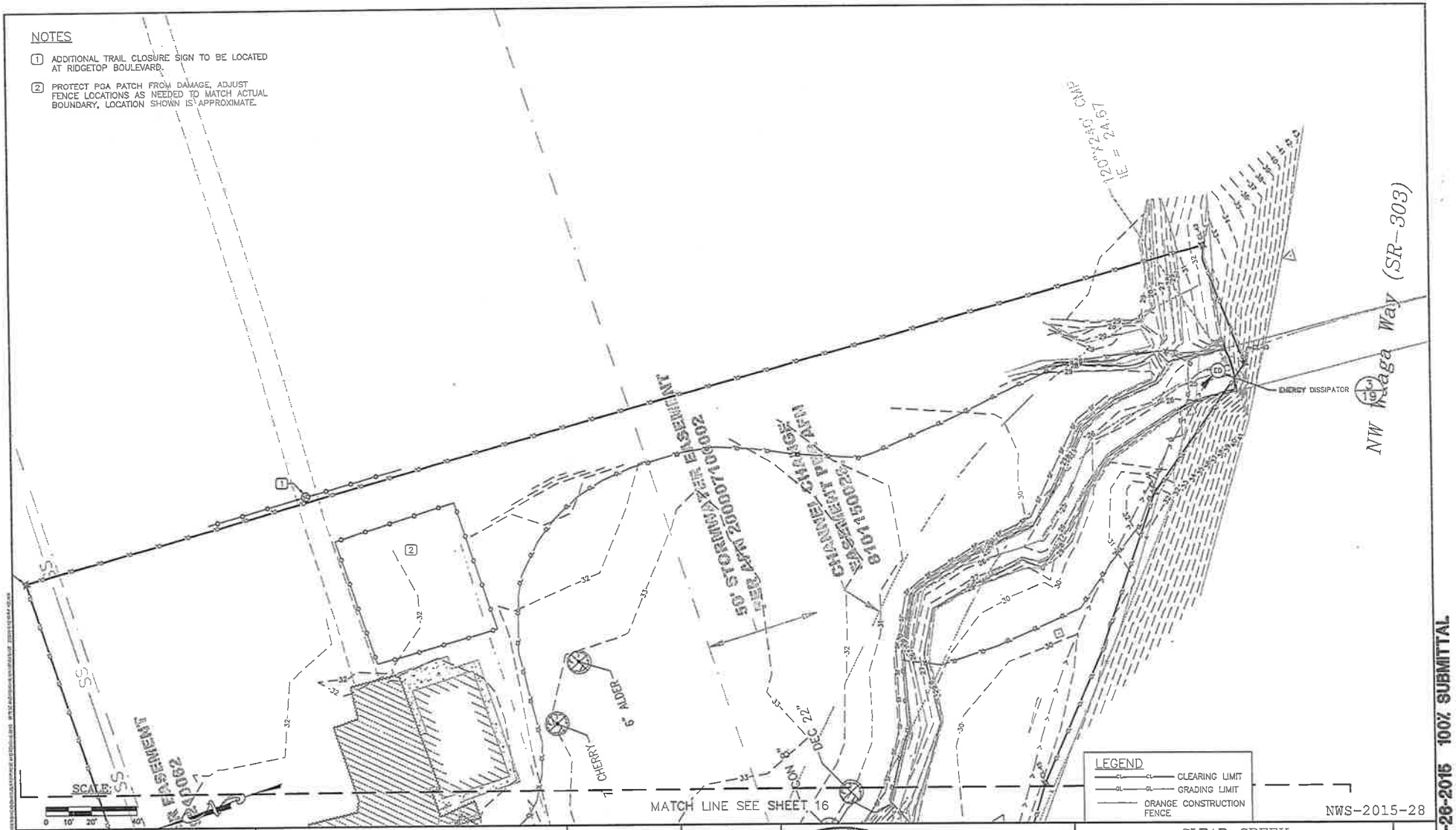
NOTES

1. ADDITIONAL TRAIL CLOSURE SIGN TO BE LOCATED AT RIDGETOP BOULEVARD.
2. PROTECT PGA PATCH FROM DAMAGE. ADJUST FENCE LOCATIONS AS NEEDED TO MATCH ACTUAL BOUNDARY. LOCATION SHOWN IS APPROXIMATE.



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MICHAEL R. HRACHOVEC
STATE OF WASHINGTON
20532
PROFESSIONAL ENGINEER

KITSAP COUNTY
18 57
WASHINGTON

KITSAP COUNTY
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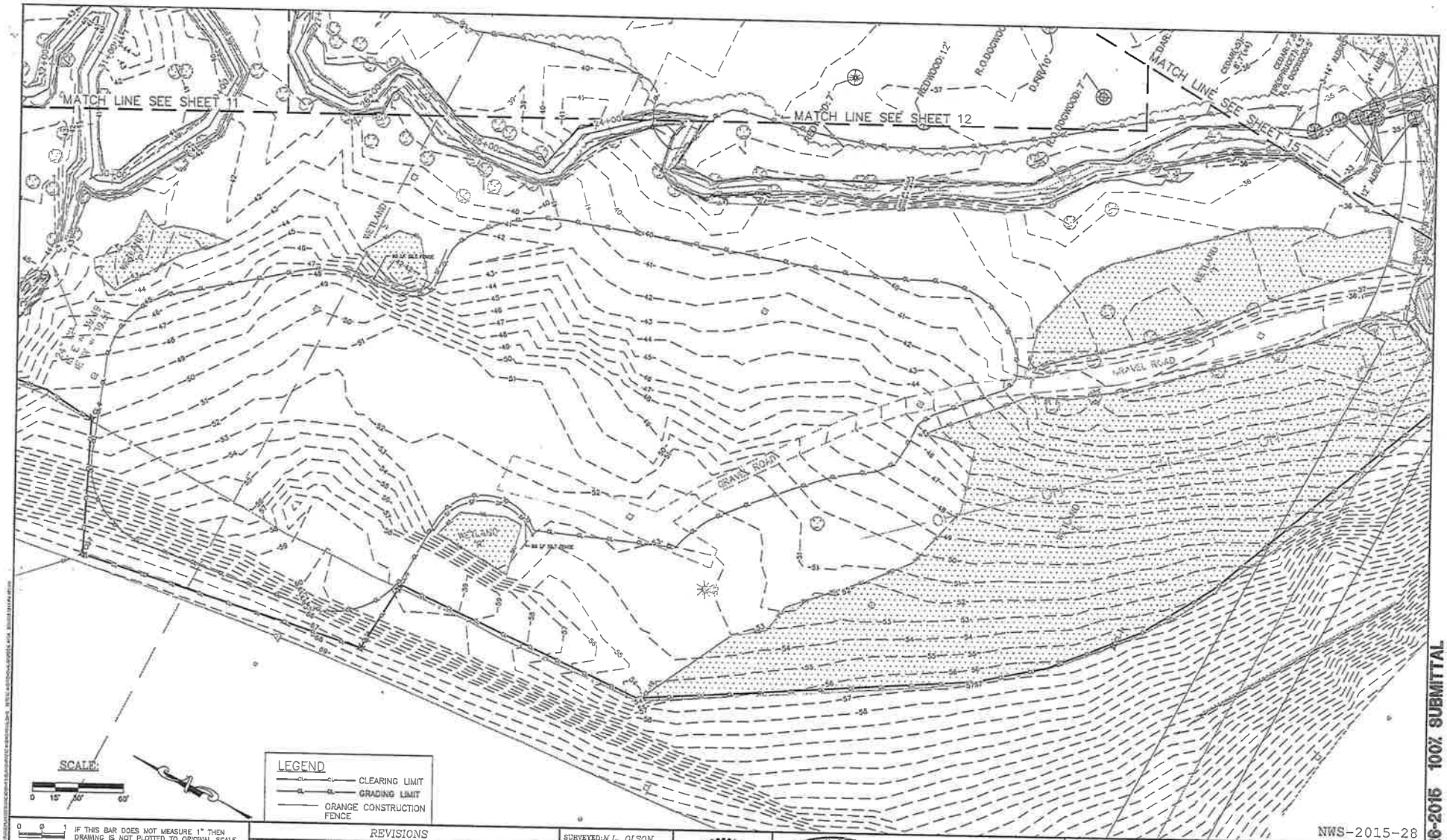
CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL
MAINSTEM EAST
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 17 OF 73

Feb-26-2015 100% SUBMITTAL



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MICHAEL L. HRACHOVEC
STATE OF WASHINGTON
36039
REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY
18 57
WASHINGTON

KITSAP COUNTY
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NWS-2015-28

CLEAR CREEK FLOODPLAIN RESTORATION TESC AND REMOVAL DISPOSAL AREA

KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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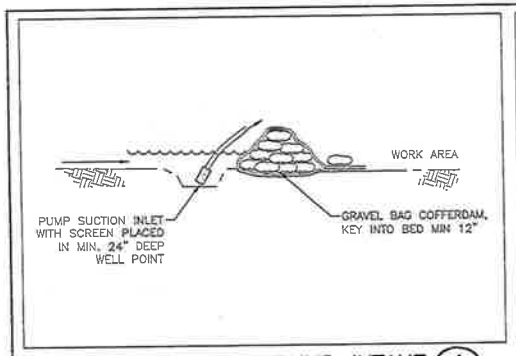
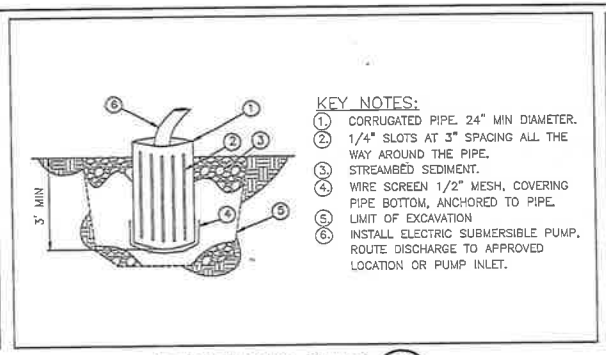
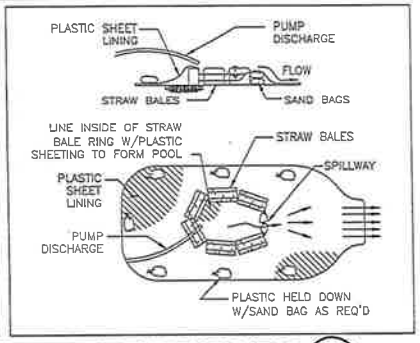


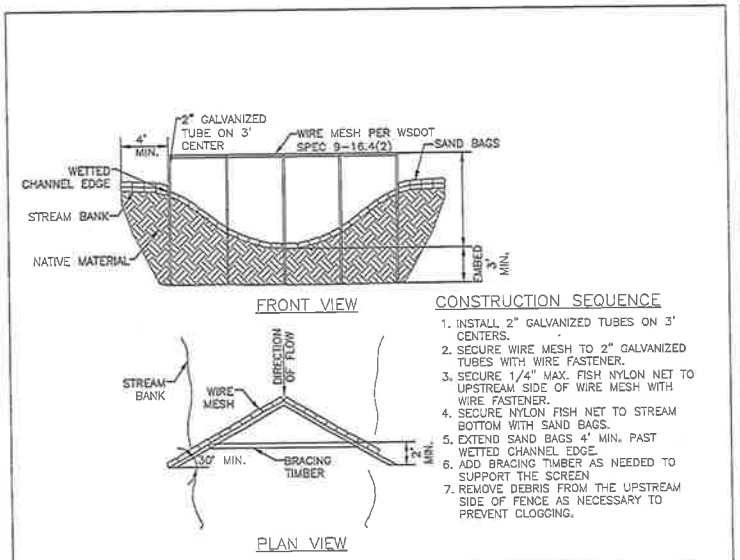
STREAM BYPASS PUMP INTAKE (1/19)
NOT TO SCALE



DEWATERING SUMP (2/19)
NOT TO SCALE



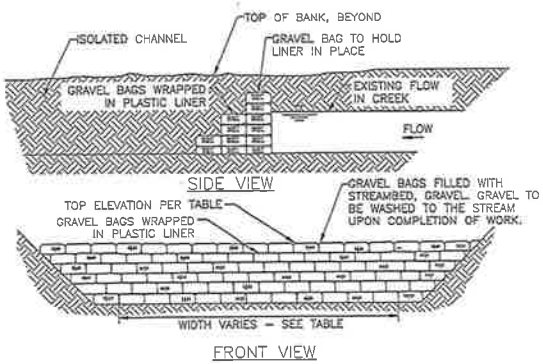
ENERGY DISSIPATOR (3/19)
NOT TO SCALE



CONSTRUCTION SEQUENCE

1. INSTALL 2" GALVANIZED TUBES ON 3' CENTERS.
2. SECURE WIRE MESH TO 2" GALVANIZED TUBES WITH WIRE FASTENER.
3. SECURE 1/4" MAX. FISH NYLON NET TO UPSTREAM SIDE OF WIRE MESH WITH WIRE FASTENER.
4. SECURE NYLON FISH NET TO STREAM BOTTOM WITH SAND BAGS.
5. EXTEND SAND BAGS 4' MIN. PAST WETTED CHANNEL EDGE.
6. ADD BRACING TIMBER AS NEEDED TO SUPPORT THE SCREEN
7. REMOVE DEBRIS FROM THE UPSTREAM SIDE OF FENCE AS NECESSARY TO PREVENT CLOGGING.

FISH SCREEN (4/19)
NOT TO SCALE



GRAVEL BAG COFFERDAM (5/19)
NOT TO SCALE

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KITSAP COUNTY
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614 DIVISION STREET MS-26
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CLEAR CREEK
FLOODPLAIN RESTORATION
TESC AND REMOVAL-
DETAILS
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 19 OF 73

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MICHAEL E. HRACHOVEC
STATE OF WASHINGTON
38039
REGISTERED
PROFESSIONAL ENGINEER

KITSAP COUNTY
18 57
WASHINGTON

KITSAP COUNTY
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CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
NORTHERN WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 20 OF 73

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CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
SOUTHERN WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 21 OF 73

Feb-26-2015 100% SUBMITTAL

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MICHAEL J. HRACHOVEC, STATE OF WASHINGTON, 36339, REGISTERED PROFESSIONAL ENGINEER

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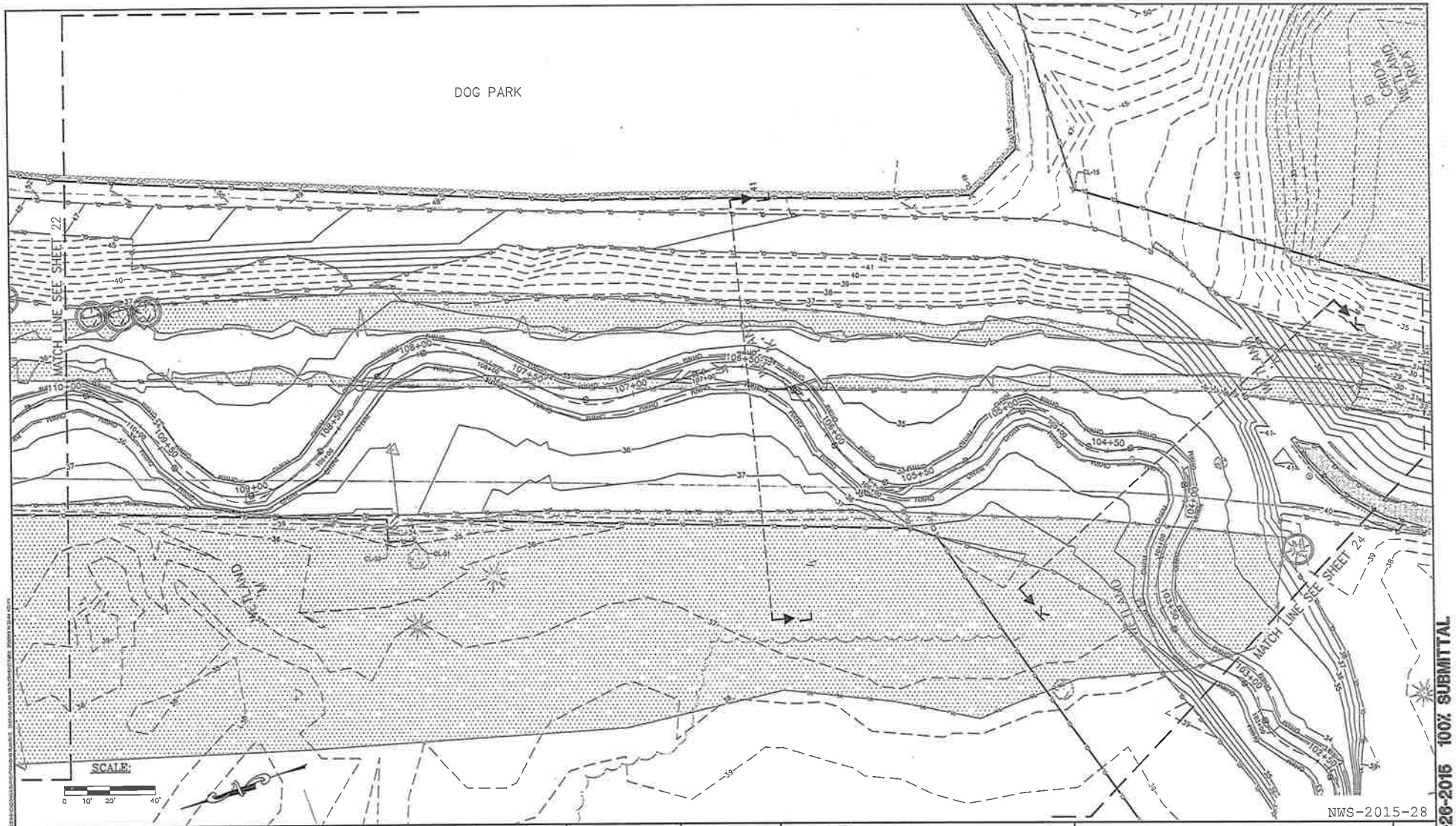
CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
NORTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 22 OF 73

Feb-26-2015 100% SUBMITTAL



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MICHAEL L. HRACHOVEC
STATE OF WASHINGTON
38038
PROFESSIONAL ENGINEER

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CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
SOUTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 23 OF 73

Feb-26-2016 100% SUBMITTAL

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KITSAP COUNTY
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CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
CONFLUENCE
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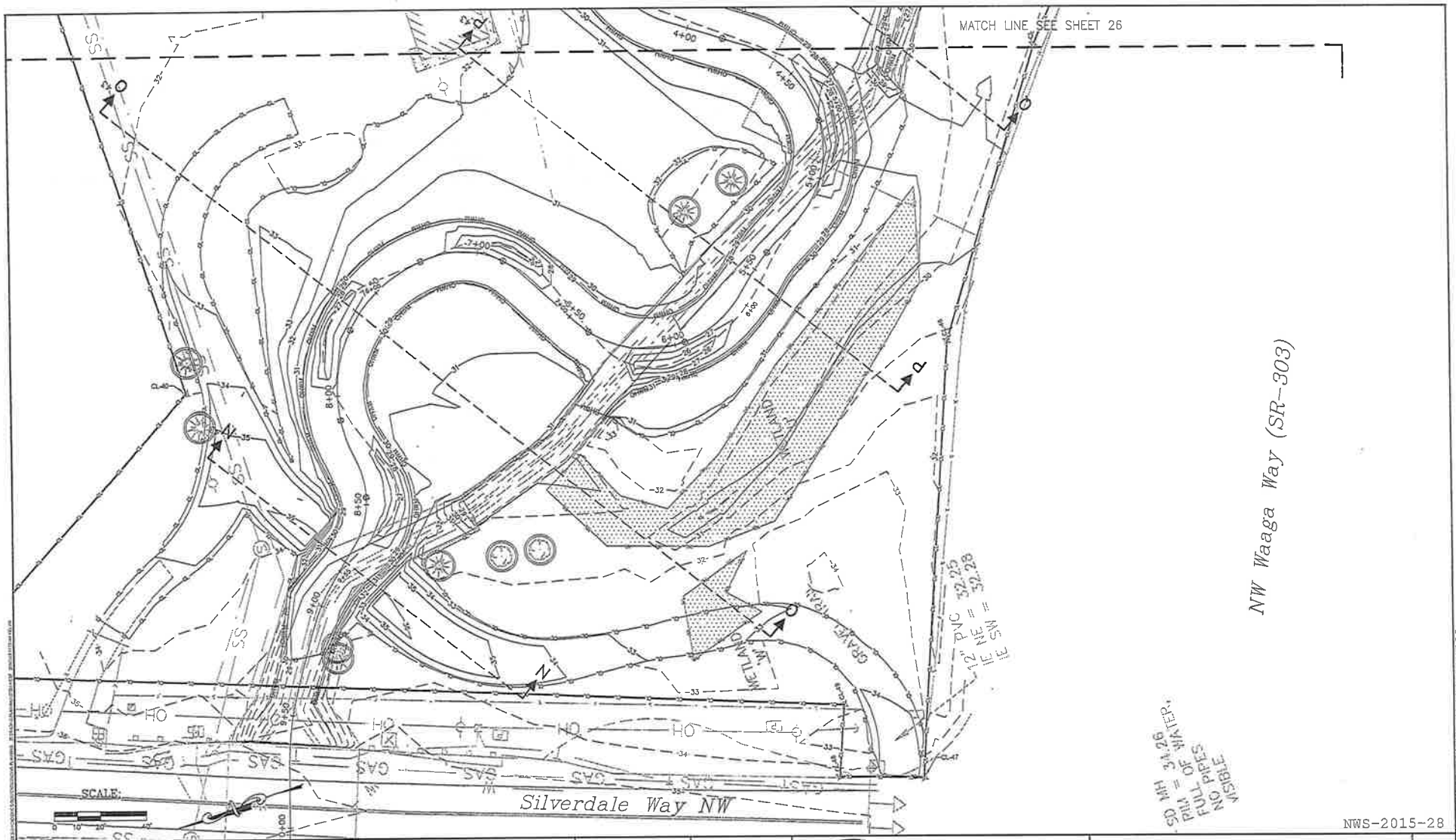
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 24 OF 73

Feb-26-2015 100% SUBMITTAL



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MICHAEL R. HRACHOVEC
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20039
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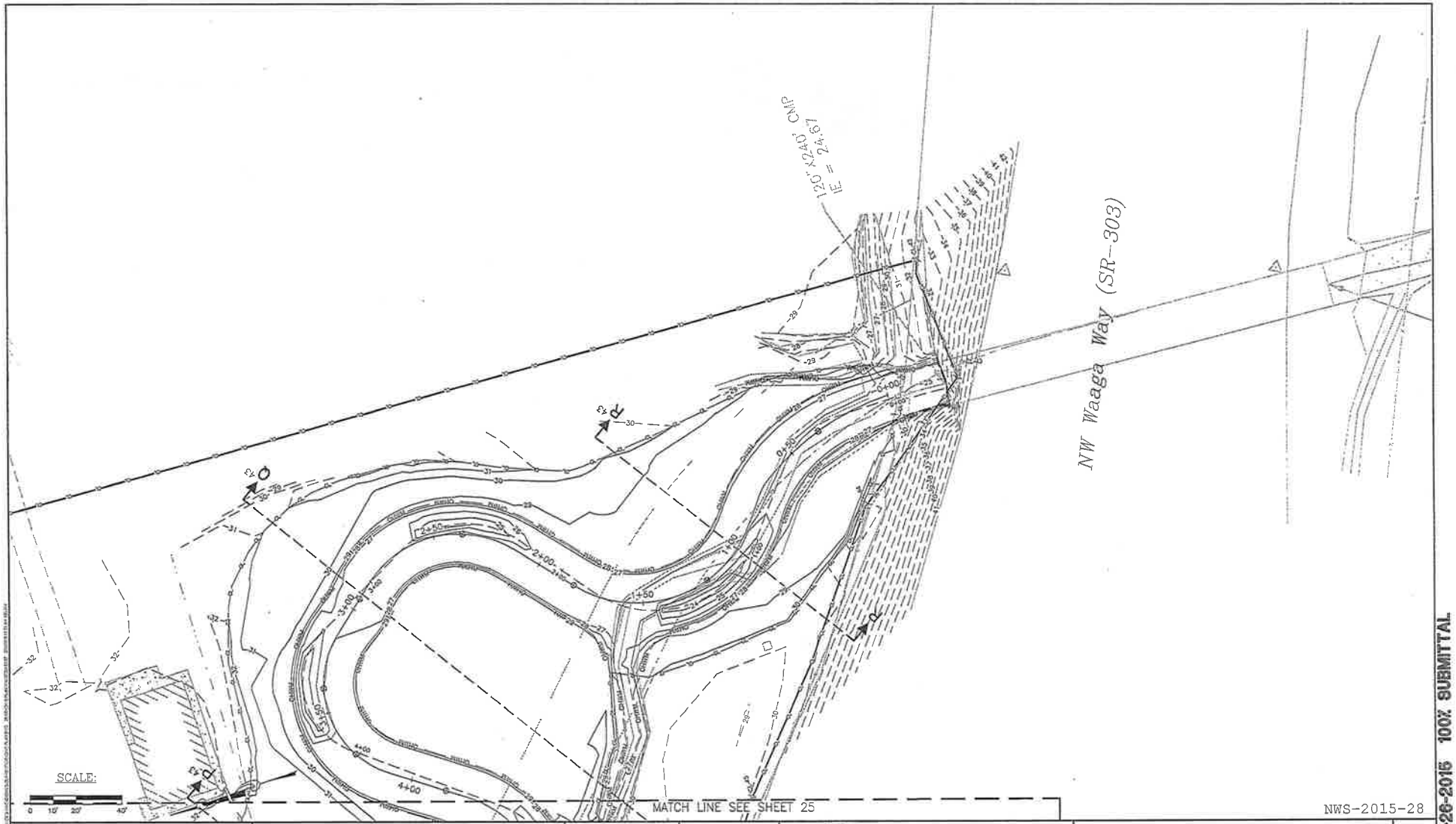
CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
MAINSTEM WEST
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



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MICHAEL B. HRACHOVEC
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56030
REGISTERED PROFESSIONAL ENGINEER

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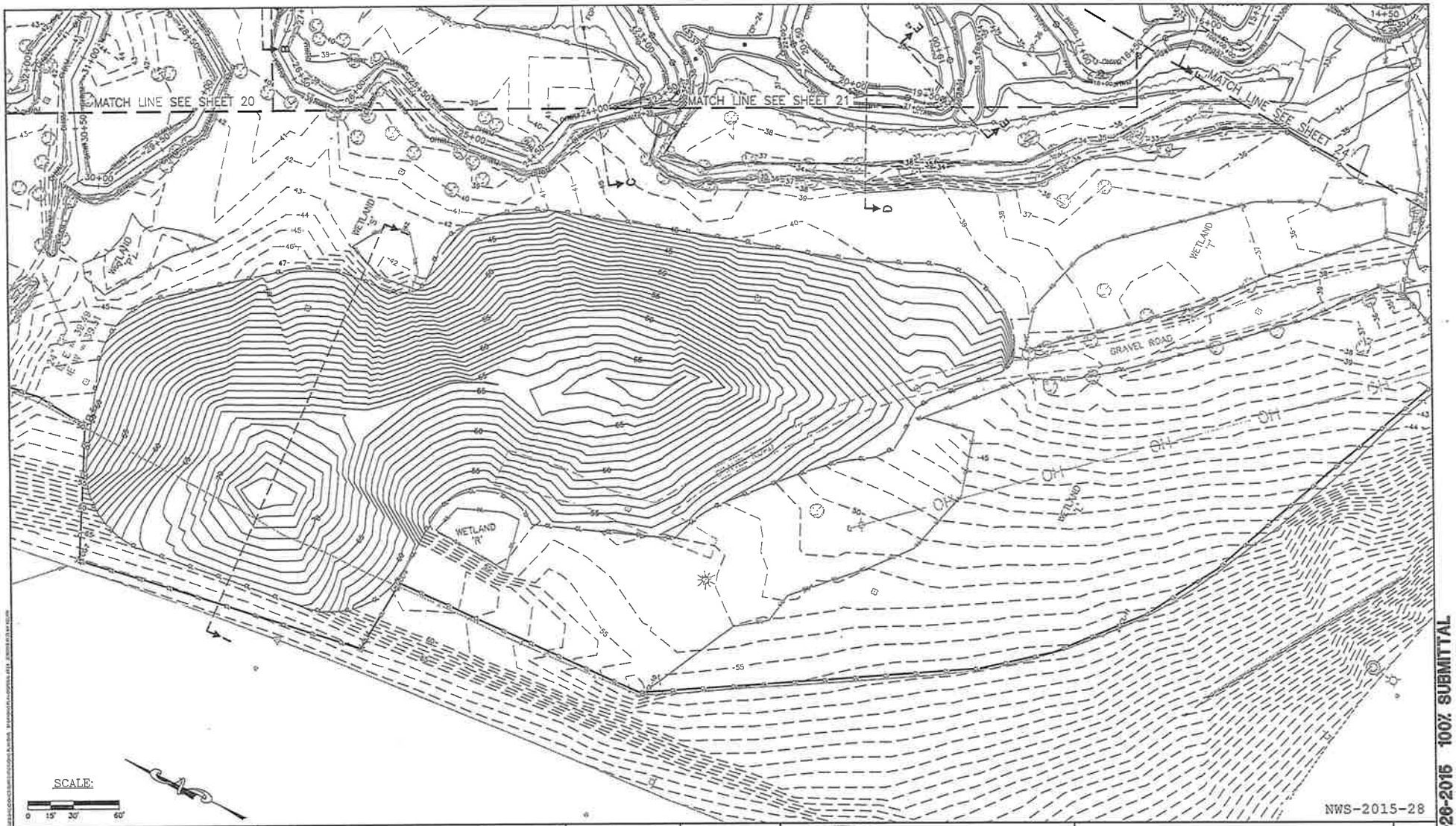
CLEAR CREEK FLOODPLAIN RESTORATION GRADING MAINSTEM EAST

KITSAP COUNTY, WASHINGTON

SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 26 OF 73



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MICHAEL R. HRACHOVEC
STATE OF WASHINGTON
28039
REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY
18 57
WASHINGTON

KITSAP COUNTY
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614 DIVISION STREET MS-26
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CLEAR CREEK
FLOODPLAIN RESTORATION
GRADING
DISPOSAL AREA
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 27 OF 73

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MICHAEL B. HRACHOVEC
STATE OF WASHINGTON
36888
REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 1857 WASHINGTON

KITSAP COUNTY
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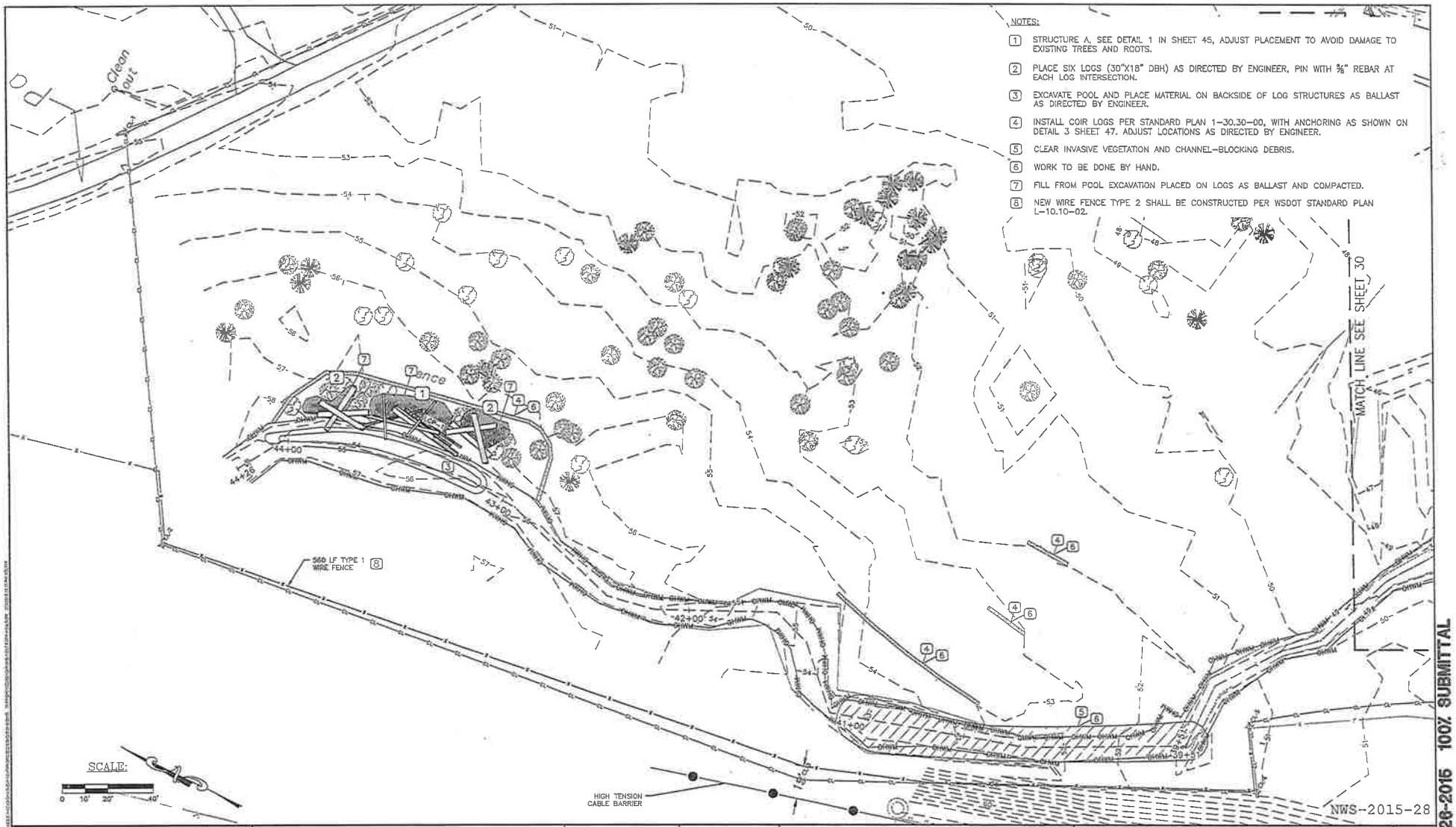
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
PROJECT SITE
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 28 OF 73

NOTES:

1. STRUCTURE A, SEE DETAIL 1 IN SHEET 45, ADJUST PLACEMENT TO AVOID DAMAGE TO EXISTING TREES AND ROOTS.
2. PLACE SIX LOGS (30"X18" DBH) AS DIRECTED BY ENGINEER, PIN WITH ⅝" REBAR AT EACH LOG INTERSECTION.
3. EXCAVATE POOL AND PLACE MATERIAL ON BACKSIDE OF LOG STRUCTURES AS BALLAST AS DIRECTED BY ENGINEER.
4. INSTALL COIR LOGS PER STANDARD PLAN 1-30.30-00, WITH ANCHORING AS SHOWN ON DETAIL 3 SHEET 47. ADJUST LOCATIONS AS DIRECTED BY ENGINEER.
5. CLEAR INVASIVE VEGETATION AND CHANNEL-BLOCKING DEBRIS.
6. WORK TO BE DONE BY HAND.
7. FILL FROM POOL EXCAVATION PLACED ON LOGS AS BALLAST AND COMPACTED.
8. NEW WIRE FENCE TYPE 2 SHALL BE CONSTRUCTED PER WSDOT STANDARD PLAN L-10.10-02.



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KITSAP COUNTY
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614 DIVISION STREET MS-26
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CLEAR CREEK FLOODPLAIN RESTORATION
PROPOSED CONDITIONS– WEST FORK AVULSION

KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 29 OF 73

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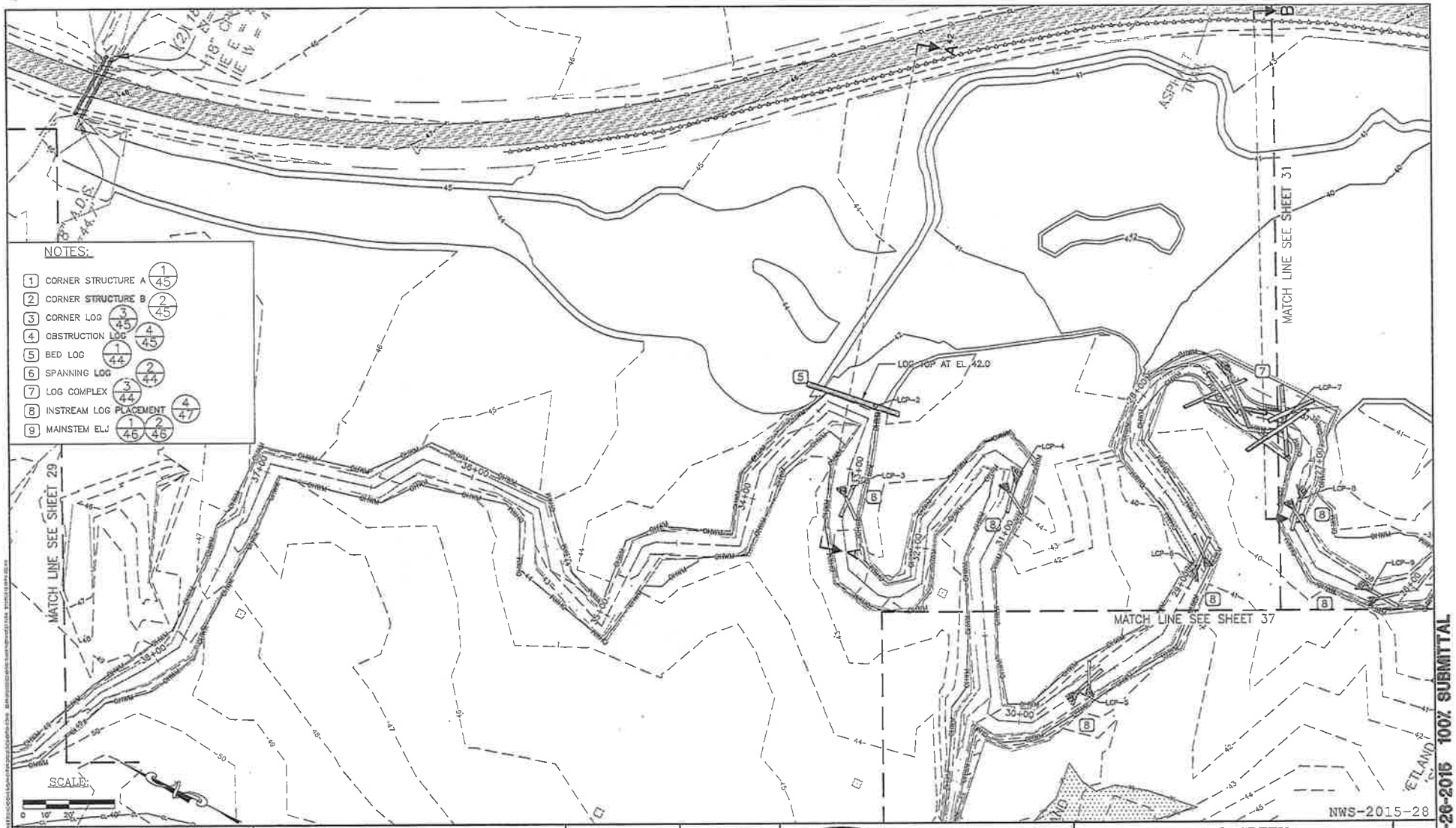

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MICHAEL L. HRACHOVEC STATE OF WASHINGTON 38038 REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 18 57 WASHINGTON

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614 DIVISION STREET MS-26
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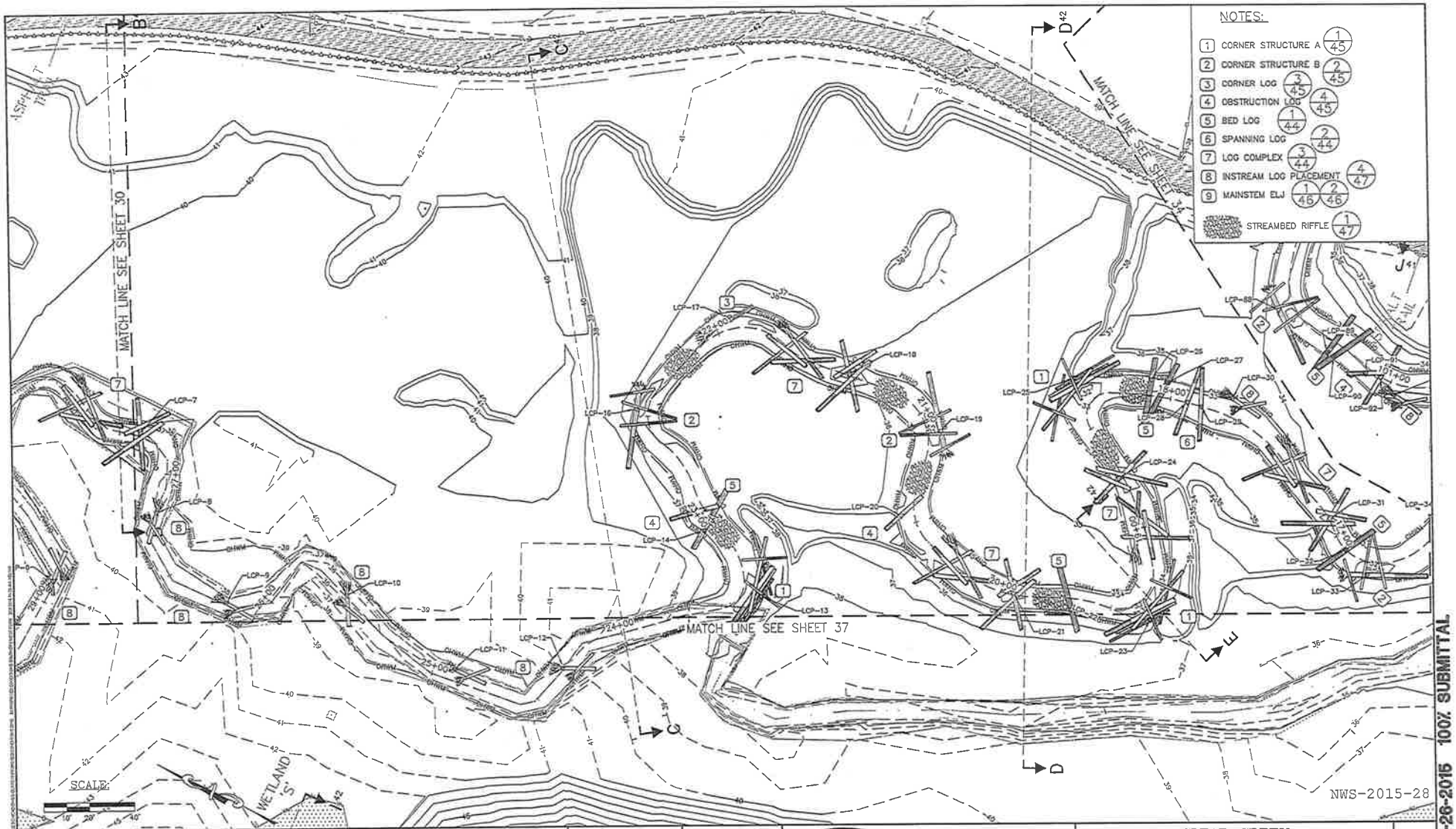
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
NORTHERN WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 30 OF 73

Feb-26-2015 100% SUBMITTAL



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614 DIVISION STREET MS-26
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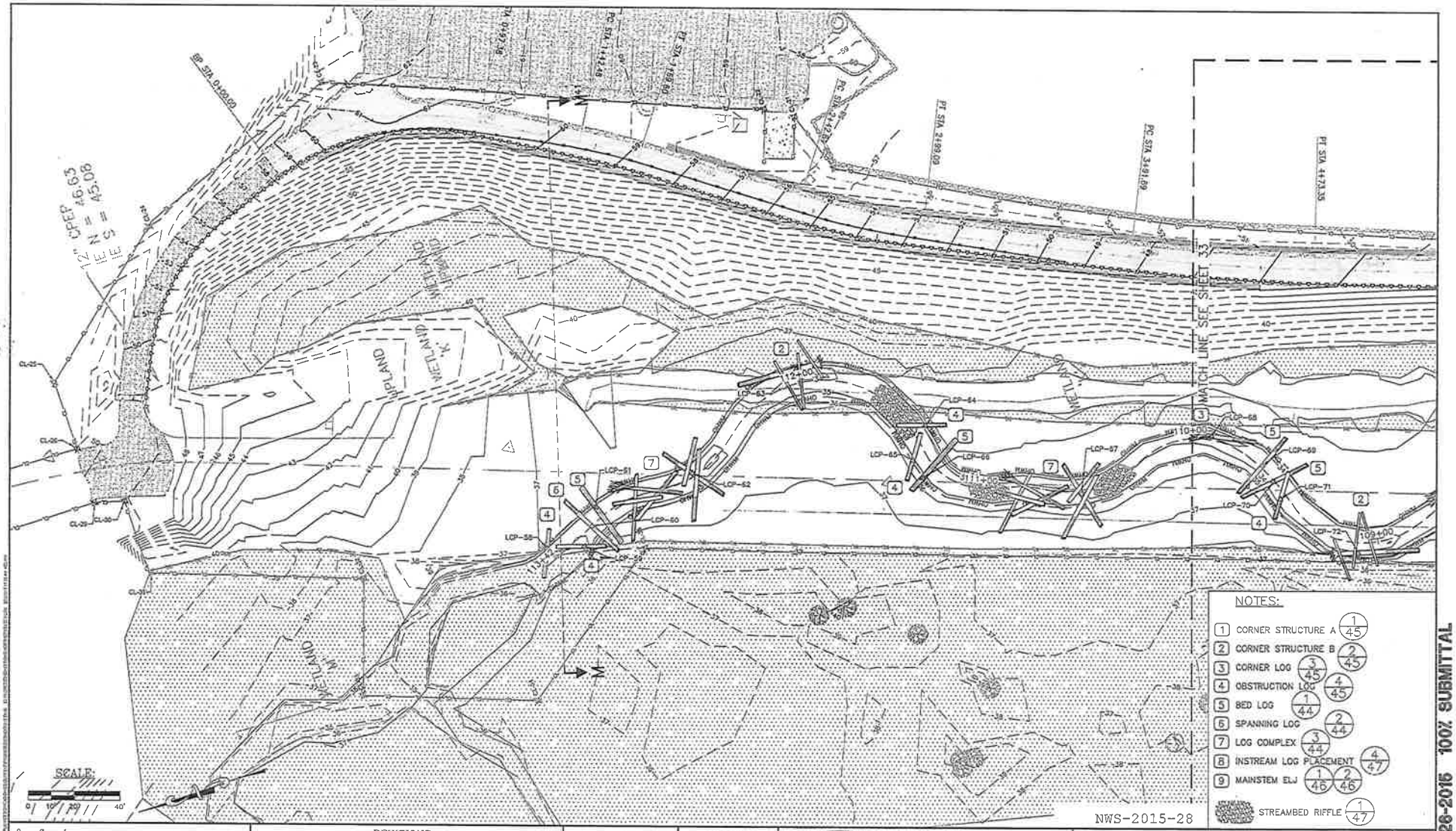
CLEAR CREEK FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
SOUTHERN WEST FORK

KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 31 OF 73

Feb-26-2015 100% SUBMITTAL



NOTES:

1. CORNER STRUCTURE A (1/45)
2. CORNER STRUCTURE B (2/45)
3. CORNER LOG (3/45)
4. OBSTRUCTION LOG (4/45)
5. BED LOG (1/44)
6. SPANNING LOG (2/44)
7. LOG COMPLEX (3/44)
8. INSTREAM LOG PLACEMENT (4/47)
9. MAINSTEM ELJ (1/46) (2/46)

STREAMBED RIFFLE (1/47)

Feb-26-2016 100% SUBMITTAL

0 ø 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

Natural Systems Design
P.O. Box 15609
Seattle, WA 98115

REVISIONS			
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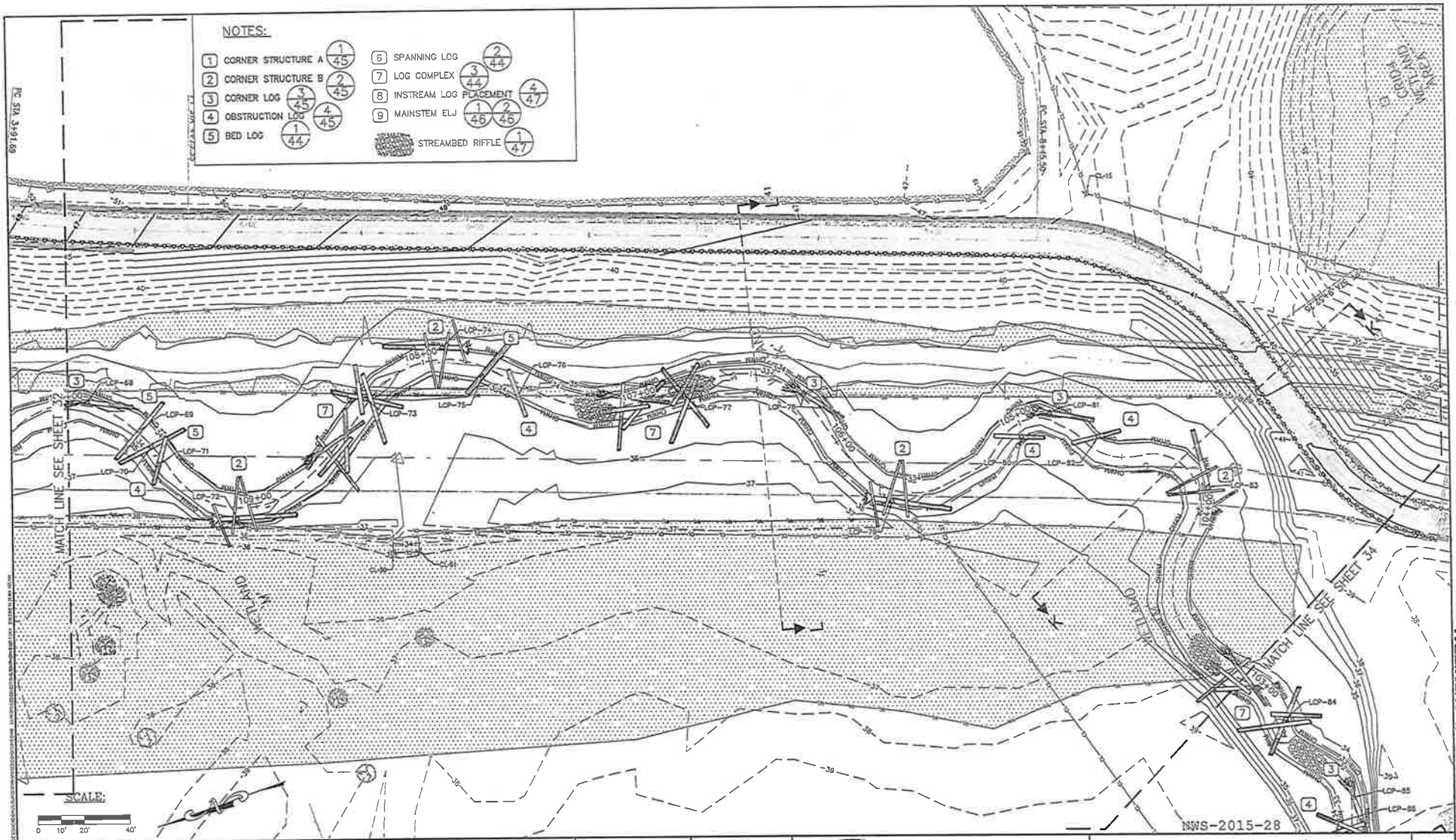
Received by Corps: 11 March 2015

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4657

CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
NORTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 32 OF 73



0 ø 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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KITSAP COUNTY
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614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
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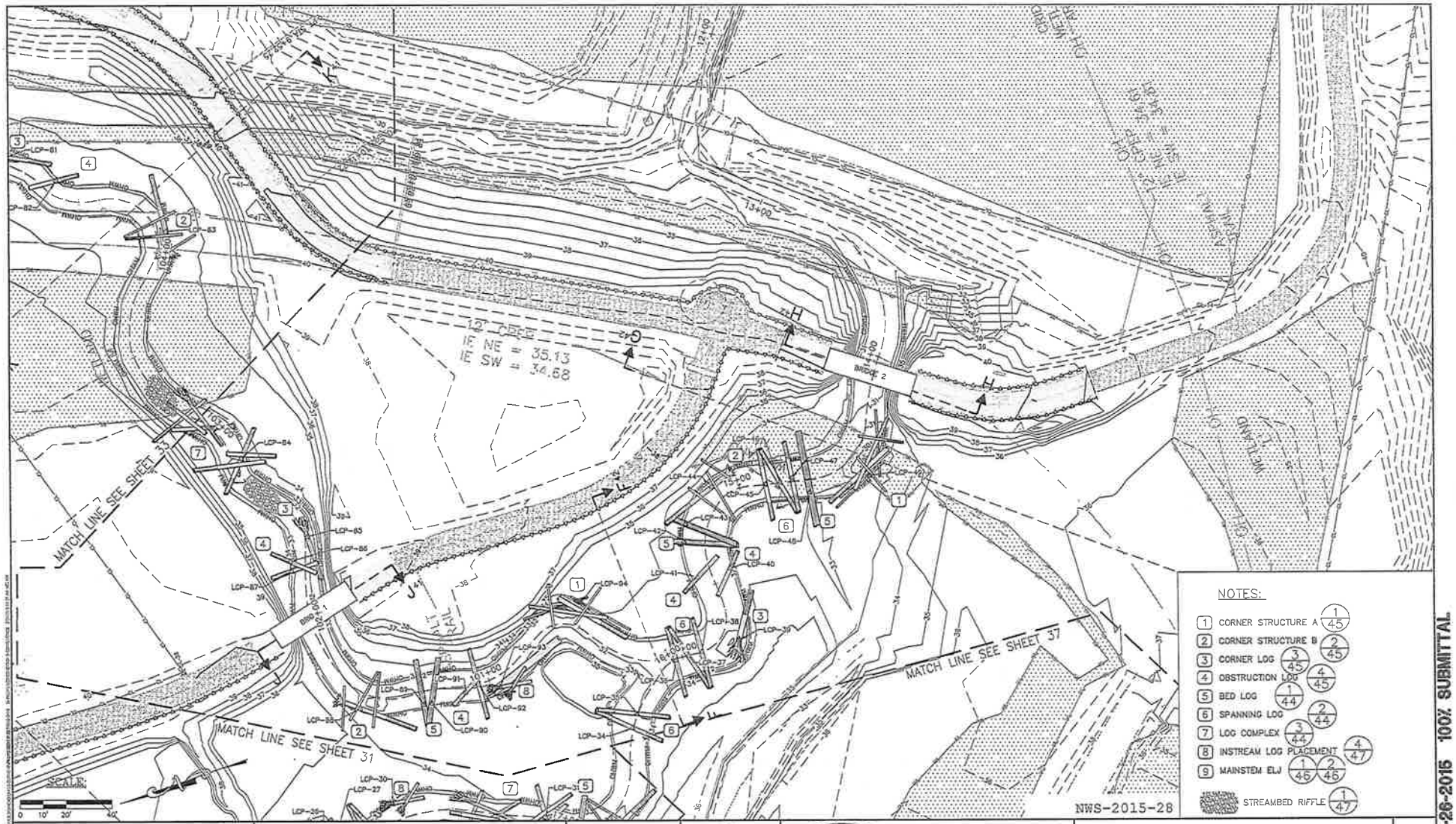
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
SOUTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 33 OF 73

Feb-26-2015 100% SUBMITTAL



NOTES:

1. CORNER STRUCTURE A (1/45)
2. CORNER STRUCTURE B (2/45)
3. CORNER LOG (3/45)
4. OBSTRUCTION LOG (4/45)
5. BED LOG (1/44)
6. SPANNING LOG (2/44)
7. LOG COMPLEX (3/44)
8. INSTREAM LOG PLACEMENT (4/47)
9. MAINSTEM ELJ (1/46) (2/46)

STREAMBED RIFFLE (1/47)

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Seattle, WA 98115

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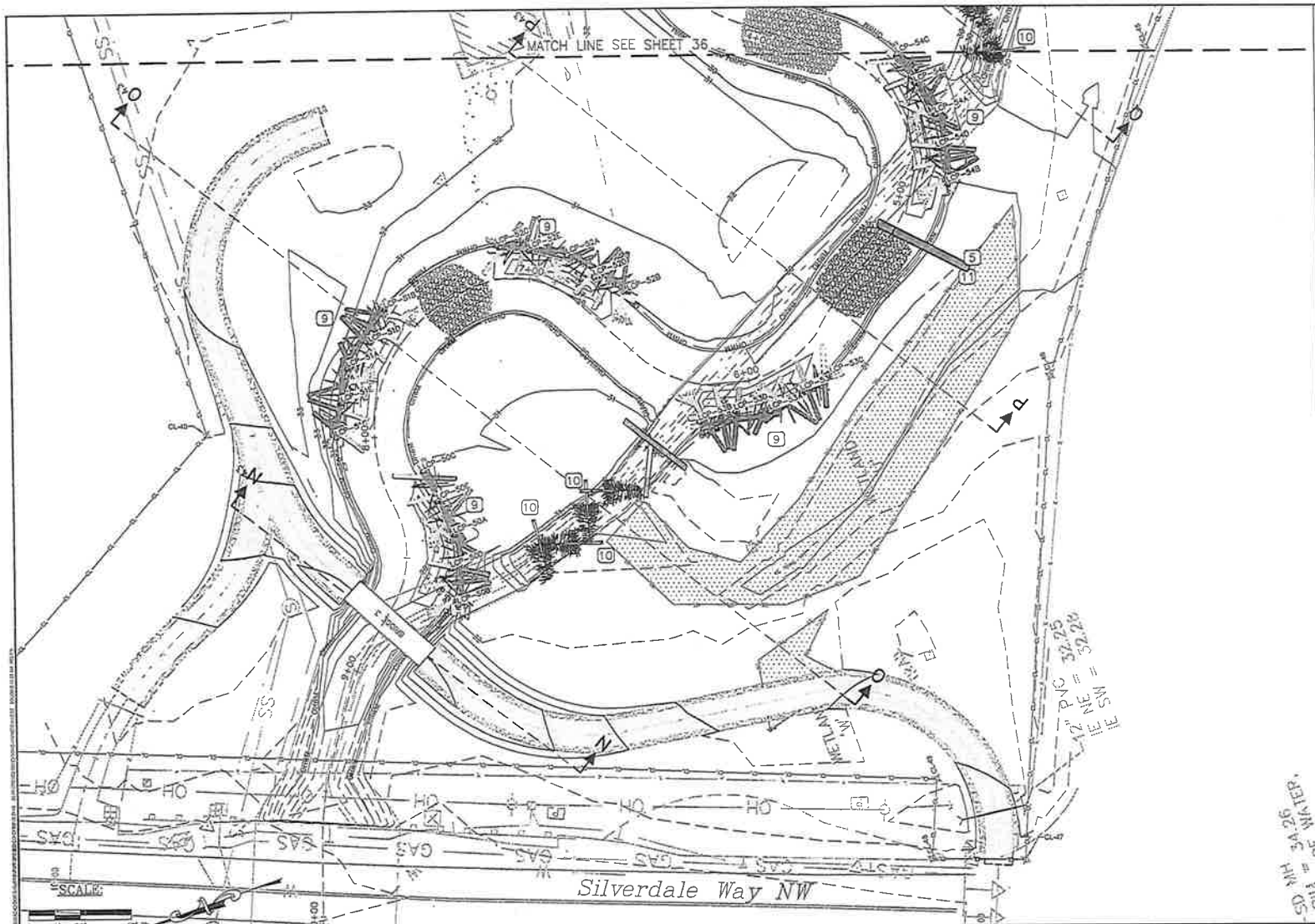
KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4957

CLEAR CREEK FLOODPLAIN RESTORATION PROPOSED CONDITIONS CONFLUENCE

KITSAP COUNTY, WASHINGTON

SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

Feb-26-2015 100% SUBMITTAL



NOTES:

1. CORNER STRUCTURE A (1/45)
2. CORNER STRUCTURE B (2/45)
3. CORNER LOG (3/45)
4. OBSTRUCTION LOG (4/45)
5. BED LOG (1/44)
6. SPANNING LOG (2/44)
7. LOG COMPLEX (3/44)
8. INSTREAM LOG PLACEMENT (4/47)
9. MAINSTEM ELJ (1/46) (2/46)

STREAMBED RIFFLE (1/47)

10. INSTALL 4 SLAVAGED TREE TOPS WITH LIMBS MIN. 25' LONG IN ABANDONED CHANNEL. DIG TRENCH AND BURY MIN. 10' OF TRUNK IN BANK WITH MIN. 3' COMPACTED FILL ON TOP OF TRUNK. ORIENT AS DIRECTED BY ENGINEER.
11. TRENCH MIN. 15' OF BED LOG IN BANK. LOG WILL NOT FULLY CROSS CHANNEL. COMPACT BACKFILL TO MIN. 90% MAX DENSITY.

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KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4867

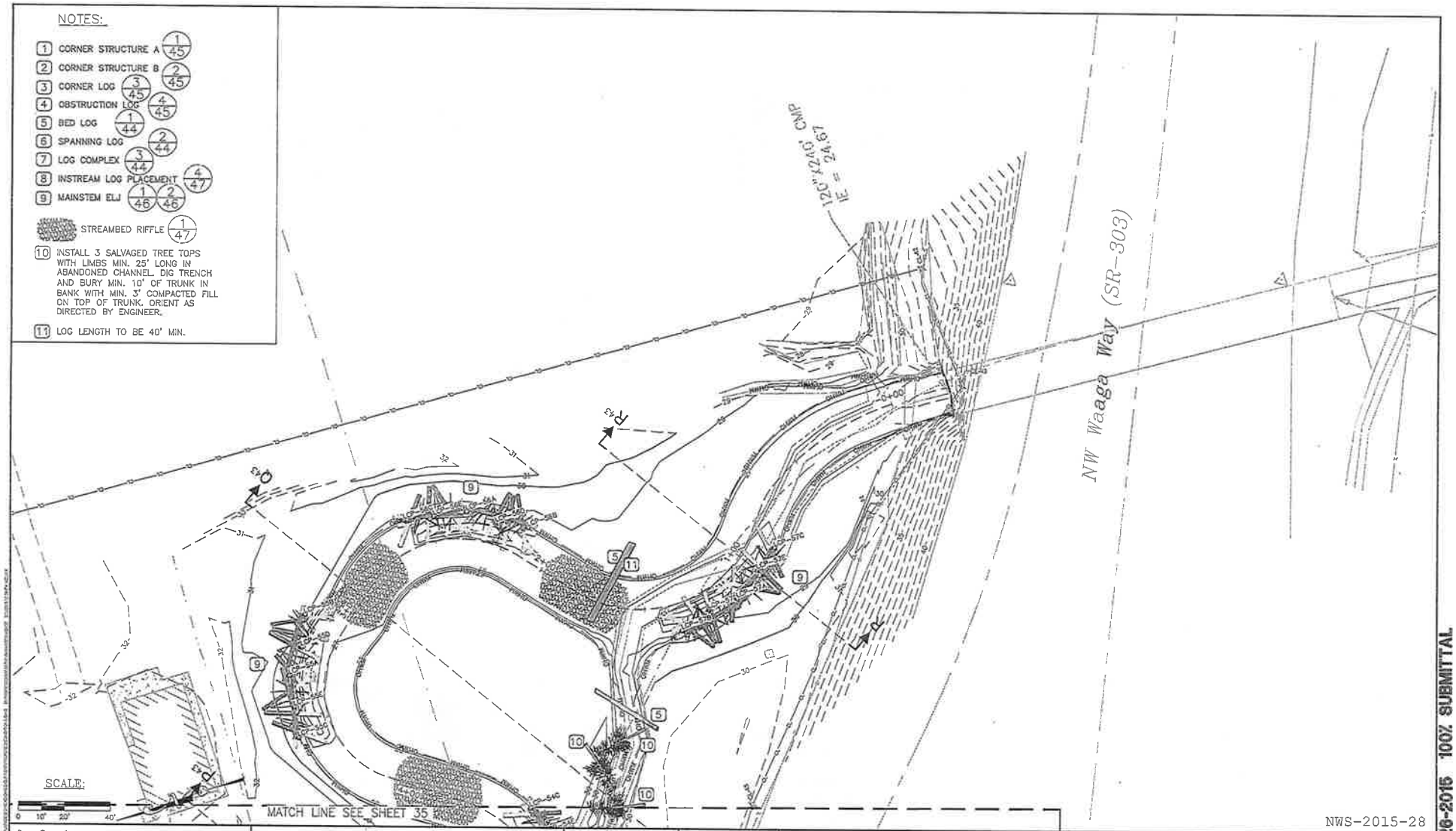
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
MAINSTEM WEST
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

NOTES:

1. CORNER STRUCTURE A (1/45)
2. CORNER STRUCTURE B (2/45)
3. CORNER LOG (3/45)
4. OBSTRUCTION LOG (4/45)
5. BED LOG (1/44)
6. SPANNING LOG (2/44)
7. LOG COMPLEX (3/44)
8. INSTREAM LOG PLACEMENT (4/47)
9. MAINSTEM ELJ (1/46) (2/46)

STREAMBED RIFFLE (1/47)

10. INSTALL 3 SALVAGED TREE TOPS WITH LIMBS MIN. 25' LONG IN ABANDONED CHANNEL. DIG TRENCH AND BURY MIN. 10' OF TRUNK IN BANK WITH MIN. 3' COMPACTED FILL ON TOP OF TRUNK. ORIENT AS DIRECTED BY ENGINEER.
11. LOG LENGTH TO BE 40' MIN.



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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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KITSAP COUNTY
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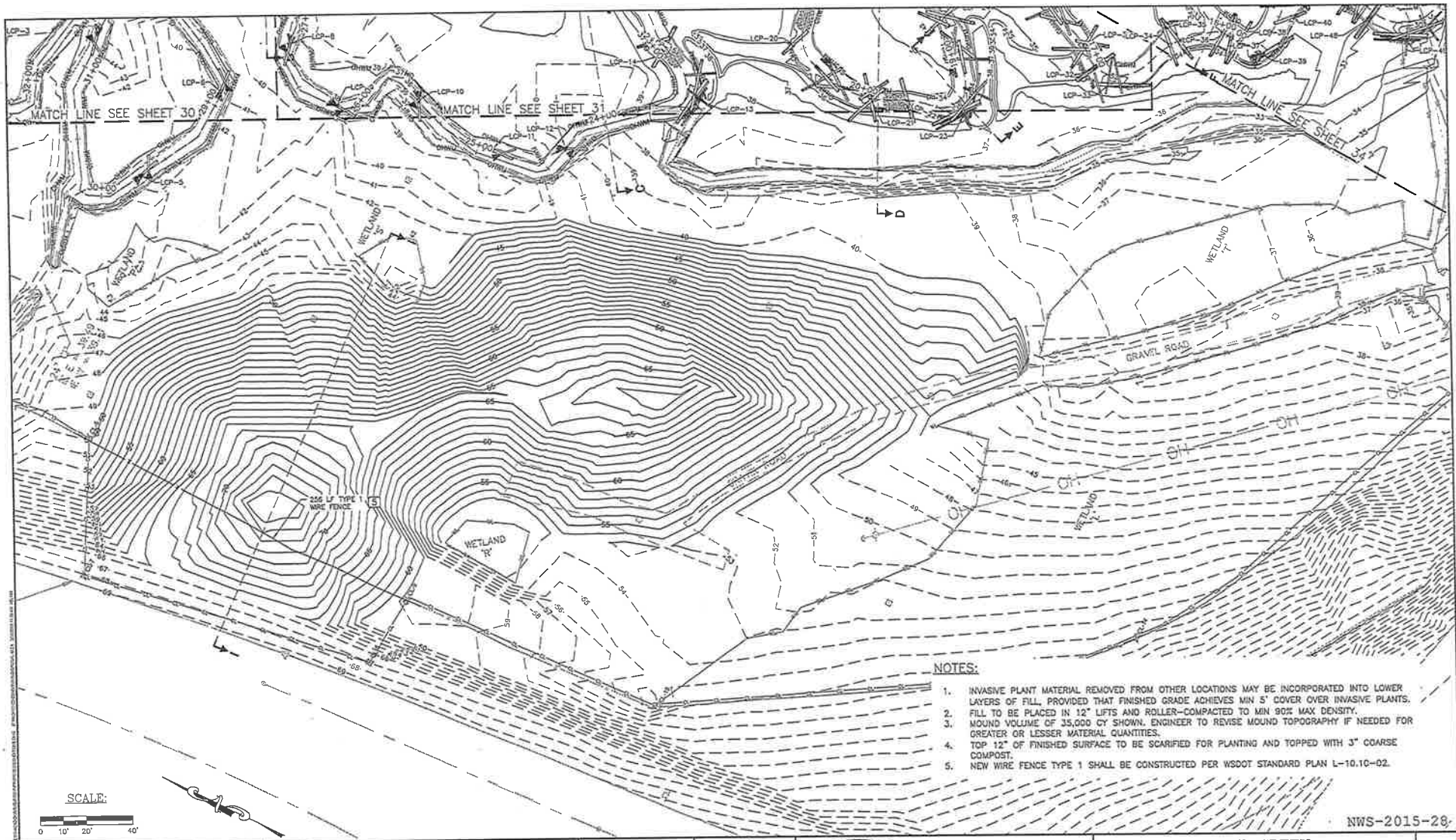
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
MAINSTEM EAST
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 36 OF 73

Feb-26-2015 100% SUBMITTAL



NOTES:

1. INVASIVE PLANT MATERIAL REMOVED FROM OTHER LOCATIONS MAY BE INCORPORATED INTO LOWER LAYERS OF FILL, PROVIDED THAT FINISHED GRADE ACHIEVES MIN 5' COVER OVER INVASIVE PLANTS.
2. FILL TO BE PLACED IN 12" LIFTS AND ROLLER-COMPACTED TO MIN 90% MAX DENSITY.
3. MOUND VOLUME OF 35,000 CY SHOWN. ENGINEER TO REVISE MOUND TOPOGRAPHY IF NEEDED FOR GREATER OR LESSER MATERIAL QUANTITIES.
4. TOP 12" OF FINISHED SURFACE TO BE SCARIFIED FOR PLANTING AND TOPPED WITH 3" COARSE COMPOST.
5. NEW WIRE FENCE TYPE 1 SHALL BE CONSTRUCTED PER WSDOT STANDARD PLAN L-10.10-02.

NWS-2015-28

Feb-26-2015 100% SUBMITTAL

0 Ø 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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DRAWN: K. ANDREWS
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CRP No.:
DATE: --/--/--

MICHAEL S. HRACHOVEC
STATE OF WASHINGTON
38039
REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY
18 57
WASHINGTON

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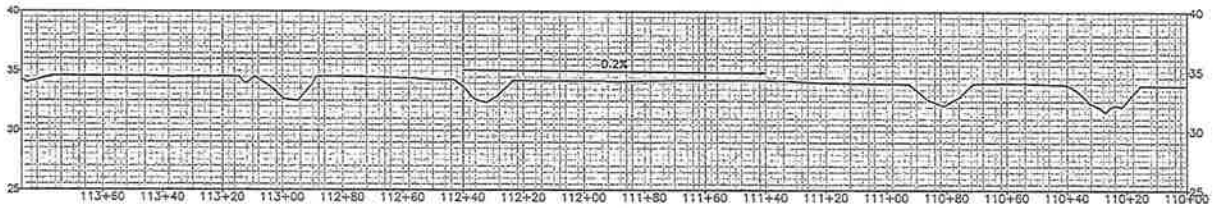
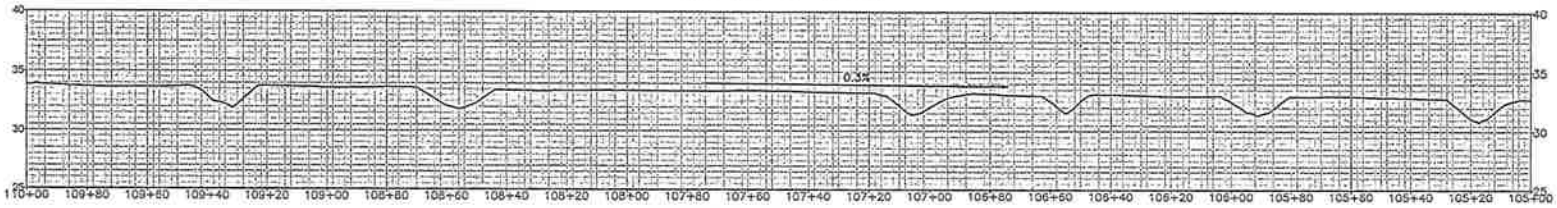
CLEAR CREEK
FLOODPLAIN RESTORATION
PROPOSED CONDITIONS
DISPOSAL AREA
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 37 OF 73



STREAM THALWEG PROFILE – EAST FORK

SCALE: H: 1" = 20' V: 1" = 5'



STREAM THALWEG PROFILE – EAST FORK

SCALE: H: 1" = 20' V: 1" = 5'

STREAM THALWEG PROFILE – EAST FORK

SCALE: H: 1" = 20' V: 1" = 5'

NOTES:

1. THE ELEVATIONS SHOWN IN THE THALWEG PROFILE ARE NOT TO BE USED FOR THE STREAM CONSTRUCTION CENTERLINE, CONTROL POINTS FOR STREAM CONSTRUCTION CENTERLINE, TOP OF BANK AND THALWEG ARE ON SHEET 3.

SCALE:

VERT: 1"=5' (5', 2 ½', 0)

VERTICAL EXAGGERATION: 4

HORIZ: 1"=20' (0, 10', 20', 40')

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Feb-26-2015 100% SUBMITTAL

0 ½ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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MICHAEL S. HRACHOVEC, STATE OF WASHINGTON, 36636, REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 1857 WASHINGTON

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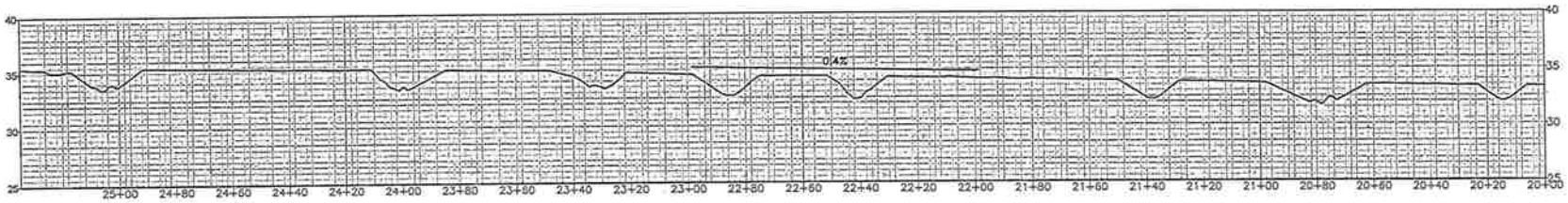
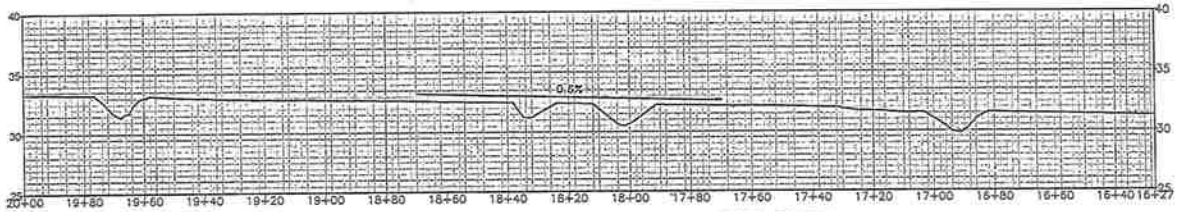
CLEAR CREEK
FLOODPLAIN RESTORATION
PROFILE
EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 38 OF 73



STREAM THALWEG PROFILE – WEST FORK

SCALE: H: 1" = 20' V: 1" = 5'



STREAM THALWEG PROFILE – WEST FORK

SCALE: H: 1" = 20' V: 1" = 5'

STREAM THALWEG PROFILE – WEST FORK

SCALE: H: 1" = 20' V: 1" = 5'

NOTES:

1. THE ELEVATIONS SHOWN IN THE THALWEG PROFILE ARE NOT TO BE USED FOR THE STREAM CONSTRUCTION CENTERLINE. CONTROL POINTS FOR STREAM CONSTRUCTION CENTERLINE, TOP OF BANK AND THALWEG ARE ON SHEET 3.

SCALE:

VERT: 1"=5' (5', 2 ½', 0)

VERTICAL EXAGGERATION: 4

HORIZ: 1"=20' (0, 10', 20', 40')

NWS-2015-28

0 ½ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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MICHAEL J. HRACHOVEC, STATE OF WASHINGTON, 36039, REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 1857 WASHINGTON

KITSAP COUNTY
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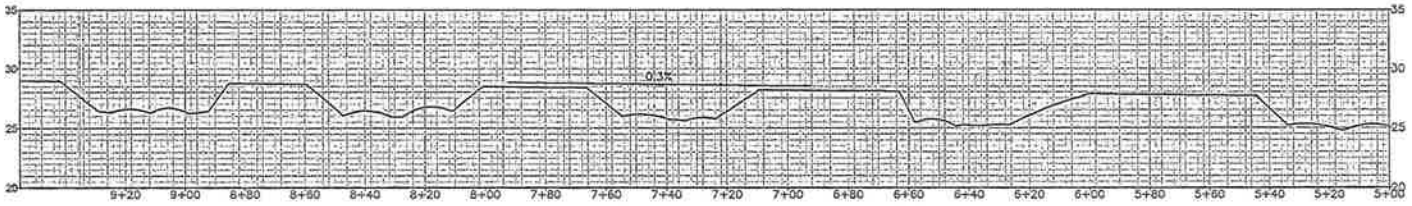
CLEAR CREEK
FLOODPLAIN RESTORATION
PROFILE
WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 39 OF 73

Feb-26-2015 100% SUBMITTAL



STREAM THALWEG PROFILE – MAIN STEM

SCALE: H: 1" = 20' V: 1" = 5'

STREAM THALWEG PROFILE – MAIN STEM

SCALE: H: 1" = 20' V: 1" = 5'

NOTES:

1. THE ELEVATIONS SHOWN IN THE THALWEG PROFILE ARE NOT TO BE USED FOR THE STREAM CONSTRUCTION CENTERLINE. CONTROL POINTS FOR STREAM CONSTRUCTION CENTERLINE, TOP OF BANK AND THALWEG ARE ON SHEET 3.

SCALE:

VERT: 2 ½' 1"=5' — VERTICAL EXAGGERATION: 4

HORIZ: 1"=20'

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DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
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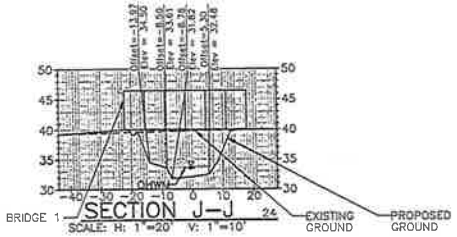
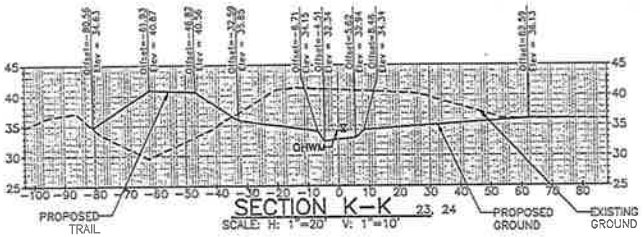
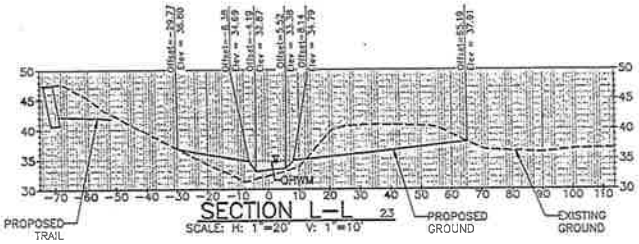
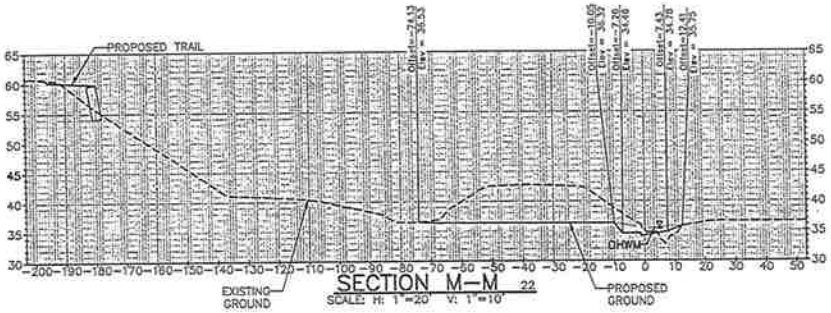
CLEAR CREEK
FLOODPLAIN RESTORATION
PROFILE
MAINSTEM
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

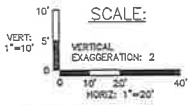
Feb-26-2015 100% SUBMITTAL











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KITSAP COUNTY
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614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
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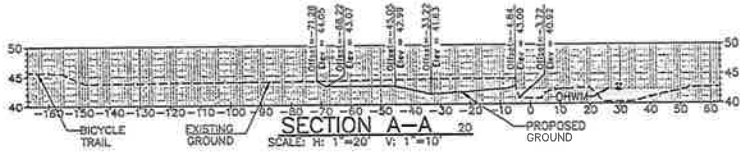
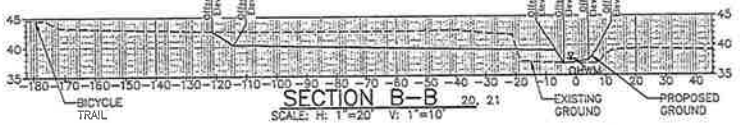
CLEAR CREEK
FLOODPLAIN RESTORATION
CROSS-SECTIONS
EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

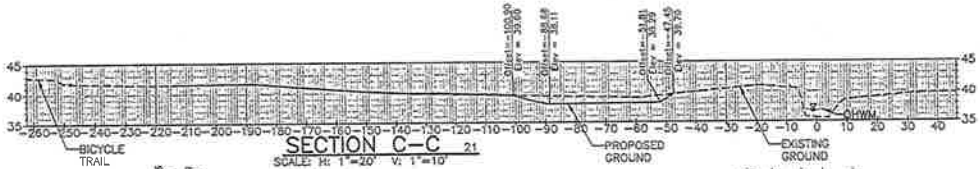
SHEET 41 OF 73



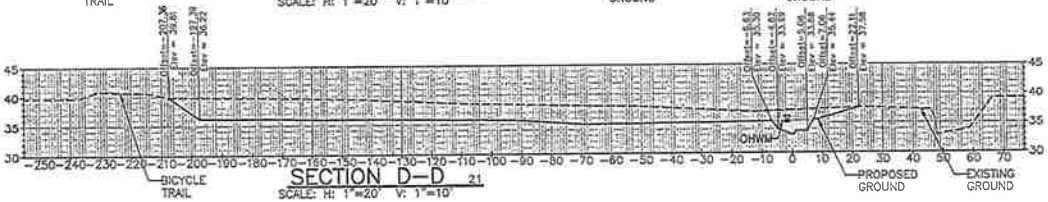
SECTION A–A 20
SCALE: H: 1"=20' V: 1"=10'



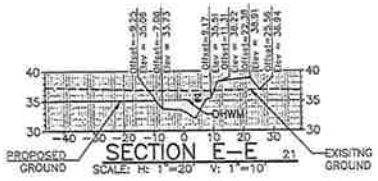
SECTION B–B 20, 21
SCALE: H: 1"=20' V: 1"=10'



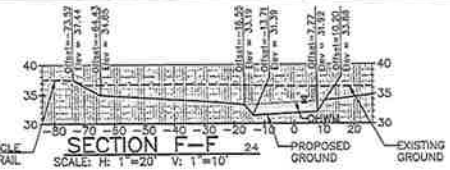
SECTION C–C 21
SCALE: H: 1"=20' V: 1"=10'



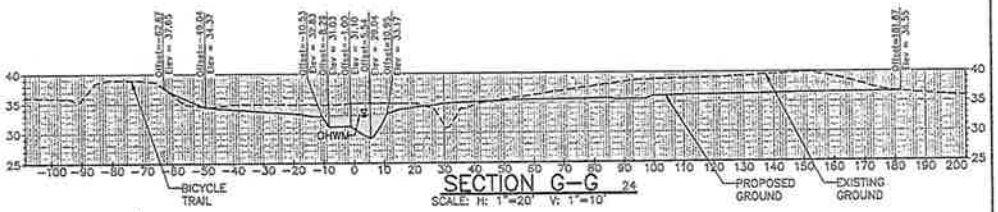
SECTION D–D 21
SCALE: H: 1"=20' V: 1"=10'



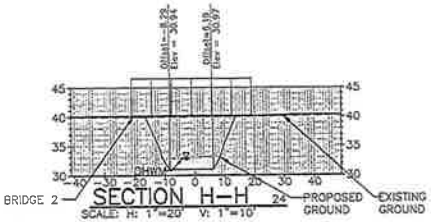
SECTION E–E 21
SCALE: H: 1"=20' V: 1"=10'



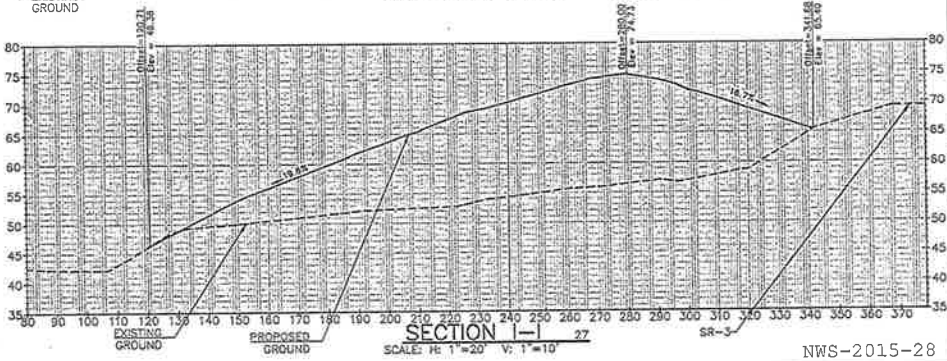
SECTION F–F 24
SCALE: H: 1"=20' V: 1"=10'



SECTION G–G 24
SCALE: H: 1"=20' V: 1"=10'



SECTION H–H 24
SCALE: H: 1"=20' V: 1"=10'



SECTION I–I 27
SCALE: H: 1"=20' V: 1"=10'

SCALE:
VERT: 1"=10'
VERTICAL EXAGGERATION: 2
HORIZ: 1"=20'

NWS-2015-28

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Natural Systems Design
P.O. Box 15609
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

Received by Corps: 11 March 2015

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

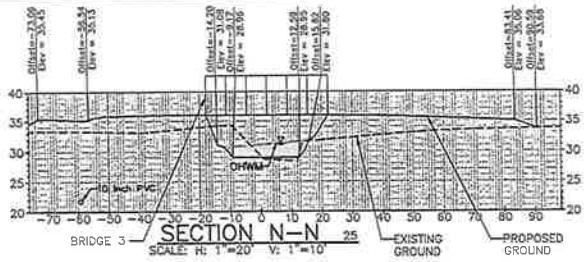
MICHAEL E. HRACHOVEC STATE OF WASHINGTON 36038 REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 1857 WASHINGTON

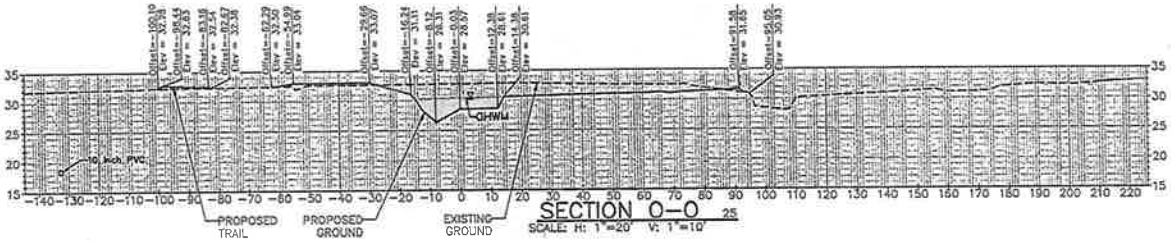
KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4557

CLEAR CREEK
FLOODPLAIN RESTORATION
CROSS–SECTIONS
WEST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 42 OF 73



SECTION N–N 25
SCALE: H: 1"=20' V: 1"=10'



SECTION O–O 25
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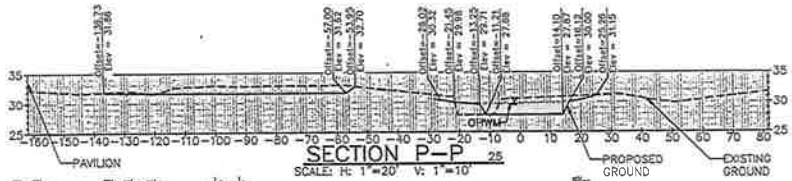
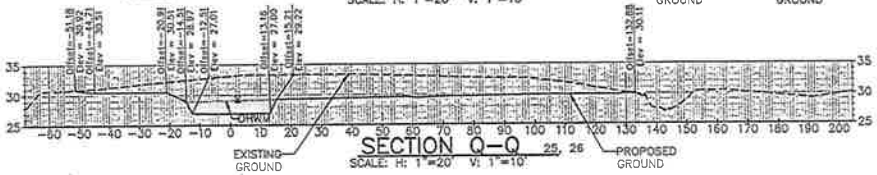
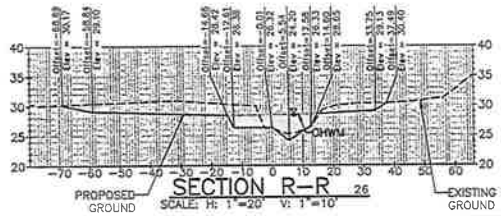


SECTION P–P 25
SCALE: H: 1"=20' V: 1"=10'



SECTION Q–Q 25, 26
SCALE: H: 1"=20' V: 1"=10'



SECTION R–R 26
SCALE: H: 1"=20' V: 1"=10'

SCALE:
VERT: 1"=10'
VERTICAL EXAGGERATION: 2
HORIZ: 1"=20'

NWS-2015-28

0 Ø 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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MAINSTEM
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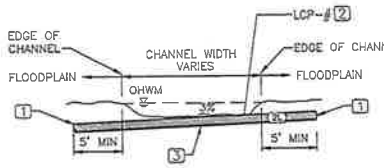
SHEET 43 OF 73

Feb-26-2016 100% SUBMITTAL

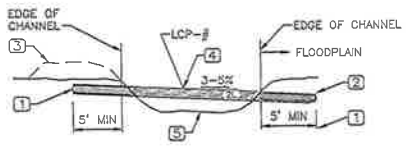


NOTES

1. BURY MIN 5' LOG END BEYOND EDGE OF CHANNEL BOTH SIDES. MIN LOG LENGTH OF 30'.
2. LOG EL MEASURED AT HIGHEST POINT IN CHANNEL AT LOCATION SHOWN IN PLAN VIEW. LOG TO BE FULLY BURIED IN CHANNEL AND TO BE SLOPED AS SHOWN.
3. LOG DIAMETER TO BE 18" MIN, LENGTH TO BE MIN 10' LONGER THAN BANKFULL WIDTH. 45' MAX LENGTH.

BED LOG SECTION VIEW (TYP) 1/44

SCALE: 1"=10'

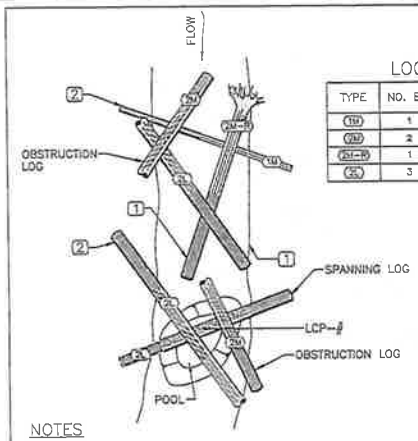


NOTES

1. BURY MIN 5' LOG END BEYOND EDGE OF CHANNEL BOTH SIDES.
2. LOG TO BE BURIED AT LEAST 2' BELOW FLOODPLAIN GRADING ON DEEPEST POINT OF BURIAL.
3. ON HIGH SIDE OF LOG ADD A 5' WIDE X 6' LONG PAD OF SOIL ABOVE FLOODPLAIN GRADING EL. ADD SUFFICIENT AMOUNT OF TOPSOIL SUCH THAT THE COMPACTED PAD TOP EL IS AT LEAST 2' ABOVE THE TOP OF LOG.
4. SLOPE LOG AT APPROX 3%-5%. LOG DIAMETER TO BE 12"-24", LENGTH TO BE MIN 10' LONGER THAN BANKFUL CHANNEL WIDTH (APPROX. 25'-30').
5. EXCAVATE POOL BELOW LOG AT A DEPTH EQUIVALENT TO MAX DIAMETER GRADED 2:1 (H:V) UPSTREAM AND DOWNSTREAM OF LOG.

SPANNING LOG SECTION VIEW (TYP) 2/44

SCALE: 1"=10'



LOG SCHEDULE

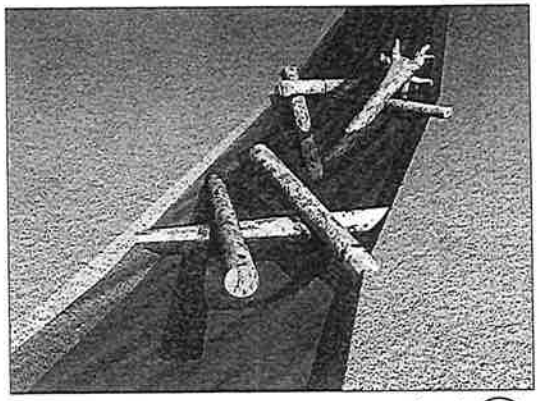
TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
1M	1	12-18	20-30
2M	2	18-28	20-30
2M-R	1	18-28	20-30
2L	3	18-28	>30

NOTES

1. BURY MIN 10' OF LOG AT LEAST 5' BELOW CHANNEL THALWEG EL AS MEASURED AT DEEPEST POINT OF BURIAL.
2. BURY MIN 10' OF LOG AT LEAST 5' BELOW FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.

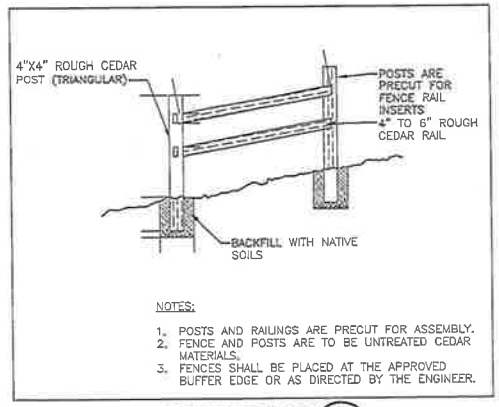
LOG COMPLEX PLAN VIEW (TYP) 3/44

SCALE: 1"=10'



LOG COMPLEX ISOMETRIC VIEW (TYP) 5/44

SCALE: NTS



NOTES:

1. POSTS AND RAILINGS ARE PRECUT FOR ASSEMBLY.
2. FENCE AND POSTS ARE TO BE UNTREATED CEDAR MATERIALS.
3. FENCES SHALL BE PLACED AT THE APPROVED BUFFER EDGE OR AS DIRECTED BY THE ENGINEER.

SPLIT FENCE 4/44

SCALE: 1" = 20'

LOG TYPES

TYPE	LOG DIA. (IN)	LENGTH (FT)
1S	<18	<20
1M	<18	20-30
1L	<18	>30
2S	18-28	<20
2M	18-28	20-30
2L	18-28	>30
3S	>28	<20
3M	>28	20-30
3L	>28	>30

* LOG TYPE DESIGNATORS ARE APPENDED WITH "-R" IF THE LOG INCLUDES A ROOT WAD. EXAMPLE: 2L LOG WITH A ROOTWAD = 2L-R

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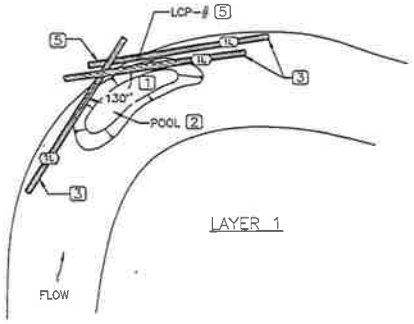
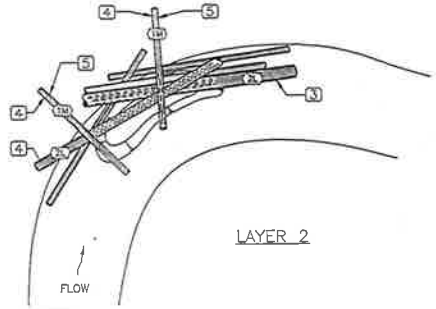
CLEAR CREEK
FLOODPLAIN RESTORATION
DETAILS-
CLEAR CREEK 1
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 44 OF 73

Feb-26-2015 100% SUBMITTAL





LOG SCHEDULE

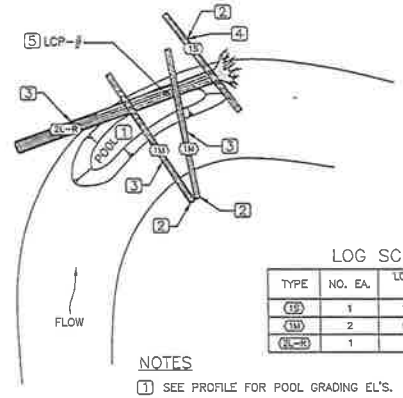
TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
1L	3	12–18	>30
2L	2	18–28	>30
1M	2	12–18	20–30

NOTES

1. ANGLE TO VARY FROM 100° – 150°. ADJUST AS DIRECTED BY ENGINEER.
2. SEE PROFILE FOR POOL GRADING ELEVATIONS.
3. LOG BURIED MIN 3' BELOW ADJACENT CHANNEL CHANNEL PROFILE EL AS MEASURED AT DEEPEST POINT OF BURIAL. 15' OF LOG IS TO BE BURIED.
4. BURY MIN 10' OF LOG.
5. LOG BURIED MIN 5' BELOW SURROUNDING FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.
6. LOGS WITH ROOTWADS MAY BE UTILIZED IN PLACE OF LOGS WITHOUT ROOTWADS.

CORNER STRUCTURE A (1/45)

SCALE: 1"=10'



LOG SCHEDULE

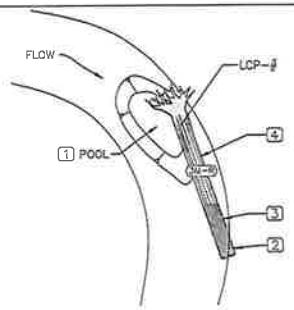
TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
1L	1	12–18	20
1M	2	12–18	20–30
2L–R	1	18–28	>30

NOTES

1. SEE PROFILE FOR POOL GRADING EL'S.
2. LOG BURIED MIN 5' BELOW SURROUNDING FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.
3. BURY MIN 15' OF LOG.
4. BURY MIN 10' OF LOG.
5. STRUCTURE CONTROL POINT EL TO MATCH ADJACENT TOP OF BANK.

CORNER STRUCTURE B (2/45)

SCALE: 1"=10'

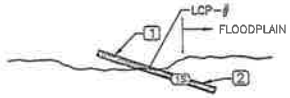


NOTES

1. SEE PROFILE FOR POOL GRADING EL'S.
2. LOG BURIED MIN 2' BELOW CORRESPONDING CHANNEL THALWEG EL AS MEASURED AT END OF LOG.
3. BURY MIN 5' OF LOG.
4. LOG TO BE MIN 30" DIAMETER AND MIN 25' LONG WITH ROOTWAD.

CORNER LOG (PLAN VIEW) (3/45)

SCALE: 1"=10'



NOTES

1. LOG TO BE 8"–18" DIAMETER AND 15'–25' LONG.
2. BURY MIN 5' LOG LENGTH. BURY MIN 5' OF LOG BELOW SURROUNDING FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.

OBSTRUCTION LOG SECTION VIEW (4/45)

SCALE: 1"=10'

NWS-2015-28

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KITSAP COUNTY — 18 57 — WASHINGTON

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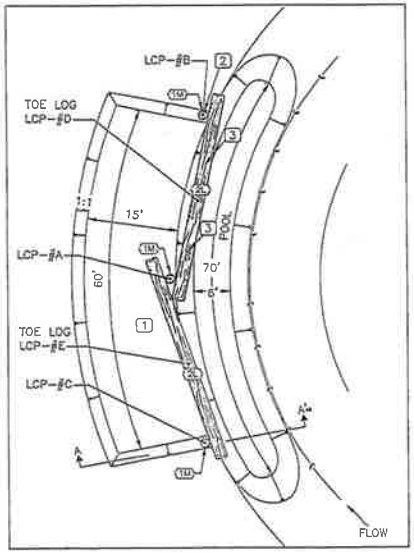
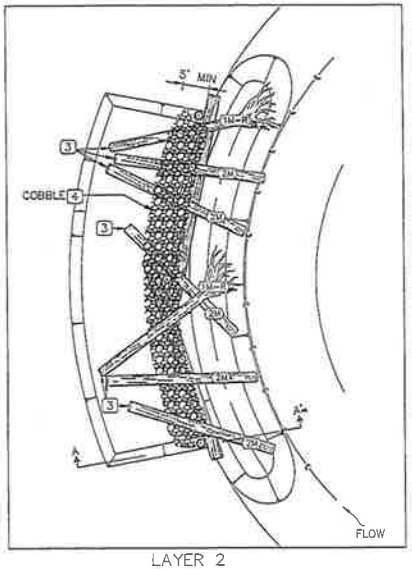
CLEAR CREEK
FLOODPLAIN RESTORATION
DETAILS–
CLEAR CREEK 2
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

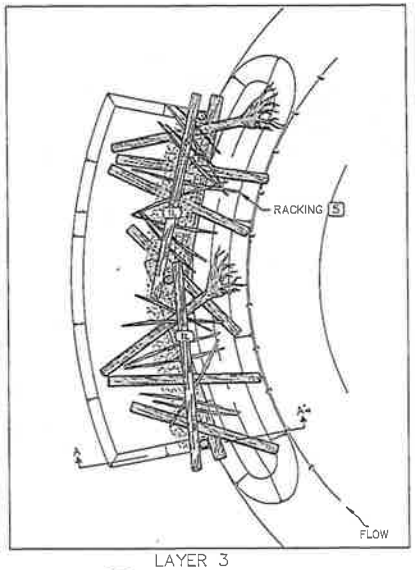
SHEET 45 OF 73



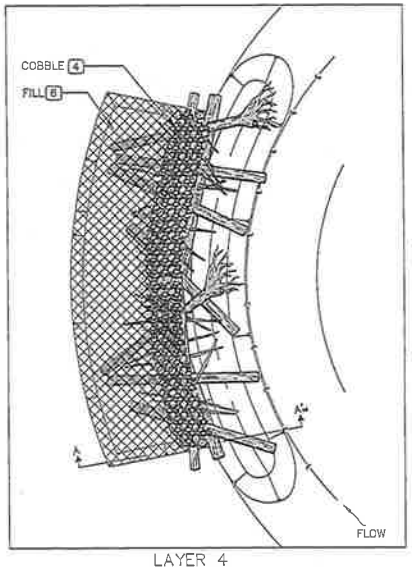
LAYER 1



LAYER 2



LAYER 3



LAYER 4

MAINSTEM ELJ1 (1/46)

SCALE: 1"=10'

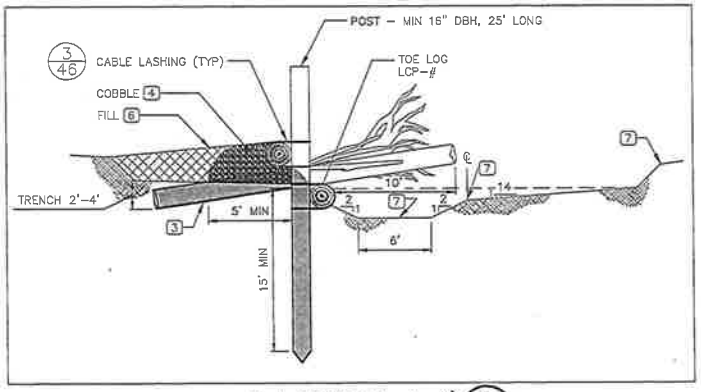
LOG SCHEDULE

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
2M	2	18–28	>30
1M*	3	12–18	20–30
1M-R	2	12–18	20–30
2M	5	18–28	20–30
1L	2	12–18	>30

* POSTS SHOWN AS 1-M SHALL BE MIN 16" DIA., 25' LONG.

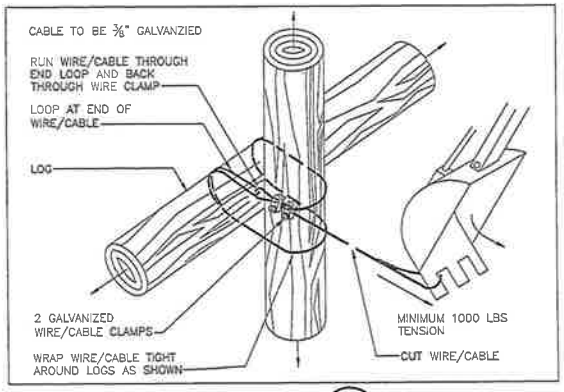
NOTES:

1. GRADING EL TO MATCH CONTROL OF TOE LOG
2. INSTALL POSTS PRIOR TO TOE LOG INSTALL
3. TRENCH INDIVIDUAL LOGS INTO SOIL AS DIRECTED BY ENGINEER
4. PLACE COBBLE BETWEEN LOGS, LEVEL WITH TOP OF LOGS AND COMPACT WITH HOE PACK TO DRIVE COBBLE INTO VOIDS BETWEEN LOGS.
5. RACKING TO CONSIST OF MIN 2 TREES (4–6 SEGMENTS EACH >20' LONG WITH ROOTS AND BRANCHES) SALVAGED THROUGH SITE CLEARING. ENGINEER TO SELECT SEGMENTS TO BE USED AND PLACEMENT RACKING SHOWN AS SMALL MATERIAL FOR GRAPHICAL CLARITY ONLY. ACTUAL RACKING SHALL BE 8"–24" DBH, 20'–30' LONG WITH BRANCHES AND ROOTS.
6. FILL TO BE RE-USED MATERIAL CUT FROM SITE. SELECT FILL WITH LOW ORGANIC CONTENT, INSTALL AND COMPACT IN 12" LAYERS TO MIN 90% MAX DENSITY USING HOE PACK UNIT. TOP OF FILL OVER STRUCTURE WILL BE 1'–3' ABOVE GRADE SHOWN ON GRADING PLAN.
7. SEE CONTROL DATA FOR GRADING EL'S, SHEET 3.



ELJ SECTION A–A' (2/46)

SCALE: 1"=5'



LASHING DETAIL (3/46)

SCALE: 1"= 2'

NWS-2015-28

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DETAILS–
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KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 46 OF 73

LEGEND

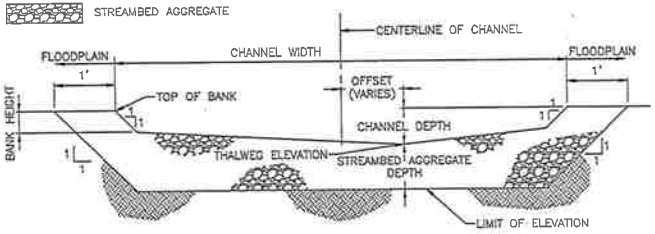
FINISHED CHANNEL

NATIVE SOIL

STREAMBED AGGREGATE

NOTES:

1. OVER-EXCAVATE CHANNEL TO PLACE STREAMBED AGGREGATE TO ACHIEVE PROPOSED FINISH GRADE AND DESIGN PARAMETERS.



DESIGN PARAMETERS	W. FORK	E. FORK	MAIN STEM
CHANNEL WIDTH (FT)	15.0 ±2'	15.0 ±2'	21.0 ±2'
CHANNEL DEPTH (FT)	1.9	1.8	2.2
BANK HEIGHT (FT)	1.6	1.5	1.8
STREAMBED AGGREGATE DEPTH (FT)	1.0	1.0	1.0
RIFFLE LENGTH (FT)	15	15	40

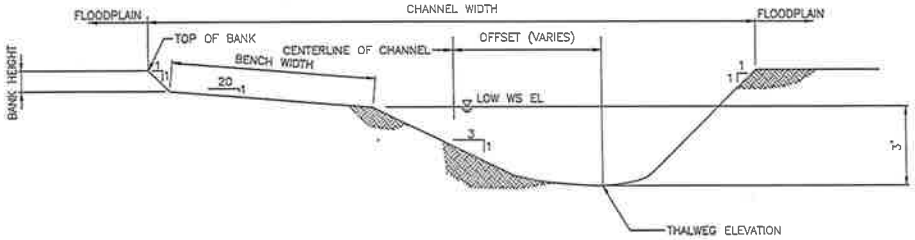
STREAMBED RIFFLE CROSS SECTION (TYP) 1/47

SCALE: NTS

LEGEND

FINISHED CHANNEL

NATIVE SOIL



DESIGN PARAMETERS	W. FORK	E. FORK	MAIN STEM
CHANNEL WIDTH (FT)	18 ±2'	18 ±2'	25 ±2'
BENCH WIDTH (FT)	6	6	9
BANK HEIGHT (FT)	1.6	1.5	1.8

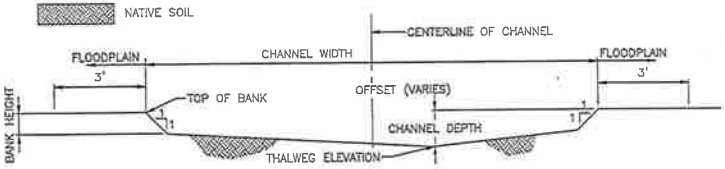
CORNER POOL CROSS SECTION GRADING (TYP) 2/47

SCALE: NTS

LEGEND

FINISHED CHANNEL

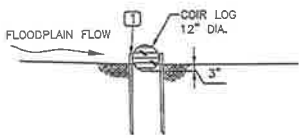
NATIVE SOIL



DESIGN PARAMETERS	W. FORK	E. FORK	MAIN STEM
CHANNEL WIDTH (FT)	15.0 ±2'	15.0 ±2'	21.0 ±2'
CHANNEL DEPTH (FT)	1.9	1.8	2.2
BANK HEIGHT (FT)	1.6	1.5	1.8

STANDARD CHANNEL CROSS-SECTION (TYP) 5/47

SCALE: NTS

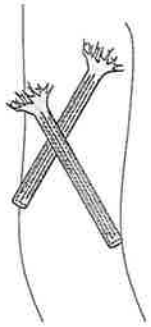


COIR LOG NOTES:

1 WOOD STAKES, 30" X 2" X 1", INSTALLED ON BOTH SIDES AT 24" SPACING, TIE DOWN TOGETHER OVER COIR LOG WITH 3/16" TWINE.

COIR LOG ANCHORING DETAIL (TYP) 3/47

SCALE: NTS



NOTES

1. LOGS SHALL BE PLACED BY HAND WHERE MACHINE ACCESS WOULD DAMAGE EXISTING VEGETATION
2. SPECIFIC PLACEMENT TO BE GUIDED BY ENGINEER

LOG SCHEDULE

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)	ROOTWAD
1M-R	2	12-18	20-30	Y

INSTREAM LOG PLACEMENT 4/47

SCALE: NTS

NWS-2015-28

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SHEET 47 OF 73

Mar-11-2015 100% SUBMITTAL

BRIDGE SPECIFICATIONS

SEE THE CONTRACT FOR THE FULL BRIDGE DESIGN AND FABRICATION REQUIREMENTS.

QUALIFIED SUPPLIER
ALL SUPPLIERS MUST HAVE AT LEAST 5 YEARS EXPERIENCE IN FABRICATING THIS TYPE OF STRUCTURE, AND BE APPROVED BY THE ENGINEER. THE ABUTMENT WAS LAID OUT TO ACCEPT A GENERIC HALF-THROUGH TRUSS. THE LAYOUT OF THE BEARING PEDESTALS AND ANCHOR & BOLTS MUST BE VERIFIED PRIOR TO CONSTRUCTION.

GENERAL FEATURES OF DESIGN
BRIDGE LENGTH SHALL BE FABRICATED TO FIT THE ABUTMENTS SHOWN. THE BRIDGE WIDTH SHALL BE 15'-0" FROM THE INSIDE OF THE STRUCTURAL ELEMENTS AT DECK LEVEL. THE BRIDGE SYSTEM TYPE SHALL BE DESIGNED AS A HALF-THROUGH TRUSS. THE TOP OF THE TOP CHORD SHALL NOT BE LESS THAN 54 INCHES ABOVE THE DECK, MEASURED FROM THE HIGH POINT OF THE DECK SURFACE. THE VERTICAL BRIDGE CAMBER DIMENSION AT MIDSPAN SHALL BE EQUAL TO 100% OF THE FULL DEAD LOAD DEFLECTION PLUS 1% OF THE FULL LENGTH OF THE BRIDGE. HORIZONTAL SAFETY RAIL SHALL BE SPACED TO PREVENT A 6 INCH SPHERE FROM PASSING THROUGH IT, AND DESIGNED FOR A 50 PLF DISTRIBUTED AND 200 LB POINT LOAD PER AASHTO 13.8.2. THE SAFETY RAILS SHALL BE PLACED ON THE STRUCTURE TO A MINIMUM HEIGHT OF 3'-2". THE MAXIMUM VERTICAL LIVE LOAD DEFLECTION SHALL BE L/500 AND THE MAXIMUM HORIZONTAL DEFLECTION SHALL BE L/400.

ENGINEERING / LOADS
THE BRIDGE SHALL BE DESIGNED FOR ITS OWN SELF WEIGHT, A PEDESTRIAN LIVE LOAD OF 90 PSF, AN AASHTO H10 TRUCK (10 TONS) AND WIND LOAD PER THE SPECIAL PROVISIONS. ALL WELDS SHALL MEET ANSI/AWS STANDARDS. ALL WELDS SHALL MEET THE REQUIREMENTS OF AWS D1.1

MATERIALS
THE STRUCTURAL ELEMENTS SHALL BE CONSTRUCTED WITH STRUCTURAL STEEL MEETING THE REQUIREMENTS OF ASTM A709 50W WEATHERING STEEL. CONCRETE IN THE DECK SHALL BE CLASS 4000D.

SUBMITTALS
PRIOR TO FABRICATION, SHOP DRAWINGS THAT ARE UNIQUE TO THE PROJECT, AS WELL AS STRUCTURAL CALCULATIONS AND ERECTION PROCEDURES STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL

FOOTING SPECIFICATIONS

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL 2014. THE STRUCTURAL ELEMENTS ARE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS FOR LOAD AND RESISTANCE FACTOR DESIGN. SEISMIC DESIGN OF THIS STRUCTURE HAS BEEN DONE USING PGA=0.440 AND SITE CLASS D.

ALL WORK SHALL CONFORM TO THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) CURRENT STANDARD PLANS AND STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION 2014, AND THE KITSAP COUNTY STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS.

THE CONCRETE IN THE FOOTINGS SHALL BE CLASS 4000 WITH AIR. THE ANCHOR BOLTS SHALL BE ASTM A307 AND GALVANIZED ACCORDING TO ASTM A123. FALSEWORK SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS IN THE STRUCTURE. UNLESS OTHERWISE SHOWN IN THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2½ INCHES AT THE TOP OF THE ABUTMENT WALL, 3 INCHES FOR CONCRETE CAST AGAINST EARTH, 2 INCHES FOR CONCRETE FORMED AND BACKFILLED, AND 2 INCHES AT ALL OTHER LOCATIONS. USE A ¾ INCH CHAMFER AT ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

ALL REINFORCING BARS SHALL BE AASHTO M-31 GRADE 60 EPOXY COATED UNLESS OTHERWISE NOTED. NUMBER AND LENGTH OF BARS TO BE VERIFIED BY CONTRACTOR.

IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND THE EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS FOR RESOLUTION OF ANY DISCREPANCIES.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ANY AND ALL UTILITIES IN THE AREA AND FIELD VERIFY THESE LOCATIONS PRIOR TO CONSTRUCTION. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS: 1-800-424-5555. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER PROMPTLY IN ORDER TO RESOLVE ANY CONFLICTS.

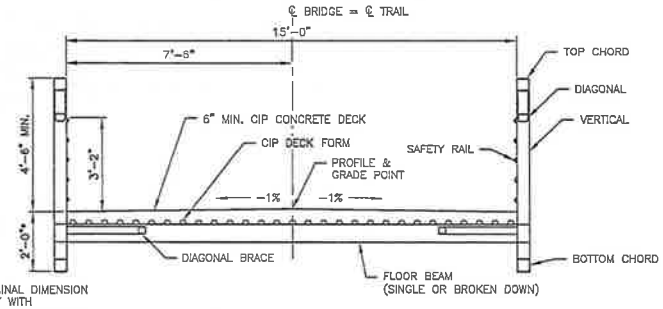
THE CONTRACTOR SHALL NOTIFY THE COUNTY 96 HOURS IN ADVANCE OF ANY WORK REQUIRING DE-ENERGIZING OF ANY POWER OR UTILITIES. SEE SPECIAL PROVISIONS 1-07.17(4) FOR CONTACT NUMBERS

THE TEMPORARY EROSION/SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED PRIOR TO STARTING ANY EARTHWORK.

THE CONTRACTOR MAY BACKFILL THE ABUTMENTS BEFORE BRIDGE STRUCTURE PLACEMENT.

CALCIUM CHLORIDE SHALL NOT BE USED AS A CONCRETE ADMIXTURE.

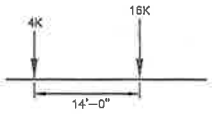
DRAWINGS ARE NOT TO BE SCALED FOR INFORMATION. CONTACT ENGINEER FOR ANY DIMENSIONAL INFORMATION NOT SHOWN.



* NOMINAL DIMENSION VERIFY WITH BRIDGE MANUFACTURER

TYPICAL BRIDGE SECTION

Scale: 1/2" = 1'-0"



AASHTO H-10 TRUCK
TOTAL WEIGHT = 10 TONS
WEIGHTS SHOWN AS KIPS PER AXLE

THE BRIDGE SHALL ALSO BE DESIGNED FOR A 90 PSF PEDESTRIAN LIVE LOAD

DESIGN IN ACCORDANCE WITH THE AASHTO LRFD PEDESTRIAN BRIDGE DESIGN SPECIFICATIONS

BRIDGE LOADING: AASHTO H-10

Scale: NTS

Received by Corps: 11 March 2015

NWS-2015-28

CONTROL POINTS	REVISIONS					
	No.	BY	DATE	DESCRIPTION	SURVEYED:	–
	–	–	–	–	DESIGNED:	RPD
	–	–	–	–	DRAWN:	RPD
	–	–	–	–	CHECKED:	DRS
	–	–	–	–	CRP No.	–
	–	–	–	–	DATE:	2/10/2015

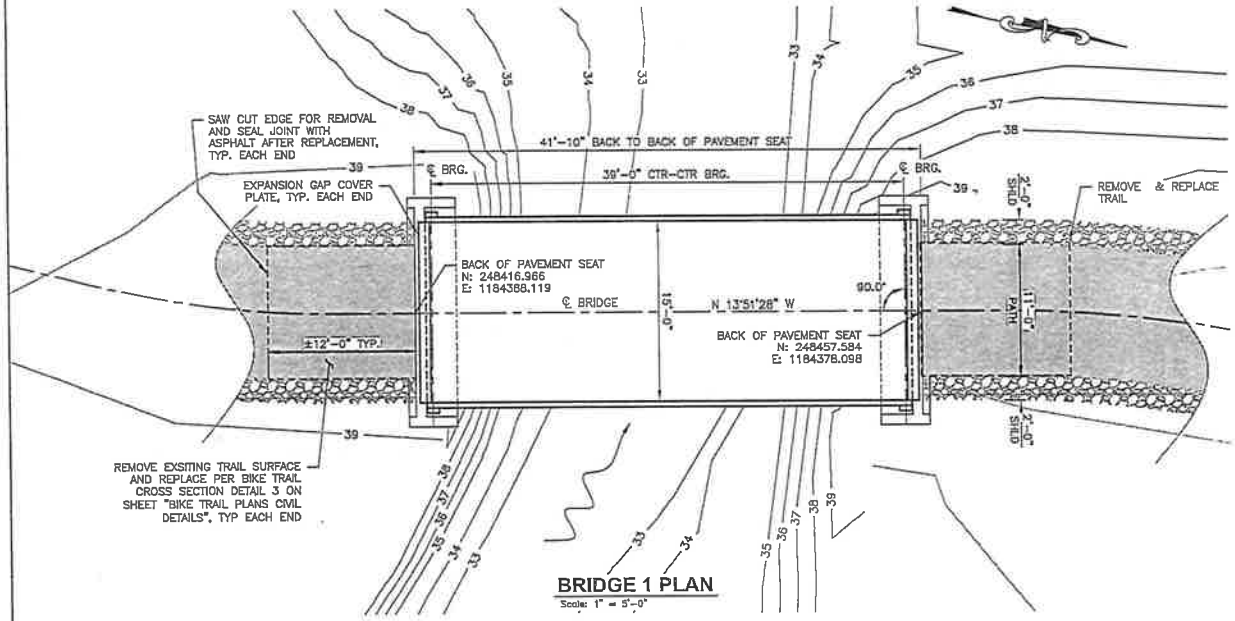
100% REVIEW SET NOT FOR CONSTRUCTION

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4667

CLEAR CREEK FLOODPLAIN RESTORATION

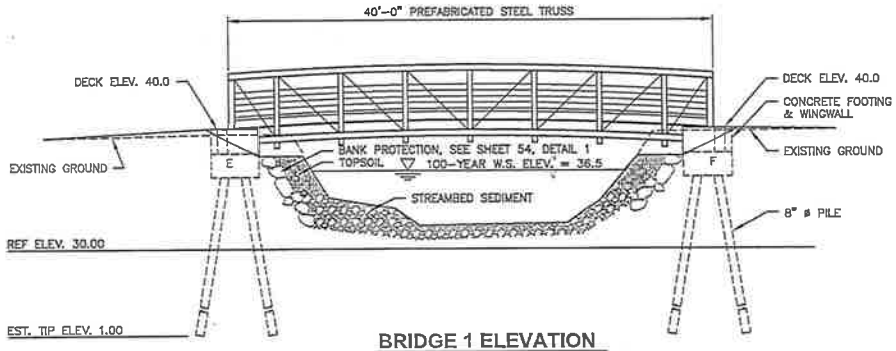
BRIDGE GENERAL NOTES AND TYPICAL SECTION

KITSAP COUNTY, WASHINGTON
SECTION9,16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



BRIDGE 1 PLAN

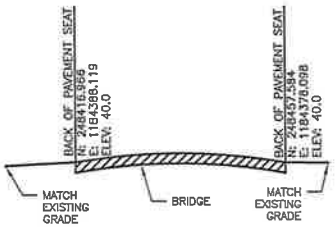
Scale: 1" = 5'-0"



BRIDGE 1 ELEVATION

Scale: 1" = 5'-0"

FACING DOWNSTREAM



CENTERLINE PROFILE

Scale: 1" = 1'-0"

Received by Corps: 11 March 2015

NWS-2015-28

CONTROL POINTS	REVISIONS					
	No.	BY	DATE	DESCRIPTION	SURVEYED:	–
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	–	–	–	–	CHECKED:	DRS
	–	–	–	–	CRP No.	–
	–	–	–	–	DATE:	2/10/2015

100% REVIEW SET NOT FOR CONSTRUCTION

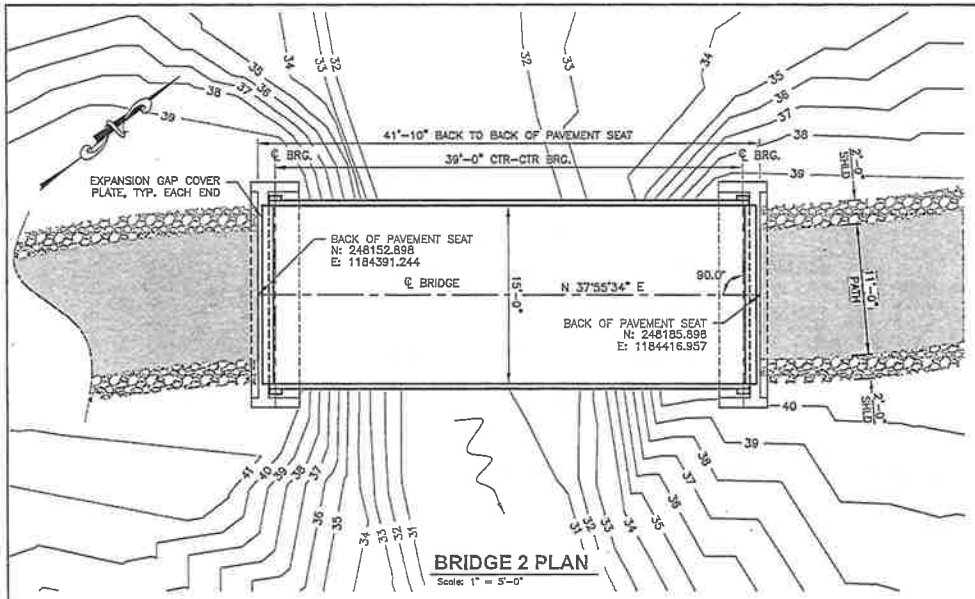
KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4987

CLEAR CREEK FLOODPLAIN RESTORATION

BRIDGE 1 PLAN AND ELEVATION

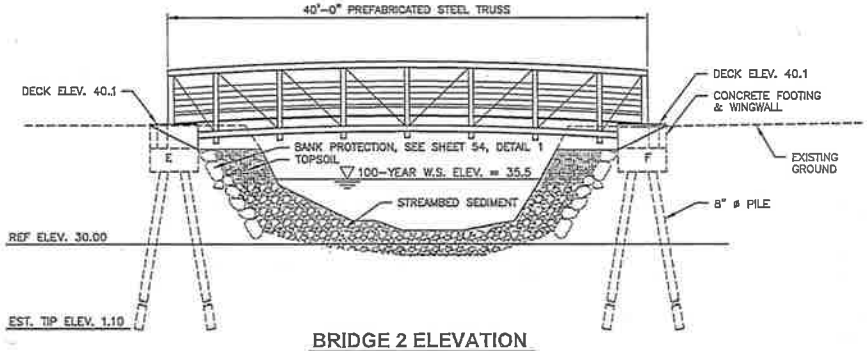
KITSAP COUNTY, WASHINGTON

SECTION 9, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



BRIDGE 2 PLAN

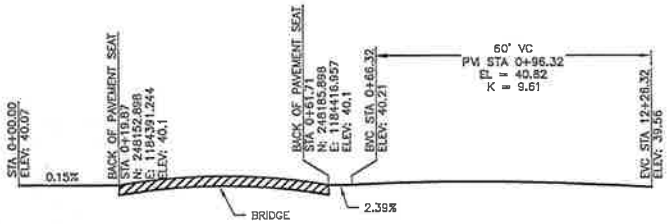
Scale: 1" = 5'-0"



BRIDGE 2 ELEVATION

Scale: 1" = 5'-0"

FACING UPSTREAM



CENTERLINE PROFILE

Scale: 1" = 1'-0"

Received by Corps: 11 March 2015

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CONTROL POINTS	REVISIONS				
	No.	BY	DATE	DESCRIPTION	
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DESIGNED: RPD
DRAWN: RPD
CHECKED: DRS
CRP No. –
DATE: 2/10/2015

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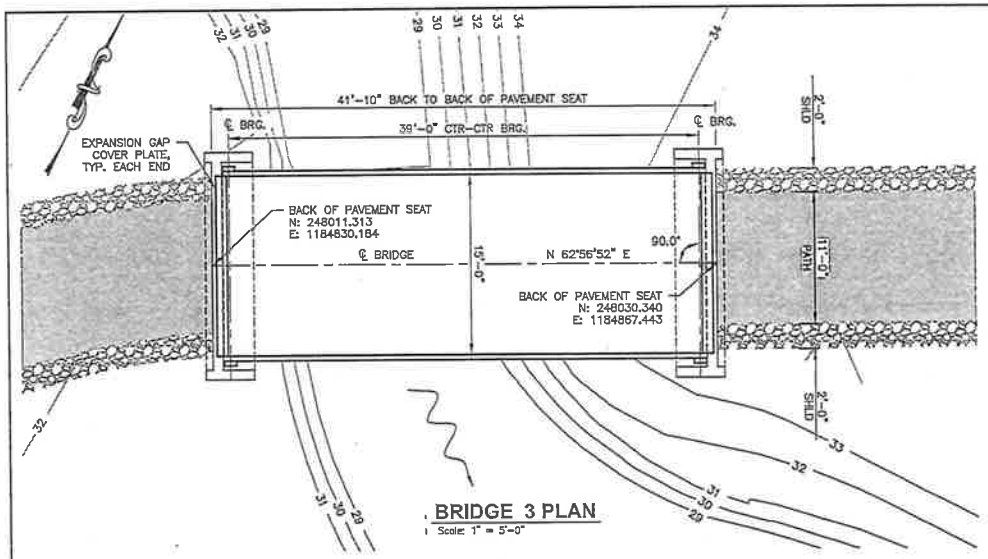
REVIEW SET NOT FOR CONSTRUCTION

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK
FLOODPLAIN RESTORATION

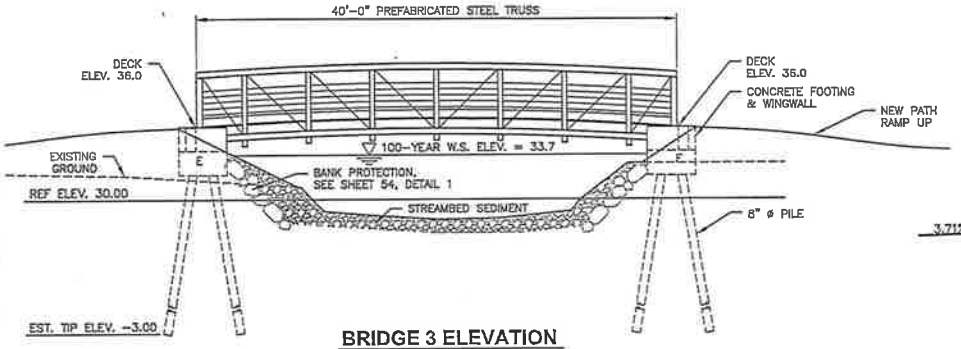
BRIDGE 2
PLAN AND ELEVATION

KITSAP COUNTY, WASHINGTON
SECTION 9, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



BRIDGE 3 PLAN

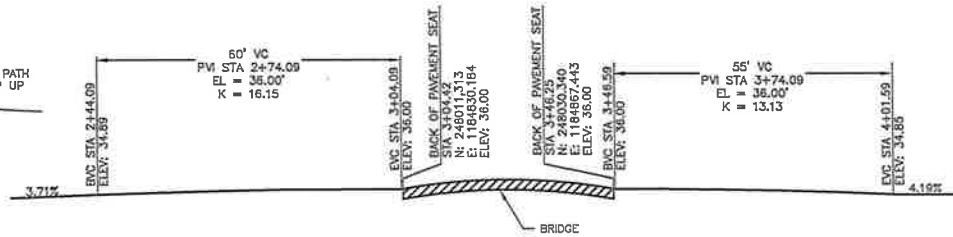
Scale: 1" = 5'-0"



BRIDGE 3 ELEVATION

Scale: 1" = 5'-0"

FACING UPSTREAM



CENTERLINE PROFILE

Scale: 1" = 1'-0"

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CONTROL POINTS	REVISIONS			
	No.	BY	DATE	DESCRIPTION
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DATE: 2/10/2015

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KITSAP COUNTY WASHINGTON 18 57

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
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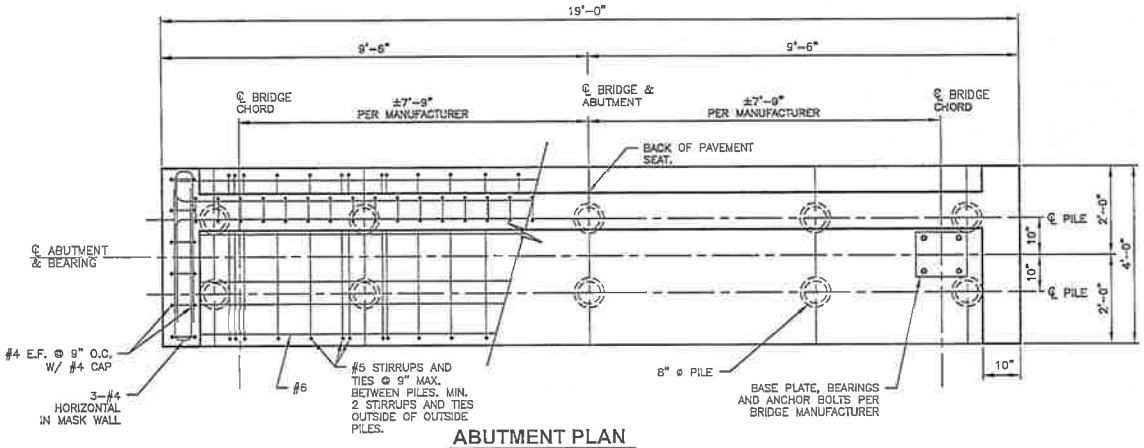
CLEAR CREEK
FLOODPLAIN RESTORATION

BRIDGE 3
PLAN AND ELEVATION

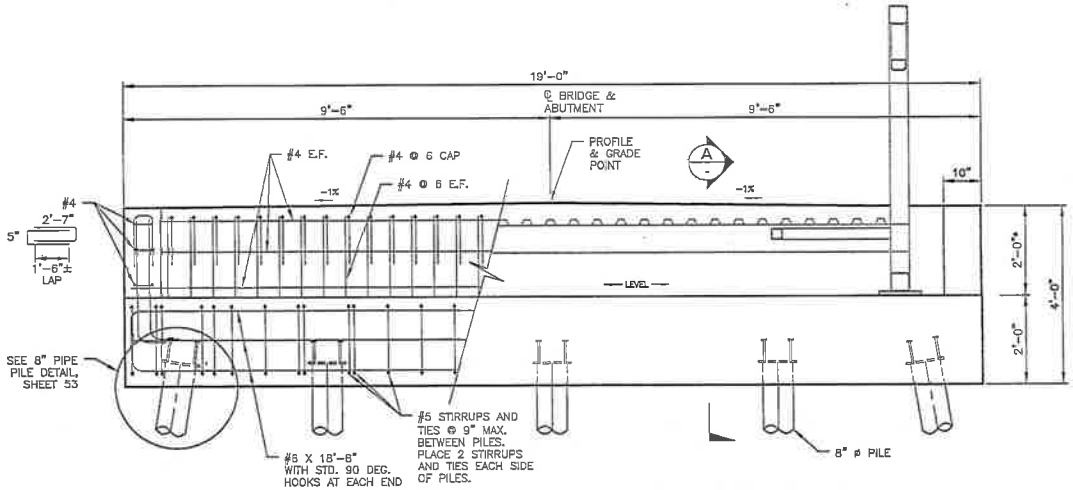
KITSAP COUNTY, WASHINGTON
SECTION 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



ABUTMENT PLAN

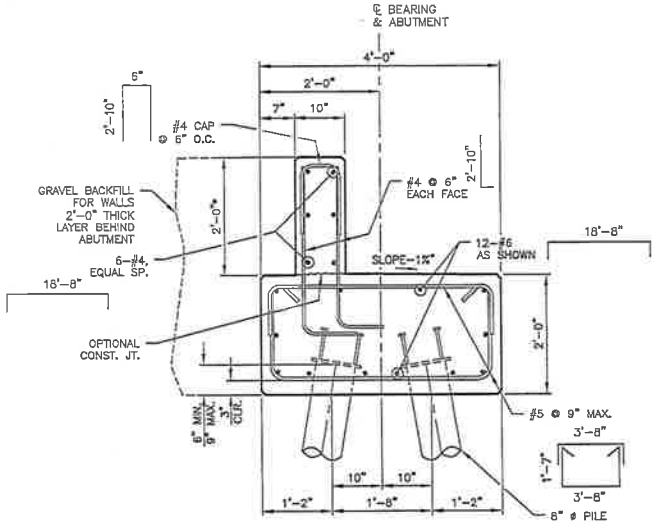
Scale: 3/4" = 1'-0"

ALL REINFORCEMENT NOT SHOWN FOR CLARITY



ABUTMENT ELEVATION

Scale: 3/4" = 1'-0"



TYPICAL SECTION (A)

Scale: 1" = 1'-0"

NOTE:
ALL REINFORCEMENT HOOKS SHOWN SHALL BE STANDARD HOOKS.

* HEIGHT OF BACKWALL VARIES TO MATCH TRUSS MANUFACTURER'S DETAILS FOR DECK TO BEARING HEIGHT.

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CONTROL POINTS	REVISIONS					
	No.	BY	DATE	DESCRIPTION	SURVEYED:	–
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	–	–	–	–	CRP No.	–
	–	–	–	–	DATE:	2/10/2015

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KITSAP COUNTY DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
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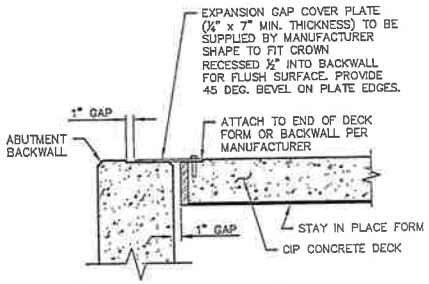
TEL:(360) 337-5777 FAX:(360) 337-4867

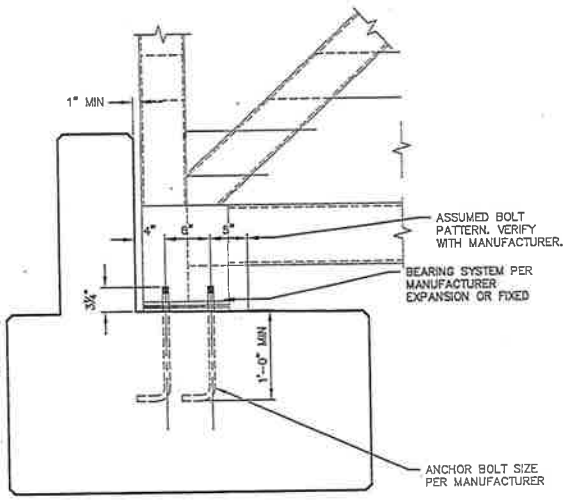
CLEAR CREEK FLOODPLAIN RESTORATION
BRIDGE REINFORCEMENT DETAILS
KITSAP COUNTY, WASHINGTON
SECTION9,16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 52 OF 73



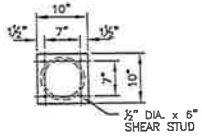
COVER PLATE DETAIL

Scale: 1-1/2" = 1'-0"



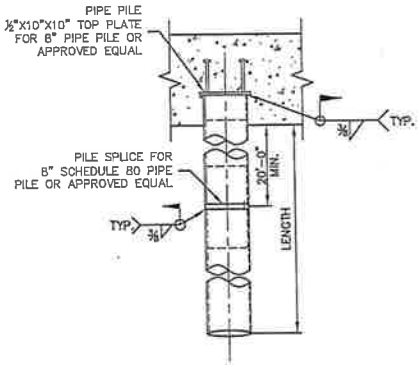
BRIDGE BEARING DETAIL

Scale: 1-1/2" = 1'-0"



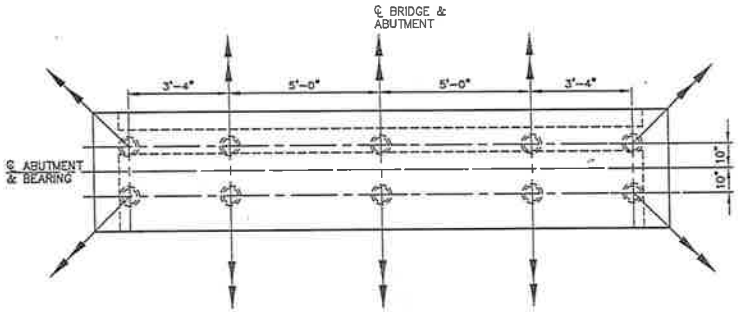
10" TOP PLATE

Scale: 1" = 1'-0"



8" PIPE PILE DETAIL

Scale: 1" = 1'-0"



FOUNDATION/PILE PLAN

Scale: 1/2" = 1'-0"

PILE SPECIFICATIONS						
	SERVICE PILE LOADS (TONS)	MINIMUM LENGTH (FT.) BELOW CAP	ESTIMATED LENGTH (FT.)	STRENGTH 1 LOAD (TONS)	ULTIMATE LOAD (TONS)	PILE SIZE
BRIDGE 1	7.5	30.0	35.75	11.0	22.0	8"ø X 0.500
BRIDGE 2	7.5	30.0	35.75	11.0	22.0	8"ø X 0.500
BRIDGE 3	7.5	30.0	35.75	11.0	22.0	8"ø X 0.500

NOTE: ESTIMATED PILE LENGTHS ARE PER PILE

Received by Corps: 11 March 2015

NWS-2015-28

CONTROL POINTS

REVISIONS			
No.	BY	DATE	DESCRIPTION
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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DESIGNED: RPD
DRAWN: RPD
CHECKED: DRS
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DATE: 2/10/2015

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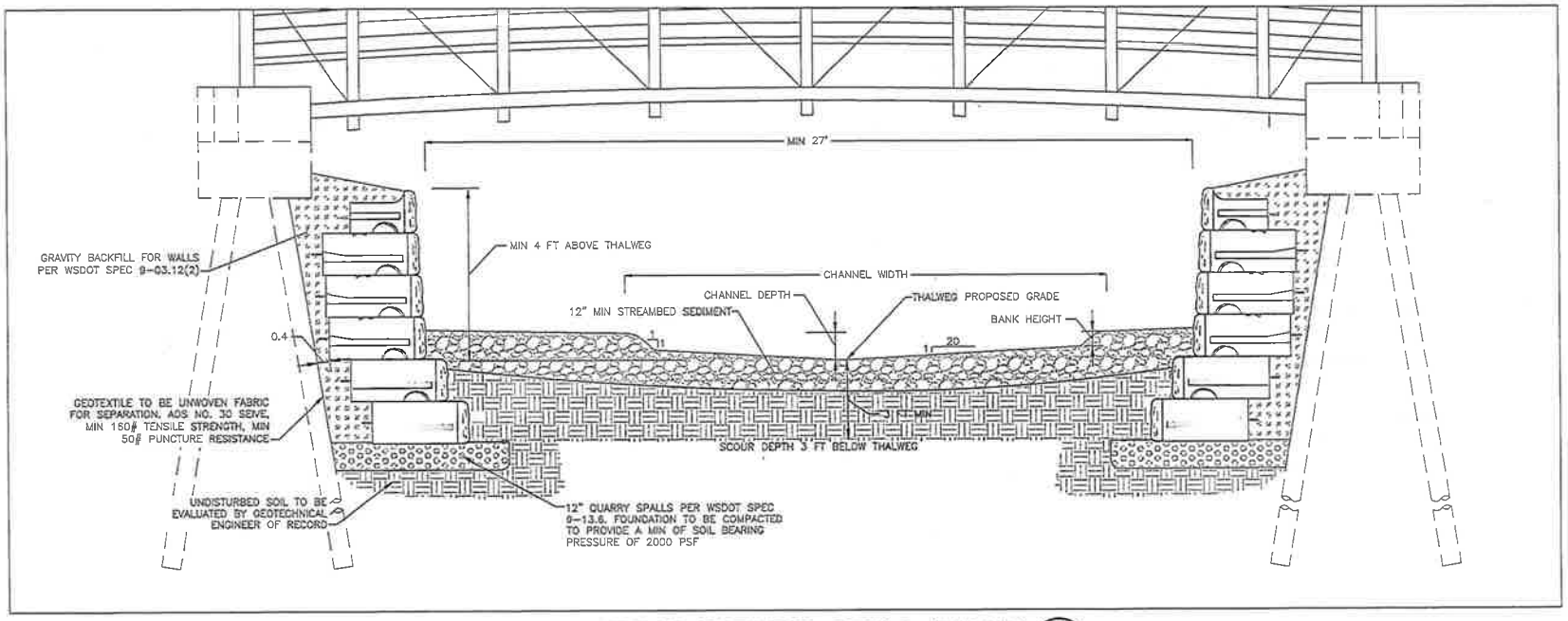
KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4867

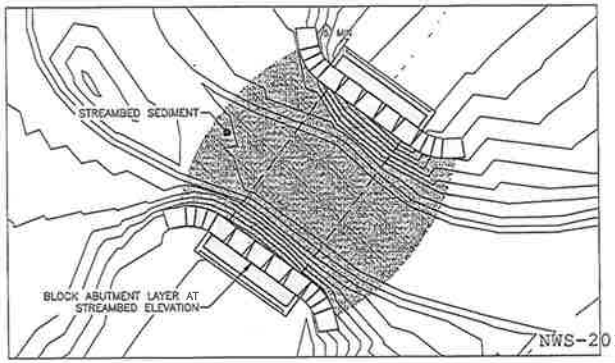
CLEAR CREEK FLOODPLAIN RESTORATION
BRIDGE MISCELLANEOUS DETAILS
KITSAP COUNTY, WASHINGTON
SECTIONS 9,16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



BRIDGE STREAMBED DETAILS (TYPICAL) 1/49

CROSS SECTION — SCALE: 1" = 2'

NOTES
1. GRAVITY WALL BLOCK SHALL BE REDI-ROCK, 41" SERIES BLOCKS OR APPROVED EQUAL, INSTALLED PER MANUFACTURER'S STANDARD SPECIFICATIONS
2. HALF-MIDDLE AND HALF-BOTTOM BLOCKS TO BE INSTALLED AT CORNERS TO ACHIEVE SPECIFIED ALIGNMENT AS IN PLAN VIEW.
3. BOTTOM BLOCK TO BE PLACED AT BOTTOM LAYER AND TOP BLOCK TO PLACED AS TOP LAYER AS SHOWN.



BRIDGE STREAMBED PLAN VIEW (TYPICAL)

NWS-2015-28

Mar-11-2015 100% SUBMITTAL

0 @ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

Natural Systems Design
P.O. Box 15609
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

Received by Corps: 11 March 2015

SURVEYED:
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

MICHAEL S. HRACHOVEC STATE OF WASHINGTON 20030 REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 18 57 WASHINGTON

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4557

CLEAR CREEK
FLOODPLAIN RESTORATION
BRIDGE STREAMBED
DETAILS
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 54 OF 73

NOTES

1. SEE GRADING PLANS FOR CONTOURS FROM EDGE OF TRAIL SHOULDER TO MATCH EXISTING LOCATION.
2. INSTALL SIGN ON 4x4 POST PER WSDOT STANDARD PLAN 9-22.10-02. SIGN MOUNTING HEIGHT IS 7' FROM FINISHED GRADE TO BOTTOM OF SIGN.

LEGEND

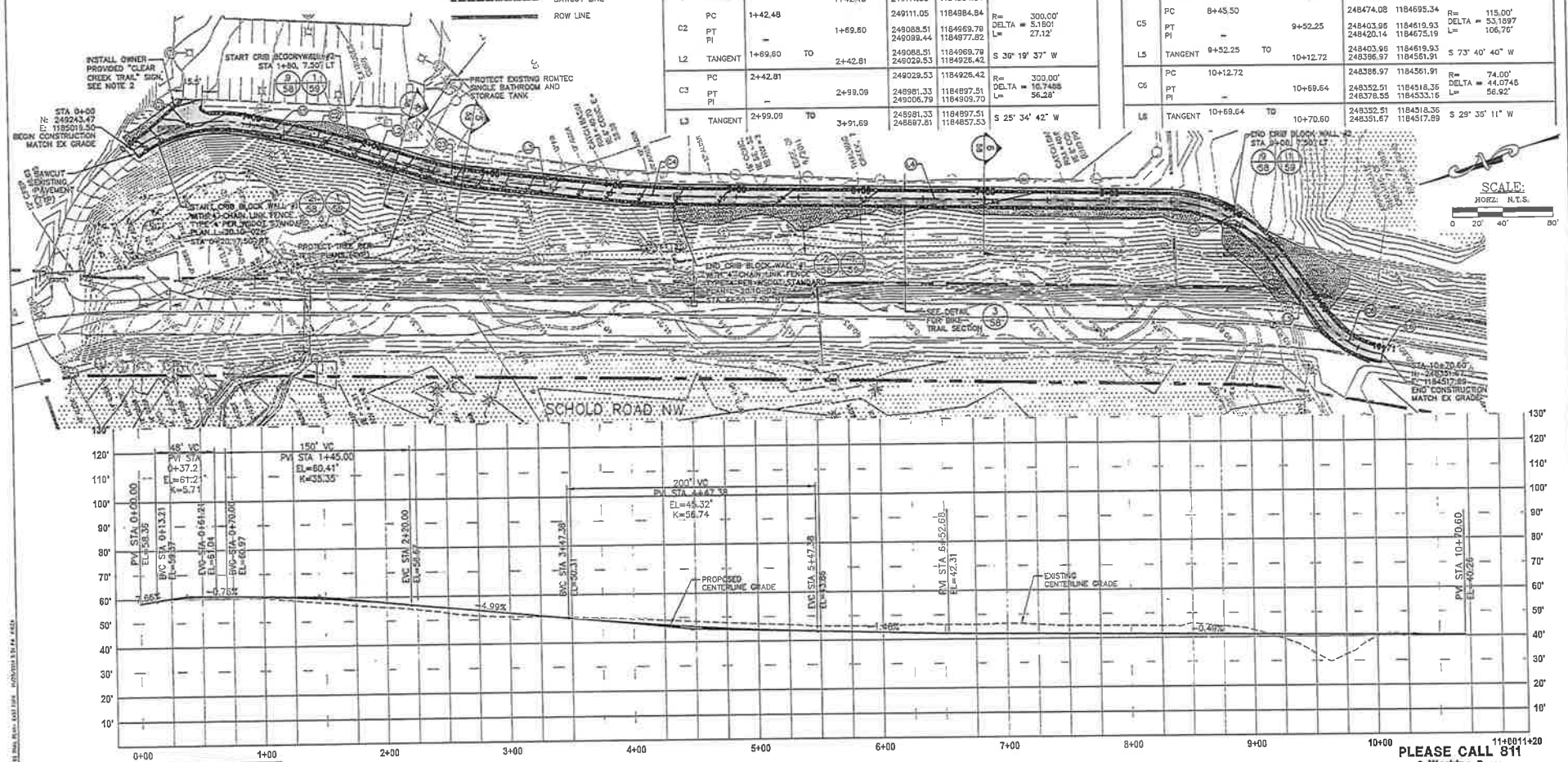
- ASPHALT PAVEMENT
- TRAIL SHOULDER
- FILL AREA, SEE NOTE 1
- CRIB BLOCK WALL (1/59)
- SAWCUT LINE
- ROW LINE

East Fork Alt-A CENTERLINE LAYOUT DATA

NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
	PC	0+00.00		249243.47	1185019.50	
C1	PT PI	– –	0+97.38	249149.65 249194.00	1185008.17 1185034.97	R= 115.00' DELTA = 48.5184 L= 97.38'
L1	TANGENT	0+97.38 TO	1+42.48	249149.65 249111.05	1185008.17 1184984.84	S 31° 08' 49" W
	PC	1+42.48		249111.05	1184984.84	
C2	PT PI	– –	1+69.60	249088.51 249099.44	1184969.78 1184977.82	R= 300.00' DELTA = 5.1601 L= 27.12'
L2	TANGENT	1+69.60 TO	2+42.81	249088.51 249029.53	1184969.78 1184926.42	S 36° 19' 37" W
	PC	2+42.81		249029.53	1184926.42	
C3	PT PI	– –	2+99.09	248981.33 249006.79	1184897.51 1184909.70	R= 300.00' DELTA = 10.7455 L= 56.28'
L3	TANGENT	2+99.09 TO	3+91.69	248981.33 248897.81	1184897.51 1184857.53	S 25° 34' 42" W

East Fork Alt-A CENTERLINE LAYOUT DATA

NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
	PC	3+91.69		248897.81	1184857.53	
C4	PT PI	– –	4+73.35	248822.66 248860.96	1184825.59 1184839.69	R= 919.22' DELTA = 5.0901 L= 81.66'
L4	TANGENT	4+73.35 TO	8+45.50	248822.66 248474.08	1184825.59 1184695.34	S 20° 29' 17" W
	PC	8+45.50		248474.08	1184695.34	
C5	PT PI	– –	9+52.25	248403.96 248420.14	1184619.93 1184675.19	R= 115.00' DELTA = 53.1897 L= 106.76'
L5	TANGENT	9+52.25 TO	10+12.72	248403.96 248386.97	1184619.93 1184561.91	S 73° 40' 40" W
	PC	10+12.72		248386.97	1184561.91	
C6	PT PI	– –	10+69.64	248352.51 248378.55	1184518.36 1184533.16	R= 74.00' DELTA = 44.0746 L= 56.92'
L6	TANGENT	10+69.64 TO	10+70.60	248352.51 248351.67	1184518.36 1184517.89	S 29° 36' 11" W



1" = 10' (24x36 INCH DRAWING) 1" = 20' (11x17 INCH DRAWING) IS NOT PLOTTED TO ORIGINAL SCALE

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THOMAS R. VON SCHRADER — STATE OF WASHINGTON — PROFESSIONAL ENGINEER — 11-20-14

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CLEAR CREEK
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BIKE TRAIL PLAN
EAST FORK
KITSAP COUNTY, WASHINGTON

SHEET 55 OF 73

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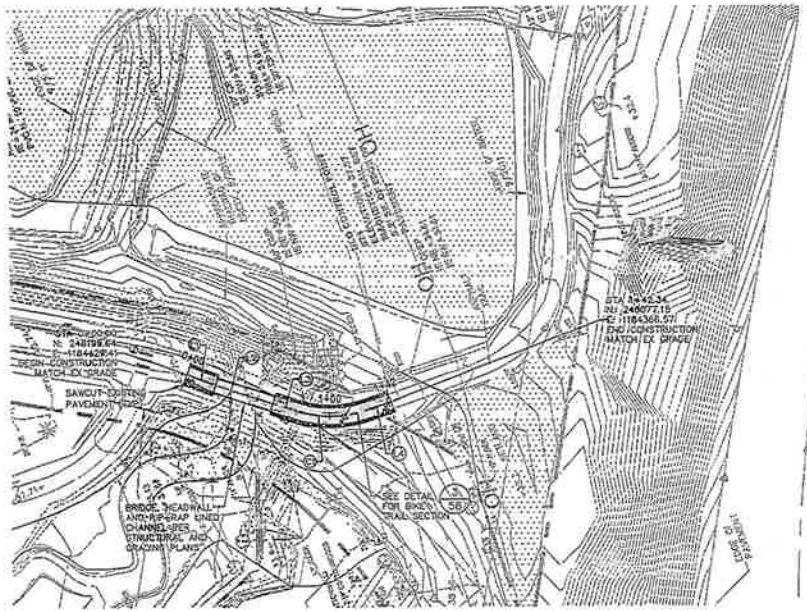


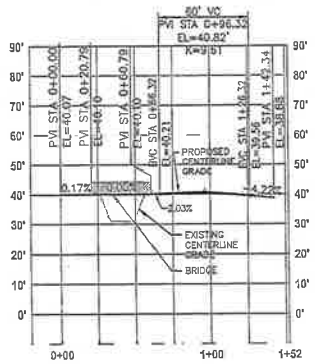
East Fork Connection CENTERLINE LAYOUT DATA							
NUMBER	DESC	BEGIN STATION		END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
L1	TANGENT	0+00.00	TO	0+20.79	248199.64 248183.78	1184429.41 1184415.97	S 40° 17' 10" W
L2	TANGENT	0+20.79	TO	0+60.79	248183.78 248151.99	1184415.97 1184391.69	S 37° 22' 20" W
L3	TANGENT	0+60.79	TO	0+77.83	248151.99 248138.39	1184391.69 1184381.41	S 37° 03' 32" W
	PC	0+77.83			248138.39	1184381.41	
C1	PT PI	 –		1+26.15	248093.34 246118.40	1184366.47 1184355.32	R= 74.00' DELTA = 37.4074 L= 48.31'
L4	TANGENT	1+26.15	TO	1+42.34	248093.34 248077.15	1184366.47 1184366.57	S 0° 20' 55" E

LEGEND

- ASPHALT PAVEMENT
- TRAIL SHOULDER
- FILL AREA, SEE NOTE 1
- CRIB BLOCK WALL (1/59)
- SAWCUT LINE
- ROW LINE

NOTES

1. SEE GRADING PLANS FOR CONTOURS FROM EDGE OF TRAIL SHOULDER TO MATCH EXISTING LOCATION.



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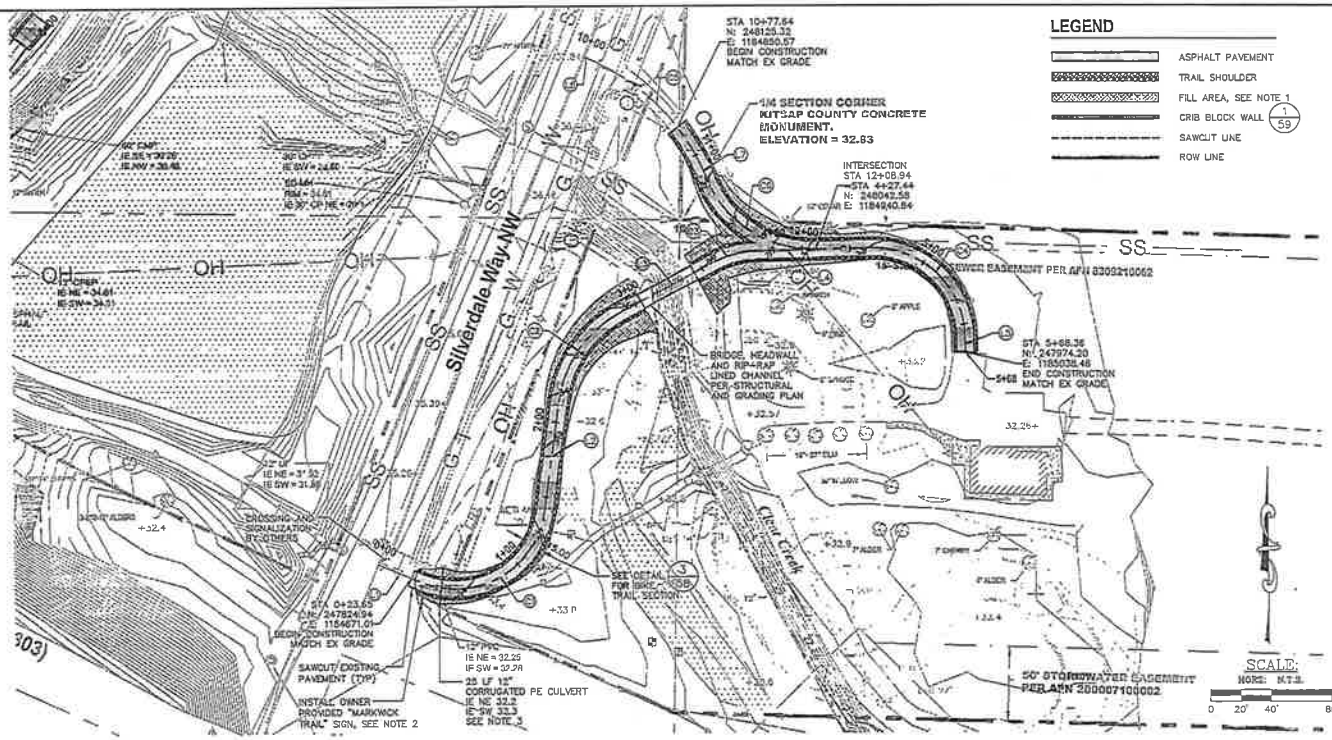
KITSAP COUNTY, WASHINGTON

SHEET 56 OF 73



LEGEND

- ASPHALT PAVEMENT
- TRAIL SHOULDER
- FILL AREA, SEE NOTE 1
- CRIB BLOCK WALL (1/59)
- SAWCUT LINE
- ROW LINE

Markwick CENTERLINE LAYOUT DATA

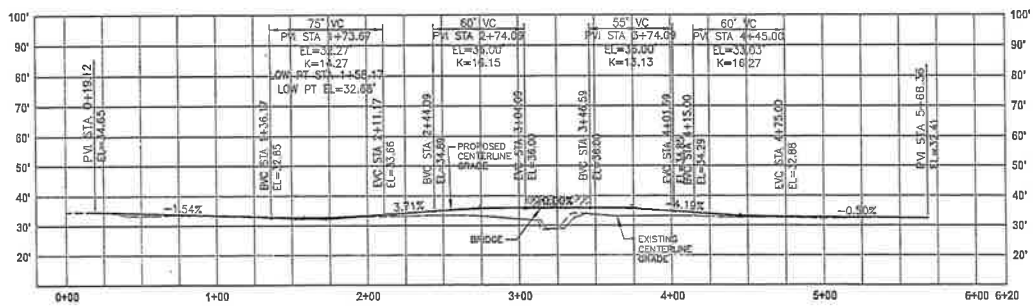
NUMBER	DESC	BEGIN STATION		END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
L1	TANGENT	0+00.00	TO	0+30.77	247834.02 247822.21	1184849.18 1184677.59	S 67° 25' 12" E
C1	PC PT PI	0+30.77 –		1+40.43	247822.21 247858.40 247792.33	1184677.59 1184760.06 1184749.42	R= 60.00' DELTA = 104.7205 L= 109.66'
L2	TANGENT	1+40.43	TO	2+13.89	247869.40 247942.17	1184760.06 1184770.11	N 7° 51' 34" E
C2	PC PT PI	2+13.89 –		2+87.32	247942.17 248000.24 247981.49	1184770.11 1184810.51 1184775.53	R= 78.00' DELTA = 53.9384 L= 73.43'
L3	TANGENT	2+87.32	TO	3+59.80	248000.24 248034.50	1184810.51 1184874.40	N 61° 47' 52" E
C3	PC PT PI	3+59.80 –		3+87.86	248034.50 248041.81 248041.25	1184874.40 1184901.27 1184865.99	R= 60.00' DELTA = 26.7883 L= 28.05'
L4	TANGENT	3+87.86	TO	4+63.34	248041.61 248043.47	1184901.27 1184976.73	N 88° 35' 10" E
C4	PC PT PI	4+63.34 –		5+57.59	248043.47 247984.97 248044.95	1184976.73 1185038.19 1185036.71	R= 60.00' DELTA = 90.0000 L= 94.25'
L5	TANGENT	5+57.59	TO	5+68.36	247984.97 247974.20	1185038.19 1185038.48	S 1° 24' 50" E

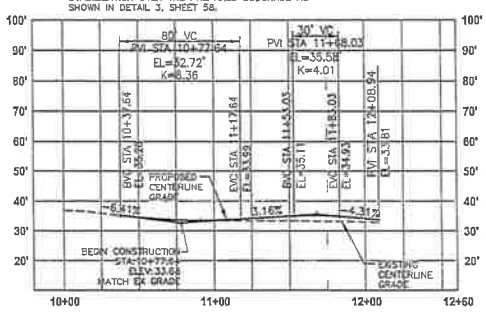
Road onto Markwick CENTERLINE LAYOUT DATA

NUMBER	DESC	BEGIN STATION		END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
L6	TANGENT	10+00.00	TO	10+02.61	248171.90 248170.90	1184789.69 1184792.10	S 67° 25' 12" E
C5	PC PT PI	10+02.61 –		11+11.14	248170.90 248096.34 248148.85	1184792.10 1184867.21 1184844.87	R= 140.00' DELTA = 44.4149 L= 108.53'
L7	TANGENT	11+11.14	TO	11+20.59	248096.34 248087.64	1184867.21 1184870.90	S 23° 00' 18" E
C6	PC PT PI	11+20.59 –		12+08.94	248087.64 248042.58 248041.34	1184870.90 1184940.84 1184890.56	R= 74.00' DELTA = 68.4087 L= 88.35'

NOTES

1. SEE GRADING PLANS FOR CONTOURS FROM EDGE OF TRAIL SHOULDER TO MATCH EXISTING LOCATION.
2. INSTALL SIGN ON 4x4 POST PER WSDOT STANDARD PLAN 9-22.10-02. SIGN MOUNTING HEIGHT IS 7' FROM FINISHED GRADE TO BOTTOM OF SIGN.
3. BEVEL CULVERT PIPE END AND INSTALL QUARRY SPALLS PER KITSAP COUNTY ROAD STANDARD FIGURE 4-1.
4. PRIOR TO CONSTRUCTION OF THE BIKE TRAIL PLACE A LAYER OF CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION OVER THE PREPARED SUBGRADE AS SHOWN IN DETAIL 3, SHEET 58.





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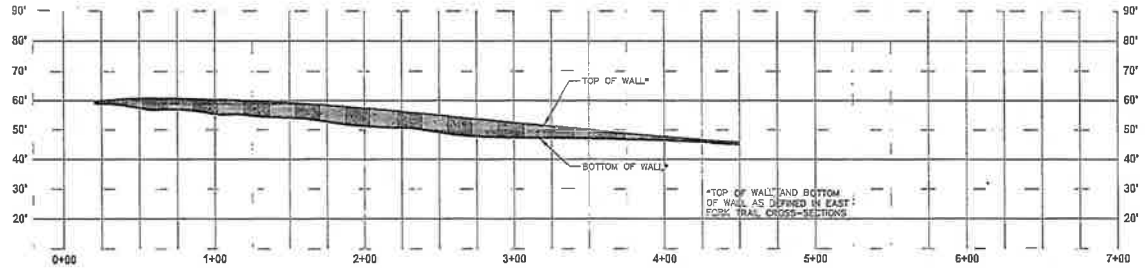
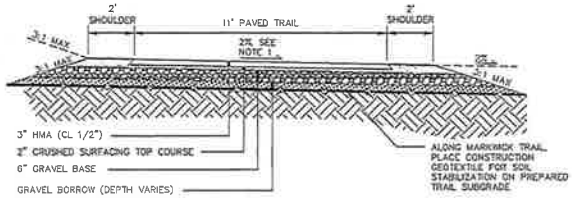
SHEET 57 OF 73



WALL 1 PROFILE (2)

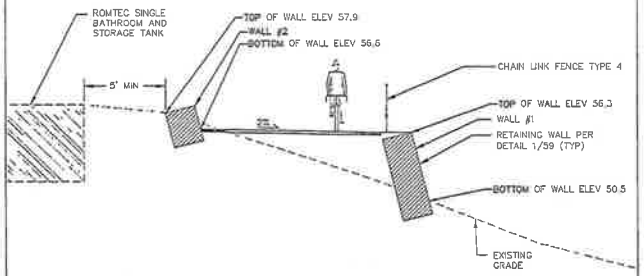
HORIZONTAL: 1"=40'
VERTICAL: 1"=20'



NOTE:
1. DIRECTION OF TRAIL CROSS SLOPE PER CONTOURS SHOWN ON THE PLANS

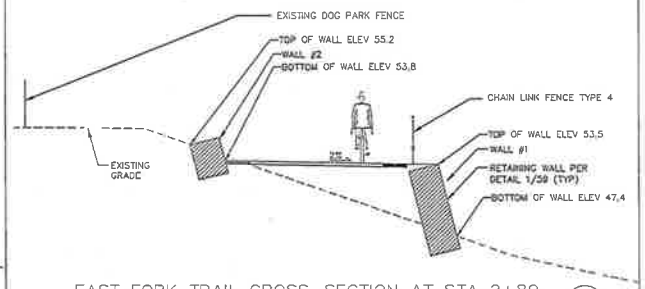
BIKE TRAIL CROSS-SECTION (3)

NTS



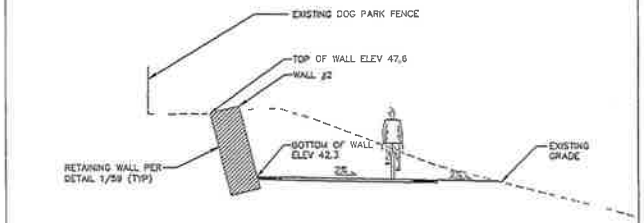
EAST FORK TRAIL CROSS-SECTION AT STA 2+25 (4)

NTS



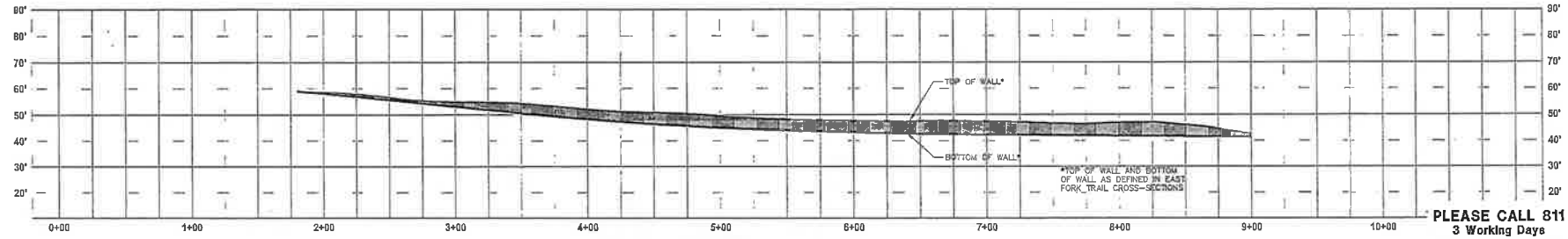
EAST FORK TRAIL CROSS-SECTION AT STA 2+80 (5)

NTS



EAST FORK TRAIL CROSS-SECTION AT STA 7+00 (6)

NTS



WALL 2 PROFILE (9)

HORIZONTAL: 1"=40'
VERTICAL: 1"=20'

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CLEAR CREEK
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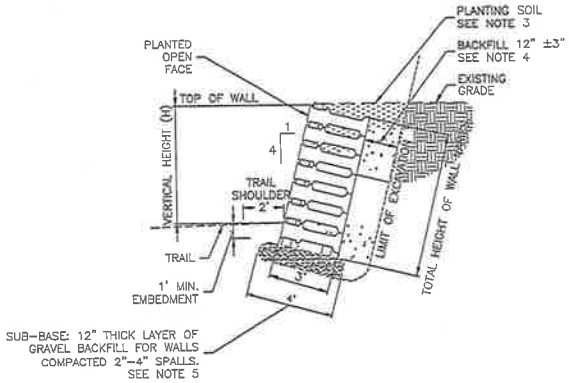
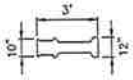
BIKE TRAIL PLAN
CIVIL DETAILS

KITSAP COUNTY, WASHINGTON

SHEET 58 OF 73





NOTES

1. INSTALL MINI CRIBLOCK™ PER MANUFACTURER'S REQUIREMENTS.
2. TOP AND BOTTOM ELEVATIONS VARY ALONG TRAIL. NUMBER OF LAYERS TO VARY.
3. MINI CRIBLOCK STRUCTURE SHALL BE FILLED WITH PLANTING SOIL. PLANTS SHALL BE INSTALLED IN CRIBLOCK AS CONSTRUCTED AND BACKFILLED IN APPROX. 1' LIFTS. SOILS TO BE COMPACTED TO FIRM AND UNYIELDING CONDITION AS APPROVED BY ENGINEER. SEE SPECS SECTION 6-20.
4. BACKFILL SHALL CONSIST OF GRAVEL BACKFILL FOR WALLS COMPACTED TO 90% ASTM D 1557 (MODIFIED PROCTOR).
5. SUB-BASE SHALL CONSIST OF MINIMUM 12" LAYER OF 2-4" SPALLS COMPACTED TO FIRM AND UNYIELDING CONDITION. SOIL SUBGRADE SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO PLACING THE SPALLS AND WALL ELEMENTS.
6. WALL INSTALLATION SHALL BE OBSERVED PERIODICALLY BY THE GEOTECHNICAL ENGINEER OF RECORD AS DIRECTED BY THE ENGINEER TO VERIFY PROPER CONSTRUCTION INCLUDING MAINTAINING THE WALL BATTER (4 VERTICAL TO 1 HORIZONTAL).
7. TEMPORARY SHORING, IF NEEDED, TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

TYP RETAINING WALL STRUCTURE (MINI CRIBLOCK) 1/59

SCALE: 1" = 3'

2850 sq. ft Criblock Wall	Species Name	Common Name	% of area to be planted	sq ft of area to be planted	area per plant (sq. ft)	QTY	SIZE	AVG SPACING	NOTES
	Achillea millefolium	yarrow	10	285	0.44	647 bareroot seedling	8" OC		plant in groups of 5-7 clustered
	Anaphalis margaritacea	pearly everlasting	10	285	0.44	647 bareroot seedling	8" OC		plant in groups of 5-7 clustered
	Antennaria microphylla	rosy pussy-toes	10	285	0.25	1140 bareroot seedling	6" OC		plant in groups of 5-7 clustered
	Arctostaphylos uva-ursi	kinnikinnick	10	285	1	285 4" POT	12" OC		plant in groups of 5-7 clustered
	Erigeron speciosus	showy fleabane	8	228	0.25	912 bareroot seedling	6" OC		plant in groups of 5-7 clustered
	Eriophyllum lanatum	Oregon sunshine	10	285	0.44	647 bareroot seedling	8" OC		plant in groups of 5-7 clustered
	Fragaria vesca	woodland strawberry	10	285	1	285 bareroot seedling	12" OC		plant in groups of 5-7 clustered
	Pityrogramma triangularis*	goldenback fern	2	57	1	57 4" POT or 1 GAL	12" OC		plant in groups of 2-3 clustered
	Polystichum munitum	sword fern	2	57	1	57 4" POT or 1 GAL	12" OC		plant in groups of 2-3 clustered
	Sedum divergens	spreading stonecrop	10	285	0.25	1140 bareroot seedling	6" OC		plant in groups of 5-7 clustered
	Sedum oreganum	Oregon stonecrop	10	285	0.25	1140 bareroot seedling	6" OC		plant in groups of 5-7 clustered
	Sedum spathulifolium	broad-leaved stonecrop	10	285	0.25	1140 bareroot seedling	6" OC		plant in groups of 5-7 clustered
		SUBTOTAL	102	2907		8,097			

* Can substitute Dryopteris expansa or Dryopteris arguta if P. triangularis not available

CRIBLOCK PLANTING PLAN

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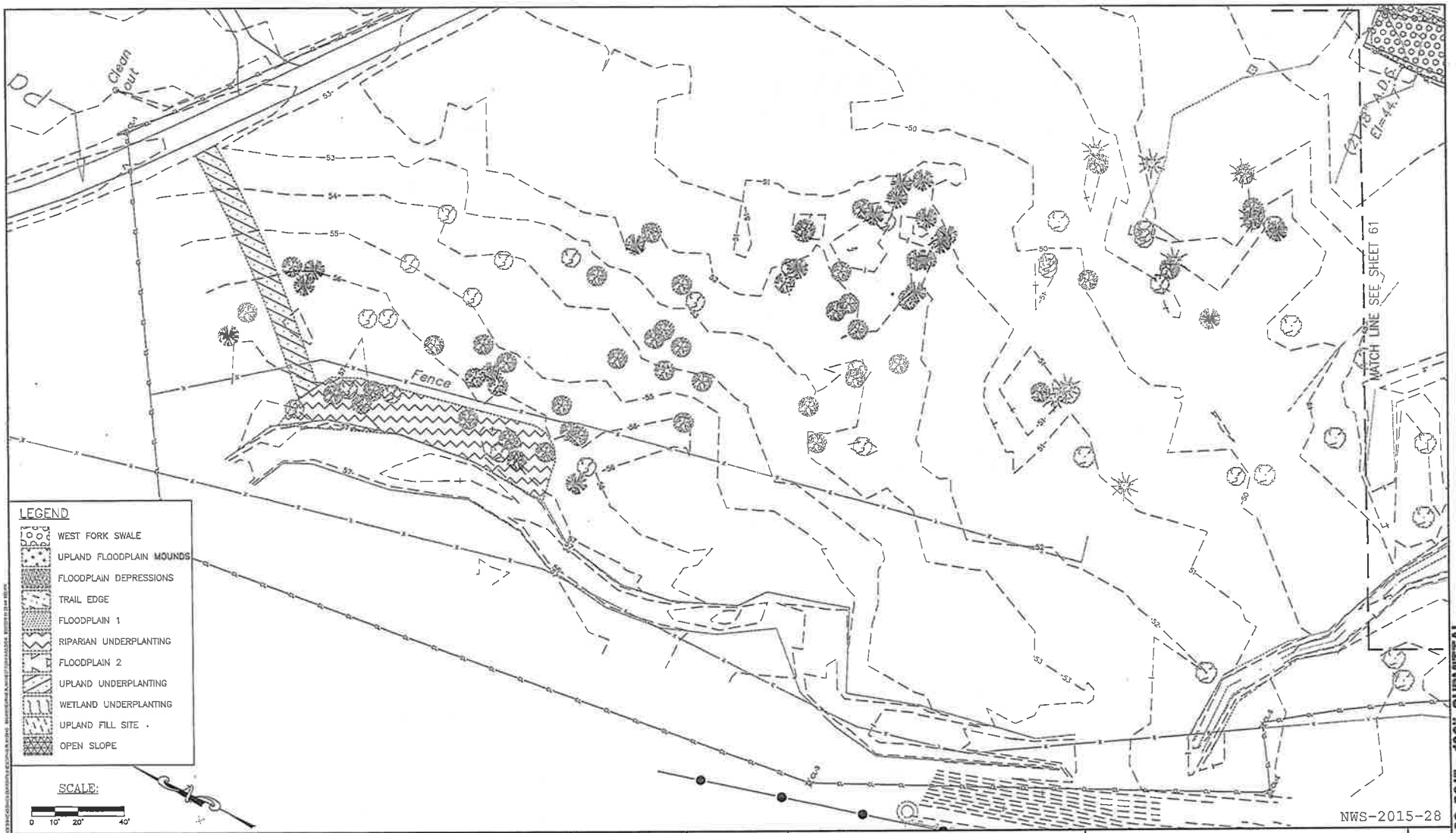

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MICHAEL E. HRACHOVEC
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Registered Professional Engineer

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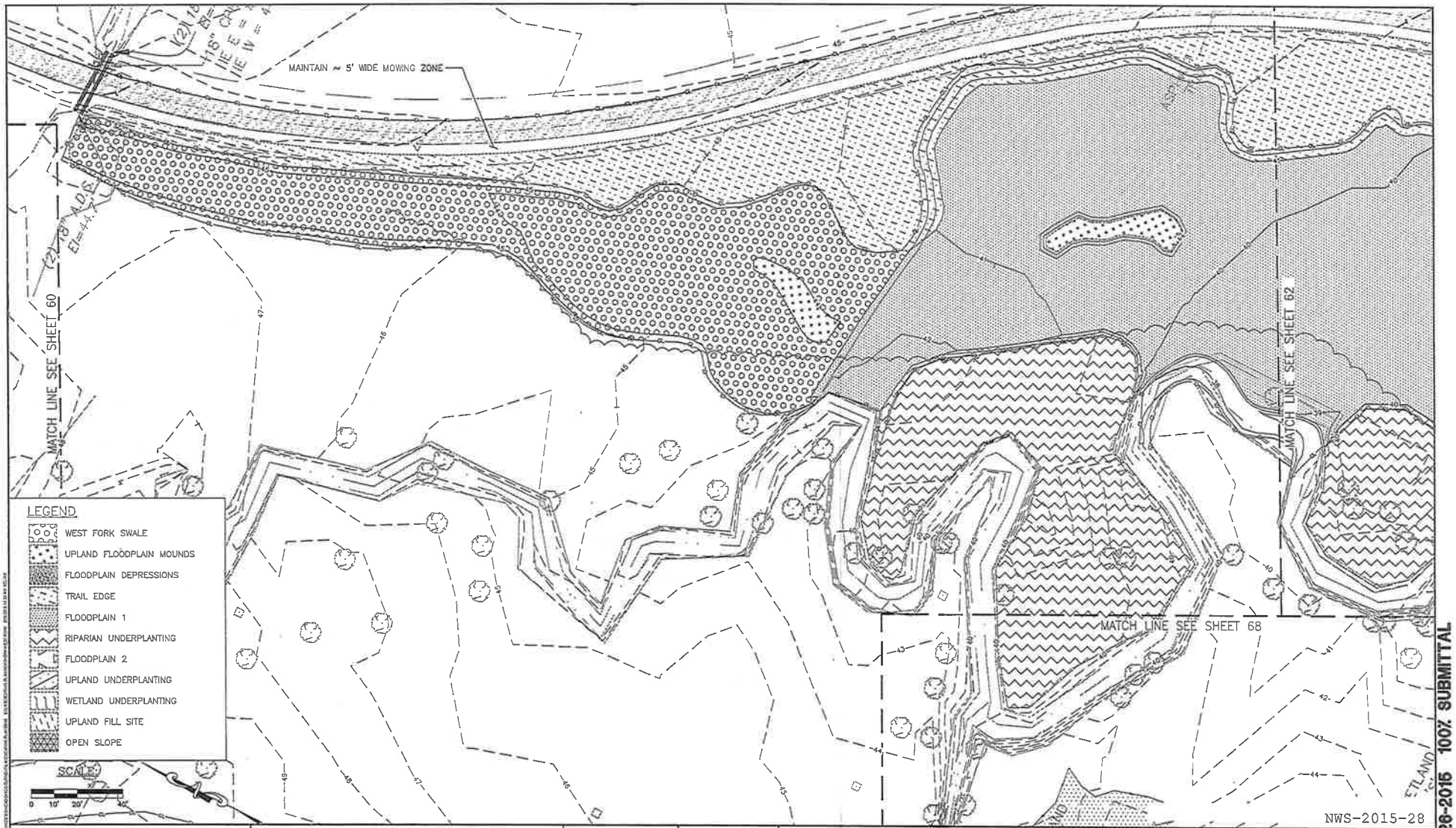

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CLEAR CREEK FLOODPLAIN RESTORATION LANDSCAPING PLAN NORTHERN WEST FORK

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MICHAEL S. HRACHOVEC
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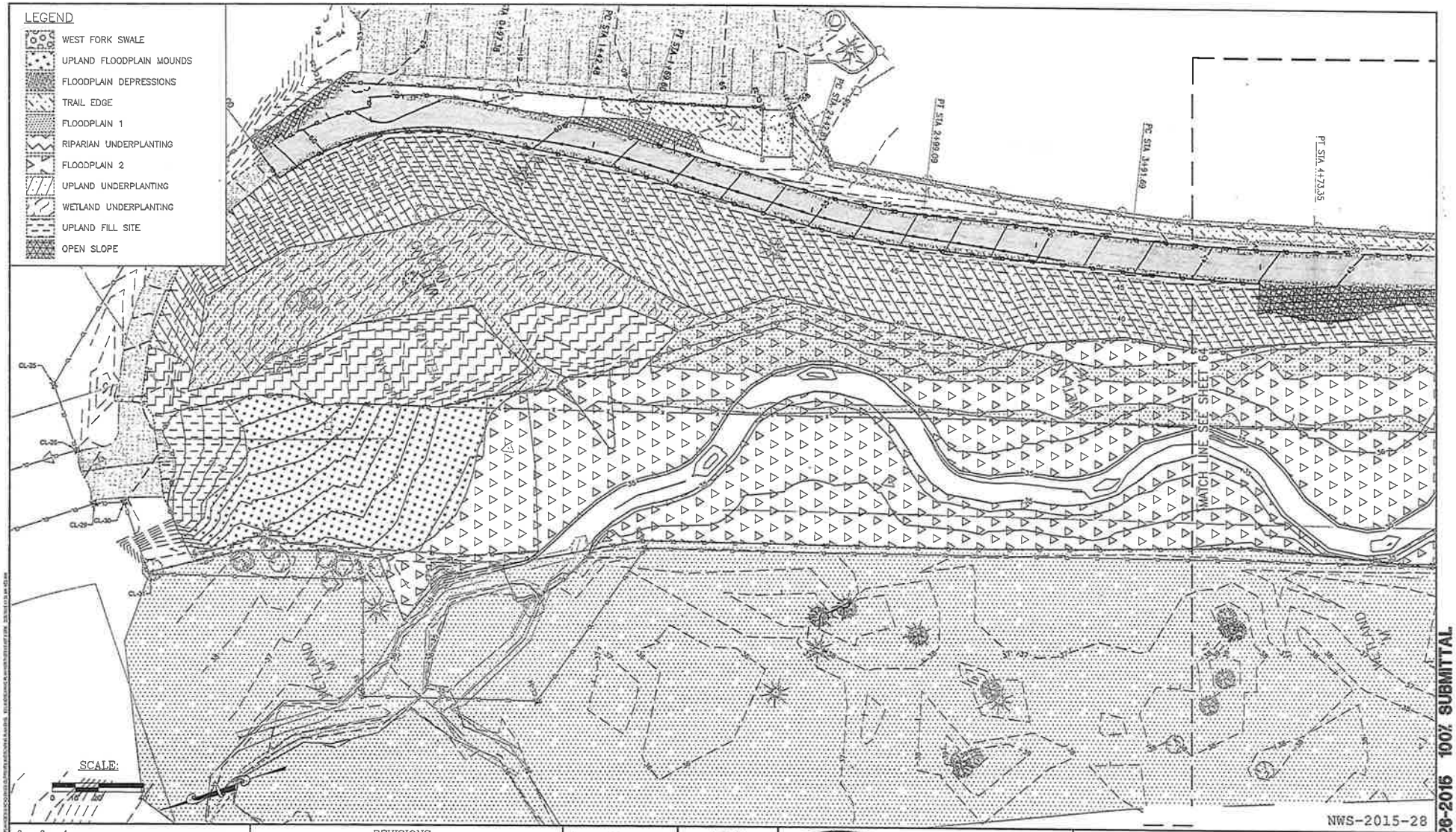

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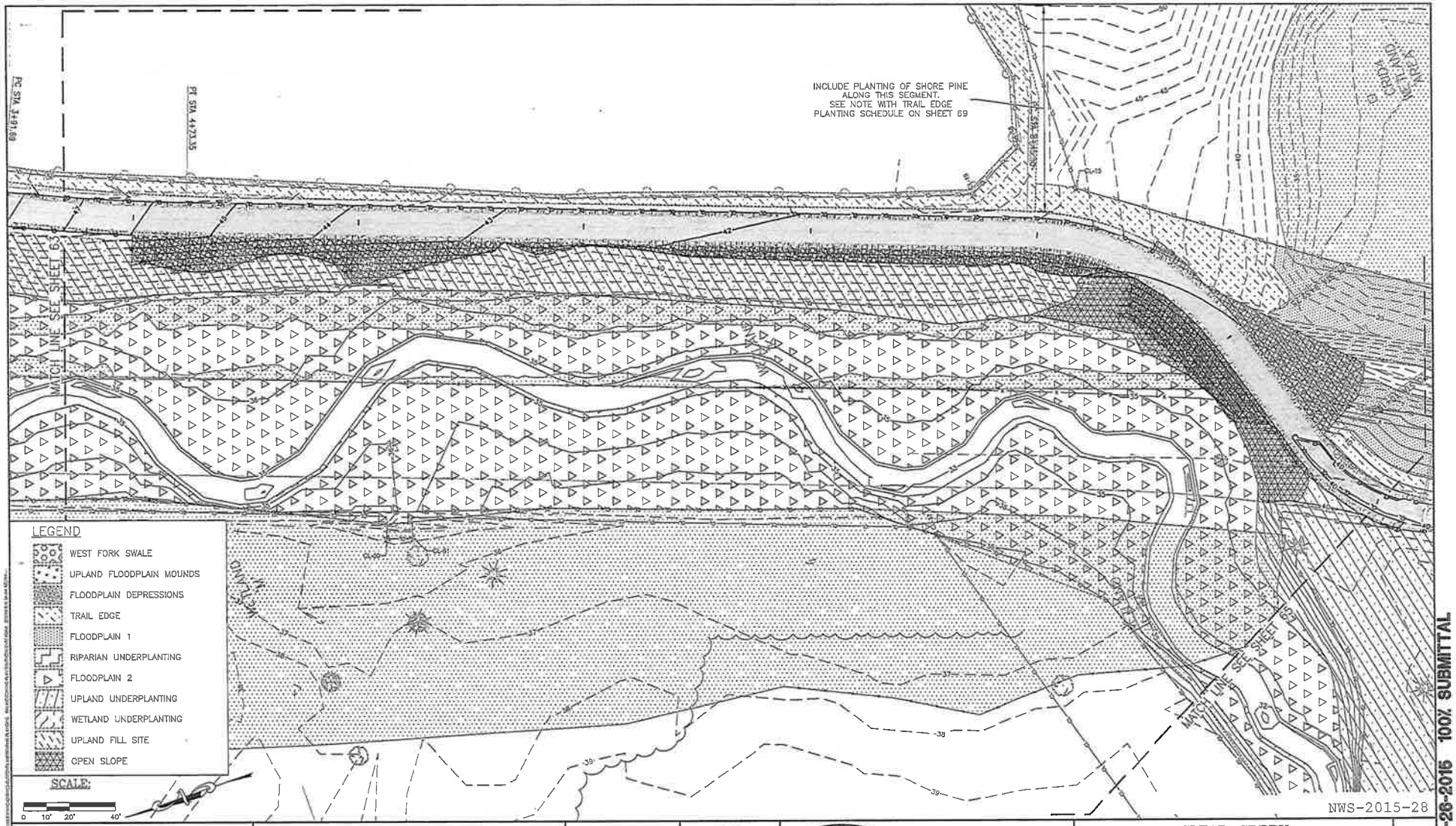
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4557

CLEAR CREEK
FLOODPLAIN RESTORATION
LANDSCAPING PLAN
NORTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 63 OF 73

Feb-26-2016 100% SUBMITTAL



NWS-2015-28

Feb-26-2016 100% SUBMITTAL

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Natural Systems Design
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REVISIONS			
No.	BY	DATE	DESCRIPTION

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SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

MICHAEL B. HRACHOVEC, STATE OF WASHINGTON, 36002, REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 1857 WASHINGTON

KITSAP COUNTY
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614 DIVISION STREET MS-25
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CLEAR CREEK
FLOODPLAIN RESTORATION
LANDSCAPING PLAN
SOUTHERN EAST FORK
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 64 OF 73

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614 DIVISION STREET MS-28
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CLEAR CREEK
FLOODPLAIN RESTORATION
LANDSCAPING PLAN
CONFLUENCE
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 65 OF 73

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MICHAEL E. HRACHOVEC STATE OF WASHINGTON 50038 REGISTERED PROFESSIONAL ENGINEER

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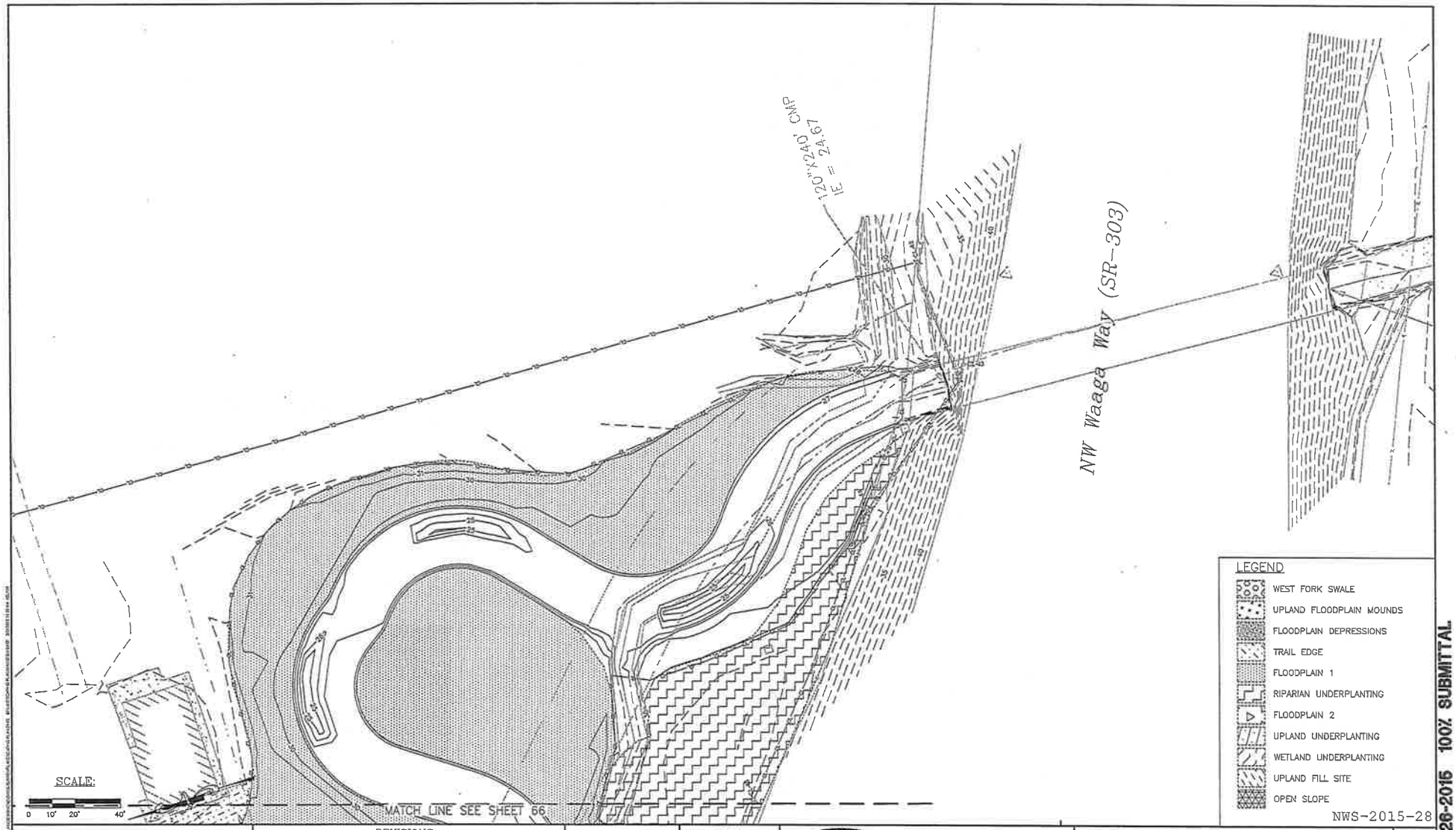
CLEAR CREEK
FLOODPLAIN RESTORATION
LANDSCAPE PLAN
MAINSTEM WEST
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 66 OF 73



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MICHAEL L. HRACHOVEC
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REGISTERED PROFESSIONAL ENGINEER

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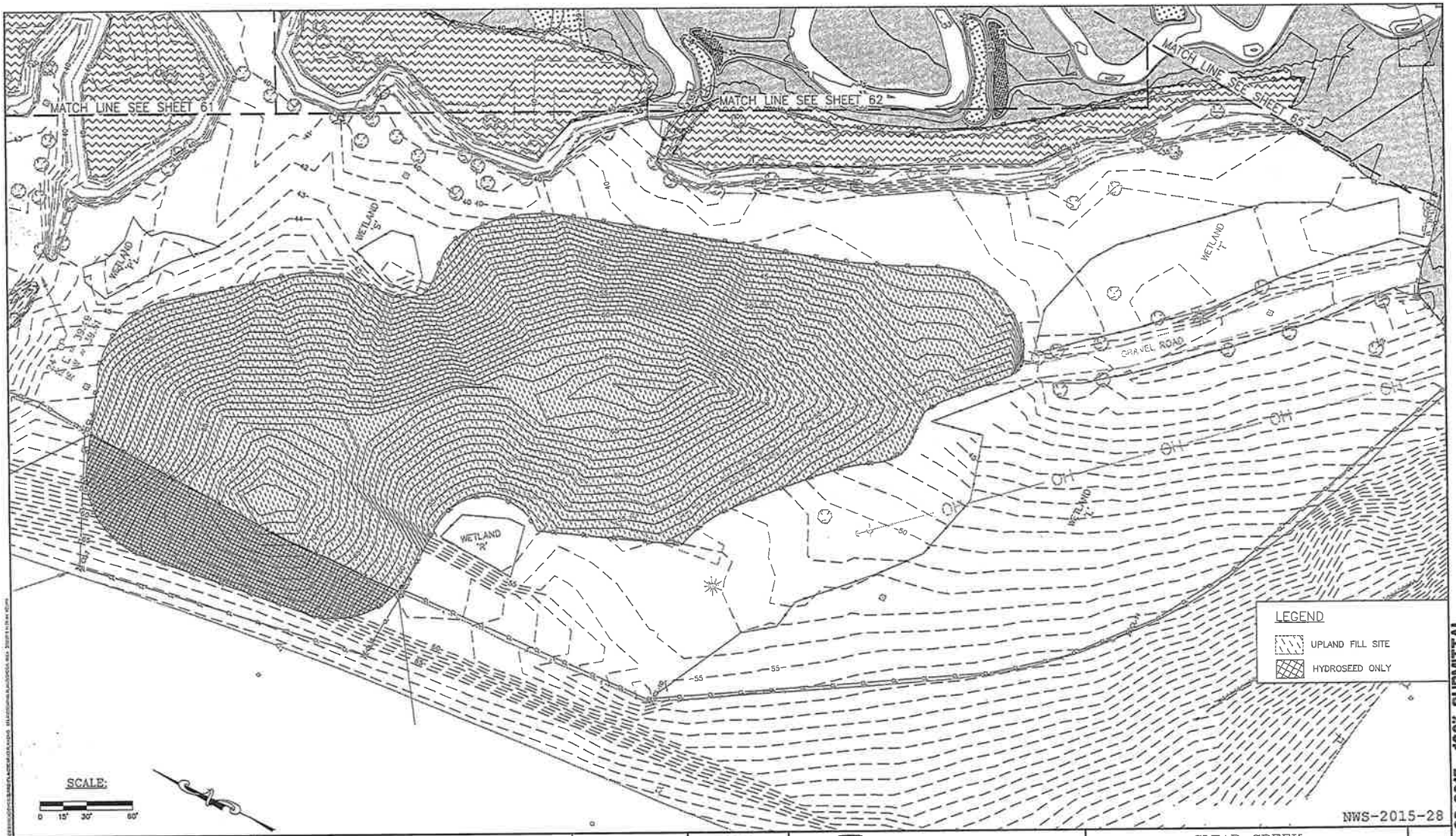
CLEAR CREEK
FLOODPLAIN RESTORATION
LANDSCAPING PLAN
MAINSTEM SOUTH
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



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MICHAEL E. HRACHOVEC, STATE OF WASHINGTON, 38639, REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY 18 57 WASHINGTON

KITSAP COUNTY
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614 DIVISION STREET MS-26
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CLEAR CREEK
FLOODPLAIN RESTORATION
LANDSCAPING PLAN
DISPOSAL AREA
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 68 OF 73

Feb-26-2015 100% SUBMITTAL

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	QTY. LBS. PLS	
WEST FORK SWALE SQ FT 15,829	GROUND		WETLAND SEED MIX	LBS PLS (SEED)		100	15,829		3.6	
					SUBTOTAL	100	15,829		3.6	LBS PLS
								Total Seed	3.6 lbs	

SEEDING RATE (LBS OF PLS/ACRE) 10
Assumes seeding rate of 10 LBS PLS/Acre to be verified with seed supplier

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL	
UPLAND FLOODPLAIN MOUNDS SQ FT 15,099	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	45	6,795	64	106	21	127	
		POPULUS BALSAMIFERA	BLACK COTTONWOOD	BARE ROOT	12	20	3,020	144	21	4	25	
		PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	10	35	5,285	100	53	11	63	
					SUBTOTAL	100	15,099		180	36	216	TREES
	SHRUB	HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	20	3,020	25	121	24	145	
		MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	BARE ROOT	4	10	1,510	16	94	19	113	
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	35	5,285	9	587	117	705	
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	35	5,285	9	587	117	705	
					SUBTOTAL	100	15,099		1,390	278	1,667	SHRUBS
										Total Plants	1,883	

* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters.
** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
TRAIL EDGE SQ FT 59,778	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	15	8,967	64	140	28	168	
		PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	8	30	17,933	64	280	56	336	
					SUBTOTAL	45	26,900		420	84	504	TREES
	SHRUB	AMELANCHIER ALNIFOLIA	SERVICEBERRY	BARE ROOT	5	10	5,978	25	239	48	287	
		HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	15	8,967	25	359	72	430	
		MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	BARE ROOT	4	5	2,989	16	187	37	224	
		RIBES SANGUINEUM	RED FLOWERING CURRANT	BARE ROOT	5	10	5,978	25	239	48	287	
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	30	17,933	9	1,993	399	2,391	
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	30	17,933	9	1,993	399	2,391	
					SUBTOTAL	100	59,778		5,009	1,002	6,011	SHRUBS
	DOG PARK PERIMETER	PINUS CONTORTA v. CONTORTA	SHORE PINE***	BARE ROOT	8	40	1,667	64	26	5	32	
					SUBTOTAL	40	1,667	64	26	5	32	
										Total Plants	6,515	TREES

* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps
** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.
*** Shore pine to be planted ONLY in reveg area along dog park perimeter (not adjacent to floodplain areas) as indicated on Sheet 64

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
OPEN SLOPE SQ FT 4,498	SHRUB	AMELANCHIER ALNIFOLIA	SERVICEBERRY	BARE ROOT	4	10	450	16	28	6	34	
		HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	5	225	25	9	2	11	
		RIBES SANGUINEUM	RED FLOWERING CURRANT	BARE ROOT	5	10	450	25	18	4	22	
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	30	1,349	9	150	30	180	
		RUBUS PARVIFLORUS	THIMBLEBERRY	BARE ROOT	4	15	675	16	42	8	51	
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	30	1,349	9	150	30	180	
					SUBTOTAL	100	4,498		397	79	477	SHRUBS
										Total Plants	477	

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** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

SEED

Species	Common Name	Application Rate (PLS pounds per acre)
Wetland Seed Mix - West Fork Swale, Floodplain 1, Floodplain 2 Plant Communities		
Agrostis exarata	Bentgrass	4.0 - 12.0
Alopecurus geniculatus	Water Foxtail	2.0 - 8.0
Deschampsia cespitosa	Tufted Hairgrass	8.0 - 16.0
Elymus glaucus	Blue Wildrye	8.0 - 20.0
Glyceria occidentalis	Reed Mannagrass	6.0 - 10.0
Lupinus rivularis	Streambank Lupine	8.0 - 20.0
	Total wetland seed	54 Pls Lbs
Upland Seed Mix - Upland Fill Site Plant Community		
Achilea millefolium	Yarrow	1.5 - 3.5
Anaphalis margaritacea	Pearly Everlasting	5 - 7.5
Elymus glaucus	Blue Wildrye	15 - 35
Danthonia californica	California Oatgrass	3.5 - 18
Festuca roemeri	Roemer's Fescue	60 - 80
Prunella vulgaris	Heal-all	3.5 - 11.0
Deschampsia elongata	Slender Hairgrass	3.5 - 11.0
Solidago canadensis	Canada Goldenrod	2 - 5
	Total upland seed	105 Pls Lbs

PROJECT TOTALS

TOTAL WOODY PLANTS/FERNS	70,295
TOTAL EMERGENT PLUGS	9,314
TOTAL	79,610

NWS-2015-28

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DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
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TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK
FLOODPLAIN RESTORATION
PLANTING SCHEDULE-
LANDSCAPE 1
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

Feb-26-2016 100% SUBMITTAL

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
UPLAND UNDERPLANTING SQ FT 48,247	TREE	CORNUS NUTTALLII	WESTERN FLOWERING DOGWOOD	BARE ROOT	15	15	7,237	225	32	6	39	
		THUJA PLICATA	WESTERN RED CEDAR	BARE ROOT	12	30	14,474	144	101	20	121	
		PSEUDOTSUGA HETEROPHYLLA	WESTERN HEMLOCK	BARE ROOT	12	45	21,711	144	151	30	181	
					SUBTOTAL	90	43,422		283	57	340	TREES
	SHRUB	SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	25	12,062	9	1,340	268	1,608	
		OEMLARIA CERASIFORMIS	OSOBERRY	BARE ROOT	4	25	12,062	16	754	151	905	
		RUBUS PARVIFLORUS	THIMBLEBERRY	BARE ROOT	3	15	7,237	9	804	161	965	
					SUBTOTAL	65	31,361		2,898	580	3,478	SHRUBS
	GROUND	POLYSTICHUM MUNITUM	SWORD FERN	4" POT	1.5	5	2,412	2	1,072	214	1,287	
		MAHONIA NERVOSA	LOW OREGON GRAPE	BARE ROOT	1	5	2,412	1	2,412	482	2,895	
					SUBTOTAL	10	4,825		3,485	697	4,181	GROUNDCOVERS
										Total Plants	7,999	

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** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
RIPARIAN UNDERPLANTING SQ FT 100,716	TREE	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	8	30	30,215	64	472	94	567	
		THUJA PLICATA	WESTERN RED CEDAR	BARE ROOT	8	30	30,215	64	472	94	567	
					SUBTOTAL	60	60,430		944	189	1,133	TREES
	SHRUB	ACER CIRCINATUM	VINE MAPLE	BARE ROOT	5	20	20,143	25	806	161	967	
		CORYLUS CORNUTA	HAZELNUT	BARE ROOT	5	10	10,072	25	403	81	483	
		OEMLARIA CERASIFORMIS	OSOBERRY	BARE ROOT	4	20	20,143	16	1,259	252	1,511	
		RHAMNUS PURSHIANA	CASCARA	BARE ROOT	10	10	10,072	100	101	20	121	
		RIBES SANGUINEUM	RED FLOWERING CURRANT	BARE ROOT	5	6	6,043	25	242	48	290	
		RUBUS SPECTABILIS	SALMONBERRY	BARE ROOT	4	32	32,229	16	2,014	403	2,417	
		SAMBUCUS RACEMOSA	RED ELDERBERRY	BARE ROOT	10	5	5,036	100	50	10	60	
					SUBTOTAL	103	103,737		4,875	975	5,850	SHRUBS
	GROUND	POLYSTICHUM MUNITUM	SWORD FERN	4" POT	1.5	5	5,036	2	2,238		2,238	
					SUBTOTAL	5	5,036		2,238	0	2,238	GROUNDCOVERS
										Total Plants	9,221	

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** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
UPLAND FILL SITE SQ FT 95,669	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	10	40	38,268	100	383	77	459	
		ABIES GRANDIS	GRAND FIR	BARE ROOT	10	20	19,134	100	191	38	230	
		PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	10	30	28,701	100	287	57	344	
					SUBTOTAL	90	86,102		861	172	1,033	TREES
	SHRUB	CEANOTHUS VELUTINUS	SNOWBRUSH	BARE ROOT	5	20	19,134	25	765	153	918	
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	25	23,917	9	2,657	531	3,189	
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	25	23,917	9	2,657	531	3,189	
		HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	15	14,350	25	574	115	689	
		RUBUS PARVIFLORUS	THIMBLEBERRY	BARE ROOT	4	15	14,350	16	897	179	1,076	
					SUBTOTAL	100	95,669		7,551	1,510	9,061	SHRUBS
										Total Plants	10,095	
	GROUND	HYDROSEED	105	PLS LBS		100	95,669		95.8	0	95	
					SUBTOTAL	100	95,669				95.8	LBS PLS
										Total Seed (lbs)	95.8	

SEEDING RATE (LBS OF PLS/ACRE) 43.6
Assumes seeding rate of 43.6 LBS PLS/Acre to be verified with seed supplier

* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters. Planting should consist of clusters of shrubs clumped tightly around clusters of trees to create dense plant groups that are easy to mulch and mow around.
** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

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Feb-26-2015 100% SUBMITTAL

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CLEAR CREEK
FLOODPLAIN RESTORATION
PLANTING SCHEDULE--
LANDSCAPE 2
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 70 OF 73

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	PLANTS PER HOLE	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
WETLAND UNDERPLANTING SQ FT 7,992	TREE	THUJA PLICATA	WESTERN RED CEDAR	BARE ROOT	8	80	6,394	64		100	20	120	
				SUBTOTAL	80		6,394			100	20	120	TREES
	SHRUB	CORNUS SERICEA	RED-TWIG DOGWOOD	BARE ROOT	4	15	1,199	16		75	15	90	
		LONICERA INVOLUCRATA	BLACK TWINBERRY	BARE ROOT	5	15	1,199	25		48	10	58	
		MALUS FUSCA	WESTERN CRABAPPLE	BARE ROOT	6	5	400	36		11	2	13	
		RUBUS SPECTABILIS	SALMONBERRY	BARE ROOT	4	25	1,998	16		125	25	150	
		RHAMNUS PURSHIANA	CASCARA	BARE ROOT	12	15	1,199	144		8	2	10	
				SUBTOTAL	75		5,994			267	53	321	SHRUBS
	GROUND	ATHYRIUM FILIX-FEMINA	LADY FERN	4" POT	3	10	799	9		89	18	107	
		CAREX OBNUPTA***	SLOUGH SEDGE	BARE ROOT/PLUG	1.5	15	1,199	2	3	1,598	320	1,918	
		LYSICHITON AMERICANUM***	SKUNK CABBAGE	BARE ROOT/PLUG	2	15	1,199	4	3	899	180	1,079	
		SCIRPUS MICROCARPUS***	SMALL-FRUITED BULRUSH	BARE ROOT/PLUG	1.5	5	400	2	3	533	107	639	
				SUBTOTAL	45		3,596			3,119	624	3,743	GROUNDCOVERS
											Total Plants	4,183	

* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters.
** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.
*** Indicates species that is to be planted 3 bare root plants per planting hole

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT.)	PLANTS PER HOLE	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL	
FLOODPLAIN DEPRESSIONS SQ FT 844	GROUND	ATHYRIUM FILIX-FEMINA	LADY FERN	4" POT	2	15	127	4		32	6	38	
		CAREX STIPATA***	SAWBEAK SEDGE	BARE ROOT/PLUG	1.5	10	84	2	3	113	23	135	
		GLYCERIA BOREALIS***	NORTHERN MANNAGRASS	BARE ROOT/PLUG	1.5	10	84	2	3	113	23	135	
		JUNCUS TENUIS***	SLENDER RUSH	BARE ROOT/PLUG	2	15	127	4	3	95	19	114	
		SCIRPUS ACUTUS***	HARDSTEM BULRUSH	BARE ROOT/PLUG	1.5	15	127	2	3	169	34	203	
		SCIRPUS ATROCINCTUS***	WOOLGRASS	BARE ROOT/PLUG	1.5	10	84	2	3	113	23	135	
		SCIRPUS MICROCARPUS***	SMALL-FRUITED BULRUSH	BARE ROOT/PLUG	1.5	25	211	2	3	281	56	338	
				SUBTOTAL	100	844				914	183	1,097	GROUNDCOVERS
											Total Plants	1,097	

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***indicates species that is to be planted 3 bare root plants per planting hole

NWS-2015-28

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Natural Systems Design
P.O. Box 15609
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

Received by Corps: 11 March 2015

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.:
DATE: --/--/--

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
614 DIVISION STREET MS-26
PORT ORCHARD, WA 98366
TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK
FLOODPLAIN RESTORATION
PLANTING SCHEDULE-
LANDSCAPE 3
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 71 OF 73

Feb-26-2015 100% SUBMITTAL

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	NOTES
FLOODPLAIN 1 SQ FT 194,241	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	20	38,848	64	607	121	728	See Detail 5, Sheet 72. Plant in clumps of 8-10
		PICEA SITCHENSIS	SITKA SPRUCE	BARE ROOT	10	10	19,424	100	194	39	233	See Detail 5, Sheet 72. Plant in clumps of 8-10
		POPULUS BALSAMIFERA	BLACK COTTONWOOD	BARE ROOT	8	15	29,136	64	455	91	546	See Detail 5, Sheet 72. Plant in clumps of 8-10
		SALIX LUCIDA	PACIFIC WILLOW	BARE ROOT	4	15	29,136	16	1,821	364	2,185	See Detail 5, Sheet 72. Plant in clumps of 8-10
		SALIX LUCIDA	PACIFIC WILLOW	LIVE STAKE	3	15	29,136	9	3,237	647	3,885	See Detail 6, Sheet 72. Plant in clumps of 10-20.
				SUBTOTAL		75	145,681		6,315	1,263	7,578	TREES
	SHRUB	CORNUS SERICEA	RED-TWIG DOGWOOD	LIVE STAKE	3	5	9,712	9	1,079	216	1,295	See Detail 6, Sheet 72. Plant in clumps of 10-20
		CORNUS SERICEA	RED-TWIG DOGWOOD	BARE ROOT	4	5	9,712	16	607	121	728	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		See Detail 5, Sheet 69. Plant in clumps of 8-10.	BLACK TWINBERRY	BARE ROOT	5	15	29,136	25	1,166	233	1,399	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		MALUS FUSCA	WESTERN CRABAPPLE	BARE ROOT	6	5	9,712	36	270	54	324	See Detail 5, Sheet 72. Plant in clumps of 8-10
		ROSA PISOCARPA	PEA-FRUITED ROSE	BARE ROOT	3	10	19,424	9	2,158	432	2,590	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		SALIX SCOULERIANA	SCOULER'S WILLOW-	LIVE STAKE	3	7	13,597	9	1,511	302	1,813	See Detail 6, Sheet 72. Plant in clumps of 10-20.
		SALIX SCOULERIANA	SCOULER'S WILLOW	BARE ROOT	4	8	15,539	16	971	194	1,165	See Detail 5, Sheet 72. Plant in clumps of 8-10
		SALIX SITCHENSIS	SITKA WILLOW	LIVE STAKE	3	3	15,539	9	1,727	345	2,072	See Detail 6, Sheet 72. Plant in clumps of 10-20
		SALIX SITCHENSIS	SITKA WILLOW	BARE ROOT	4	7	13,597	16	850	170	1,020	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		SPIRAEA DOUGLASII	HARDHACK	BARE ROOT	4	20	38,848	16	2,428	486	2,914	See Detail 5, Sheet 72. Plant in clumps of 8-10
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	10	19,424	9	2,158	432	2,590	See Detail 5, Sheet 72. Plant in clumps of 8-10
				SUBTOTAL		100	194,241		14,924	2,985	17,909	SHRUBS
										Total Plants	25,487	
	GROUND		WETLAND SEED MIX	PLS LBS (SEED)		100	194,241		44.6	0	45	
				SUBTOTAL		100	194,241		45	0	44.6	PLS LBS
										Total Seed	44.6 lbs	

SEEDING RATE (LBS OF PLS/ACRE): 10
Assumes seeding rate of 10 LBS PLS/Acre to be verified with seed supplier

Put something here.

* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters with gaps between clusters.
** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	PLANTS PER HOLE	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	NOTES
FLOODPLAIN 2 SQ FT 73,770	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	30	22,131	64		346		346	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		PICEA SITCHENSIS	SITKA SPRUCE	BARE ROOT	10	15	11,066	100		111	22	133	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		POPULUS BALSAMIFERA	BLACK COTTONWOOD	BARE ROOT	8	10	7,377	64		115	23	138	See Detail 5, Sheet 72. Plant in clumps of 8-10
		SALIX LUCIDA	PACIFIC WILLOW	BARE ROOT	4	10	7,377	16		461	92	553	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		SALIX LUCIDA	PACIFIC WILLOW	LIVE STAKE	3	10	7,377	9		820	164	984	See Detail 6, Sheet 72. Plant in clumps of 10-20
				SUBTOTAL		75	55,328			1,852	301	2,154	TREES
	SHRUB	CORNUS SERICEA	RED-TWIG DOGWOOD	LIVE STAKE	3	15	11,066	9		1,230	246	1,476	See Detail 6, Sheet 72. Plant in clumps of 10-20
		CORNUS SERICEA	RED-TWIG DOGWOOD	BARE ROOT	4	15	11,066	16		692	138	830	See Detail 5, Sheet 72. Plant in clumps of 8-10
		LONICERA INVOLUCRATA	BLACK TWINBERRY	BARE ROOT	8	10	7,377	25		295	59	354	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		MALUS FUSCA	WESTERN CRABAPPLE	BARE ROOT	6	10	7,377	36		205	41	246	See Detail 5, Sheet 72. Plant in clumps of 8-10
		SALIX SITCHENSIS	SITKA WILLOW	LIVE STAKE	3	15	11,066	9		1,230	246	1,475	See Detail 5, Sheet 72. Plant in clumps of 10-20
		SALIX SITCHENSIS	SITKA WILLOW	BARE ROOT	4	15	11,066	16		692	138	830	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		SPIRAEA DOUGLASII	HARDHACK	BARE ROOT	4	10	7,377	16		461	92	553	See Detail 5, Sheet 72. Plant in clumps of 8-10.
				SUBTOTAL		90	66,393			4,803	961	5,764	SHRUBS
	GROUND	ATHYRIUM FILIX-FEMINA	LADY FERN	4" POT	3	5	3,689	9		410	82	492	See Detail 3, Sheet 72. Plant in clumps of 8-10
		CAREX OBNUPTA***	SLOUGH SEDGE	BARE ROOT/PLUG	1.5	1	738	2	3	984	197	1,180	See Detail 4, Sheet 72
		JUNCUS ENSIFOLIUS***	DAGGER LEAF RUSH	BARE ROOT/PLUG	1.5	1	738	2	3	984	197	1,180	See Detail 4, Sheet 72.
		LYSICHITON AMERICANUM***	SKUNK CABBAGE	BARE ROOT/PLUG	2	1	738	4	3	553	111	664	See Detail 4, Sheet 72.
		SCIRPUS MICROCARPUS***	SMALL-FRUITED BULRUSH	BARE ROOT/PLUG	1.5	1.5	1,107	2	3	1,476	295	1,770	See Detail 4, Sheet 72
				SUBTOTAL		9.5	7,003			4,406	881	5,287	GROUNDCOVERS
											Total Plants	13,205	
	SEED		WETLAND SEED MIX	PLS LBS (SEED)		100	73,770			16.9		17	
				SUBTOTAL		100	73,770			17	0	16.9	PLS LBS
											Total Seed	16.9 lbs	

SEEDING RATE (LBS OF PLS/ACRE): 10
Assumes seeding rate of 10 LBS PLS/Acre to be verified with seed supplier
* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters with gaps between clusters.
** 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.
*** Indicates species that is to be planted 3 bare root plants per planting hole

NWS-2015-28

Feb-26-2015 100% SUBMITTAL

0 2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

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No.	BY	DATE	DESCRIPTION

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MICHAEL R. HRACHOVEC, STATE OF WASHINGTON, 38034, REGISTERED PROFESSIONAL ENGINEER

KITSAP COUNTY, 18, 57, WASHINGTON

KITSAP COUNTY
DEPT. OF PUBLIC WORKS
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CLEAR CREEK
FLOODPLAIN RESTORATION
PLANTING SCHEDULE-
LANDSCAPE 4
KITSAP COUNTY, WASHINGTON
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 72 OF 73

US Army Corps of Engineers
Seattle District

NATIONWIDE PERMIT 27
Terms and Conditions

Effective Date: June 15, 2012

A. Description of Authorized Activities
B. Corps National General Conditions for all NWPs
C. Corps Seattle District Regional General Conditions
D. Corps Regional Specific Conditions for this NWP
E. State 401 Certification General Conditions
F. State 401 Certification Specific Conditions for this NWP
G. EPA 401 Certification General Conditions
H. EPA 401 Certification Specific Conditions for this NWP
I. Coastal Zone Management Consistency Response for this NWP

In addition to any special condition that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit authorization to be valid in Washington State.

A. DESCRIPTION OF AUTHORIZED ACTIVITIES

27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities. Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas, the restoration and enhancement of non-tidal streams and other non-tidal open waters, and the rehabilitation or enhancement of tidal streams, tidal wetlands, and tidal open waters, provided those activities result in net increases in aquatic resource functions and services.

To the extent that a Corps permit is required, activities authorized by this NWP include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms, as well as discharges of dredged or fill material to restore appropriate stream channel configurations after small water control structures, dikes, and berms, are removed; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels; the removal of existing drainage structures, such as drain tiles, and the filling, blocking, or reshaping of drainage ditches to restore wetland hydrology; the installation of structures or fills necessary to establish or re-establish wetland or stream hydrology; the construction of small nesting islands; the construction of open water areas; the construction of oyster habitat over unvegetated bottom in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; re-establishment of submerged aquatic vegetation in areas where those plant communities previously existed; re-establishment of tidal wetlands in tidal waters where those wetlands previously existed; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

This NWP authorizes the relocation of non-tidal waters, including non-tidal wetlands and streams, on the project site provided there are net increases in aquatic resource functions and services.

Except for the relocation of non-tidal waters on the project site, this NWP does not authorize the conversion of a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa) or uplands. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic

habitat type. This NWP does not authorize stream channelization. This NWP does not authorize the relocation of tidal waters or the conversion of tidal waters, including tidal wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water impoundments.

Compensatory mitigation is not required for activities authorized by this NWP since these activities must result in net increases in aquatic resource functions and services.

Reversion. For enhancement, restoration, and establishment activities conducted: (1) In accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), U.S. Forest Service (USFS), or their designated state cooperating agencies; (2) as voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) on reclaimed surface coal mine lands, in accordance with a Surface Mining Control and Reclamation Act permit issued by the Office of Surface Mining Reclamation and Enforcement (OSMRE) or the applicable state agency, this NWP also authorizes any future discharge of dredged or fill material associated with the reversion of the area to its documented prior condition and use (i.e., prior to the restoration, enhancement, or establishment activities). The reversion must occur within five years after expiration of a limited term wetland restoration or establishment agreement or permit, and is authorized in these circumstances even if the discharge occurs after this NWP expires. The five-year reversion limit does not apply to agreements without time limits reached between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS, or an appropriate state cooperating agency. This NWP also authorizes discharges of dredged or fill material in waters of the United States for the reversion of wetlands that were restored, enhanced, or established on prior-converted cropland or on uplands, in accordance with a binding agreement between the landowner and NRCS, FSA, FWS, or their designated state cooperating agencies (even though the restoration, enhancement, or establishment activity did not require a section 404 permit). The prior condition will be documented in the original agreement or permit, and the determination of return to prior conditions will be made by the Federal agency or appropriate state agency executing the agreement or permit. Before conducting any reversion activity the permittee or the appropriate Federal or state agency must notify the district engineer and include the documentation of the prior condition. Once an area has reverted to its prior physical condition, it will be subject to whatever the Corps Regulatory requirements are applicable to that type of land at the time. The requirement that the activity results in a net increase in aquatic resource functions and services does not apply to reversion activities meeting the above conditions. Except for the activities described above, this NWP does not authorize any future discharge of dredged or fill material associated with the reversion of the area to its prior condition. In such cases a separate permit would be required for any reversion.

Reporting. For those activities that do not require pre-construction notification, the permittee must submit to the district engineer a copy of: (1) The binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement, or a project description, including project plans and location map; (2) the NRCS or USDA Technical Service Provider documentation for the voluntary stream enhancement or restoration action or wetland restoration, enhancement, or establishment action; or (3) the SMCRA permit issued by OSMRE or the applicable state agency. The report must also include information on baseline ecological conditions on the project site, such as a delineation of wetlands, streams, and/or other aquatic habitats. These documents must be submitted to the district engineer at least 30 days prior to commencing activities in waters of the United States authorized by this NWP.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing any activity (see general condition 31), except for the following activities:

(1) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding stream enhancement or restoration agreement or wetland enhancement,

restoration, or establishment agreement between the landowner and the U.S. FWS, NRCS, FSA, NMFS, NOS, USFS or their designated state cooperating agencies;

(2) Voluntary stream or wetland restoration or enhancement action, or wetland establishment action, documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or

(3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSMRE or the applicable state agency.

However, the permittee must submit a copy of the appropriate documentation to the district engineer to fulfill the reporting requirement. (Sections 10 and 404)

Note: This NWP can be used to authorize compensatory mitigation projects, including mitigation banks and in-lieu fee projects. However, this NWP does not authorize the reversion of an area used for a compensatory mitigation project to its prior condition, since compensatory mitigation is generally intended to be permanent.

B. CORPS NATIONAL GENERAL CONDITIONS FOR ALL NWPs

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR § 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not

adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the

undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332. (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment. (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered. (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be

approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.
(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include: (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions; (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either: (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information: (1) Name, address and telephone numbers of the prospective permittee; (2) Location of the proposed project; (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans); (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate; (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required.

As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan. (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level. (2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5. (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act. (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination

will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the

necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

C. CORPS SEATTLE DISTRICT REGIONAL GENERAL CONDITIONS

1. Aquatic Resources Requiring Special Protection. Activities resulting in a loss of waters of the United States in a mature forested wetland, bog, bog-like wetland, aspen-dominated wetland, alkali wetland, wetlands in a dunal system along the Washington coast, vernal pools, camas prairie wetlands, estuarine wetlands, and wetlands in coastal lagoons cannot be authorized by a NWP, except by the following NWPs:

NWP 3 – Maintenance
NWP 20 – Oil Spill Cleanup
NWP 32 – Completed Enforcement Actions
NWP 38 – Cleanup of Hazardous and Toxic Waste

In order to use one of the above-referenced NWPs in any of the aquatic resources requiring special protection, you must submit a pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 (Pre-Construction Notification) and obtain written approval before commencing work.

2. Commencement Bay. The following NWPs may not be used to authorize activities located in the Commencement Bay Study Area (see Figure 1 at www.nws.usace.army.mil, select Regulatory Permits then Permit Guidebook, then Nationwide Permits) requiring Department of the Army authorization:

NWP 12 – Utility Line Activities (substations)
NWP 13 – Bank Stabilization
NWP 14 – Linear Transportation Projects
NWP 23 – Approved Categorical Exclusions
NWP 29 – Residential Developments
NWP 39 – Commercial and Institutional Developments
NWP 40 – Agricultural Activities
NWP 41 – Reshaping Existing Drainage Ditches
NWP 42 – Recreational Facilities
NWP 43 – Stormwater Management Facilities

3. New Bank Stabilization Prohibition Areas in Tidal Waters of Puget Sound. Activities involving new bank stabilization in tidal waters in Water Resource Inventory Areas (WRIAs) 8, 9, 10, 11, and 12 (within

the specific area identified on Figure 2 at www.nws.usace.army.mil, select Regulatory Permits then Permit Guidebook, then Nationwide Permits) cannot be authorized by a NWP.

4. Bank Stabilization. Any project including new or maintenance bank stabilization activities requires pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 for Pre-Construction Notification. This requirement does not apply to maintenance work exempt by 33 CFR 323.4 (a)(2). Each notification must also include the following information:

a. Need for the work, including the cause of the erosion and the threat posed to structures, infrastructure, and/or public safety. The notification must also include a justification for the need to place fill or structures waterward of the line of the Corps' jurisdiction (typically, the ordinary high water mark or mean higher high water mark).

b. Current and expected post-project sediment movement and deposition patterns in and near the project area. In tidal waters, describe the location and size of the nearest bluff sediment sources (feeder bluffs) to the project area and current and expected post-project nearshore drift patterns in the project area.

c. Current and expected post-project habitat conditions, including the presence of fish, wildlife and plant species, submerged aquatic vegetation, spawning habitat, and special aquatic sites (e.g., vegetated shallows, riffle and pool complexes, or mudflats) in the project area.

d. In rivers and streams, an assessment of the likely impact of the proposed work on upstream, downstream and cross-stream properties (at a minimum the area assessed should extend from the nearest upstream bend to the nearest downstream bend of the watercourse). Discuss the methodology used for determining effects. The Corps reserves the right to request an increase in the reach assessment area to fully address the relevant ecological reach and associated habitat.

e. For new bank stabilization activities in rivers and streams, describe the type and length of existing bank stabilization within 300 feet up and downstream of the project area. In tidal areas, describe the type and length of existing bank stabilization within 300 feet along the shoreline on both sides of the project area.

f. Demonstrate the proposed project incorporates the least environmentally damaging practicable bank protection methods. These methods include, but are not limited to, the use of bioengineering, biotechnical design, root wads, large woody material, native plantings, and beach nourishment in certain circumstances. If rock must be used due to site erosion conditions, explain how the bank stabilization structure incorporates elements beneficial to fish. If the Corps determines you have not incorporated the least environmentally damaging practicable bank protection methods and/or have not fully compensated for impacts to aquatic resources, you must submit a compensatory mitigation plan to compensate for impacts to aquatic resources.

g. A planting plan using native riparian plant species unless the applicant demonstrates a planting plan is not appropriate or not practicable.

5. Crossings of Waters of the United States. Any project including installing, replacing, or modifying crossings of waters of the United States, such as culverts, requires pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 for Pre-Construction Notification. This requirement does not apply to maintenance work exempt by 33 CFR 323.4 (a)(2). Each notification must also include the following information:

a. Need for the crossing.

b. Crossing design criteria and design methodology.

c. Rationale behind using the specific design method for the crossing.

6. Cultural Resources and Human Burials. Permittees must immediately stop work and notify the District Engineer within 24 hours if, during the course of conducting authorized work, human burials, cultural resources, or historic properties, as identified by the National Historic Preservation Act, are discovered. Failure to stop work in the area of discovery until the Corps can comply with the provisions of 33 CFR 325 Appendix C, the National Historic Preservation Act, and other pertinent laws and regulations could result in a violation of state and federal laws. Violators are subject to civil and criminal penalties.

7. Essential Fish Habitat. An activity which may adversely affect essential fish habitat, as identified under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), may not be authorized by NWP until essential fish habitat requirements have been met by the applicant and the Corps. Non-federal permittees shall notify the District Engineer if essential fish habitat may be affected by, or is in the vicinity of, a proposed activity and shall not begin work until notified by the District Engineer that the requirements of the essential fish habitat provisions of the MSA have been satisfied and the activity is authorized. The notification must identify the type(s) of essential fish habitat (e.g., Pacific salmon, groundfish, and/or coastal-pelagic species) managed by a Fishery Management Plan that may be affected. Information about essential fish habitat is available at www.nwr.noaa.gov/.

8. Vegetation Protection and Restoration. Permittees must clearly mark all construction area boundaries before beginning work. The removal of native vegetation in riparian areas and wetlands, and the removal of submerged aquatic vegetation in estuarine and tidal areas must be avoided and minimized to the maximum extent practicable. Areas subject to temporary vegetation removal shall be replanted with appropriate native species by the end of the first planting season following the disturbance except as waived by the District Engineer. If an aquaculture area is permitted to impact submerged aquatic vegetation under NWP 48, the aquaculture area does not need to be replanted with submerged aquatic vegetation.

9. Access. You must allow representatives of this office to inspect the authorized activity at any time deemed necessary to ensure the work is being, or has been, accomplished in accordance with the terms and conditions of your permit.

10. Contractor Notification of Permit Requirements. The permittee must provide a copy of the nationwide permit verification letter, conditions, and permit drawings to all contractors involved with the authorized work, prior to the commencement of any work in waters of the U.S.

D. CORPS REGIONAL SPECIFIC CONDITIONS FOR THIS NWP

1. For projects subject to pre-construction notification, the notification must explain why the loss is necessary and show how it would be fully offset by the beneficial impacts of the project. The notification must describe pre-project site conditions (including photographs), general wetland and other aquatic functions the site provides, benefits anticipated from project construction, and proposed maintenance and monitoring plans.

2. The permittee must submit a pre-construction notification to the District Engineer in accordance with Nationwide Permit General Condition 31 (Pre-Construction Notification) for any proposed project located

in a Department of the Army permit compensatory mitigation site, Comprehensive Environmental Response, Compensation and Liability Act (Superfund) site, Resource Conservation and Recovery Act hazardous waste clean-up site, or Washington State Model Toxics Control Act clean-up site.

E. STATE 401 CERTIFICATION GENERAL CONDITIONS:

1. **For in-water construction activities.** Individual 401 review is required for projects or activities authorized under NWPs that will cause, or be likely to cause or contribute to an exceedence of a State water quality standard (WAC 173-201A) or sediment management standard (WAC 173-204).

   ***Note**: State water quality standards are posted on Ecology's website: http://www.ecy.wa.gov/programs/wq/swqs/. Click "Surface Water Criteria" for freshwater and marine water standards. Sediment management standards are posted on Ecology's website: http://www.ecy.wa.gov/biblio/wac173204.html. Information is also available by contacting Ecology's Federal Permit staff.*

2. **Projects or Activities Discharging to Impaired Waters.** Individual 401 review is required for projects or activities authorized under NWPs if the project or activity will occur in a 303(d) listed segment of a waterbody or upstream of a listed segment and may result in further exceedences of the specific listed parameter.

   ***Note**: To determine if your project or activity is in a 303(d) listed segment of a waterbody, visit Ecology's Water Quality Assessment webpage for maps and search tools, http://www.ecy.wa.gov/programs/wq/303d/2008/. Information is also available by contacting Ecology's Federal Permit staff.*

3. **Notification.** For projects or activities that will require Individual 401 review, applicants must provide Ecology with the same documentation provided to the Corps (as described in Corps Nationwide Permit General Condition 31, Pre-Construction Notification), including, when applicable:

   (a) A description of the project, including site plans, project purpose, direct and indirect adverse environmental effects the project would cause, and any other Department of the Army permits used or intended to be used to authorize any part of the proposed project or any related activity.

   (b) Delineation of special aquatic sites and other waters of the United States. Wetland delineations must be prepared in accordance with the current method required by the Corps and shall include Ecology's Wetland Rating form. Wetland rating forms are subject to review and verification by Ecology staff.

   ***Note**: Wetland rating forms are available on Ecology's Wetlands website: http://www.ecy.wa.gov/programs/sea/wetlands/ratingsystems or by contacting Ecology's Federal Permit staff.*

   (c) A statement describing how the mitigation requirement will be satisfied. A conceptual or detailed mitigation or restoration plan may be submitted.

   Mitigation plans submitted for Ecology review and approval shall be based on the guidance provided in Wetland Mitigation in Washington State, Parts 1 and 2 (Ecology Publications #06-06-011a and #06-06-011b).

(d) Coastal Zone Management Program "Certification of Consistency" Form if the project is located within a coastal county (Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Wahkiakum, and Whatcom counties).

Note: CZM Certification of Consistency forms are available on Ecology's Federal Permit website: http://www.ecy.wa.gov/programs/sea/fed-permit/index.html or by contacting Ecology's Federal Permit staff.

(e) Other applicable requirements of Corps Nationwide Permit General Condition 31, Corps Regional Conditions, or notification conditions of the applicable NWP.

Note: Ecology has 180 days from receipt of applicable documents noted above ***and*** *a copy of the final authorization letter from the Corps providing coverage for a proposed project or activity under the NWP Program to issue a WQC and CZM consistency determination response. If more than 180 days pass after Ecology's receipt of these documents, your requirement to obtain an individual WQC and CZM consistency determination response becomes waived.*

4. **Aquatic resources requiring special protection.** Certain aquatic resources are unique, difficult-to-replace components of the aquatic environment in Washington State. Activities that would affect these resources must be avoided to the greatest extent possible. Compensating for adverse impacts to high value aquatic resources is typically difficult, prohibitively expensive, and may not be possible in some landscape settings.

Individual 401 review is required for activities in or affecting the following aquatic resources (and not prohibited by Regional Condition 1):

(a) Wetlands with special characteristics (as defined in the Washington State Wetland Rating Systems for western and eastern Washington, Ecology Publications #04-06-025 and #04-06-015):
- Estuarine wetlands
- Natural Heritage wetlands
- Bogs
- Old-growth and mature forested wetlands
- Wetlands in coastal lagoons
- Interdunal wetlands
- Vernal pools
- Alkali wetlands

(b) Fens, aspen-dominated wetlands, camas prairie wetlands, and marine water with eelgrass (*Zostera marina*) beds (except for NWP 48).

(c) Category 1 wetlands

(d) Category II wetlands with a habitat score ≥ 29 points. This State General Condition does not apply to the following Nationwide Permits:

NWP 20 – Response Operations for Oil and Hazardous Substances
NWP 32 – Completed Enforcement Actions

5. **Mitigation.** For projects requiring Individual 401 review, adequate compensatory mitigation must be provided for wetland and other water quality-related impacts of projects or activities authorized under the NWP Program.

   (a) Mitigation plans submitted for Ecology review and approval shall be based on the guidance provided in Wetland Mitigation in Washington State, Parts 1 and 2 (Ecology Publications #06-06-011a and #06-06-011b) and shall, at a minimum, include the following:

      i. A description of the measures taken to avoid and minimize impacts to wetlands and other waters of the U.S.

      ii. The nature of the proposed impacts (i.e., acreage of wetlands and functions lost or degraded)

      iii. The rationale for the mitigation site that was selected

      iv. The goals and objectives of the compensatory mitigation project

      v. How the mitigation project will be accomplished, including construction sequencing, best management practices to protect water quality, proposed performance standards for measuring success and the proposed buffer widths

      vi. How it will be maintained and monitored to assess progress towards goals and objectives. Monitoring will generally be required for a minimum of five years. For forested and scrub-shrub wetlands, 10 years of monitoring will often be necessary.

      vii. How the compensatory mitigation site will be legally protected for the long term.

Refer to Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Ecology Publication #06-06-011b) for guidance on developing mitigation plans.

Ecology encourages the use of alternative mitigation approaches, including advance mitigation and other programmatic approaches such as mitigation banks and programmatic mitigation areas at the local level. If you are interested in proposing use of an alternative mitigation approach, consult with the appropriate Ecology regional staff person. (see http://www.ecy.wa.gov/programs/sea/wetlands/contacts.htm)

Information on the state wetland mitigation banking program is available on Ecology's website: http://www.ecy.wa.gov/programs/sea/wetlands/mitigation/banking/index.html

6. **Temporary Fills.** Individual 401 review is required for any project or activity with temporary fill in wetlands or other waters of the State for more than 90 days, unless the applicant has received written approval from Ecology.

   Note: This State General Condition does not apply to projects or activities authorized under NWP 33, Temporary Construction, Access, and Dewatering

7. **Stormwater discharge pollution prevention**: All projects that involve land disturbance or impervious surfaces must implement prevention or control measures to avoid discharge of pollutants in stormwater runoff to waters of the state. For land disturbances during construction, the permittee must obtain and implement permits where required and follow Ecology's current stormwater manual.

Note: Stormwater permit information is available at Ecology's Water Quality website: http://www.ecy.wa.gov/programs/wq/stormwater/index.html. Ecology's Stormwater Management and Design Manuals are available at: http://www.ecy.wa.gov/programs/wq/stormwater/municipal/StrmwtrMan.html. Information is also available by contacting Ecology's Federal Permit staff.

8. **State Certification for PCNs not receiving 45-day response.** In the event the U.S. Army Corps of Engineers does not respond to a complete pre-construction notification within 45 days, the applicant must contact Ecology for Individual 401 review.

F. STATE 401 CERTIFICATION SPECIF**IC CONDITIONS FOR THIS NWP:** Certified subject to conditions. Permittee must meet Ecology 401 General Conditions. Individual 401 review is required for projects or activities authorized under this NWP if:

1. The project or activity involves fill in tidal waters.
2. The project or activity affects ½ acre or more of wetlands.

G. EPA 401 CERTIFICATION GENERAL CONDITIONS:

A. Any activities in the following types of wetlands and waters of the United States will need to apply for an individual 401 certification: Mature forested wetlands, bogs, bog-like wetlands, wetlands in dunal systems along the Washington coast, coastal lagoons, vernal pools, aspen-dominated wetlands, alkali wetlands, camas prairie wetlands, estuarine wetlands, including salt marshes, and marine waters with eelgrass or kelp beds.

B. A 401 certification determination is based on the project or activity meeting established turbidity levels. The EPA will be using as guidance the state of Washington's water quality standards [WAC 173-201a] and sediment quality standards [WAC 173-204]. Projects or activities that are expected to exceed these levels or that do exceed these levels will require an individual 401 certification.

The water quality standards allow for short-term turbidity exceedances after all necessary Best Management Practices have been implemented (e.g., properly placed and maintained filter fences, hay bales and/or other erosion control devices, adequate detention of runoff to prevent turbid water from flowing off-site, providing a vegetated buffer between the activity and open water, etc.), and only up to the following limits:

Wetted Stream Width at Discharge Point	Approximate Downstream Point for Determining Compliance
Up to 30 feet	50 feet
>30 to 100 feet	100 feet
>100 feet to 200 feet	200 feet
>200 feet	300 feet
LAKE, POND, RESERVOIR	Lesser of 100 feet or maximum surface dimension

C. 401 certification of projects and activities under NWPs will use Washington State Department of Ecology's most recent stormwater manual or an EPA approved equivalent manual as guidance in meeting water quality standards.

D. For projects and activities requiring coverage under an NPDES permit, certification is based on compliance with the requirements of that permit. Projects and activities not in compliance with NPDES requirements will require individual 401certification.

E. Individual 401certification is required for projects or activities authorized under NWPs if the project will discharge to a waterbody on the list of impaired waterbodies (the 303(d) List) and the discharge may result in further exceedance of a specific parameter the waterbody is listed for. The EPA shall make this determination on a case-by-case basis.

For projects or activities that will discharge to a 303(d)-listed waterbody that does not have an approved Total Maximum Daily Load (TMDL) or an approved water quality management plan, the applicant must provide documentation for EPA approval showing that the discharge will not result in further exceedance of the listed contaminant or impairment.

For projects or activities that will discharge to a 303(d)-listed waterbody that does not have an approved TMDL, the applicant must provide documentation for EPA approval showing that the discharge is within the limits established in the TMDL. The current list of 303(d)-listed waterbodies in Washington State will be consulted in making this determination and is available on Ecology's web site at: www.ecy.wa.gov/programs/wq/303d/2012/index.html

The EPA may issue 401 certification for projects or activities that would result in further exceedance or impairment if mitigation is provided that would result in a net decrease in listed contaminants or less impairment in the waterbody. This determination would be made during individual 401 certification review.

F. For projects requiring individual 401 certification, applicants must provide the EPA with the same documentation provided to the Corps, (as described in Corps' National General Condition 31, Pre-Construction Notification), including, when applicable:

(a) A description of the project, including site plans, project purpose, direct and indirect adverse environmental effects the project would cause, any other U.S. Department of the Army permits used or intended to use to authorize any part of the proposed project or any related activity.

(b) Delineation of special aquatic sites and other waters of the United States. Wetland delineations must be prepared in accordance with the current method required by the Corps.

(c) A statement describing how the mitigation requirement will be satisfied. A conceptual or detailed mitigation or restoration plan may be submitted.

(d) Other applicable requirements of Corps National General Condition 31, Corps Regional Conditions, or notification conditions of the applicable NWP.

A request for individual 401 certification- review is not complete until the EPA receives the applicable documents noted above and the EPA has received a copy of the final authorization letter from the Corps providing coverage for a proposed project or activity under the NWP Program.

G. No activity, including structures and work in navigable waters of the United States or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

H. An individual 401 certification is based on adequate compensatory mitigation being provided for aquatic resource and other water quality-related impacts of projects or activities authorized under the NWP Program.

A 401 certification is contingent upon written approval from the EPA of the compensatory mitigation plan for projects and activities resulting in any of the following:

- impacts to any aquatic resources requiring special protection (as defined in EPA General Condition A or Corps General Regional Condition 1)
- any impacts to tidal waters or non-tidal waters adjacent to tidal waters (applies to NWP 14)
- Or, any impacts to aquatic resources greater than ¼ acre.

Compensatory mitigation plans submitted to the EPA shall be based on the Joint Agency guidance provided in *Wetland Mitigation in Washington State, Parts 1 and 2* (Ecology Publication #06-06-011a and #06-06-011b) and shall, at a minimum, include the following:

(1) A description of the measures taken to avoid and minimize impacts to wetlands and other waters of the U.S.
(2) The nature of the proposed impacts (i.e., acreage of wetlands and functions lost or degraded)
(3) The rationale for the mitigation site that was selected
(4) The goals and objectives of the compensatory mitigation project
(5) How the mitigation project will be accomplished, including proposed performance standards for measuring success (including meeting planting success standard of 80 percent survival after five years), evidence for hydrology at the mitigation site, and the proposed buffer widths;
(6) How it will be maintained and monitored to assess progress towards goals and objectives.
(7) Completion and submittal of an "as-built conditions report" upon completion of grading, planting and hydrology establishment at the mitigation site;
(8) Completion and submittal of monitoring reports at years 3 and 5 showing the results of monitoring for hydrology, vegetation types, and aerial cover of vegetation.
(9) For forested and scrub-shrub wetlands, 10 years of monitoring will often be necessary.
(10) Documentation of legal site protection mechanism (covenant or deed restriction) to show how the compensatory mitigation site will be legally protected for the long-term.

I. An individual 401 certification is required for any activity where temporary fill will remain in wetlands or other waterbodies for more than 90 days. The 90 day period begins when filling activity starts in the wetland or other waterbody.

J. An individual 401 is required for any proposed project or activity in waterbodies on the most current list of the following Designated Critical Resource Waters (per Corps General Condition 22).

K. An individual 401 certification is required for any proposed project that would increase permanent, above-grade fill within the 100-year floodplain (including the floodway and the flood fringe).

[***Note:*** The 100-year floodplain is defined as those areas identified as Zones A, A1-30, AE, AH, AO, A99, V, V1-30, and VE on the most current Federal Emergency Management Agency Flood Rate Insurance Maps, or areas identified as within the 100-year floodplain on applicable local Flood Management Program maps. The 100-year flood is also known as the flood with a 100-year recurrence interval, or as the flood with an exceedance probability of 0.01.]

H. EPA 401 CERTIFICATION SPECIFIC CONDITIONS FOR THIS NWP: Partially denied without prejudice. Permittee must meet EPA 401 General Conditions. An individual 401 review is required for projects authorized under this NWP if:

1. The project or activities impact greater than ½ acre, or

2. Any activity in tidal wetlands or waters, or

3. Any project that involves shellfish seeding activities.

I. COASTAL ZONE MANAGEMENT CONSISTENCY RESPONSE FOR THIS NWP: Concur subject to the following condition: When individual 401 review by Ecology is triggered, a CZM Certification of Consistency form must be submitted for projects located within the 15 coastal counties (see State General 401 Condition 3 (Notification)).

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 6 August 2015

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Christopher May, Kitsap County Public Works, 614 Division Street, Port Orchard, Washington, 98366

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District, Kitsap County Public Works (Clear Creek Habitat and Floodplain Restoration); NWS-2015-28

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
State: WA County: Kitsap City: Silverdale
Center coordinates of site (lat/long in degree decimal format): Lat. 47.66528°N, Long. -122.68611°W
Name of nearest waterbody: Clear Creek
Name of any water bodies on the site, in the review area, that have been identified as Section 10 waters:
Tidal: _____
Non-Tidal: _____

Identify (estimate) amount of waters in the review area (if there are multiple sites, use the table instead):
Non-wetland waters (total for site): linear feet _2000__ and width (ft) varies or _____ acres.
Stream Flow : RPW Flow path: Clear Creek flows into Puget Sound. Puget Sound is a tradtional navigable water of the U.S.
Wetlands: 5.06 acres (total for site).
Cowardin Class(es): PEM, PSS, PFO

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Clear Creek	47.6655	-122.6837	R2	2000 linear feet	Riverine
Wetland K	47.6668	-122.6830	PEM, PSS, PFO	0.57 acre	Depressional
Wetland L	47.6656	-122.6861	PEM, PSS, PFO	1.48 acre	Depressional
Wetland M	47.6677	-122.6831	PEM, PSS, PFO	2.22 acre	Depressional/ Riverine
Wetland N	47.6654	-122.6843	PEM, PSS	0.064 acre	Depressional
Wetland P	47.6672	-122.6864	PEM, PSS, PFO	0.043 acre	Depressional
Wetland R	47.6664	-122.6867	PEM	0.03 acre	Depressional
Wetland S	47.6668	-122.6860	PEM	0.027 acre	Depressional
Wetland T	47.6655	-122.6855	PFO	0.31 acre	Depressional
Wetland U	47.6643	-122.6821	PEM, PSS	0.32 acre	Depressional
Wetland W	47.6645	-122.6826	PEM	0.0002 acre	Depressional

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
- ☒ Office (Desk) Determination. Date: 6 August 2015
- ☒ Field Determination. Date(s): 11 February 2015

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):
- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland and Stream Assessment Report, Clear Creek Floodplain Restoration dated 18 December 2012.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report. Explain: _____

- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☐ U.S. Geological Survey Hydrologic Atlas: _____.
  - ☐ USGS NHD data. ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name: _____.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: _____.
- ☐ National wetlands inventory map(s). Cite name: _____.
- ☐ State/Local wetland inventory map(s): _____.
- ☐ FEMA/FIRM maps: _____.
- ☐ 100-year Floodplain Elevation is: _____(National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Google Earth, April 2015.
- ☐ Photographs: ☐ Other (Name & Date): _____.
- ☐ Previous determination(s). File no., date (and findings) of response letter (determination and coordination): _____.
- ☐ Other information (please specify): _____.

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the information in this document.

<u>IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.</u>

Signature:

Regulatory Project Manager

6 Aug 2015
Date

_____
Person[1] Requesting Preliminary JD

_____
Date

[1] Permit applicant, landowner, a lease, easement or option holder, or individual with identifiable and substantial legal interest in the property; this signature is not required for preliminary JDs associated with enforcement actions.

US Army Corps of Engineers ®
Seattle District

CERTIFICATE OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: NWS-2015-28

Name of Permittee: Kitsap County Public Works (Restore Stream Channel)

Date of Issuance: OCT 09 2015

Upon completion of the activity authorized by this permit, please check the applicable boxes below, date and sign this certification, and return it to the following address:

Department of the Army
U.S. Army Corps of Engineers
Seattle District, Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-3755

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of your authorization, your permit may be subject to suspension, modification, or revocation.

☐ The work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of this permit.

Date work complete: _____

☐ Photographs and as-built drawings of the authorized work (OPTIONAL, unless required as a Special Condition of the permit).

☐ If applicable, the mitigation required (e.g., construction and plantings) in the above-referenced permit has been completed in accordance with the terms and conditions of this permit (not including future monitoring).

Date work complete: _____ ☐ N/A

☐ Photographs and as-built drawings of the mitigation (OPTIONAL, unless required as a Special Condition of the permit).

☐ Provide phone number/email for scheduling site visits (must have legal authority to grant property access).

Printed Name: _____

Phone Number: _____ Email: _____

Printed Name: _____

Signature: _____

Date: _____

Washington State Department of Transportation

Memorandum

October 29, 2014

To: Scott Zeller
Assistant State Design Engineer, MS 47329

From: Barbara De Ste. Croix
HQ Development Services & Temporary access Manager, MS 47336

RE: Temporary Access Break Request
SR 3, MP 46.04 RT to MP 46.10 RT and MP 46.13 RT to MP 46.25 RT
Station 561+00 RT to Station 564+50 RT and Station 565+00 RT to 571+00 RT
Kitsap County Public Works

Kitsap County Public Works is requesting approval of two temporary access breaks on SR 3 at or near MP 46.04 RT to MP 46.10 RT and MP 46.13 RT to MP 46.25 RT. The two temporary access breaks will be located at or near SR 3 Station 561+00 RT to Station 564+50 RT and Station 565+00 RT to 571+00 RT.

If approved, the two temporary access breaks will allow Kitsap County Public Works to perform floodplain restoration work at the Clear Creek recreation area north of Silverdale. The large-scale restoration of the Clear Creek stream and associated floodplain will recreate floodplain along Clear Creek and require excavating approximately 32,000 cubic yards of material. This material will be kept onsite and deposited into proposed fill areas, some of which are on SR 3 right of way.

The SR 3 right of way fencing will be temporarily removed during the earthwork construction and will be replaced with new fencing on the newly created fill slopes upon the completion of the project. Between Station 561+00 RT to Station 564+50 RT, the new fencing will be installed along the existing SR 3 right of way line. Between Station 565+00 RT to 571+00 RT, the new fencing will be relocated out of the stream bed and will be installed inside of the existing SR 3 right of way line. Temporary fencing will be in place during construction off-hours.

The temporary break request duration is for two or three weeks and is scheduled for the summer of 2016. The temporary access break between Station 561+00 RT to Station 564+50 RT will create no negative impacts to SR 3 traffic. There will be no access to or from this construction site and SR 3 mainline or ramps. The temporary access break between Station 565+00 RT to 571+00 RT may require a temporary SR 3 shoulder closure to deliver the new R/W fencing materials. A Shoulder Closure Traffic Control Plan is included.

If you have any questions, please contact Trent Rickman at 360-705-7234.

The Region and HQ Access and Hearings Office are supportive of this request and request your approval to allow two temporary access breaks for Kitsap County Public Works on SR 3 at or near MP 46.04 RT to MP 46.10 RT and MP 46.13 RT to MP 46.25 RT.

Zeller, Scott
2014.10.30 16:18:19
-07'00'

I approve	Do not approve	Date

BD:ter
TER(ACC/HU)
SF14-070

Enclosures:

- Break request from OR to HQ Access & Hearings dated October 1, 2014
- Break request from Kitsap County Public Works to OR dated September 20, 2013
- Should Closure Traffic Control Plan
- Junction SR 303/Kitsap Mall Blvd plan
- Red & Green R/W Plans, "SR 3, CLEAR CREEK ROAD INTERCHANGE" (sheet 3 of 3 sheets)

cc: Trent E Rickman, MS 47336
Barb De Ste. Croix, MS 47336

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ATTACHMENT E. INADVERENT DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

CLEAR CREEK FLOODPLAIN PROJECT, KITSAP COUNTY WASHINGTON

1. INTRODUCTION

Kitsap County Public Works intends to restore natural floodplain function in the lower East and West Forks of Clear Creek and the mainstem segment of the creek upstream of Silverdale. The historic floodplain area will be excavated down to a depth of 6-8 feet and the creek will be remeandered through the restored floodplain area created. The following Inadvertent Discovery Plan (IDP) outlines procedures to follow, in accordance with state and federal laws, if archaeological materials or human remains are discovered.

2. RECOGNIZING CULTURAL RESOURCES

A cultural resource discovery could be prehistoric or historic. Examples include:

- An accumulation of shell, burned rocks, or other food related materials,
- Bones or small pieces of bone,
- An area of charcoal or very dark stained soil with artifacts,
- Stone tools or waste flakes (i.e. an arrowhead, or stone chips),
- Clusters of tin cans or bottles, logging or agricultural equipment that appears to be older than 50 years,
- Buried railroad tracks, decking, or other industrial materials.

When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

STEP 1: STOP WORK. If any Kitsap County Public Works employee, contractor or subcontractor believes that he or she has uncovered a cultural resource at any point in the project, all work adjacent to the discovery must stop. The discovery location should be secured at all times.

STEP 2: NOTIFY MONITOR. If there is an archaeological monitor for the project, notify that person. If there is a monitoring plan in place, the monitor will follow its provisions.

STEP 3: NOTIFY CLEAR CREEK FLOODPLAIN PROJECT MANAGEMENT. Contact the Kitsap County Public Works Project Manager:

Chris May
Phone: 360.471.8137
Email: cmay@co.kitsap.wa.us

The Project Manager will make all other calls and notifications.

If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. **Do not call 911 or speak with the media.**

4. FURTHER CONTACTS AND CONSULTATION

A. Kitsap County Public Works Project Manager's Responsibilities:

- **Protect Find**: The Project Manager is responsible for taking appropriate steps to protect the discovery site. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material as set forth in this document.

- **Direct Construction Elsewhere On-site**: The Project Manager may direct construction away from cultural resources to work in other areas prior to contacting the concerned parties.

- **Contact CR/ENV/NR Manager**: If the CR/ENV/NR_Program Manager has not yet been contacted, the Project Manager will do so.

B. Recipient CR/ENV/NR Program Manager's Responsibilities:

- **Identify Find**: The CR/ENV/NR Program Manager (or a CR Specialist if so delegated), will ensure that a qualified professional archaeologist examines the find to determine if it is archaeological.

    - If it is determined not archaeological, work may proceed with no further delay.

    - If it is determined to be archaeological, the CR/ENV/NR Manager or CR Specialist will continue with notification.

    - If the find may be human remains or funerary objects, the CR/ENV/NR Manager or CR Specialist will ensure that a qualified physical anthropologist examines the find. **If it is determined to be human remains, the procedure described in Section 5 will be followed.**

- **Notify DAHP**: The CR/ENV/NR Program Manager (or a CR Specialist if so delegated) will contact the involved federal agencies (if any) and the Department of Archaeology and Historic Preservation (DAHP).

- **Notify Tribes**: If the discovery may relate to Native American interests, the Manager or Specialist will also contact the project's Tribal Liaison, or, if the project is not assigned a Liaison, the Executive Tribal Liaison.

General Contacts

Federal Agencies: None

Department of Archaeology and Historic Preservation:

Dr. Allyson Brooks	or
State Historic Preservation Officer	Rob Whitlam, Ph.D.
360-586-3066	Staff Archaeologist
	360-586-3050

Tribal Liaisons:

Project Tribal Liaison	Executive Tribal Liaison
Name Dennis Lewarch	Name Leonard Forsman, Chair
Number 360-394-8529	Number 360-598-3311
Email dlewarch@Suquamish.nsn.us	Emaillforsman@Suquamish.nsn.us

The Tribal Liaison, or CR/ENV/NR Program Manager or Specialist, will contact the interested and affected Tribes for a specific project.

Tribes consulted on this project are:

Tribe:
Name Suquamish Tribe
Title Stephanie Trudel
Number 360-394-8529
Email strudel@Suquamish.nsn.us

C. Further Activities

- Archaeological discoveries will be documented as described in Section 6.
- Construction in the discovery area may resume as described in Section 7.

5. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect.

If the project occurs on federal lands (e.g., national forest or park, military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 apply,

and the responsible federal agency will follow its provisions. Note that state highways that cross federal lands are on an easement and are not owned by the state.

If the project occurs on non-federal lands, Kitsap County Public Works will comply with applicable state and federal laws, and the following procedure:

A. Notify Law Enforcement Agency or Coroner's Office:

In addition to the actions described in Sections 3 and 4, the Project Manager will immediately notify the local law enforcement agency or coroner's office.

The coroner (with assistance of law enforcement personnel) will determine if the remains are human, whether the discovery site constitutes a crime scene, and will notify DAHP.

Kitsap County Coroners Office
Greg Sandstrom, Coroner, 360-337-7077

Kitsap County Sheriff's Office
614 Division Street MS-37,
Steve Boyer, Sheriff, 360-337-7101

B. Participate in Consultation:

Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. WSDOT personnel will participate in consultation.

C. Further Activities:

- Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44.055, RCW 68.50, and RCW 68.60.
- When consultation and documentation activities are complete, construction in the discovery area may resume as described in Section 7.

6. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological deposits discovered during construction will be assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

Kitsap County Public Works staff will ensure the proper documentation and assessment of any discovered cultural resources in cooperation with the federal agencies (if any), DAHP, affected tribes, and a contracted consultant (if any).

All prehistoric and historic cultural material discovered during project construction will be recorded by a professional archaeologist on cultural resource site or isolate form using standard techniques. Site overviews, features, and artifacts will be photographed;

stratigraphic profiles and soil/sediment descriptions will be prepared for subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps.

Cultural features, horizons and artifacts detected in buried sediments may require further evaluation using hand-dug test units. Units may be dug in controlled fashion to expose features, collect samples from undisturbed contexts, or interpret complex stratigraphy. A test excavation unit or small trench might also be used to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. Excavations will be conducted using state-of-the-art techniques for controlling provenience.

Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded for each probe on a standard form. Test excavation units will be recorded on unit-level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. A stratigraphic profile will be drawn for at least one wall of each test excavation unit.

Sediments excavated for purposes of cultural resources investigation will be screened through 1/8-inch mesh, unless soil conditions warrant ¼-inch mesh.

All prehistoric and historic artifacts collected from the surface and from probes and excavation units will be analyzed, catalogued, and temporarily curated. Ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, and the affected tribes.

Within 90 days of concluding fieldwork, a technical report describing any and all monitoring and resultant archaeological excavations will be provided to the Kitsap County Public Works Project Manager, who will forward the report to the Cultural/Environmental/Natural Resources Program for review and delivery to the federal agencies (if any), SHPO, and the affected tribe(s).

If assessment activity exposes human remains (burials, isolated teeth, or bones), the process described in Section 5 above will be followed.

7. PROCEEDING WITH CONSTRUCTION

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. A professional archaeologist must determine the boundaries of the discovery location. In consultation with DAHP and any affected tribes, the Kitsap County Public Works Project Manager and CR/ENV/NR Program staff will determine the appropriate level of documentation and treatment of the resource. If there is a federal nexus, Section 106 consultation and associated federal laws will make the final determinations about treatment and documentation.

Construction may continue at the discovery location only after the process outlined in this plan is followed and Kitsap County Public Works, DAHP, any affected tribes, Ecology (and the federal agencies, if any) determine that compliance with state and federal laws is complete.

8. KITSAP COUNTY PUBLIC WORKS RESPONSIBILITY

Kitsap County Public Works is responsible for developing an IDP. The IDP must be immediately available by request by any party. An IDP must be immediately available and be implemented to address any discovery.

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