KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
COUNTY ROAD PROJECT NO. 3668
WORK ORDER No. 713135

BAY SHORE DRIVE AND WASHINGTON AVE NW
ROADWAY AND UTILITY IMPROVEMENT PROJECT

KITSAP COUNTY
WASHINGTON

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
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APPENDICES

APPENDIX A - WASHINGTON STATE PREVAILING WAGE RATES, STATE BENEFIT CODE KEY AND SUPPLEMENTAL (L&I STATEMENT)

APPENDIX B - WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HYDRAULIC PERMIT APPROVAL, MINOR MODIFICATION, MINOR MODIFICATION 1

APPENDIX C - GEOTECHNICAL CONDITIONS RECOMMENDATIONS REPORT FOR BAY SHORE AND WASHINGTON IMPROVEMENTS PROJECT- KITSAP COUNTY PUBLIC WORKS DEPARTMENT, SILVERDALE, WASHINGTON (Dated January 22, 2019)

APPENDIX D – CONSTRUCTION STORMWATER GENERAL PERMIT

APPENDIX E – DISPUTES REVIEW BOARD – THREE-PARTY AGREEMENT
CALL FOR BIDS

KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
COUNTY ROAD PROJECT NO. 3668

BAY SHORE DRIVE AND WASHINGTON AVE NW
ROADWAY AND UTILITY IMPROVEMENT PROJECT

BID OPENING: DATE: March 24, 2020 TIME: 11:00 AM
PRE-BID MEETING: DATE: March 10, 2020 TIME: 1:00 PM
LOCATION: 9161 Washington Avenue (Boy Scout Hall), Silverdale WA

A mandatory pre-bid meeting will be held at the location and time above. This meeting must be attended by the Prime Contractor/Prospective Bidder. After the meeting, a tour of the project will be conducted. This will be the only tour of the project.

Sealed bids for the project designated above will be received by Kitsap County Department of Public Works before the time and date indicated above, at which time they will be opened and publicly read aloud.

Bids will be received in person or by private carrier (UPS, Federal Express, etc.) at:

Kitsap County Department of Public Works
Third floor Reception Desk
507 Austin Avenue
Port Orchard, Washington

Bids delivered by US Postal Service shall be addressed to:

Kitsap County Department of Public Works
614 Division Street, MS-26
Port Orchard, Washington 98366-4699

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) Certification of Compliance with Wage Payment Statutes  
6) Non-Collusion Affidavit  
7) Subcontractor List  
8) Proposal for Incorporating Recycled Materials into the Project  

All 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.

**DESCRIPTION OF WORK**  
This contract is a roadway improvement project which provides for the improvement of 1600 feet of Bay Shore Drive, 1150 feet of Washington Avenue and 700 feet of NW Byron Street in Kitsap County, Washington. Project elements include sewer replacement, domestic and reclaimed water system replacement, sewer system rehabilitation, stormwater system replacement, shoring, dewatering, microtunnelling, temporary sewer bypass, cured-in-place piping, surfacing, paving, striping, illumination,
and other work in accordance with the Contract Documents. The engineer’s estimate ranges from $15,000,000 to $20,000,000.

The following is applicable to federal aid projects:

The Kitsap County Board of Commissioners accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

OBTAINING PLANS AND CONTRACT PROVISIONS:
Electronic copies of the Plans and Contract Provisions in PDF format are available on the internet through Kitsap County’s website, Department of Public Works, Road Projects Open for Bid, located at http://kcowa.us/roadbid.

Paper copies of the Contract Plans and Provisions for the proposed work may be obtained from the Kitsap County Department of Public Works at 507 Austin Avenue, 3rd floor Reception Desk, Port Orchard, Washington for a non-refundable fee of $35.00 for each set plus $10.00 to cover postage and handling if mailing is requested. To order these Contract Documents, please call 360-337-5777 or email at kitsap1@co.kitsap.wa.us. Plans and Contract Provisions will not be shipped until the fee is received.

To obtain a Bid Proposal Package at no cost or to be added to the Plan Holder List, please call 360-337-5777 or email at kitsap1@co.kitsap.wa.us.

CONTACT PERSON
Any prospective Bidder having questions or desire an explanation or interpretation of the Bid Documents are requested to contact Tina Nelson, Capital Projects Manager, at 360-337-4891, or knelson@co.kitsap.wa.us.

KITSAP COUNTY BOARD OF COMMISSIONERS
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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).
COST CODE (a guide to locate Bid Item information – the Contracting Agency does not warrant its accuracy): The Cost Code for each Bid Item consists of the WSDOT/APWA Standard Specifications division number, the section number and the item number, in that order. An example is shown below:

![Diagram](image)

Kitsap County-specific Bid Items are noted with “KC” at the end. Project-specific Bid Items are noted with “SP”. Bid Items that have options (e.g. Plant Selection or Beam Guardrail Anchor Type X) are designated as such. Examples are shown below:

- 01-04-7728 WSDOT Standard Bid Item
- 01-07-0010KC Kitsap County Standard Bid Item
- 05-05-SP01 Project-specific Bid Item
- 08-02-6550-AC WSDOT Standard Bid Item with Option
- 08-11-6760-16 WSDOT Standard Bid Item with Option (e.g. specific pipe size)
## SCHEDULE A

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SCHEDULE B SUBTOTAL

SALES TAX - 9.0%

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**SCHEDULE C SUBTOTAL** $

**SALES TAX - 9.0%** $

**SCHEDULE C TOTAL** $

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
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**SCHEDULE D SUBTOTAL** $ 

**SALES TAX - 9.0%** $ 

**SCHEDULE D TOTAL** $
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<td>E-01-04-7728</td>
<td>Minor Change</td>
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<td>CALC</td>
<td>$1.00</td>
<td>$2,500.00</td>
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<td>E-01-10-6971</td>
<td>Project Temporary Traffic Control</td>
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<td>L.S.</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>E-8-26-SP01</td>
<td>Connect to Comcast Installed 18x36 Vault</td>
<td>4</td>
<td>EACH</td>
<td></td>
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<td>4</td>
<td>E-8-26-SP02</td>
<td>Connection to Existing Pedestal</td>
<td>2</td>
<td>EACH</td>
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<td>5</td>
<td>E-8-26-SP03</td>
<td>Franchise Utility Coordination</td>
<td>1</td>
<td>L.S.</td>
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<td>6</td>
<td>E-8-26-SP04</td>
<td>Install Conduit, 4-Inch PVC Schedule 40</td>
<td>1275</td>
<td>L.F.</td>
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**Schedule E Subtotal** $ 

**Sales Tax - 9.0%** $ 

**Schedule E Total** $ 

**Schedule A Total** $ 

**Schedule B Total** $ 

**Schedule C Total** $ 

**Schedule D Total** $ 

**Schedule E Total** $ 

**Grand Total** $
2. BIDDER SHALL INCLUDE SALES TAX IN THE LUMP SUM AND UNIT PRICE BID ITEMS in accordance with Section 1-07.2(1) of 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 530 working days.

4. The agreed liquidated damage to the Owner shall be in accordance with Liquidated Damages as described in the Standard Specifications, 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.

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<th>ADDENDUM #</th>
<th>DATE OF RECEIPT OF ADDENDUM</th>
<th>SIGNED ACKNOWLEDGMENT</th>
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(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 this Proposal, the Bidder certifies that they have read and understand all of the terms and Conditions of the Contract Plans, Standard Specifications, and these Special Provisions, and agrees to comply with them.
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 ________________________, 2020.

The Condition of the above obligation is such that whereas the Principal has submitted
To Kitsap County Department of 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 which 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 hereeto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

Surety

By: ________________________

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
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: [ ]

7. Have you received training on the requirements related to public works and prevailing wage?
   Yes: [ ] No: [ ] Exempt: [ ]

B) SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

(SPECIAL PROVISIONS SECTION 1-02.14)

1. Do you own 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 established procedure which your company utilizes to validate the responsibility of each of your subcontractors and any sub-tier contractors?
   Yes: ☐  No: ☐

5. 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: ☐

6. Have you had any claims against retainage or payment bonds for public works projects in the last 3 years?
   Yes: ☐  No: ☐

7. 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: ☐

8. 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: ☐

9. 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:

________________________________________________________________________________________
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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.
STATEMENT OF QUALIFICATIONS FOR CONTRACTOR PERSONNEL

This form shall be completed in its entirety and submitted with the bid, as stated in Special Provisions Section 1-02.14.

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

Prime Contractor Project Manager:

Name: ________________________________________________________________
Address: __________________________________________________________________
Phone: __________________________________________________________________
Years of PM Experience: __________________________________________________

Prime Contractor Superintendent:

Name: ________________________________________________________________
Address: __________________________________________________________________
Phone: __________________________________________________________________
Years of Superintendent Experience: _________________________________________

Dewatering Contractor:

The Dewatering Bidder/Contractor and Dewatering Contractor’s Field/Project Supervisor assigned to this project shall each have a minimum of 3 successfully completed projects that were similar in scope, time, and complexity of work for dewatering within the last (10) years.

Contractor Name: _______________________________________________________
Address: __________________________________________________________________
Phone: __________________________________________________________________
Years of Dewatering Experience: ____________________________________________

List three (3) successfully completed projects requiring dewatering that were similar in scope, time and complexity within the last (10) years. Written Project Descriptions shall be submitted along with the bid proposal.

#1 Project Name: _________________________________________________________
Owner: ________________________________________________________________
Contact Person: _______________ Contact Phone: _________________________
Name of Contractor Employed By: __________________________________________
Completion Date: _________________________________________________________
#2 Project Name: ___________________________________________________
Owner: ___________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ___________________________________________________

#3 Project Name: ___________________________________________________
Owner: ___________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ___________________________________________________

Dewatering Contractor’s Field/Project Supervisor:

Name: _____________________________________________________________
Address: ___________________________________________________________
Phone: ____________________________________________________________
Years of Dewatering Experience: ________________________________________

Supervised a minimum of three (3) successfully completed vacuum wellpoint dewatering projects in similar conditions within the last (10) years. Written Project Descriptions shall be submitted along with the bid proposal.

#1 Project Name: ___________________________________________________
Owner: ___________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ___________________________________________________

#2 Project Name: ___________________________________________________
Owner: ___________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ___________________________________________________

#3 Project Name: ___________________________________________________
Owner: ___________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ___________________________________________________
**Monitoring Contractor:**

The Contractor performing the geotechnical instrument Monitoring assigned to this project shall each have completed projects that were similar in scope and complexity of work for monitoring the equipment as described in the specifications.

Subcontractor Name: __________________________________________________
Address: ____________________________________________________________
Phone: _____________________________________________________________
Years of Geotech Monitoring Experience: __________________________________

List two (2) successfully completed projects requiring monitoring that were similar in scope, time and complexity within the last (10) years. Written Project Descriptions shall be submitted along with the bid proposal.

#1 Project Name: ___________________________________________________
Owner: _____________________________________________________________
Contact Person: __________________ Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ____________________________________________________

#2 Project Name: ___________________________________________________
Owner: _____________________________________________________________
Contact Person: __________________ Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: ____________________________________________________

**Microtunneling Contractor:**

The Microtunneling Contractor and Microtunneling Contractor’s Operator assigned to this project shall each have completed projects that were similar in scope and complexity of work for microtunneling.

Contractor Name: ___________________________________________________
Address: ____________________________________________________________
Phone: _____________________________________________________________
Years of Microtunneling Experience: -

List two (2) successfully completed projects requiring microtunneling that were similar in scope, time and complexity within the last (10) years. Written Project Descriptions shall be submitted along with the bid proposal.

#1 Project Name: ___________________________________________________
Owner: _____________________________________________________________

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: __________________________________________________

#2 Project Name: ___________________________________________________
Owner: ____________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: __________________________________________________

**Microtunneling Contractor’s Operator:**

Name: _____________________________________________________________
Address: ___________________________________________________________
Phone: ____________________________________________________________
Years of Microtunneling Experience: ____________________________________

Supervised a minimum of two (2) successfully completed microtunneling projects in similar conditions. Written Project Descriptions shall be submitted along with the bid proposal.

#1 Project Name: ___________________________________________________
Owner: ____________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: __________________________________________________

#2 Project Name: ___________________________________________________
Owner: ____________________________________________________________
Contact Person: __________________   Contact Phone: ___________________
Name of Contractor Employed By: _____________________________________
Completion Date: __________________________________________________

**Watertight Shoring Contractor:**

The Watertight Shoring Contractor for the chosen method of shoring assigned to this project shall have completed projects that were similar in scope and complexity of work for watertight shoring.

Contractor Name: ___________________________________________________
Address: ___________________________________________________________
Phone: ____________________________________________________________
Years of Watertight Shoring Experience: __________________________________
List two (2) successfully completed projects requiring watertight shoring that were similar in scope, time and complexity within the last (10) years. Written Project Descriptions shall be submitted along with the bid proposal.

#1 Project Name: ___________________________________________________
Owner: ____________________________________________________________
Contact Person: __________________ Contact Phone: ___________________
Name of Contractor Employed By: _______________________________________
Completion Date: ____________________________________________________

#2 Project Name: ___________________________________________________
Owner: ____________________________________________________________
Contact Person: __________________ Contact Phone: ___________________
Name of Contractor Employed By: _______________________________________
Completion Date: ____________________________________________________

Cured in Place Pipe (CIPP) Subcontractor

The subcontractor installing the CIPP shall submit evidence of Contractor training, testing, and/or certification of being trained to install the Manufacturer's product.

Name of CIPP Manufacturer's Representative: _____________________________
Address: ____________________________________________________________
Phone: ______________________________________________________________

Cured in Place Pipe (CIPP) Superintendent/Foreman

Name: __________________________________________________________________
Address: __________________________________________________________________
Phone: __________________________________________________________________
Years of CIPP Experience: __________________________________________________________________

The superintendent/foreman who will supervise the field activities associated with the cured in place pipe (CIPP) shall have personally performed the work and directly supervised the construction, at a minimum of three (3), CIPP projects that were similar in scope, time and complexity within the last ten (10) years. A written summary of the Superintendent/Foreman qualifications shall be submitted along with the bid proposal.

#1 Project Name: ___________________________________________________
Owner: __________________________________________________________________
Contact Person: _______________ Contact Phone: ___________________________
Name of Contractor Employed By: ___________________________________________
Completion Date: __________________________________________________________________
#2 Project Name: ___________________________________________________
Owner: __________________________________________________________
Contact Person: __________________   Contact Phone: __________________
Name of Contractor Employed By: ______________________________________
Completion Date: __________________________________________________

#3 Project Name: ___________________________________________________
Owner: __________________________________________________________
Contact Person: __________________   Contact Phone: __________________
Name of Contractor Employed By: ______________________________________
Completion Date: __________________________________________________
CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date **March 24, 2020**, the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

__________________________________________
Bidder’s Business Name

__________________________________________
Signature of Authorized Official*

__________________________________________
Printed Name

__________________________________________
Title

Date __________________________ City __________________________ State __________________________

**Check One:**
Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

__________________________________________

If a co-partnership, give firm name under which business is transacted:

* If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.
Failure to return this Declaration as part of the bid proposal package will make the bid nonresponsive and ineligible for award.

NON-COLLUSION DECLARATION FORM

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.
SUBCONTRACTOR LIST

Local Agency Subcontractor List
Prepared in compliance with RCW 39.30.060 as amended

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.

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* 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.
Proposal for Incorporating Recycled Materials into the Project

In compliance with a new law that went into effect January 1, 2016 (SHB1695), the Bidder shall propose below, the total percent of construction aggregate and concrete materials to be incorporated into the Project that are recycled materials. Calculated percentages must be within the amounts allowed in Section 9-03.21(1)E, Table on Maximum Allowable Percent (By Weight) of Recycled Material, of the Standard Specifications.

Proposed total percentage: __________________________ percent.

Note: Use of recycled materials is highly encouraged within the limits shown above, but does not constitute a Bidder Preference, and will not affect the determination of award, unless two or more lowest responsive Bid totals are exactly equal, in which case proposed recycling percentages will be used as a tie-breaker, per the APWA GSP in Section 1-03.1 of the Special Provisions. Regardless, the Bidder’s stated proposed percentages will become a goal the Contractor should do its best to accomplish. Bidders will be required to report on recycled materials actually incorporated into the Project, in accordance with the APWA GSP in Section 1-06.6 of the Special Provisions.

Bidder: _______________________________________

Signature of Authorized Official: ____________________________

Date: ____________________________________________
AGREEMENT

This Agreement, made and entered into this _____ day of ____________, 2020 by and between Kitsap County, through the BOARD OF COUNTY COMMISSIONERS of Kitsap County, State of Washington, hereinafter referred to as the “COUNTY”, and, ________________________, a general Contractor licensed by the State of Washington, for themselves, their heirs, executors, administrators, successors, and assigns, hereinafter referred to as the “CONTRACTOR.”

RECITALS:

WHEREAS, the COUNTY desires to Improve 1600 feet of Bay Shore Drive, 1150 feet of Washington Avenue and 700 feet of NW Byron Street, in Commissioner District 3:

WHEREAS, the CONTRACTOR has been selected by competitive bid as the “responsible bidder with the lowest responsive bid,” as defined under RCW 39.04.010;

NOW THEREFORE, in consideration of the mutual benefits and covenants contained herein, the COUNTY and the CONTRACTOR mutually agree as follows:

CONTRACT DOCUMENTS:

This Agreement hereby incorporates the recitals and the Contract Documents, which documents are incorporated herein by reference. The Contract Documents shall include, but shall not be limited to, the Contract Provisions for “Bay Shore Drive and Washington Ave NW”, Call for Bids, Contractors accepted Bid Proposal, the General and Special Provisions, Contract Plans and Drawings, Addenda, applicable Bonds, and the 2020 WSDOT/APWA Standard Specifications for Road, Bridge, and Municipal Construction, hereinafter referred to as the “Standard Specifications”, any amendments to the Standard Specifications, and this Agreement.

1) DESCRIPTION OF WORK:

This contract is a roadway improvement project which provides for the improvement of 1600 feet of Bay Shore Drive, 1150 feet of Washington Avenue and 700 feet of NW Byron Street in Kitsap County, Washington. Project elements include sewer replacement, domestic and reclaimed water system replacement, sewer system rehabilitation, stormwater system replacement, shoring, dewatering, microtunnelling, temporary sewer bypass, cured-in-place piping, surfacing, paving, striping, illumination, and other work in accordance with the Contract Documents.

The CONTRACTOR shall furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the project described herein, in accordance with the Contract Documents.

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 to fully complete the work within the time limits as described in the Contract Documents. Failure to complete within the allowed time limit will subject the CONTRACTOR to Liquidated Damages, as described in Section 1-08.9, Liquidated Damages, of the Contract Documents.

4) TIME FOR COMPLETION:

The work to be performed under this Agreement shall commence and complete in accordance with Sections 1-08.4, Notice to Proceed and Prosecution of Work, and 1-08.5, Time for Completion, of the Contract Documents and Physically Completion of the work shall be achieved within **530 WORKING DAYS**, unless Contract Time is extended otherwise in accordance with the Contract Documents.

5) COMPENSATION:

The COUNTY agrees to pay the CONTRACTOR for the work described and completed according to the Contract Documents the sum of [spell out the amount in words and in numbers]$ _________________. 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 Agreement 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.
10) MODIFICATION
There shall be no modification of this Agreement, except in writing, executed with the same formalities as this Agreement. 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 harmless the COUNTY and its officers and employees 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 Agreement.

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 Agreement shall be governed by the laws of the State of Washington, both as to interpretation and performance.

14) INTEGRATION CLAUSE:
This instrument embodies the entire agreement of the parties. There are no promises, terms, conditions or obligations other than those contained herein; and this Agreement shall supersede all previous communications, representations or agreements, either verbal or written, between parties.
15) AUTHORIZATION:
Each party signing below warrants to the other party, that they have the full power and authority to execute this Agreement on behalf of the party for whom they sign.

16) COMPLIANCE WITH LAWS:
The CONTRACTOR shall comply with all applicable federal, state and local laws, rules and regulations in performing this Agreement.

17) SEVERABILITY:
a. If a court of competent jurisdiction holds any part, term or provision of this Agreement to be illegal, or invalid in whole or in part, the validity of the remaining provisions shall not be affected, and the parties rights and obligations shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

b. If it should appear that any provision of this Agreement is in conflict with any statutory provision of the United States or State of Washington, said provision which may conflict therewith shall be deemed inoperative and null and void insofar as it may be in conflict therewith, and shall be deemed modified to conform to such statutory provision.

18) CONFLICTS PROVISION:
In the event language in this Contract conflicts with the requirements in the Standard Specifications, the language in the Contract controls.

19) RIGHTS and REMEDIES:
No action or failure to act by the COUNTY shall constitute a waiver of a right or duty afforded the COUNTY under the Contract Documents, nor shall such action or failure to act constitute approval of an acquiescence in a breach therein, except as may be specifically agreed in writing.

20) THIRD-PARTY AGREEMENTS:
The Contract Documents shall not be construed to create a contractual relationship of any kind between the COUNTY and any Subcontractor or any persons other than the COUNTY and the CONTRACTOR.

21) RECORDS RETENTION:
The wage, payroll, bid and cost records of the CONTRACTOR and its Subcontractors, and all records subject to audit in accordance with the Standard Specifications shall be retained for a period of not less than six (6) years after the date of Final Acceptance of the Contract Documents.
22) 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 ___________________________.
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 ______________________

TITLE _____________________

Charlotte Garrido, Chair

Edward E. Wolfe, Commissioner

Robert Gelder, Commissioner

Foregoing contract approved and ratified:

ATTEST

__________________________

DANA DANIELS, Clerk of the Board
PUBLIC WORKS PAYMENT BOND

to __________, WA

Bond No. __________

________________________________________________________________________ Washington, (__________) has awarded to ________________________________________ (Principal), a Contract for the construction of the project designated as __________________________, Project No. __________________________, in __________________________, 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 ______________________________________, 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 Titles 60.28, 39.08, and 39.12 including all workers, laborers, mechanics, subcontractors, lower tier subcontractors, and material suppliers, and all persons 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 Title 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 agrees to indemnify, defend, and protect the ______________________________________ against any claim of direct or indirect loss resulting from the failure of the Principal, its heirs, executors, administrators, successors, or assigns, (or the subcontractors or lower tier subcontractors of the Principal) to pay all laborers, mechanics, subcontractors, lower tier subcontractors material persons, and all persons who shall supply such contractor or subcontractors with provisions and supplies for the carrying on of such work.

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, except as provided herein, and waives notice of any change, 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 officer executing on behalf of the surety.

The Surety agrees to be bound by the laws of the state of Washington and subjected to the jurisdiction of the state of Washington.

PRINCIPAL

Principal Signature __________ Date __________

Printed Name __________________________

Title __________________________

Local office/agent of Surety Company:

Name __________________________ Telephone __________________________

Address __________________________

SURETY

Surety Signature __________ Date __________

Printed Name __________________________

Title __________________________

Name __________________________ Telephone __________________________

Address __________________________

DOT Form 72-003A EF
12/2015

APWA

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
PUBLIC WORKS PERFORMANCE BOND

to ____________________, WA

Bond No. ____________

__________________________________________, Washington, (__________) has awarded to
__________________________________________, (Principal), a Contract for the construction of the project
designated as ______________________ Project No. ____________ in
________________________, Washington (Contract), and said Principal is required under the terms
of that Contract to furnish a bond for performance of all obligations under the Contract.

The Principal, ______________________ (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
hold and firmly bound to the ______________________, in the sum of
($______________________) 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 all of the Principal’s obligations under
the Contract and fulfill all the terms and conditions of all duly authorized modifications, additions, and
changes to said Contract that may hereafter be made, at the time and in the manner therein specified; and if
such performance obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety agrees to indemnify, defend, and protect the ______________________ against any claim of direct or
indirect loss resulting from the failure of the Principal, its heirs, executors, administrators, successors, or
assigns (or any of the employees, subcontractors, or lower tier subcontractors of the Principal) to faithfully
perform the Contract.

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 change, 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’ duty
authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original
power of attorney for the officer executing on behalf of the surety.

The Surety agrees to be bound by the laws of the state of Washington and subjected to the jurisdiction of the
state of Washington.

PRINCIPAL

Principal Signature ____________________ Date ____________________
Printed Name ____________________ Title ____________________
Local office/agent of Surety Company:
Name ____________________ Telephone ____________________
Address ____________________

SURETY

Surety Signature ____________________ Date ____________________
Printed Name ____________________ Title ____________________

DOT Form 272-002A EF
12/2015

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
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*, 2020 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)
(August 22, 2019 KC GSP)

Also incorporated into the Contract Documents by reference are:

- *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
(March 13, 1995 WSDOT GSP)

This contract is a roadway improvement project which provides for the improvement of 1600 feet of Bay Shore Drive, 1150 feet of Washington Avenue and 700 feet of NW Byron Street in Kitsap County, Washington. Project elements include sewer replacement, domestic and reclaimed water system replacement, sewer system rehabilitation, stormwater system replacement, shoring, dewatering, microtunneling, temporary sewer bypass, cured-in-place piping, surfacing, paving, striping, illumination, and other work, all in accordance with the Contract Documents.

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 section:

1-02.1(1) Supplemental Qualifications Criteria
(July 31, 2017 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(3), 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.
1-02.2 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:

<table>
<thead>
<tr>
<th>To Prime Contractor</th>
<th>No. of Sets</th>
<th>Basis of Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced plans (11&quot; x 17&quot;)</td>
<td>5</td>
<td>Furnished automatically upon award.</td>
</tr>
<tr>
<td>Contract Provisions</td>
<td>5</td>
<td>Furnished automatically upon award.</td>
</tr>
<tr>
<td>Large plans (e.g., 22&quot; x 34&quot;)</td>
<td>5</td>
<td>Furnished only upon request.</td>
</tr>
</tbody>
</table>

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.

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

1-02.4(1) General

(August 15, 2016 APWA GSP, Option B)

Revise the first sentence of the last paragraph to read as follows:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business 5 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.5 Proposal Forms
(July 31, 2017 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 UDBE/DBE/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
(July 11, 2018 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 two paragraphs, and replace them with the following:

If no Subcontractor is listed, the Bidder acknowledges that it does not intend to use any Subcontractor to perform those items of work.

The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

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 UDBE 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 UDBE requirements are to be satisfied through such an agreement.

Add the following new section:

1-02.6(1) Recycled Materials Proposal  
(January 4, 2016 APWA GSP)

The Bidder shall submit with the Bid, its proposal for incorporating recycled materials into the project, using the form provided in the Contract Provisions.

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 obligee;
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.

1-02.9 Delivery of Proposal  
(May 17, 2018 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.
To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- UDBE Written Confirmation Document from each UDBE firm listed on the Bidder’s completed UDBE Utilization Certification (WSDOT 272-056U)
- Good Faith Effort (GFE) Documentation

These documents, if applicable, shall be received either with the Bid Proposal or as a supplement to the Bid. These documents shall be received **no later than 24 hours** (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

If submitted after the Bid Proposal is due, the document(s) must be submitted in a sealed envelope labeled the same as for the Proposal, with “Supplemental Information” added. All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

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. The Contracting Agency will not open or consider any “Supplemental Information” (UDBE confirmations, or GFE documentation) that is received after the time specified above or received in a location other than that specified in the Call for Bids.

**1-02.10 Withdrawing, Revising, or Supplementing Proposal**
(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder’s request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then
submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.13 Irregular Proposals
(June 20, 2017 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 an Underutilized Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit written confirmation from each UDBE firm listed on the Bidder’s completed UDBE Utilization Certification that they are in agreement with the bidder’s UDBE 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 UDBE 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
(May 17, 2018 APWA GSP, Option C)

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 Supplemental Criteria 1-8 in this Section:

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-8 shall be provided by the Bidder as stated later in this Section.

1. Delinquent State Taxes

   A. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

   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 does not owe delinquent taxes to the Washington State Department of Revenue, or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

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. **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.

5. **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.
6. **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.

7. **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 terms of construction related contracts.

8. **Contracting Agency Specific Criteria**

A. **Criterion:** Bidders shall supply the following information:

1. Dollar amount of contracts currently held by the bidder,
2. List of more important construction projects completed by your company in the last 5 years,
3. Bank references, and
4. Bonding company.

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

As evidence that the Bidder meets the Supplemental Responsibility Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the Supplemental Criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Responsibility Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. 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 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.

Add the following to this section:

A bidder will be deemed not responsible for failing to:

- Attend and sign in at the mandatory pre-bid meeting as indicated in the Call for Bids.
- Submit and meet the requirements of the “Statement of Qualifications for Contractor Personnel” form included in the Contract 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:

- A complete statement of the origin, composition, and manufacture of any or all materials to be used,
- Samples of these materials for quality and fitness tests,
- A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
- A breakdown of costs assigned to any bid item,
- Attendance at a conference with the Engineer or representatives of the Engineer,
- Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
- 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.

1-03.1(1) Identical Bid Totals
(January 4, 2016 APWA GSP)

Revise this section to read:

After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the highest percentage of recycled materials in the Project, per the form submitted with the Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be determined by drawing as follows: Two or more slips of paper will be marked as follows: one marked “Winner” and the other(s) marked “unsuccessful”. The slips will be folded to make the marking unseen. The slips will be placed inside a box. One authorized representative of each Bidder shall draw a slip from the box. Bidders shall draw in alphabetic order by the name of the firm as registered with the Washington State Department of Licensing. The slips shall be unfolded and the firm with the slip marked “Winner” will be determined to be the successful Bidder and eligible for Award of the Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest responsive Bid, and with a proposed recycled materials percentage that is exactly equal to the highest proposed recycled materials amount, are eligible to draw.

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.

The first paragraph of Section 1-03.3 is supplemented with the following:

The Contract will not be executed until the Contractor completes sections I, III, and VIII of the Transfer of Coverage for the Construction Stormwater General Permit and returns the form to the Contracting Agency.

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
(November 30, 2018 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 36.01.050 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.

1-04.6 Variation in Estimated Quantities
(May 25, 2006 APWA GSP)

Supplement this section with the following:

The quantities for:
- Special Borrow including Haul
- Trenchless Lateral Connection Reinstatement and Rehabilitation
- Removal and Replacement of Unsuitable Material

have been entered into the Proposal only to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications.

1-05 CONTROL OF WORK

1-05.3 Working Drawings

Supplement this section with the following:

1-05.3(1) Submittals

The Contractor shall not install materials or equipment, which requires submittals, until reviewed by the Contracting Agency. Late submissions by the Contractor shall not be cause for time extension.

Submittals shall be made per Submittal Number and Revision assigned by the Contracting Agency’s project management software, rather than per material. The Contractor shall be responsible for ensuring that each submittal includes cut sheets and/or other information for all pertinent materials necessary to complete the work for each Submittal Number. It is understood that producing submittals for each Submittal Number may require multiple submittals of common materials that are associated with more than one Submittal Number. The Contractor shall also be responsible for producing submittals that may only be associated with a Specification Section, not a particular Submittal Number.
The Contractor shall submit electronic copies of each submittal required by the Contract Documents through the Contracting Agency’s project management software, (see Special Provisions Section 1-05.17), unless otherwise required elsewhere in the Contract Provisions. This includes, but is not limited to:

- Working Drawings
- Product Data
- Samples
- Reports
- Material Submittals (Ref. 1-06)
- Progress Schedules (Ref. 1-08.3)

Physical samples shall be delivered with a hardcopy of the transmittal submitted through the Contracting Agency’s project management software.

The Engineer will return reviewed submittals through the Contracting Agency’s project management software for the Contractor’s use.

**1-05.3(2) Submittal Schedule**

In conformance with section 1-08.3, the progress schedule shall be submitted and reviewed prior to commencing any work. No delay claim shall be entertained for Contractor’s failure to comply.

No claim will be allowed for damages or extension of time resulting from rejection of a submittal or the requirement of resubmittals as outlined by this section.

The Engineer’s review will be completed as quickly as possible but may require up to ten (10) working days from the date the submittals or resubmittals are received until they are sent to the Contractor. If more than ten (10) working days are required for the Engineer’s review of any individual submittal or resubmittal, an extension of time will be considered in accordance with Section 1-08.8.

**1-05.3(3) Submittal Procedures**

Contractor submittals shall be in accordance with the following:

The Contractor shall thoroughly review each submittal for dimensions, quantities, and details of the material or item shown. The Contractor shall review each submittal and note any errors, omissions, or deviations with the Contract Documents. The Contractor shall accept full responsibility for the completeness of each submittal.

Each submittal shall have a unique number assigned to it (via the Contracting Agency’s project management software). On each page, indicate the page number, and total number of pages in each submittal.
Each submittal shall indicate the following:

1. The intended use of the item in the work;
2. Clearly indicate only applicable items on any catalog cut sheets;
3. The current revision, issue number, and data shall be indicated on all drawings and other descriptive data.
4. Description of Submittal.
5. Related Specification Section and/or plan sheet.
6. Each material submittal shall clearly indicate the name and address of all suppliers, processors, distributors, and/or producers from which the Contractor directly purchased each material.

When submitting product data, the Contractor shall modify drawings to delete any information not applicable to the project and add information that is applicable to the project. The Contractor shall mark copies of printed material to clearly identify the pertinent materials, products or models.

Samples submitted shall be of sufficient size and quantity to clearly illustrate functional characteristics of product or material and full range of colors available. Field samples and mock-ups, where required, shall be erected at the project site where directed by the Engineer.

The Contractor shall notify the Engineer, in writing at time of submission, of deviations in submittals from requirements of the contract documents.

The Contracting Agency shall not be responsible for delays in reviewing submittals not submitted in accordance with these specifications.

Review or approval of Working Drawings shall neither confer upon the Contracting Agency nor relieve the Contractor of any responsibility for the accuracy of the drawings or their conformity with the Contract. The Contractor shall bear all risk and all costs of any Work delays caused by rejection or non-approval of Working Drawings.

1-05.3(4) Engineer’s Review of Submittals

The Engineer’s review of drawings and data submitted by the Contractor will cover only general conformity with the Contract drawings and specifications. The Engineer’s review of submittals shall not relieve the Contractor from responsibility for errors, omissions, deviations, or responsibility for compliance with the Contract documents.

Review of a separate item does not constitute review of an assembly in which the item functions.
When the submittal or resubmittal is marked “APPROVED”, “APPROVED AS NOTED”, “REVIEWED & FILED” AND “CONDITIONALLY APPROVED” no resubmittal is required. When the submittal is marked “REVIEWED WITH COMMENTS” the Contractor shall comply with any comments on the return submittal.

**1-05.3(5) Resubmittals**

When a submittal is marked “REVISE AND RESUBMIT” or “REJECTED,” the Contractor shall make the corrections as noted and instructed by the Engineer and resubmit via the Contracting Agency’s project management software. The Contractor shall not install material or equipment that has received a review status of “REVISE AND RESUBMIT” or REJECTED”.

When corrected copies are resubmitted, the Contractor shall in writing direct specific attention to all revisions and shall list separately any revision made other than those called for by the Engineer on previous submittals. The Contracting Agency’s project management software will assign the resubmittal number of the original submittal followed by a revision number (1, 2, etc.) to indicate the sequence of the resubmittal.

Each submittal shall have a unique number assigned to it (via the Contracting Agency’s project management software).

The Contractor shall revise returned submittals as required and resubmit until final review is obtained. Any associated progress delay due to the Contractor’s need to revise and resubmit is the Contractor’s sole responsibility.

The Contractor shall verify that all exceptions previously noted by the Engineer have been accounted for.

**1-05.3(6) Clarifications**

Clarifications of the Contract intent shall be submitted via a Request for Information (RFI) using the Contracting Agency’s project management software as described in Section 1-05.17 of the Special Provisions. The Contractor shall provide a clear and concise clarification question, specific project document reference such as plan detail number or specification number, proposed solution to the clarification question, and provide any supporting documentation necessary to understand the clarification question.

Request for Information responses provided by the Contracting Agency shall be incorporated into the Record Drawings, if resulting in a change to the Contract Plans.

Request for Information responses provided by the Contracting Agency shall not be construed to be a change to the Contract Documents.
1-05.4 Conformity With and Deviations From Plans and Stakes

Delete the fourth through seventh paragraph of this section and add the following new subsection:

1-05.4(1) Contracting Agency Provided Construction Staking

1-05.4(1)A General

As used in this Section 1-05.4, the words, “stake,” “mark,” “marker,” or “monument” will be deemed to include any kind of survey marking, whether or not set by the Contracting Agency.

1-05.4(1)B Control Stakes

The Engineer will supply construction stakes and marks establishing lines, slopes and grades in accordance with this Section of these Special Provisions. The Contractor shall assume full responsibility for detailed dimensions, elevations, and excavation slopes measured from these Engineer furnished stakes and marks.

Any claim by the Contractor for extra compensation by reason of alterations or reconstruction work allegedly due to error in the Engineer’s line and grade will not be allowed unless the original control points set by the Engineer still exist, or unless the Contractor can provide other satisfactory substantiating evidence to prove the error was caused by incorrect Engineer furnished survey data. Three consecutive points set on line or grade shall be the minimum points used to determine any variation from a straight line or grade. Any such variation shall, upon discovery, be reported to the Engineer.

The Contractor shall provide a work site clear of equipment, stockpiles and obstructions which has been prepared and maintained to permit construction staking to proceed in a safe and orderly manner. The Engineer will stake a finite amount of work in a single day in accordance with Section 1-05.4(1)C of these Special Provisions.

Stakes that constitute reference points for all construction work will be conspicuously marked with an appropriate color of flagging tape. It will be the responsibility of the Contractor to inform its employees and subcontractors of the importance and necessity to preserve the stakes.

1-05.4(1)C Survey Requests

It shall be the Contractor’s responsibility to properly schedule survey work and coordinate staking requests with construction activities. The Engineer may be
reasonably expected to stake any one of the following items, in the quantity shown, in a single day:

- Roadway grading +/-1500 lineal feet of centerline
- Storm or sanitary sewer Approximately 8-10 structures
- Water main +/-1500 lineal feet of pipe
- Curb and gutter +/-1300 lineal feet (one side only)
- Base and top course +/-1000 lineal feet of centerline
- Slope staking +/-800-1200 lineal feet (top and toe)
- Illumination/signalization Approximately 15-20 structures

Actual quantities may vary based on the complexity of the project, line of sight considerations, traffic interference, properly prepared work site, and other items that could affect production.

The Contractor shall be aware that length does not always translate directly into stationing. For example, a survey request for storm sewer pipe from Station 3+00 to 8+00 is 500 lineal feet in length. There may be 1000 lineal feet, or more, of storm sewer pipe, if the pipe is placed on both sides of the roadway and interconnected.

The Contractor shall provide staking requests at least three (3) working days before the Engineer needs to begin the staking operation. If the work site is obstructed so that survey work cannot be done, a new survey request shall be submitted by the Contractor so that the survey work can be rescheduled once the site is properly prepared. An additional 3 working days may be required to complete the rescheduled work.

The Contractor shall work to preserve stakes and marks set by the Engineer. The Contracting Agency will deduct from payments due the Contractor all costs to replace such stakes, marks, and monuments carelessly or willfully damaged or destroyed by the Contractor's operation. A new survey request shall be submitted by the Contractor to replace the damaged or destroyed stakes. An additional 3 working days may be required to complete the request.

If the removal of a control stake or monument is required by the construction operations of the Contractor or its subcontractors, and advance notice of at least three (3) working days is given to the Engineer, the Engineer will reference, remove, and later replace the stakes at no cost to the Contractor.

**1-05.4(1)D Staking Services**

The Contractor shall determine appropriate construction stake offset distances to prevent damage to stakes by its construction equipment.
The Engineer shall furnish to the Contractor, one time only, all principal lines, grades and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Cut or fill stakes for establishing grade and embankments,
2. Curb or gutter grade stakes,
3. Centerline finish grade stakes for pavement sections wider than 25 feet as set forth in Section 1-05.5(5), subsection 2, and
4. Offset points to establish line and grade for underground utilities such as water, sewers, storm drains, illumination and signalization.

No intermediate stakes shall be provided between curb grade and centerline stakes.

**Roadway and Utility Surveys**

The County will furnish the following stakes and reference marks:

- **Clearing Limits** - One set of clearing limit stakes will be set at approximately 50-foot stations or as needed.
- **Rough Grading** - One set of rough grade stakes will be set along the construction centerline of streets at 50-foot stations as required. (If superelevations require intermediate stakes along vertical curves, the County will provide staking at closer intervals.) One set of primary cut and fill stakes will be set for site work. One set of secondary final grade cut and fill stakes will be set where deemed applicable as determined by the Engineer.
- **Storm Sewers** - Two cut or fill stakes for each inlet, catch basin or manhole will be set at appropriate offsets to the center of the structure. After installation and backfill, inverts will be checked for correctness.
- **Sanitary Sewers** - Two cut or fill stakes for each manhole or cleanout location will be set at appropriate offsets to the center of the structure. After installation and backfill, inverts will be checked for correctness.
- **Water Main** - One set of line stakes will be furnished for water mains at 50-foot stations. Additionally, two reference stakes for each valve, hydrant, tee and angle point location will be set concurrently with these line stakes.
- **Staking for Embankments** - Catch points and one-line stake will be set in those cases where the vertical difference in elevation from the construction centerline to the toe or top of a cut or fill slope exceeds 3 feet. In all other areas, stakes shall be set at an appropriate offset to the street centerline to allow for the preservation of said offsets through the rough grading phase. In both cases the stakes shall be clearly marked with appropriate information necessary to complete the rough grading phase.
- **Curb and Gutters** - One set of curb and gutter stakes shall be set at an appropriate offset at 25-foot intervals, beginning and end points of curves and
curb returns, wheelchair ramps, driveways, and sufficient mid-curve points to establish proper alignment.

- **Base and Top Course** - One set of final construction centerline grade hubs will be set for each course, at not less than 50-foot stations. No intermediate stakes shall be provided unless superelevations require them. In those circumstances, one grade hub left and right of construction centerline at the transition stations will be set at an appropriate offset to centerline not less than 25-foot stations.

- **Adjacent or Adjoining Wetlands** - One set of stakes delineating adjacent wetland perimeters will be set at 25 to 50-foot stations as required.

- **Illumination and Traffic Signals System** - One set of stakes for luminaires and traffic signal pole foundations will be set as required. One set of stakes for vaults, junction boxes, and conduits will be set, only if curb and gutter is not in place at the time of the survey request. If curb and gutter is in place, staking for vaults, junction boxes, and conduits will be provided at an additional expense to the Contractor.

When deemed appropriate by the Engineer, cut sheets will be supplied for curb, storm, sanitary sewer and water lines. Cuts or fills may be marked on the surveyed points but should not be relied on as accurate until a completed cut sheet is supplied.

The Contractor is responsible for staking all other items deemed necessary to construct the project per the Plans and Specifications. All costs associated with Contractor staking shall be incidental to the Work and be included in the Contract unit prices.

**Structure Survey**
The Engineer is responsible for setting all alignment stakes, slope stakes, and grades necessary for the construction of bridges, noise walls, and retaining walls. The Contractor shall maintain stakes set for construction and maintain the necessary lines and grades.

The survey work by the Engineer will include but not be limited to the following:

- Establish, by placing hubs and/or marked stakes, the location with offsets of foundation shafts and piles.
- Establish offsets to footing centerline of bearing for structure excavation.
- Establish offsets to footing centerline of bearing for footing forms.
- Establish wing wall, retaining wall, and noise wall horizontal alignment.
- Establish retaining wall top of wall profile grade.
- Establish elevation benchmarks for all substructure formwork.
- Check elevations at top of footing concrete line inside footing formwork immediately prior to concrete placement.
• Check column location and pier centerline of bearing at top of footing immediately prior to concrete placement.

• Establish location and plumbness of column forms and monitor column plumbness during concrete placement.

• Establish pier cap and crossbeam top and bottom elevations and centerline of bearing.

• Check pier cap and crossbeam top and bottom elevations and centerline of bearing prior to and during concrete placement.

• Establish grout pad locations and elevations.

• Establish structure bearing locations and elevations, including locations of anchor bolt assemblies.

• Establish box girder bottom slab grades and locations.

• Establish girder and/or web wall profiles and locations.

• Establish diaphragm locations and centerline of bearing.

• Establish roadway slab alignment, grades and provide dimensions from top of girder to top of roadway slab. Set elevations for deck paving machine rails.

• Establish traffic barrier and curb profile.

• Profile all girders prior to the placement of any deadload or construction live load that may affect the girder's profile.

Staking for the microtunneling shall be the responsibility of the Contractor in accordance with Special Provisions Section 7-20.3(9)B. A land surveyor licensed in Washington is to be retained by the Contractor for these services.

1-05.4(1)E Monuments

The Contractor shall work to preserve the existing monumentation as provided in RCW 58.09.130 and WAC 332-120. The Contractor shall notify the Engineer immediately if it becomes apparent that a survey marker will be disturbed due to construction. The Contractor shall allow ample time for the Engineer to acquire adequate information so that the monument may be replaced in its original position after construction.

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 remediing 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:

Other Contracts Or Other Work  
(March 13, 1995 WSDOT GSP)

It is anticipated that the following work adjacent to or within the limits of this project will be performed by others during the course of this project and will require coordination of the work:

- Relocation of existing power, telephone, fiber optics, cable television, gas, reclaimed water, sewer and water facilities by their owners.
- Adjustments of vaults to grade by utility companies upon staking curb and temporary shoring of existing utilities.
- Relocation of transformers and pedestals outside of improvements and splicing work associated with relocations.
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. 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.

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.

Add the following new section:

1-05.17 Project Management Communications

1-05.17(1) Summary

The Contractor shall use the communications tool and protocols included in the Contracting Agency’s project management software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.

A valid email address, electronic and computer equipment, and internet connections are the responsibility of each project participant. The Contracting Agency will set up the user account.

Nothing in this specification or the subsequent communications supersedes the parties’ obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein.

1-05.17(2) Training & Support

The Contracting Agency will host an information and training session for Contractor staff in use of the Contracting Agency’s project management software at a time to be schedule after contract award. Companies may also use online videos, support
articles, online chat and phone support provided by the Contracting Agency’s project management software at no cost.

1-05.17(3) Project Archive

The archive will be available to the Contractor at no cost. The archive set will contain only documents that the Contractor has access to during construction. All legal rights in any discovery process are retained. Archive material shall be ordered through the Contracting Agency.

1-05.17(4) Authorized Users

Access to the Contracting Agency’s project management software will be by individuals who have been authorized to use it by the Engineer.

1. The Contracting Agency will provide the Contractor with at least five (5) access accounts for the duration of the project. The sharing of user accounts is prohibited.

2. Contractor shall provide Engineer with list of Authorized users including valid email addresses following award of the Contract and scheduling of Contracting Agency provided training.

3. Authorized users will be contacted via e-mail with log-in information.

4. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the Contractor.

5. Only entities with a direct Contract with the Contracting Agency will be allowed to have read/write access (Authorized user) to the software. Read access may be provided to others, if beneficial to the project, including subcontractors and utility providers.

1-05.17(5) Communications

The use of fax, email and courier communication for this project is discouraged in favor of using the Contracting Agency’s project management software to send messages. Communication functions are as follows:

1. Document Integrity and Revisions:
   a. Documents, comments, drawings and other data posted to the system remain a permanent component of the project. The originator, time and date are recorded for each document submitted to the system. Submitting a new document or record with a unique ID, originator, and time stamp is the method used to make modifications or corrections.
   b. The system identifies revised or superseded documents and their predecessors.
   c. Server or Client-side software enhancements during the life of the project will not alter or restrict the content of data published by the
1. Large format documents may be transmitted by hardcopy and electronically via the Contracting Agency’s project management software as otherwise agreed, or as otherwise noted in the specifications.

2. Document Types that shall be transmitted via the Contracting Agency’s project management software include, but are not limited to:
   i. Request for Information (RFI)
   ii. Change Order (CO)
   iii. Submittals
   iv. Transmittals, including record of documents and materials delivered in hard copy
   v. Meeting Minutes/Notes
   vi. Application for Payments
   vii. Review Comments
   viii. Inspector's Daily Field Reports (IDR)
   ix. Construction Photographs
   x. Drawings
   xi. Supplemental Sketches
   xii. Schedules
   xiii. Specifications
1-05.17(6) Record Keeping

1. The Contracting Agency and their representatives and the Contractor shall respond to electronic documents received from the Contracting Agency’s project management software and consider them as if received in paper document form.

2. The Contracting Agency and their representatives and the Contractor reserve the right to reply or respond through the Contracting Agency’s project management software to documents actually received in paper document form.

3. The following are examples of paper documents which will require an original signature:
   1. Contract
   2. Change Orders
   3. Application & Certificates for Payment
   4. Force Account and Protested Force Account forms
   5. Correspondence by the Contractor constituting notification per Section 1-05.15 of the Special Provisions.

1-05.17(7) Minimum Equipment Requirements

In addition to other requirements specified in this Section, the Contractor shall be responsible for providing suitable tools and internet access to utilize the Contracting Agency’s project management software. Contact the Contracting Agency for equipment requirements and support.

No separate payment will be made for the use of the Contracting Agency’s project management software, as this will be considered incidental to the Contract. All costs incurred to carry out the requirements of utilizing and maintaining the Contracting Agency’s project management software, including but not limited to, labor, training, equipment, and required tools are the sole responsibility of the Contractor.

1-06 CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior to Use

1-06.1(4) Fabrication Inspection Expense
(June 27, 2011 APWA GSP)

Delete this section in its entirety.

1-06.6 Recycled Materials
(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:
The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

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.

1-07 LEGAL RELATIONS 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).

1-07.5 Environmental Regulations

1-07.5(2) State Departments of Fish And Wildlife

Supplement this section with the following:

(April 2, 2018, WSDOT GSP, Option 1)
The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Contracting Agency by the Washington State Department of Fish and Wildlife. Throughout the work, the Contractor shall comply with the following requirements:

Boring under the creek is authorized at any time for the life of the permit, provided that the work does not disturb the creek bed, distress the fish or cause congregating of the fish downstream of the project area. The WDFW area habitat biologist is to be contacted immediately if any of the above situations occur.

(April 2, 2018, WSDOT GSP, Option 2)
All costs to comply with this special provision are incidental to the Contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the Contract.
1-07.6 Permits and Licenses

Supplement this section with the following:

(January 2, 2018 WSDOT GSP, Option 1)

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. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology’s approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). 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.

- Hydraulic Project Approval
- Department of Ecology Stormwater General Construction Permit

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.

1-07.17 Utilities and Similar Facilities

Supplement this section with the following:

(April 2, 2007 WSDOT GSP, Option 2)

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

Public and private utilities, or their Contractors, will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocation, replacement, or construction will be done during the prosecution of the work for this project. It is anticipated that utility adjustment, relocation, replacement or construction within the project limits will be completed as follows:
Potable and reclaimed water, electric, phone, gas, sewer, and cable; vaults and pedestals to be relocated and adjusted along with all connections and splicing to existing utilities.

The Contractor shall attend a mandatory utility preconstruction meeting with the Engineer, all affected Subcontractors, and all utility owners and their Contractors prior to beginning onsite work.

The following addresses and telephone numbers of utility companies or their Contractors that will be adjusting, relocating, replacing or constructing utilities within the project limits are supplied for the Contractor's use:

Kitsap County Public Works
Sewer Utility
614 Division Street, MS
Port Orchard, WA 98366
Contact: Stella Vakarcs
Telephone: (360) 337 3660

Silverdale Water
5300 NW Newberry Hill Road
Silverdale, WA 98383
Contact: Nolan Corpuz
Telephone: (360) 447-3521

Puget Sound Energy
6522 Kitsap Way
Bremerton, WA 98312
Contact: Jeremy Paz
Telephone: (360) 333-7056

Century Link
611 – 6th Street
Bremerton, WA 98337
Contact: Royce Klein
Telephone: (360) 478-5930

Wave Broadband
4519 SE Mile Hill Drive
Port Orchard, WA 98366
Contact: Ron McGehee
Telephone: (360) 871-5618 ext. 1734
Supplement this section with the following new subsection:

1-07.17(3) Protection and Support of Existing Utilities:

Description
The Contractor shall provide support and protection of all existing utility facilities crossing the work area during construction. All utilities shall remain fully operational throughout the life of this Contract. The Contractor shall expect to modify shoring and construction methods for all utilities to remain in service and this includes all homeowner service lines throughout the project as shown on the plans. This will require the installation of temporary service lines if ground freezing, and/or modifications to shoring systems including watertight shoring.

The Contractor shall be responsible for coordinating with the Engineer and the utility owners for the relocation of the utilities, or the erection of temporary support for them. The Contractor shall be responsible for the erection of all temporary support and all costs for temporary relocation necessary to complete the work. Severing any utilities shown on the plans during construction shall be repaired immediately at the expense of the Contractor and to the corresponding utilities standards.

The contractor shall provide the support necessary to protect the existing ductile iron sanitary sewer forcemain based on the selected methods of deep trench shoring. The forcemain is unrestrained and all bends are assumed to have cast-in-place blocking.

The Contractor shall “pot-hole” and expose the existing underground utilities crossing the route of the new improvements and/or shoring planned locations. Excavation immediately adjacent to the existing conduits shall be made by hand methods in compliance with Washington State requirements.
Payment
Payment will be made in accordance with Section 1-04.1 for the following bid item included on the proposal:

“Protection and Support of Existing Utilities”, lump sum.

The lump sum Contract price for “Protection and Support of Existing Utilities” shall be full pay for all labor, tools, materials and equipment necessary to protect and support existing utilities, install temporary utilities and service lines, costs for repairs to any utilities as a result of the Contractors work and for any costs incurred by the Contractor due to the loss of work efficiency as a result of the requirement to work adjacent to the relocated or temporarily supported utilities or modify shoring methods around existing utilities.

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

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

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

13. 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.

14. 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:

3. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.

4. 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.

5. Any other amendatory endorsements to show the coverage required herein.

6. A notation of coverage enhancements on the Certificate of Insurance shall not 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.
1-07.18(5)H  Marine Pollution  
(January 4, 2016 APWA GSP)

The Contractor shall procure and maintain Pollution Liability (OPA, CERCLA) insurance to satisfy U.S. Coast Guard requirements as respects the Federal Oil Pollution Act of 1990 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended.

Such policy must provide the following minimum limits, or statutory limits of liability as applicable, whichever is higher:

$1,000,000 per Occurrence

1-07.18(5)I  Builder’s Risk  
(January 4, 2016 APWA GSP)

Contractor shall purchase and maintain Builder’s Risk insurance covering interests of the Contracting Agency, the Contractor, and Subcontractors of every tier, as Named Insureds, in the Work. An Installation Floater instead of Builders Risk is acceptable for renovation projects. Builder’s Risk insurance shall be on a special form policy, and shall insure against the perils of fire and extended coverage and physical loss or damage, theft, vandalism, malicious mischief and collapse; and flood and earthquake when shown below. The Builder’s Risk insurance shall include coverage for temporary buildings, debris removal, and damage to materials in transit or stored off-site. Such insurance shall cover resulting “soft costs” including but not limited to design costs, licensing fees, architect’s and engineer’s fees, and costs due to delay in completion.

Builder’s Risk insurance shall be written in the amount of the completed value of the project, with no coinsurance provisions. Such policy must provide coverage and deductibles that comply with the following:

Coverage:
- Total Cost of Project to be Insured: $15,000,000
- Soft Costs: N/A
- Flood: N/A
- Earthquake: N/A

Deductibles not to exceed:
- Flood: 2% of the Value at Time of Loss, subject to a $250,000 Minimum
- Earthquake: 5% of the Value at Time of Loss, subject to a $250,000 Minimum
- Earth Movement: 5% of the Value at Time of Loss, subject to a $250,000 Minimum
- All Other Perils: $50,000
Soft Costs: $50,000, with no more than 7-day waiting period

The Builders Risk insurance covering the work shall have maximum deductibles as listed above for each occurrence. The deductible(s) shall be the responsibility of the Contractor.

The Contractor shall provide the Contracting Agency with a full and certified copy of the insurance policy 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.

The Builders Risk insurance shall be maintained until final acceptance of the Work by the Contracting Agency.

The Contractor and the Contracting Agency waive all rights against each other and any of their Subcontractors of every tier, agents, and employees, officers, and officials, for damages caused by fire or other perils to the extent covered by Builder’s Risk insurance or other property insurance applicable to the work. The policies shall provide such waivers by endorsement.

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.

1-07.23(1) Construction Under Traffic

Supplement this section with the following:

(January 2, 2012 WSDOT GSP, Option 2)

Work Zone Clear Zone

The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The WZCZ applies only to temporary roadside objects introduced by the Contractor’s operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the WZCZ unless they are protected by permanent guardrail or temporary concrete barrier. The use of temporary concrete barrier shall be permitted only if the Engineer approves the installation and location.
During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

<table>
<thead>
<tr>
<th>Regulatory Posted Speed</th>
<th>Distance From Traveled Way (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 mph or less</td>
<td>10 *</td>
</tr>
<tr>
<td>40 mph</td>
<td>15</td>
</tr>
<tr>
<td>45 to 55 mph</td>
<td>20</td>
</tr>
<tr>
<td>60 mph or greater</td>
<td>30</td>
</tr>
</tbody>
</table>

* or 2-feet beyond the outside edge of sidewalk

**Minimum Work Zone Clear Zone Distance**

(May 2, 2017 APWA GSP)
Revise the third sentence of the second paragraph to read:

Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if approved by the Contracting Agency activating pedestrian recall timing or other accommodation may be allowed during construction.

Add the following new section:

**1-07.23(3) Temporary Road Closures**

Closures to through traffic on Washington and Bay Shore will be allowed per the Contractor’s submitted and approved traffic control plans and detour route. The plans included in the contract are proposed and give a general concept of what may be approved.
The approved detour is only permitted while conducting work on the items shown on the Contractor's approved traffic control plans. The road closures must be in place for the entire work week, Monday through Friday allowing up to 4 one-week closures of each zone if necessary. All roads shall be open to two-way traffic on the weekends and holidays unless otherwise approved by the Engineer. The Contractor shall phase work to allow at least one pedestrian accessible route along Washington and Bay Shore at all times.

The Contractor shall provide 2 – Type 3 Barricades in the immediate vicinity of both ends of the work zone. All costs for providing, installing, maintaining the Type 3 Barricades during the duration of the road closure shall be included in the Lump Sum Contract price for "Project Temporary Traffic Control". Barricades shall be removed promptly upon completion of the work.

Local access to the individual residences shall be maintained at all times, along with emergency vehicle and school district and Kitsap Transit bus access. The Contractor shall maintain all necessary construction signs during non-working hours.

The Contractor shall maintain driveway approach access to adjacent properties at all times. This includes temporary construction and maintenance of gravel approaches as well as construction of concrete driveway approaches half at a time (unless otherwise agreed upon by the property owner and Engineer) with sufficient cure time between concrete pours as defined in the standard specifications. The Contractor shall coordinate construction of driveway approaches with individual property owners and provide a minimum of 2 business days notice prior to driveway approach construction.

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.

Supplement this section with the following:

<table>
<thead>
<tr>
<th>Parcel No.</th>
<th>Property Owner</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>4458-003-012-0108</td>
<td>Olympic Photo Group - Brad Camp &amp; Jesse Beals</td>
<td>Contractor will only block 1 entrance to the building at a time; there are 3 entrances. Contractor will provide 24-hour notice prior to completing</td>
</tr>
<tr>
<td>Project Number</td>
<td>Company Name</td>
<td>Required Work</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4458-008-007-0005</td>
<td>Cannongate Development, LLC</td>
<td>Contractor will not park any vehicles or equipment along McConnell Avenue NW adjacent to the building.</td>
</tr>
<tr>
<td>4458-009-001-0009</td>
<td>Port of Silverdale</td>
<td>Contractor will remove the vegetation between the parking area and the sidewalk located along Byron Street and restore the area (soil &amp; bark). Business sign will need to be removed and given to business owner for storage location during construction. Sign to be replaced by Contractor after construction.</td>
</tr>
<tr>
<td>4458-009-006-0004</td>
<td>Port of Silverdale</td>
<td>None.</td>
</tr>
<tr>
<td>4458-014-001-0207</td>
<td>Cannongate Development, LLC</td>
<td>Kitsap County will install restricted parking signage sleeves at the curb in front of 2 angled parking stalls on Washington Avenue adjacent to the southwest corner of property (see plans). Entrance to building will need to remain available during business hours and require steel plate and/or plywood ramps. No disruption to garbage/trash removal service. Per Plans - 1) Remove trees including roots on Washington Avenue causing cracking sidewalks and intrusion into building foundation. 2) Saw-cut sidewalks for removal to prevent damage to foundation and reconstruct. 3) Connect side sewer.</td>
</tr>
<tr>
<td>4458-013-001-0001</td>
<td>Port of Silverdale</td>
<td>Retain as much as possible existing landscaping. See plans for ROW, all vegetation to be removed within ROW.</td>
</tr>
<tr>
<td>4458-008-006-0006</td>
<td>Diehl, Laurie &amp; Roger</td>
<td>Contractor will relocate sprinkler heads. This work will be</td>
</tr>
<tr>
<td>Account Number</td>
<td>Description</td>
<td>Details</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4458-012-004-0109</td>
<td>Port of Silverdale</td>
<td>Retain as much as possible existing landscaping. See plans for ROW, all vegetation to be removed within ROW.</td>
</tr>
<tr>
<td>4458-006-010-0004</td>
<td>ET Old Town Properties, LLC</td>
<td>Coordinate with School Day Care regarding restrictive times &amp; use of playground area abutting right of way; children are present. Install temporary fencing where needed. Completely remove stumps/trees as shown on plans.</td>
</tr>
<tr>
<td>4458-011-003-0003</td>
<td>Horn Properties, LLC</td>
<td>Protect stream banks, repair where required. Fully restore Temporary Construction Easement area to existing condition if impacted.</td>
</tr>
<tr>
<td>4458-011-001-005</td>
<td>Christman, Gerald</td>
<td>An Encroachment Easement has been granted for the Business Sign, and as noted in the Project Plans “Preserve and Protect Existing Sign throughout construction.”</td>
</tr>
<tr>
<td>202501-1-040-2002</td>
<td>Kitsap County Consolidated Housing Authority - Stuart Grogan</td>
<td>Contractor must not block both sides of circular entrance to Bay Shore Drive; one side must remain open for emergency services.</td>
</tr>
<tr>
<td>202501-1-038-2006</td>
<td>JS Keating LLC</td>
<td>Property has very limited on-site parking. Property owner has agreed to close business for one week during construction to provide a closure in this area. Contractor must provide minimum of 3 weeks’ prior notice. Sewer trenching expected during closure.</td>
</tr>
<tr>
<td>202501-1-186-2006</td>
<td>Harlow, Bruce &amp; Betty</td>
<td>Contractor will relocate sprinkler heads; do not cap. Contractor will always provide controlled access to and from Bay Shore Drive and the property for employees, delivery trucks, customers and emergency vehicles.</td>
</tr>
<tr>
<td>202501-1-154-2004</td>
<td>MacFarland, Gary</td>
<td>Secured utility easement for this area limited to water (fire hydrant, meters), power &amp; transformer, cable</td>
</tr>
<tr>
<td>Case Number</td>
<td>Property/Owner</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>202501-1-053-2006</td>
<td>Connolly Family Property LLC - David Connolly (Jeff Coombe)</td>
<td>Represented by Jeff Coombe. Contractor can only block 2 entrances of the 3 entrances to the 4 properties listed during construction. Contractor cannot block all 3 entrances at the same time during the project. (This applies to all 4 properties represented by Jeff Coombe).</td>
</tr>
<tr>
<td>8521-000-000-0003</td>
<td>NAAT NAA LLC (Jeff Coombe)</td>
<td></td>
</tr>
<tr>
<td>8521-000-001-0002</td>
<td>NAAT NAA LLC (Jeff Coombe)</td>
<td></td>
</tr>
<tr>
<td>202501-1-051-2008</td>
<td>T&amp;B Holdings LLC (Jeff Coombe)</td>
<td></td>
</tr>
<tr>
<td>202501-1-179-2005</td>
<td>Curt Baney Inc.</td>
<td>Property Owner compensation for regrading and restoring irrigation system and landscaping per estimates. Contractor (survey) to mark clearing limits for construction of sidewalk. Owners' landscaper will identify, cut, and cap existing irrigation system/pipes and remove any components to be retained. Contractor will clear only area needed to construct improvements and notify property owner when area ready for restoration. Owners' landscaper to regrade and restore irrigation system and landscaping, must protect new road improvements.</td>
</tr>
<tr>
<td>4458-003-007-0006</td>
<td>Simons Family Ltd Partnership</td>
<td>Contractor must limit sidewalk, ramps and railing demolition and reconstruction to two weeks in front of this parcel. Businesses will use temporary access points and alternative methods to enter shops during 2-week closure. Provide shops with 4-week notice of scheduled closure minimum.</td>
</tr>
</tbody>
</table>
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 working 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 Progress Schedule

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 at or prior to the preconstruction conference. 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 a copy of the Type B Progress Schedule in an electronic format acceptable to the engineer, depicting the entire project no later than 21-calendar days after the preconstruction conference.

1-08.4 Prosecution of Work

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

1-08.4 Preconstruction Work Phase

This Section specifies planning and work included within the Preconstruction Work Phase that takes place during the period after the Limited Notice to Proceed and prior to the start of the work authorized by the Notice to Proceed with Construction. The limited Notice to Proceed will be issued immediately after execution of the Contract. The Preconstruction Work Phase is limited to 45 Calendar days unless otherwise approved by the Engineer.

The planning effort includes identifying and organizing the Contractor’s work team, attending a preconstruction public meeting whose purpose is to introduce the Contractor to the public impacted by the project, planning the construction activities with the Engineer, establishing the initial survey control, preparing and delivering priority submittals for equipment, and other activities related to planning activities identified herein.

To accomplish the preconstruction activities, the Contractor shall provide staff to meet on the project site as needed and shall establish and maintain an office in the Puget Sound region to accomplish the work. Satisfactory completion of the Preconstruction Work Phase activities will be a prerequisite to the Notice to Proceed with Construction for the Construction Work Phase.

Submittal information shall be provided in sufficient detail to verify compliance with the specifications during the Preconstruction Work Phase and shall be provided prior to Notice to Proceed with Construction for the Construction Work Phase. The Contractor shall make arrangements with subcontractors and suppliers for the preparation and submittal of required documentation.

The lump sum Contract price for “Preconstruction Work Phase” shall be full pay for all costs associated with, including but not limited to, documenting, revising, updating, maintaining, and submitting all materials and data required in this section.

Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid for the pay estimate following the construction Notice to Proceed in conformance with these Special Provisions if
all documents have been submitted and accepted. A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.

1-08.4(1) Activities

The following is a list of the activities to be included in the Preconstruction Work Phase. Each of the activities and required work products are defined either within this specification or in specification sections in the Special Provisions.

1. Contractor's Management and Work Plan
2. Project Safety and Accident Prevention Program
3. Onsite Investigations
4. Preconstruction Photographs
5. Submittals
   a. Submittal Plan and Schedule
   b. Priority or Long Lead Time Material Submittals
   c. Priority Technical Submittals
      a. Microtunneling Plans
      b. Dewatering Plan(s)
      c. Erosion Control Plan(s)
   d. Sheet ing, Shoring, and Bracing Plan(s)
   e. Spill Prevention, Control, and Countermeasures Plan
   f. Temporary Sewage Bypass Plan(s)
   g. Settlement Observation Plan(s)
   h. Monitoring Plan(s)
6. Apply for and Obtain Contractor Furnished Permits
7. Schedules
   a. Contractor's Scheduler Qualifications
   b. Schedule of Values for Lump Sum Bid Items
   c. Contractor's Construction Schedule
8. Traffic Control Plan(s)
9. Attend Procore Training
10. Attend Public Meeting
11. Establishing a Disputes Review Board
1-08.4(2) Contractor's Management and Work Plan

Contractor shall prepare and submit a plan describing in detail the approach and methods for prosecuting the work in accordance with the contract. The Management Plan shall include the following:

1. An organizational chart describing:
   a. The hierarchy and relationship of the Contractor's project staff;
   b. The hierarchy of subcontractors and suppliers including the trade(s) or portion(s) for which each is responsible; and
   c. A resume for the proposed Project Manager and/or site superintendent.

2. An address and phone directory of the Contractor, Subcontractor, and priority equipment suppliers.

3. A narrative describing how the Contractor intends to staff, equip, and supply the job by trade in order to meet the contract work sequence and schedule constraints. Include the size of the work crew, description of on-site equipment, working hours, and requirements for material and equipment procurement, lay down, and storage.

4. Provide rates for craft labor likely to be used to complete the Work in accordance with Section 1-07.9(1). At a minimum, provide basic wage and benefits cost, worker's insurance costs, federal insurance costs, safety costs, and travel allowance costs, if applicable. Craft labor cost for the Contractor and all his subcontractors shall be provided.

5. Provide rates for equipment likely to be used to complete the Work. At a minimum, provide complete equipment description, hourly cost, operating cost per hour, and operated cost per hour. Equipment cost for the Contractor and all their subcontractors shall be provided.

6. Provide Settlement Observation/Monitoring Plan per Section 2-13

1-08.4(3) Project Safety and Accident Prevention Program

Contractor shall prepare and submit a Safety and Accident Prevention Program. This program shall outline the anticipated hazards and safety controls necessary to safeguard Contractor's employees, the public, Kitsap County staff and Kitsap County representatives. It shall be specific to the job and site and meet federal,
state and local jurisdictional requirements. The program will be reviewed for compliance with this Section prior to the start of work.

1-08.4(4) Onsite Investigations

The Contractor shall perform on-site investigations in support of technical submittal preparation. See Section 1-02.4(2) for additional information. Activities include but may not be limited to the following:

Survey Control
The Contractor shall establish sufficient survey control to identify vertical and horizontal location of features identified during these on-site investigations.

Utility Locations
Perform utility excavations to support collection of the as-built location of existing utilities that may impact or be impacted by the Work under this Contract. Locations of excavations shall be in coordinated and identified jointly by the Contractor and the Engineer. Proper equipment, labor, trench support methods, backfill, and asphalt patching materials shall be made available to support the operations. The Contractor shall be prepared to repair any damage caused during exploratory activities.

Prior to any utility excavations, provide the Engineer advance notice of at least four (4) working days. All information from exploratory excavations shall be submitted to the Engineer within two working days after completion of said excavation. See Section 1-07.17 for further information regarding utilities and similar facilities.

1-08.4(5) Submittals

Prepare and submit the Submittal Control Document in accordance with Section 1-06.1.

Contractor shall provide submittals in accordance with Section 1-06.1 for all priority materials or materials that may take more than six (6) weeks to be obtained. Prior to submission of priority or long lead time material submittals, Contractor shall schedule pre-submittal meetings with the Engineer as deemed appropriate.

Priority Technical Submittals:
Priority technical submittals have been identified which have an impact on work activities starting immediately following Notice to Proceed for construction. The list includes but may not be limited to the following items. Should the Contractor's schedule identify a critical submittal not listed, preparation and submittal shall be performed during the preconstruction period:
1. Provide an Erosion Control Plan identifying erosion control measures to be used by the Contractor, including those already shown and specified. The Erosion Control Plan shall employ best management practices. Refer to requirements in Sections 1-07.1 and 8-01.

2. Provide a Microtunneling Plan, including drawings and complete design calculations, and showing methods and equipment to be utilized in microtunneling, including details for constructing and maintaining seals for microtunnel penetration of watertight shoring at access shafts, access shaft bottom seal and working surface preparation and construction, reaction frames, and access shaft abandonment procedures. The microtunneling plan shall address microtunneling operations and procedures for each launch and reception and shall comply with Section 7-20.

3. Provide a Dewatering Plan, including drawings and complete design data, and showing methods and equipment to be utilized in dewatering, including relief of hydrostatic head, and in maintaining the excavation in a dewatered and in a hydrostatically relieved condition. The Dewatering plan shall address excavation operations for trenches, microtunneling access shafts, manhole excavation shafts, new structures and pipelines and shall comply with Section 2-13.

4. Provide a Sheeting, Shoring, and Bracing Plan. Information to be provided shall be prepared in accordance with Section 2-15 and/or 7-08.5 shall, at a minimum, include the following:
   a. Design calculations and method of installation and removal of all Sheeting, Sheet Piling, Shoring, and Bracing. Calculations shall be made by a Washington State registered structural or civil engineer and shall comply with applicable requirements of the Washington State Safety Code and the rules of the WISHA Department of Labor and Industries with respect to excavation and construction.
   b. Detailed excavation support drawings.

5. Provide a Spill Prevention, Control and Countermeasures Plan per Section 1-07.15.

6. Provide Temporary Sewage Bypass Plan(s), including drawings and complete design data showing methods and equipment to be utilized to temporarily bypass sanitary sewage systems while making connections to the existing system or installing new facilities that require the temporary bypass of the existing facilities.
7. Provide Settlement Monitoring Plan(s) per Section 2-13.1(5) of these Special Provisions.

1-08.4(6) Contractor Furnished Permits

The Contractor shall apply for and obtain the Contractor Furnished Permits per Section 1-07.6 during the Preconstruction Work Phase.

1-08.4(7) Schedules

The Contractor shall submit the Contractor's scheduling qualifications including the resume(s) of the designated person(s) responsible for schedules and reports (the "Contractor's Scheduler"). The Contractor's Scheduler shall have demonstrable capability to plan, coordinate, execute, and monitor a CPM schedule as required for this Project. The Engineer will approve or reasonably disapprove the Contractor's proposed scheduler. In the event of disapproval, a new scheduler shall be proposed within one week and be subject to the same consideration criteria as noted above. In addition, the Contractor shall prepare and submit the following schedule information:

1. Schedule of Values for the lump sum Bid items included in the Bid Proposal.
2. Contractor's Construction Schedule (CPM) prepared in accordance with Section 1-08.3(2)B.

1-08.4(8) Traffic Control Plan(s)

Contractor shall provide traffic control plan(s) in accordance with Section 1-10.2.

1-08.4(9) Attend Procore Training

Contractor shall attend Procore training in accordance with Section 1-05.17(2).

1-08.4(10) Attend Public Meeting

Contractor shall attend one public meeting during the Preconstruction Work Phase to be introduced to the public that may be impacted by the project. A Contractor representative shall also be present to attend monthly meetings with the public and business/property owners that will be held on site.

1-08.4(11) Notice to Proceed and Prosecution of Work

Notice to Proceed will be given after the contract has been executed, the contract bond and evidence of insurance have been approved and filed by the Contracting Agency and the items listed above in the preconstruction work phase have been completed or 45 Calendar days after the Limited Notice to Proceed. 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.

The first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration along the project corridor as shown in the Contract Plans or as directed by the Engineer. 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.

1-08.4(12) Disputes Review Board

Establish a Disputes Review Board per Special Provisions Section 1-09.11.

1-08.5 Time for Completion
(November 30, 2018 APWA GSP, Option A)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

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. 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.
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. Monthly 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. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
   g. Property owner releases per Section 1-07.24

Supplement this section with the following:

(March 13, 1995 WSDOT GSP, Option 7)
This project shall be physically completed within 530 working days.

1-08.6 Suspension of Work

Supplement this section with the following:

Upon completion of clearing and grubbing, removal of structure and obstruction, completion of the embankment construction and completion of the grading to the top of subgrade, all work shall be suspended for 15 working days to allow the utility companies to relocate their facilities.
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 Weighing Equipment

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.

1-09.2(5) Measurement
(May 2, 2017 APWA GSP)

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer’s discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.
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.

(March 13, 1995, WSDOT GSP)
The quantity of the following items to be paid for on this project shall be the quantity shown in the Proposal, unless changes are made in accordance with Section 1-04.4 which affect this quantity. The quantity shown in the Proposal will be adjusted by the amount of the change and will be paid for as specified in Section 1-04.4.

*** Roadway Excavation Incl. Haul
   Embankment Compaction***

The quantities in the Proposal 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 quantity even though the actual quantities required may deviate from those listed.

The unit contract price for these items shall be full pay to construct and complete this portion of the work.

1-09.11 Disputes and Claims
Sections 1-09.11 through 1-09.11(1)B are replaced with the following:

(September 3, 2019, WSDOT GSP)

Disputes and Claims
When protests occur during a Contract, the Contractor shall pursue resolution through the Engineer in accordance with Section 1-04.5. Unless noted otherwise in the specifications, compliance with all the requirements of Section 1-04.5 is a condition precedent to initiating any action pursuant to these Special Provisions.
If the negotiations using the procedures outlined in Section 1-04.5 fail to provide satisfactory resolution of the protest, then the Contractor shall provide the Engineer with written notification of dispute stating that the Contractor will continue to pursue the dispute in accordance with the provisions of these Special Provisions. The written notification of dispute shall be provided within 14 calendar days after receipt of the Engineer’s written determination that the Contractor’s protest is invalid pursuant to Section 1-04.5. Should the Contractor not provide written notification of dispute within the designated time period, the Contractor shall be deemed to have waived any right to pursue the protest further and the matter shall be considered resolved.

When the Proposal Form includes the Bid item “Disputes Review Board”, unresolved protests shall be subject to the Disputes Review Board subsection of this Special Provision. Either party, Engineer or Contractor, may refer a matter in dispute to the Disputes Review Board. Compliance with the requirements of the Disputes Review Board subsection of this Special Provision is a condition precedent to any further right of the Contractor to pursue the dispute either by certified claim or litigation/arbitration.

When the Proposal Form does not include the Bid item “Disputes Review Board”, the Contractor's written notification of dispute shall indicate whether the Contractor is requesting to resolve the dispute through the use of a Disputes Review Board as outlined in the Disputes Review Board section of this Special Provision, or will submit a formal certified claim directly to the Engineer pursuant to Section 1-09.11(2). If the Contractor requests a Disputes Review Board, the Engineer will notify the Contractor in writing within 7 calendar days of receipt of the request whether the request is acceptable. If both parties to the dispute agree to use a Disputes Review Board, then a pay item “Disputes Review Board” will be added to the Contract by change order and the dispute will be subject to the provisions of the Disputes Review Board subsection of this Special Provision. If the parties do not agree to establish a Disputes Review Board or the Contractor does not request a Disputes Review Board in its written notification of dispute, the Contractor shall comply with the provisions of Section 1-09.11(2).

Regardless of any protest or dispute, the Contractor shall proceed promptly with the Work as the Engineer orders.

Disputes Review Board

The procedures set forth in these Special Provisions shall only apply when the Contract includes the pay item “Disputes Review Board”.
**Disputes Review Board – General**

In order to assist in the resolution of dispute(s) between the Contracting Agency and the Contractor arising out of the work of this Contract, a Disputes Review Board, hereinafter called the “Board”, will consider disputes referred to it and furnish written recommendations to the Contracting Agency and Contractor to assist in resolution of the dispute(s). The purpose of the Board response to such issues is to provide nonbinding findings and recommendations designed to expose the disputing parties to an independent view of the dispute.

**Disputes Eligible for Consideration by the Disputes Review Board**

The Board shall consider and provide written recommendations concerning the following disputes:

1. Interpretation of the Contract.

2. Entitlement to additional compensation and/or time for completion.

3. Other subjects mutually agreed by the Contracting Agency and Contractor to be a Board issue.

**Board Member Qualifications**

The following definitions apply for the purpose of setting forth experience and disclosure requirements for Board members.

**Financial ties** - any ownership interest, loans, receivables or payables.

Party directly involved - The Contracting Agency or Contractor of this Contract.

**Party indirectly involved** - The firms associated with the Contractor on this Contract, including joint venture partners, subcontractors of any tier, and suppliers; and firms associated with the Contractor or the Contracting Agency on this Contract, such as designers, architects, engineers, or other professional service firms or consultants.

The Board members shall:

1. Be experienced in the interpretation of construction contract documents.

2. Have attended training by the Dispute Resolution Board Foundation in dispute resolution within the last five years.
3. Be experienced in construction Contract dispute resolution for an owner or Contractor at the level of having responsibility and authority to settle disputes.

4. Be able to discharge their responsibilities impartially and independently, considering the facts and conditions related to the matters under consideration in strict compliance with the provisions of the Contract.

5. Not be a current employee of any party directly or indirectly involved.

6. Not have been an employee of any party directly or indirectly involved with the Project within a period of one year of the Contract Execution date.

7. Not have a financial interest in the Contract except for payments for services on the Board.

**Board Member Ongoing Responsibilities**
While serving on the Disputes Review Board on this project:

1. Board members shall not participate in any discussion contemplating the creation of an agreement or making an agreement with any party directly or indirectly involved in the Contract regarding employment or fee-based consulting services, or any other business arrangement after the Contract is completed.

2. Board members shall not officially give any advice to either party. The individual members will act in a completely independent manner and will have no consulting or business connections with either party, except for payments for services on the Board.

3. During routine meetings of the Board as well as during formal hearings, Board members shall refrain from expressing opinions on the merits of statements on matters under dispute or potential dispute. Opinions of Board members expressed in private sessions with other Board members should be kept strictly confidential.

4. The Board shall comply with the terms of the Contract and enforce such terms consistent with the laws of the State of Washington. Board members shall not supplant or otherwise interfere with the respective rights, authorities, duties and
obligations of the parties as defined in the Contract. In making its recommendations, the Board shall not make a recommendation that ignores, disregards, or undermines the intention, requirements, or allocation of risk, established by the Contract.

5. Throughout the life of the Contract, if Board members become aware of potential conflicts of interest, they shall be disclosed to the parties immediately.

Establishment of the Board
The Contracting Agency and Contractor shall meet prior to the start of Contract time to jointly select three Board nominees. If the pay item, “Disputes Review Board” is added by change order, the Contracting Agency and Contractor shall meet to select Board nominees after the change order is processed.

The Contracting Agency and the Contractor shall provide to the Board nominees a list of the firms directly and indirectly involved with the Project, including, but not limited to designers, architects, engineers, professional service firms, consultants, JV partners, subcontractors and suppliers, along with a listing of key personnel of each.

Board nominees shall provide to the Contractor and Contracting Agency the following information within 21 calendar days of nomination. Board nominees that are included on the Washington State Department of Transportation “Statewide Prequalified DRB Candidate Roster” will not be required to submit resumes.

1. Resume showing:
   a. Full name and contact information
   b. Experience qualifying the person as a Board member as outlined in the Board Member Qualifications subsection of this Special Provision.
   c. Previous Board participation, if any. List each Board assignment separately, indicating the name and location of the project, approximate dates of Board service, name of Contracting Agency, name of Contractor, names of the other Board members and the approximate number of disputes heard. When previous Board experience is extensive, the list may be truncated at the prospective Board member’s discretion.
2. Disclosure statement addressing the following:
   
a. Previous or current direct employment by one of the parties directly or indirectly involved.
   
b. Previous or current engagement as a consultant to any party directly or indirectly involved - by the prospective Board member or by the firm to which the prospective Board member is directly employed.
   
c. Previous, current, or future financial ties to any of the parties directly or indirectly involved.
   
d. Previous or current personal or professional relationships with a key member of any party directly or indirectly involved.
   
e. Previous and current service as a Board member on projects where any of the parties directly or indirectly involved in this Contract were also involved.
   
f. Any prior involvement in this project.

Within 14 calendar days of receiving the resumes and disclosure statements from the Board nominees, the Contracting Agency and the Contractor shall review and jointly agree on the final selection of the three members to serve on the Board. In the event that any of the three nominees are not acceptable to either party, the process shall be repeated until all positions are filled.

The Contracting Agency, the Contractor, and the Board shall execute the Three-Party Agreement not later than the first Board meeting. The Three-Party Agreement form (WSDOT Form 134-091) is available online at WSDOT Electronic Forms webpage.

The Board shall determine and notify the parties which Board member will act as the Board chair.

**Disputes Review Board Candidates**

The qualifications of some potential Board members have been reviewed and deemed potentially acceptable by the Washington State Department of Transportation (WSDOT). This list of potential Board members, Statewide Prequalified DRB Candidate Roster, is available from the WSDOT Headquarters Construction Office website at https://www.wsdot.wa.gov/business/construction/dispute-review-
boards. Either party may propose a Board nominee that is not on the WSDOT list. In either case, Board nominees must comply with the requirements of the Board Member Qualifications, Board Member Ongoing Responsibilities, and Establishment of the Board subsection of this Special Provision, and every Board member must be deemed acceptable by both the Contracting Agency and the Contractor.

**Replacement or Termination of a Board Member**
Procedures for terminating Board members are defined in The Three-Party Agreement.

**Disputes Review Board Procedures – General**
The Board, Contracting Agency, and Contractor may mutually develop rules of operation of the Board that supplement the Three-Party Agreement. Such supplemental rules must be in writing and accepted by the Board, Contracting Agency, and Contractor.

The Board members shall act impartially and independently in the consideration of facts and conditions surrounding any dispute presented by the Contracting Agency or the Contractor and that the recommendations concerning any such dispute are advisory.

The Contracting Agency and the Contractor shall furnish to the Board documents in accordance with the Three-Party Agreement.

**Regular Disputes Review Board Meetings**
All regular Board meetings will be held at or near the job site. The frequency of regular meetings will be set by mutual agreement of the Board, the Contracting Agency and the Contractor. Each regular meeting is expected to consist of a round table discussion and a field inspection of the project site. A member of the Contracting Agency and Contractor are expected to jointly facilitate the round table discussion. Round table discussion attendees are expected to include selected personnel from the Contracting Agency and the Contractor. The agenda for each meeting will be managed by the Board.

**Standard Procedure for Consideration of Disputes**
**Dispute Referral**
Disputes shall be referred in writing to the Board chair with a copy concurrently provided to the other Board members and the other party.

1. The dispute referral shall concisely define the nature and specifics of the dispute that is proposed to be considered by the Board and the scope of the recommendation.
2. The Board chair shall confer with the parties to establish a briefing schedule for delivering prehearing submittals/rebuttals, and a date, time, and location for convening the Board for a hearing.

Pre-Hearing Submittal

1. The Contracting Agency and the Contractor shall each prepare a pre-hearing submittal and transmit both a hard copy and an electronic copy of it to all three members of the Board and the other party. The pre-hearing submittal, comprising a position paper with such backup data as is referenced in the position paper, shall be tabbed, indexed, and the pages consecutively numbered.

2. Both position papers shall, at a minimum, contain the following:

   a. A mutually agreed upon joint statement of the dispute and the scope of the desired report being requested of the Board, placed at the beginning of the papers. The language of this joint statement shall summarize in a few sentences the nature of the dispute. If the parties are unable to agree on the wording of the joint statement of dispute, each party's position paper shall contain both statements, and identify the party authoring each statement.

   b. The basis and justification for the party's position, with reference to Contract language and other supporting documents for each element of the dispute. In order to minimize duplication and repetitiveness, the parties may identify a common set of documents that will be referred to by both parties, and submit them in a separate package.

3. If requested by the Board or either party, the Contracting Agency and the Contractor shall each prepare and submit a rebuttal paper in response the position paper of the other party.

4. The number of copies, distribution requirements, and time for submittal will be established by the Board and communicated to the parties by the Board chair.

Disputes Review Board Hearing

1. The Contracting Agency will arrange for or provide hearing facilities at or near the project site.
2. Attendance:
   
a. The Contracting Agency and the Contractor will have a representative at all hearings.

b. The Contracting Agency and Contractor shall both limit attendance at the hearing to personnel directly involved in the dispute and participants in the good-faith negotiations that were conducted prior to submittal to the Board except as noted elsewhere in this section.

c. At least 14 calendar days before the hearing, each party shall provide a list of proposed attendees to the Board and to the other party. In the event of any disagreement, the Board shall make the final determination as to who attends the hearing.

d. Attorneys shall not attend hearings except as follows:
   
i. Attorneys are identified as such on the list of proposed attendees;

   ii. All parties desiring their attorney present are able to do so.

   iii. Attorneys shall not participate in the hearing, unless the scope and extent of Attorney participation is mutually agreed to by the Contracting Agency, Contractor and the Board at least 7 calendar days before the hearing.

e. For hearings regarding disputes involving a Subcontractor, the Contractor shall require and ensure that each Subcontractor involved in the dispute have present an authorized representative with actual knowledge of the facts underlying the Subcontractor disputes.

3. A party furnishing written evidence or documentation of any kind to the Board must furnish copies of such information to the other party and the Board a minimum of 21 calendar days prior to the date the Board sets to convene the hearing for the dispute, unless otherwise mutually agreed to by the parties and the Board. Either party shall produce such additional evidence as the Board may deem necessary and furnish copies to the other party prior to submittal to the Board.
4. The conduct of the hearing shall be established by the Board and be generally consistent with the following guidelines:

   a. The party who referred the dispute to the Board shall present first, followed by the other party.

   b. To assure each party a full and adequate opportunity to present their position, both parties shall be allowed successive rebuttals and to rebut the opposing party's position until, in the Board's opinion, all aspects of the dispute have been fully and fairly covered.

   c. The Board shall be fully prepared to, and may at any time, ask questions, request clarifications, or ask for additional data, documents, and/or job records.

   d. Either party may request that the Board direct a question to, or request a clarification from the other party. The Board shall determine at what point in the proceedings such requests may be made and if they will be granted. In general, the Board will not allow one party to be questioned directly by the other party.

   e. In difficult or complex cases, additional hearings may be necessary to facilitate full consideration and understanding of the dispute.

   f. The Board, in its discretion, may allow introduction of arguments, exhibits, handouts, or documentary evidence that were not included in that party's prehearing position paper or rebuttal and have not been previously submitted to the other party. In such cases the other party will be granted time to review and prepare a rebuttal to the new material, which may require a continuation of the hearing.

5. After the hearing is concluded, the Board shall meet in private and reach a conclusion supported by two or more members. Its findings and recommendations, together with its reasons shall then be submitted as a written report to both parties. The recommendations shall be based on the pertinent Contract provisions, facts, and circumstances involved in the dispute. The Contract shall be interpreted and construed in accordance with the laws of the State of Washington.
Failure to Prepare a Pre-Hearing Submittal or Attend a Hearing
In the event that either party fails to deliver a pre-hearing submittal by the date established by the Board, the Board shall, at its discretion, determine whether the hearing shall proceed as originally scheduled, or allow additional time for the submittal and/or reschedule the hearing. On the final date and time established for the hearing, the Board shall proceed with the hearing utilizing the information that has been submitted.

In the event that representatives of either the Contracting Agency or the Contractor fail to appear at the appointed time of a hearing, the Board shall postpone the hearing until such time as representatives from both parties are available to proceed with the hearing.

Use of Outside Experts
1. By the Contracting Agency or the Contractor:
   
a. A party intending to offer an outside expert's analysis at the hearing shall notify the other party and the Board in writing no less than 30 calendar days prior to the due date for delivering the pre-hearing submittal, and provide the following disclosure:

   i. The expert's name and a general statement of the area of the dispute that will be covered by his or her testimony.

   ii. A statement prepared by the proposed expert which addresses the requirements of the Establishment of the Board subsection of this Special Provision, item 2.

   iii. A statement prepared by the proposed expert which identifies the experience and training which qualifies them as an expert.

   b. Upon receipt of the disclosure, the other party shall have the opportunity to secure the services of an outside expert to address or respond to those issues that may be raised by the other party's outside expert. The notification and disclosure requirement shall be the same as that specified elsewhere in this section, except the time requirement is 21 calendar days.

2. By the Board:
a. When requested by the Board and subject to approval of
the parties, outside experts may be needed to assist the
Board. In such cases, the outside expert shall in no way
be deemed authorized to usurp the Board’s authority to
issue the Board recommendations. Such authority shall
remain vested solely in the Board.

b. Prior to arranging for outside experts, the Board shall
obtain prior approval from the Contracting Agency and the
Contractor by providing:

i. A statement explaining why the expert assistance is
needed.

ii. An estimate of the cost of the expert assistance.

iii. The expert's name and a general statement of the area
of expertise they will provide.

iv. A statement prepared by the proposed expert which
addresses the requirements of the Establishment of
the Board subsection of this Special Provision, item 2.

v. A statement prepared by the proposed expert which
identifies the experience and training which qualifies
them as an expert.

vi. A confidentiality statement, consistent with the
confidentiality obligations of the Board described in the
Three Party Agreement, executed by the proposed
expert.

Disputes Review Board Report
The Board’s recommendations shall be formalized in a written
report signed by all Board members. The recommendations shall
be based on the Contract Provisions and the facts and
circumstances involved in the dispute. The report should include a
description of the dispute, statements of each party’s position,
findings as to the facts of the dispute, discussion and rationale for
the recommendation(s), and the recommendation(s). The report
shall be submitted concurrently to the parties, as soon as possible
after completion of the hearing as agreed by all parties.

Either party may request clarification of a report within 14 calendar
days following receipt of the report. Within a reasonable period of
time, the Board shall provide written clarification to both parties.
Requests for clarification shall be submitted in writing simultaneously to the Board and the other party.

Either party may request reconsideration of a report, provided:

1. The request is made within 14 calendar days following receipt of the report, and

2. New information is obtained or developed that was not known at the time of the hearing or, in the party's opinion, the Board misunderstood or failed to consider pertinent facts of the dispute.

Requests for reconsideration shall be submitted in writing simultaneously to the Board and the other party. The Board shall give the party not requesting reconsideration the option of submitting a rebuttal to any information that is the basis of the request for reconsideration. The Board shall provide a written response to the request for reconsideration.

**Acceptance of Disputes Review Board Recommendations**

Within 30 calendar days of receiving the Board’s report, or within 14 calendar days of receiving the Board’s written clarification and/or reconsideration, both the Contracting Agency and the Contractor shall respond to the other in writing signifying that the dispute is either resolved or remains unresolved. Although both parties should place weight upon the Board recommendations, the recommendations are not binding.

If the Board’s assistance does not lead to resolution of the dispute, the Contractor must file a claim according to Section 1-09.11(2) before seeking any form of judicial relief.

In the event the Board’s recommendations do not lead to resolution of the dispute, the Board’s recommendation consisting solely of the Board’s written report and any written minority reports, along with the Board’s written clarifications and written responses to requests for reconsideration, if any, will be admissible in any subsequent dispute resolution proceedings including, but not limited to litigation/arbitration. The aforementioned list of documentation shall be considered all inclusive.

**Payment for the Disputes Review Board**

The Contracting Agency and Contractor shall share equally in the cost of the Board’s services and all operating expenses of the Board. The Board members’ compensation shall be in accordance with the Three
Party Agreement. After the Contractor and Contracting Agency review invoices from the Board and other operating expenses of the Board, the Contractor shall make full payment for all Board members and Board operating expenses. The Contracting Agency will reimburse the Contractor for fifty percent of such payments, under the pay item “Disputes Review Board”.

The Contractor and the Contracting Agency shall equally bear the cost of the services of the outside expert hired to advise the Board. Outside experts hired to advise the Board shall Contract directly with the Contractor after concurrence from the Board and approval from the Contracting Agency. Invoices for these services shall be submitted by the expert to both the Contractor and Contracting Agency for approval by both parties. The Contractor shall pay approved invoices in full, and the Contracting Agency will reimburse the Contractor for fifty percent of such payments, under the Bid item “Disputes Review Board”.

The cost for securing outside expert services for the Contracting Agency or the Contractor shall be borne by the party securing such services.

The Contracting Agency will provide administrative services, such as conference facilities and copying services, to the Board and the Contracting Agency will bear the costs for these services.

**Indemnification of Disputes Review Board Members**
The Contracting Agency and Contractor shall indemnify and hold harmless the Board members from and against all claims, damages, losses and expenses, including but not limited to attorney’s fees arising out of and resulting from the actions and recommendations of the Board.

1-09.11(3) **Time Limitation and Jurisdiction**
(November 30, 2018 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only 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 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor’s failure to bring suit within the
time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

1-09.13(3)A Administration of Arbitration
(November 30, 2018 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 the county in which the Contracting Agency’s headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. 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

1-10.1 General

1-10.1(2) Description

Supplement this section with the following:

The Contractor shall operate the site activity in a manner which allows businesses to remain open at all times throughout construction even within the defined closure zones, and safely move pedestrians throughout the site. This work may require the Contractor to construct and maintain ramps, platforms and surfacing allowing the public to adequately traverse the site. The work also includes following the requirements outlined in the Special Considerations of 1-07.24 Rights-of-way property owner table. Cement Concrete Sidewalks division 8-14 provides timeline requirements to the Contractor for acceptable surfacing based on the planned duration of the closure and provides timelines for all work not specifically mentioned in Division 1-07.24. The temporary traffic control is responsible to maintain an orderly site and provide a clear plan to direct pedestrians and vehicles through the site safely and efficiently.
1-10.2 Traffic Control Management

1-10.2(1) General

Supplement this section with the following:

(January 3, 2017 WSDOT GSP, Option 1)
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
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778

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 Traffic Control Plans shall be the responsibility of the Contractor. Proposed Traffic Control Plans have been included in the Contract Plan Set for the Contractor’s use in developing these plans. The Contractor shall submit their Traffic Control Plans 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.

The minimum lane widths through traffic control zones shall be ten feet with a minimum shy distance of one foot to any pavement edge, shoulder obstruction, or traffic control device.
The Contractor shall consider the following events:

- **Silverdale Outrigger Race**  
  3rd Saturday of February 2020, 2021 and 2022
- **NW Run/Walk for Epilepsy**  
  3rd Friday of June 2020, 2021 and 2022
- **Water Trails Festival**  
  Last weekend of June 2020, 2021 and 2022
- **Outrigger Regatta**  
  Last Saturday of June 2020, 2021 and 2022
- **Whaling Days**  
  Last Friday through Sunday of July 2020, 2021, and 2022
- **Walk for Water 5K**  
  First Saturday of October 2020, 2021 and 2022
- **Veterans Day**  
  November 11, 2020, 2021 and 2022

All dates are tentative, the contractor shall coordinate with the Contracting Agency to confirm dates. No work may be done on the dates listed above or after noon on the day before these events.

The project site shall be cleaned up and the roadway open in accordance with Section 1-07.23(1) of these Special Provisions

1-10.4 Measurement

1-10.4(3) Reinstating Unit Items With Lump Sum Traffic Control

Supplement this section with the following:

(August 2, 2004 WSDOT GSP)  
The bid proposal contains the item “Project Temporary Traffic Control,” lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

- “Portable Changeable Message Sign”, per hour.
- “Construction Signs Class A”, per square foot.
KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS
COUNTY ROAD PROJECT NO. 3668
WORK ORDER No. 713135

BAY SHORE DRIVE AND WASHINGTON AVE NW
ROADWAY AND UTILITY IMPROVEMENT PROJECT

The Professional Engineer's seal and signature affixed hereon indicates this Engineer's review and participation in the preparation of the following Divisions 2 through 9 Special Provisions.

Tony Pardi
Name
RH2 Engineering
Firm

John Hendron
Name
RH2 Engineering
Firm

Devon Petit
Name
RH2 Engineering
Firm

Stan Boyle
Name

Stephen Thomas
Name

Shannon and Wilson
Firm
(Div 2-14, 2-15, 7-20)

Shannon and Wilson
Firm
(Div 2-13)
DIVISION 2 EARTHWORK

2-01  CLEARING, GRUBBING AND ROADSIDE CLEANUP

2-01.1  Description
(March 13, 1995 WSDOT GSP, Option 1)

Supplement this section with the following:

Clearing and grubbing on this project shall be performed within the following limits:

*** Within the limits of existing Right of Way and demolition Limits as shown on the plans. Station limits of clearing and grubbing shall extend to the same limits as paving limits.

The Contractor shall employ a professional tree cutter certified by the International Society of Arboriculture (ISA) to remove any trees greater than 12” diameter or which, in the opinion of the Engineer, are a potential safety hazard during removal. Tree stumps shall be completely removed.

The Contractor shall clear and grub additional vegetation outside the right of way, in temporary construction easements as designated in the plan. All clearing and grubbing shall be staked and flagged by the Contractor for approval by the Engineer prior to construction.***

2-01.2  Disposal of Usable Material and Debris

Revise the third paragraph to read as follows:

The Contractor shall use Disposal Method No. 2 per Section 2-01.2(2) of the Standard Specifications.

2-02  REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1  Description

Supplement this section with the following:

All materials removed shall become the property of the Contractor and shall be disposed of at a Contractor-provided waste site meeting the requirements of Section 2-01.2(2) to be obtained and paid for by the Contractor.
Saw Cut Asphalt Concrete Pavement
Where shown in the plans or where designated by the Engineer, the Contractor shall saw cut the asphalt concrete pavement prior to removal of any pavement.

Removing Asphalt Concrete Pavement
Where shown in the Plans or where designated by the Engineer the existing asphalt concrete pavement shall be removed and promptly removed from the project site.

Temporary Fencing
As described in Section 1-07.24 of these Special Provisions, once any fencing has been removed from the listed parcels, temporary fencing shall be immediately provided, installed and maintained until permanent fencing is completed or existing fencing has been reinstalled.

2-02.3 Construction Requirements
Supplement this section with the following:

This work shall consist of removing and disposing of, or salvaging various existing improvements within the construction limits shown on the plans including, but not limited to:

- Items shown on the demolition plans

Bid Schedule A

| Removal of existing mailbox and temporary supporting |
| Adjustment of natural gas valve to sidewalk grade |
| Drainage structure cutting and adjusting modifications as shown near STA 28+50A on the Site Preparation and Demolition plans |
| Modifications to existing duckbills and trash separators as noted on the plans |
| Providing temporary fencing at locations specified in plans |
| Removal of oil water separator vaults |
| Removal and modification of retaining walls, including resetting existing walls behind improvements where noted in the plans |
| Removal of signs |
| Removal of stormwater piping |
| Plugging of stormwater piping |
| Removal of benches |
| Removal of railing |
| Removal of curbing |
| Removal of traffic barrier |
Removal of fencing
Removal of brick walkway and salvage for replacement
Providing and/or relocating wire fence post as shown on plans
Removing all railings, stairs and concrete walls within the concrete removal areas shown in the Site Preparations and Demolition plans
Removing signs temporarily and replacing after construction as noted in the Site Preparations and Demolition plans (Including temporary support of stop signs throughout construction at stop-controlled intersections)
Protecting and adjusting Strawberry Creek interpretive sign
Sawcutting (except final prep)
Removal of conflicting striping and symbols

Material near buildings shall be removed by Sawcutting 1 foot from the building facia then carefully removing excess concrete or asphalt by hand between the sawcut and the building.

Bid Schedule B

Removal of sewer air release valve and vaults. Capping/plugging at forcemain and properly abandoning system per County standards
Removal of sanitary sewer manholes
Abandonment of sanitary sewer manholes in place per the plans, minimum depth of 4’ or 1’ below the lowest invert passing through the existing manhole, whichever is deeper, plugging and penetrations with grout and filling with pea gravel.
Removal of sanitary sewer wetwell near lift station below grade
Removal of non-asbestos sanitary sewer piping
Plugging of sanitary sewer piping

Unless otherwise noted, all existing utilities no longer in service and in conflict of the proposed improvements shall be removed from the project site.

Where it is required that an existing utility pipe be abandoned in place, the pipe shall be filled in accordance with Section 7-08.3(4). All utility structures shall be removed, or abandoned in accordance with Section 7-05.3(2) as noted and detailed in the Plans.

Salvage of Removed Structure Items
Unless otherwise indicated on the Plans or in the Special Provisions, the following shall be carefully removed and reviewed by the Contracting Agency for salvaging. Materials deemed salvageable shall be delivered to the Contracting Agency.
   1. Frames and grates
   2. Signs
3. Other material of recoverable value as determined by the Engineer.

Materials and items deemed of no value by the Engineer shall be removed and become property of the Contractor.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs and Gutters

Supplement this section with the following:

**Pavement Thickness**
The approximate thickness of the existing asphalt pavement is:

<table>
<thead>
<tr>
<th>Station (Offset)</th>
<th>Depth of Asphalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>11+00B (15'R)</td>
<td>2-3&quot;</td>
</tr>
<tr>
<td>14+00B (15'R)</td>
<td>2-3&quot;</td>
</tr>
<tr>
<td>11+00A (5'R)</td>
<td>3&quot;</td>
</tr>
<tr>
<td>17+00A (5'R)</td>
<td>3&quot;</td>
</tr>
<tr>
<td>18+00A (15'L)</td>
<td>3&quot;</td>
</tr>
<tr>
<td>19+25A (25'L)</td>
<td>2&quot;</td>
</tr>
<tr>
<td>21+50A (25'L)</td>
<td>3&quot;</td>
</tr>
<tr>
<td>22+50A (10'L)</td>
<td>2&quot;</td>
</tr>
<tr>
<td>27+50A (5'R)</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

**Saw Cut Asphalt Concrete Pavement**
The equipment and procedures used to make the vertical cut shall be approved by the Engineer. No skip cutting will be allowed. Existing sidewalk or curb and gutter shall be removed in full panel sections and shall be removed or saw cut at expansion/contraction joints only.

The Contractor shall make a vertical saw cut to delineate the areas of pavement to be removed from those areas of pavement to remain. The removed pavement shall become the property of the Contractor and shall be promptly removed from the project.

Damage caused to portions of the pavement to remain, due to the Contractor's operations, shall be repaired by the contractor at no expense to the Contracting Agency.

**Removing Cement Concrete**
Removing Cement Conc. includes removal of sidewalk, driveways, walkways, stairways, curbing and pedestrian ramps which are shown in the Contract Plans as concrete removal areas. Areas where the depths of the various concrete work are anticipated to be thicker have been noted on the plans. No additional payment will be made for these removals.
2-02.4 Vacuum

Revise this section including the title to read as follows:

2-02.4 Measurement

Saw cut Asphalt Concrete Pavement will be measured by the lineal foot of saw cut for all final tie-ins as shown on the Plans and is necessary for complete removal of asphalt and concrete as shown on the Plans. This measurement does not include intermediate sawcutting required for phasing of work, traffic control, utilities or other work necessary to complete the project.

Removing Asphalt Concrete Pavement will be measured by the neat line square yard.

Removing Cement Concrete Sidewalk will be measured by the neat line square yard as measured from the top and includes all concrete items shown on the Plans and described in these provisions, including the adjacent curb or curb and gutter.

2-02.5 Payment

Supplement this section with the following:

“Saw Cut Asphalt Concrete Pavement”, per linear foot.
The unit Contract price, per linear foot, shown on the proposal for Saw Cut Asphalt Concrete Pavement shall be full compensation for all costs incurred, regardless of depth, for all tools, labor, materials and equipment necessary to provide a clean edge and full-depth cut where sawcuts are shown on the plans. Any sawcuts not shown on the plans, but necessary to complete the work will be paid under applicable bid items including utility items, traffic control or surfacing items. Only sawcuts for final surfacing tie-ins will be paid under this bid item.

“Removing Asphalt Conc. Pavement”, per square yard.
The unit Contract price, per square yard, shown on the proposal for Removing Asphalt Concrete Pavement shall be full compensation for all costs incurred, regardless of depth, for all tools, labor, materials and equipment necessary to remove and dispose of all concrete removal areas as shown on the Plans and complete the work.

“Removing Cement Conc. Sidewalk”, per square yard.
The unit Contract price, per square yard, shown on the proposal for Removing Cement Conc. Sidewalk shall be full compensation for all costs incurred, regardless of depth, for all tools, labor, materials and equipment necessary to remove and dispose of all concrete removal areas as shown on the Plans and complete the work.
2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.1 Description

Supplement this section with the following:

This Work shall include the excavating, hauling and placing of Special Borrow to construct embankments to subgrade elevations and for backfill of trenches resulting from installation of storm sewer as shown in the Contract Plans.

This work shall include the re-grading of existing approach to meet the new roadway pavement constructed for this project as shown in the Plans. Approach is defined as a connection providing private vehicular access to and from the County road system.

2-03.2 Vacant

Revise this section including the title to read as follows:

2-03.2 Materials

Special Borrow shall meet the requirements of Section 9-03.14(5) of these Special Provisions.

2-03.3 Construction Requirements

2-03.3(7) Disposal of Surplus Material

Delete this section and replace 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.

2-03.3(13) Borrow

Supplement this section with the following:

The Contractor must provide the Engineer with written notice at least 24 hours before hauling and placing backfill materials from off-site locations. This notice is essential in scheduling inspection personnel and item quantity ticket takers. Failure by the Contractor to begin hauling and placing materials at the agreed time may result in a penalty equal to the standby cost incurred.
by the County. The penalty will be calculated and deducted from the item being hauled.

2-03.3(14) Embankment Construction

Supplement this section with the following new subsection:

**Approach Excavation and Embankment Compaction**

The contractor shall grade each approach to the lines and grades established by the Engineer and as shown in the Plans. All fills shall be compacted in accordance with Section 2-03.3(14)C, Method B. Excess material and debris shall be removed from the site by the Contractor.

The Contractor shall place and compact on the approach the required depth of Crushed Surfacing Top Course, HMA Class ½ inch PG 58H-22 and Cement Concrete Driveway Entrance Type 1 and 2 as shown in the plans. Crushed surfacing shall be placed and compacted in accordance with Section 4-04.3 of the Standard Specifications. Requirements for HMA Class ½ inch shall be as described in Section 5-04. Cement Concrete Driveway Entrance Type 1 and 2 shall conform to Section 8-06 of the Standard Specifications and the Standard Plans.

2-03.3(14)N Special Borrow Including Haul

Where shown in the Plans or as directed by the Engineer, the Contractor shall use Special Borrow Including Haul meeting the requirements of Section 9-03.14(5) of these Provisions to:

1. Build embankments.
2. Backfill trenches when select backfill material is required in accordance with Section 2-09 or Section 7-08.

Special Borrow shall be compacted according to Section 2-03.3(14)C, Method B and 2-03.3(14)D.

2-03.3(14)O Approach Excavation and Embankment Compaction

The Contractor shall grade each approach to the lines and grades established by the Engineer and as shown in the Plans. All fills shall be compacted in accordance with Section 2-03.3(14)C, Method B. Excess material and debris shall be removed from the site by the Contractor.

2-03.4 Measurement

Supplement this section with the following:

Special Borrow Incl. Haul will be measured by the ton. Measurement when used to build embankments will be to the actual limits ordered by the
Engineer. When used in backfill of sanitary sewer and storm sewer trenches, measurement will be for material placed inside the limits defined below.

Special borrow limits will be calculated based on the following trench widths:

For drain and underdrain pipes, trench width = O.D. + 24 inches.

For pipes 15 inches and under where no shoring or speed shoring is used, trench width = O.D. + 36 inches.

For pipes 15 inches and under when box shoring or watertight shoring is used, trench width = O.D. + 48 inches.

For pipes 15 inches and over, trench width = O.D. + 48 inches.

**Computation of Excavation and Embankment Quantities**

Only one determination of the original ground elevation will be made on this project. Measurement for Roadway Excavation Including Haul and Embankment Compaction will be based on the original ground elevation recorded previous to the award of this Contract minus a factor to account for the removal of organic material during clearing and grubbing. It is anticipated that depth of removal of organic material during clearing and grubbing for this project will vary and a factor of minus 6 inches will be used to determine ground elevation after clearing and grubbing. Control stakes will be set during construction to provide the Contractor with all essential information for the construction of excavation and embankments.

If discrepancies are discovered in the ground elevations which will materially affect the quantities of earthwork, the original computations of earthwork quantities will be adjusted accordingly.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method or by the finite element analysis method utilizing digital terrain modeling techniques.

**2-03.5 Payment**

Supplement this section with the following:

“Special Borrow Incl. Haul”, per ton.

The unit contract price per ton for Special Borrow Incl. Haul shall be full compensation for all costs incurred for excavating, loading, hauling and placing and compacting the material.
Approach excavation and embankment compaction of approach subgrade will be paid for under “Roadway Excavation Including Haul” and “Embankment Compaction”.
All costs involved in the loading, hauling and the disposal of all surplus material and construction debris shall be included in the bid prices of the items shown on the proposal and no further payment will be made.

2-07 WATER

2-07.1 Description
Supplement this section with the following:

This Work does not apply to any crushed surfacing placed temporarily or below planned improvements subgrade such as utility construction.

2-09 STRUCTURE EXCAVATION

2-09.3 Construction Requirements
Supplement this section with the following:

Bidders are advised that they should be thoroughly familiar with the requirements of Section 2-09, Structure Excavation of the specifications.

All Structure Excavation Class B will need to be removed from the project. Trenches will be backfilled with Special Borrow as described in sections 2-09 and 7-08 unless Engineer deems native material acceptable for backfill.

2-09.3(1)A Staking, Cross-Sectioning and Inspecting
Supplement this section by adding the following two paragraphs at the end:

At least 24 hours prior to commencing any excavation, the Contractor shall expose by pot-holing existing underground telephone cables, gas mains, sewer mains, water mains or any other underground utility shown in the Plans that crosses the location of the new structure to be installed under this contract. Excavation immediately adjacent to the existing utilities shall be by hand methods in compliance with Washington State requirements.

When directed by the Engineer, the Contractor shall expose by pot-holing crossings of new pipe and utilities not shown in the Plans.


2-09.3(1)C  Removal of Unstable Base Material

Revise this section to read:

When the material at the bottom of an excavation is not stable enough to support the Structure, the Contractor shall excavate below grade and replace the unstable material with Class A Foundation Material. See section 7-08 for payment of Removal and Replacement of Unsuitable Material.

Class A Foundation Material shall meet the requirements of Section 9-03.17 of these Special Provisions. It shall be placed in layers not more than 6 inches thick with each layer compacted to 95 percent of the maximum density determined by the Compaction Control Test, Section 2-03.3(14)D.

2-09.4  Measurement

Revise this section to read:

No measurement will be made for Structure Excavation Class B or Structure Excavation Class B including Haul. All costs for such excavation shall be included in the unit contract price shown in the proposal for the item to be installed.

Delete the second sentence of the ninth paragraph and replace it with the following:

No unit of measurement shall apply to the lump sum bid item Shoring or Extra Excavation Class B.

Delete the third, fourth and fifth sentences of the ninth paragraph.

2-09.5  Payment

In the first paragraph delete all references to “Structure Excavation Class B” and “Structure Excavation Class B including Haul”. Insert the following at the end of the paragraph:

All costs for Structure Excavation Class B or Structure Excavation Class B including Haul shall be included in the unit price for the item to be installed and no further payment will be made.

Revise the second paragraph to read:

“Removal and Replacement of Unsuitable Material", per cubic yard.

If the Engineer orders the Contractor to excavate below the elevations shown in the Plans, the excavation and replacement of the material with
Class A Foundation Material will be paid for as “Removal and Replacement of Unsuitable Material” per cubic yard in accordance with Section 2-09.3(1)C of these Special Provisions. Dewatering of soil in the upper aquifer is required to extend 2 feet below the excavated trench bottom and to the piezometric head elevation specified for dewatering in the lower aquifer. Costs for additional dewatering to further lower the groundwater in the upper aquifer and additional lowering of the piezometric pressure in the lower aquifer that is required for excavation to proceed below the planned elevations for the purpose of Removal and Replacement of Unsuitable Material shall also be included in the Removal and Replacement of Unsuitable Material item.

Delete the ninth, tenth and eleventh paragraph and replace them with the following:

"Shoring or Extra Excavation Class B", lump sum.

The lump sum Contract price for Shoring or Extra Excavation Class B shall be full pay for all excavation, backfill, compaction and other Work required when extra excavation is used in lieu of constructing shoring. If select backfill is required for backfilling within the limits of the Structure Excavation, it shall also be required as backfill material for the extra excavation at the Contractor’s expense.

Supplement this section with the following:

Payment for Pot-holing is described in section 7-08.5 of these Special Provisions.

Add the following new section:

2-13 DEWATERING

2-13.1 Description

2-13.1(1) Project Considerations

A. The Contractor shall provide, install, and operate a dewatering system to facilitate the excavation and construction. The Contractor shall provide all materials and equipment in these specifications under Dewatering System.

B. In general, saturated soils beneath the project alignment will require dewatering. Excavation below the groundwater table will be in granular deposits consisting of silty sand, poorly graded sand with silt, and poorly graded sand, and organic-rich soil and peat. Soil conditions, and the quantities of groundwater produced when pumping, may vary significantly along the alignment and with depth. The Contractor’s drilling and dewatering systems shall accommodate variation in
subsurface conditions including cobbles, boulders, and pockets/zones of perched or confined groundwater.

C. The Specifications and Plans provide the requirements for, and required number and locations of pumped wells, wellpoints, recharge wells, and monitoring wells to be used for reducing the piezometric pressure in the lower aquifer below watertight shored excavations, lowering the groundwater level in the upper aquifer for non-watertight-shored excavation north of Station 24+75, upper aquifer groundwater recharge, and monitoring of groundwater levels. These pumped wells, wellpoints, recharge wells, and observation wells are to be constructed and used by the Contractor for construction of the deep sanitary sewer pipe along the alignment, deep sanitary sewer manhole, and microtunneling access shafts.

D. The dewatering system for dewatering needed to complete the work includes pumped wells isolated in the lower aquifer, recharge wells isolated in the upper aquifer, and up to 1,330 lineal feet of vacuum wellpoints installed on generally 10-foot centers, up to 23 feet deep, screened in the upper aquifer; and associated pumps, valves, headers and discharge piping, and wellpoint vacuum pumps capable of extracting up to 100 gpm.

E. The Contractor shall design, select components, construct, operate, and maintain the pumps, piping, valves, water treatment systems, power supply, backup power system, and all dewatering system components necessary to accomplish the work. The contractor shall incorporate the required pumped wells, wellpoints, recharge wells, and monitoring wells into the dewatering system.

F. For constructing the deep sanitary sewer, the Contractor shall design, construct, operate and maintain Contractor-selected dewatering systems, i.e., pumped wells, wellpoints, and sumps, to remove water from soils to be excavated from within watertight shored excavations and to remove incidental water remaining in soils to be excavated from non-watertight-shored excavations north of Station 24+75.

G. For the constructing all utilities other than the deep sanitary sewer, the Contractor shall design, construct, operate and maintain Contractor-selected dewatering systems, i.e., pumped wells, wellpoints, recharge wells, and sumps, to remove water from soils to be excavated to facilitate utility installation.

H. The Contractor’s dewatering system design, installation, and operation shall work integrally with the Contractor’s excavation support system and construction sequence.
I. The Contractor shall provide and operate the Dewatering System and provide watertight excavation support systems, excavation bottom seals, and/or other means, to limit groundwater drawdown to acceptable levels in the upper aquifer, lower aquifer, and organic-rich soil and peat to prevent damage to adjacent property, structures, utilities, or infrastructure.

J. The Contractor shall monitor the performance of the dewatering system using observation wells and/or vibrating wire piezometers to ensure the groundwater drawdown does not exceed the target drawdown elevations as described herein.

2-13.1(2) Definitions

- **Aquifer** – rock or sediment in a formation, group of formations, or part of a formation that is saturated and sufficiently permeable to transmit water to pumped wells, wellpoints and sumps.

- **Aquitard** – see Confining layer.

- **Confined groundwater** – groundwater under pressure that is greater than atmospheric pressure. Confined groundwater is separated from direct contact with atmospheric pressure because of overlying impermeable or relatively low permeability layers (confining layers) of soils, sediments, or rock.

- **Confining layer** – a body of material of low hydraulic conductivity/permeability that is stratigraphically adjacent to one or more aquifers. It may lie above or below the aquifer and is less permeable than the adjacent aquifer.

- **Dewatering system** – a system that will lower the water table, piezometric, or potentiometric surface adequately to improve excavation stability and subgrade stability for work to be performed.

- **Dewatering System Designer**: Professional Engineer or Licensed Hydrogeologist, specializing in dewatering system design, and who performs the design of and is responsible for the direct operation of the dewatering system.

- **Dewatering System Geotechnical Engineer**: Professional Engineer, specializing in geotechnical engineering, and who performs analyses of impacts of dewatering system groundwater drawdown on nearby properties, structures, utilities, and facilities, and who provides recommendations and designs to mitigate effects of groundwater drawdown.
• Groundwater – water that is found in fully saturated soils, sediments, and rocks below the ground surface, and which flows primarily in response to gravitational forces.

• Groundwater table – is a particular potentiometric surface for an unconfined aquifer.

• Incidental sump pumping – sump pumping of perched or pocketed groundwater in an excavation where the static groundwater table has already been lowered below subgrade using wells or vacuum wellpoints or where watertight shoring is used.

• Hydrostatic head – the difference in elevation between the surface of the static head of groundwater in a confined or unconfined confined aquifer and the elevation of target drawdown.

• Lower Aquifer – Soil below elevation 0 feet.

• Perched groundwater – groundwater that is separated from an underlying body of groundwater by unsaturated or relatively low permeability soil.

• Potentiometric surface/piezometric level – theoretical (imaginary) surface of the static head of groundwater in an aquifer. The water table is a particular potentiometric surface for an unconfined aquifer.

• Sand/gravel pack – a sand or gravel material which is placed in the annular space between a drilled hole and the well casing and/or well screen.

• Screen (well screen) – a cylinder of steel or plastic material with slots or perforations used to allow water to enter a well while preventing sediment or rock particles from entering the well.

• Specific capacity – the volume in gallons per minute of a pumped well’s discharge divided by the concurrent drawdown of the pumped well’s water level in feet during pumping.

• Piezometric level/head – the level representing the total hydraulic head of groundwater in a confined aquifer.

• Piezometric pressure – pore water pressure at a specific point.

• Pumped well – a hole in the ground with a casing and screen that includes its own motorized pump in the casing or screen to lift water to the surface.

• Pumping level – the level of water in a well casing or screen when pumping is in progress.
• Observation well – a non-pumping well used to observe changes in the elevation of the water table or the potentiometric surface/piezometric head.

• Recharge well – a well used to reinject groundwater into an aquifer to maintain groundwater drawdown in an aquifer at acceptable levels to prevent damage to adjacent properties, utilities, or work.

• Specialty dewatering subcontractor – A contractor specializing in the installation and operation of dewatering systems, including pumped wells, vacuum wellpoints, filtered sumps, and recharge systems.

• Subgrade – the finished grade level of an excavation below any slab or pipe invert including excavation for foundation materials.

• Sump – a shallow hole in the ground adjacent to or in excavation trench with a slotted or perforated casing containing a pump and surrounded by filter sand or gravel to prevent the pumping of formation material. Sumps shall not be used as a primary means of dewatering for groundwater lowering and will not be permitted on the project without Owner approval.

• Target drawdown – the groundwater level that the dewatering system shall attain to facilitate construction. Target drawdown in the upper aquifer within the limits of the excavation is typically at least 2 feet below the excavation base. Drawing down groundwater in the upper aquifer to 2 feet below the excavation base may not be possible where a low-permeability soil unit (confining or perching) lies at or near an excavation subgrade. Target drawdown in the lower aquifer depends on how deep excavations extend and soil conditions and layering at each excavation site.

• Unconfined groundwater – water in an aquifer that has a water table that is at atmospheric pressure.

• Upper Aquifer – Soil at and above elevation 0 feet.

• Wellpoints – small-diameter wells installed in 6- to 8-inch-diameter jetted or drilled holes typically less than 25 feet deep (constrained by the limits of the vacuum to suck water out of the ground). Well points typically have a 3- to 5-foot length of slotted well screen at the bottom and are spaced 2 to 10 feet apart with the closer spacing for finer grained soils (i.e., silt and clay). Wellpoints are connected to a common vacuum header and typically operate using a single pump for the whole system.

• Vibrating Wire Piezometer (VWP): A pressure transducer installed in a borehole used to measure groundwater piezometric pressure to determine groundwater elevation or potentiometric surface / piezometric head.
• Well development – the method of using swabbing, surging, jetting, resonance, and/or pumping techniques to: clean drilling debris from the well and the surrounding formation, repair damage done by drilling to the formation, remove biological or chemical biofouling and encrustation from the well screen and enhance the hydraulic connection between the well screen and the formation, and maximize the well efficiency.

• Well efficiency – describes the effectiveness of a well in yielding water, and is the ratio of the theoretical drawdown in the formation to the actual drawdown in the well. The difference between the two is caused by frictional energy losses of the water as it moves from within the formation to the pump intake.

2-13.1(3) Dewatering Requirements

A. This Section specifies the definition, responsibilities, and execution for dewatering and control of water. This Section and the project drawings provide requirements for pumped wells, wellpoints, and recharge wells that constitute the dewatering system design for the excavations presented in the project drawings.

B. Control of water includes the furnishing, installation, operation, maintenance, observation, and removal of the specified pumped well, wellpoint, and recharge well dewatering system and Contractor-designed and selected dewatering systems to achieve proper completion of all work performed under this Contract.

C. The Contractor shall furnish, install, operate, maintain and remove pumped wells, wellpoints, pumps and sumps required for final dewatering of excavations, including sumps and pumps required to be used inside watertight shored excavations and in conjunction with operation of the required pumped wells to be used to depressurize soil below watertight shored excavations and from within excavations where required wellpoint dewatering systems are used to lower groundwater in the upper aquifer prior to excavating north of Station 24+75.

D. The Contractor shall dewater the subgrade below temporary slabs installed in microtunnel launch and reception shafts to prevent development of groundwater pressure below the slabs.

E. The Contractor shall review and become thoroughly familiar with the soils and groundwater conditions presented in Appendix B - Geotech Data.

F. The Contractor shall assume responsibility for the interpretation or use of all the information presented in the geotechnical report. The dewatering information and recommendations contained in the report are for permitting and project costing purposes and do not constitute a dewatering design.
The use of the available data and information in no way relieves the Contractor from the sole responsibility for proper furnishing, installation, operation, maintenance, and any failure of any component of the dewatering systems for the duration of this Contract.

G. These specifications describe minimum dewatering system requirements, termed the “Dewatering System”. The Contractor shall include all costs in its bid to provide the Dewatering System facilities.

H. DEWATERING SYSTEM

1. Dewatering shall consist of the furnishing, installation, operation, maintenance, observation, reporting, and removal of the Dewatering System to achieve completion of work performed under this Contract.

2. Prior to excavation below the water table, the Contractor shall depress and maintain the unconfined (upper) and confined (lower) aquifer groundwater levels and hydrostatic pressures or head a minimum of 2 feet below the excavation bottom (“target drawdown”), or a drawdown depth necessary to complete the work, until the work is complete. The Contractor’s schedule shall provide sufficient time for drawdown to reach target drawdown, or a drawdown depth necessary to complete the work.

3. The Contractor shall use sumps within the excavation to remove water from soil near the excavation subgrade, where drawing down groundwater in the upper aquifer within the excavation to 2 feet below the excavation subgrade is not possible because a low-permeability soil unit (confining or perching) lies at or near an excavation subgrade or because contract limitations have been placed on the maximum depth of excavation. The Contractor shall use sumps within the excavation to remove perched groundwater that flows into dewatered non-watertight shored excavations.

4. Within watertight shored excavations south of Station 24+75, drilling for pumped wells, drilling and jetting for wellpoints, and excavations for sumps shall not extend deeper than elevation 0 feet, or the bottom of excavation elevation, whichever elevation is deeper. This limitation is provided to reduce potential for these pumped well, wellpoint, and sump installations creating a connection between the lower and upper aquifers.

5. The Contractor shall install shoring and Dewatering Systems and operate the Dewatering Systems so that the groundwater level beyond the project right-of-way is not drawn down lower than elevation 10 feet, or to the extent that groundwater drawdown-induced settlement would damage or endanger adjacent structures, underground installations,
adjacent pipelines, sidewalk, pavement, other improvements or property. Any damage occurring as a result of dewatering shall be repaired by the Contractor at no expense to the Owner.

6. The Contractor shall provide, operate, maintain, and decommission the dewatering systems. The Contractor shall perform drilling for and install pumped wells, wellpoints, and recharge wells in such a way as to prevent collapse of soil within the borings and heave of soil at the bottom of the borings. Drill casing shall extend above the ground surface to the height necessary to maintain water within the drilled hole a minimum of 5 feet above the groundwater level or piezometric pressure head in the aquifer unit in which drilling is occurring, and shall maintain water within the drilled hole and casing a minimum of 5 feet above the groundwater level or piezometric pressure head in the aquifer unit in which drilling is occurring.

7. The Contractor shall control groundwater so as to prevent softening of the bottom of excavations, or formation of “quick” conditions or “boils” during excavation. The Contractor shall design, install, maintain, and operate the dewatering system so as to prevent removal of the natural soils.

8. The Contractor shall provide backup systems for all ordinary emergencies, including power outage and flooding, and shall have available at all times competent workers for the continuous and successful operation of the dewatering system. The Contractor shall not disable or shut-down the dewatering system between shifts, on holidays, or weekends, or during work stoppages, without written permission from the Engineer. The Contractor shall be responsible for maintaining all electric power service connections to the dewatering system components and for the cost of electric power used in the operation of the dewatering system.

9. The Contractor shall design, furnish, install, operate and remove any sump pumping systems used to handle perched or pocketed groundwater and stormwater entering the trench.

10. The Contractor shall design the dewatering system using accepted and professional methods of design and engineering consistent with sound modern practice. The Contractor shall have, or shall employ the services of a subcontractor who has, experience in the field of dewatering system design, installation, operation, and maintenance.

11. Before the commencement of any dewatering, the Contractor shall obtain acceptance by the Engineer for the design, materials, method, installation, and operation and maintenance details of the dewatering system(s) and observation system the Contractor plans to install.
Acceptance by the Engineer of the design, materials, method, installation, and operation and maintenance details submitted by the Contractor shall not in any way relieve the Contractor from responsibility for errors therein or from the entire responsibility for complete and adequate design, materials, installation, operation, maintenance, and performance of the system in controlling the water level in the excavated areas and for control of the hydrostatic pressures to the depths herein specified. The Contractor shall bear sole responsibility for proper design, installation, operation, maintenance, and any failure of any component of the dewatering system for the duration of this contract except for the deep sewer dewatering system design, construction, and operation requirements specifically provided in these Specifications and the Plans.

12. Before the commencement of any dewatering, the Contractor shall obtain the necessary State, and County permit(s) to discharge dewatering water to the storm drain system or receiving waters, or to reinject dewatering water.

13. Water from the dewatering system shall not be discharged to the sanitary sewer system.

14. Water from the dewatering system to be reinjected into recharge wells shall be treated to remove suspended solids prior to reinjection so as to avoid clogging of recharge wells.

15. The Contractor shall dispose of the water from the work in a suitable manner without damage to adjacent property. Conveyance of the water shall not interfere with traffic flow or the operation of the treatment facilities. No water shall be drained into work built or under construction without prior consent of the Engineer.

16. After initiating dewatering operations, the Contractor shall operate, maintain, and monitor the dewatering system or systems for the duration of the contract until specifically authorized in writing by the engineer to cease operation, maintenance, or observation.

17. Pumped well, wellpoint, recharge well, observation well, and VWP construction and abandonment shall be in accordance with State of Washington water well standards.

18. The Contractor shall install, operate, and maintain a water treatment system to provide for settling of suspended solids or other requisite water quality treatment for the discharge from any sump, wellpoint or pumped well.
19. The Contractor shall dewater and dispose of the water in a manner that will not cause injury to public or private property, or to cause a nuisance or a menace to the public.

20. The Contractor shall not allow the water discharged from the dewatering system to degrade the water quality of the receiving waters. The Contractor shall comply with the site-specific stormwater discharge permit requirements.

2-13.1(4) Quality Assurance

A. All dewatering operations shall be adequate to facilitate construction and to assure the integrity of the finished project and shall be the responsibility of the Contractor.

B. The Contractor shall include, at minimum, all of the elements necessary for furnishing, installing, operating, and maintaining the dewatering system. The Contractor shall have at least 5 years of dewatering experience.

C. The Contractor shall employ the services of licensed Washington well drillers to construct all wells and wellpoint systems per Washington Administrative Code 173-160 (Minimum Standards for Construction and Maintenance of Wells), and shall obtain any necessary variances for dewatering systems.

D. The Contractor shall employ appropriate precautions to avoid damage to existing utilities including performing the required one-call notification prior to construction and adjusting the positions of the wells, wellpoints, recharge wells, and observation wells as necessary to avoid damaging utilities.

E. The Contractor shall, where recharge wells are used, comply with the requirement of the Washington State Department of Ecology Underground Injection Control Program (WAC Chapter 173-218).

F. The Contractor shall employ materials, equipment, and construction methods commonly used and proven as suitable for the duration of construction dewatering. The Contractor shall provide submittals and/or product data that demonstrate the suitability of the materials and equipment proposed for use on these systems.

G. In the presence of the Engineer, the Contractor shall test the dewatering systems and water treatment systems and correct any deficiency prior to commencing any excavation.

H. The Contractor shall integrate all dewatering, shoring, and excavation activities to ensure that dewatering, shoring, and excavation activities do not impede or conflict to the detriment of the work. The Contractor shall
be responsible for any impacts to the project from conflicts between dewatering, shoring, and/or excavation.

I. The Contractor shall control excavation dewatering to prevent damage from settlement due to possible lowering of the adjacent groundwater table. The return of the groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the foundation soils, prevent disturbance of backfill, and prevent movement of all structures and utilities.

J. The Contractor shall provide the County, or parties employed by them, with unrestricted access to all geotechnical instrumentation, observation wells, piezometers, other instruments, settlement and movement survey monitoring points, pumped wells, wellpoints, recharge wells, flow meters, controls, generators, and all components of the dewatering system such that the County can take independent measurements.

2-13.1(5) Submittals

A. Forty-five (45) days before the start of any dewatering system installation, the Contractor shall submit information sufficient for the Engineer to understand the dewatering system including, but not limited to, the following:

1. Details on the purpose for each excavation, excavation method, excavation depths and stages, excavation limits, shoring system, and anticipated duration that excavation will be open or require dewatering,

2. Drawings and complete design data showing methods and equipment the Contractor proposes for dewatering, including relief of hydrostatic head, management of other water, and in maintaining the excavation in a dewatered, hydrostatically controlled condition. Submittal drawings are to be signed and sealed by a professional engineer licensed in the state of Washington.

3. A Ground Water Control Plan (GWCP) that covers the entire dewatered trench alignment including access pits and microtunneling shafts. The GWCP shall be developed by a Dewatering System Designer with a minimum of 10 years of experience in the design of groundwater control systems. The Contractor’s GWCP is subject to review by the Engineer. The GWCP shall include design drawings and show complete design data, methods, schedule, and equipment the Contractor proposes for the dewatering systems, any supplemental water control systems, water treatment systems, observation systems, and detailed description of how the GWCP conforms to these specifications and schedule. Locations of geotechnical instrumentation and monitoring (to include crack meters, shoring monitoring points, surface settlement points,
structure settlement points, utility settlement points, and vibration monitors) shall be included in the GWCP.

4. Information supporting the dewatering systems performance capability and adequacy of Dewatering System.

5. Specifications and manufacturer’s literature of the materials and a description of the methods proposed for use in the construction of dewatering system.

6. Drawings indicating the location and size of berms, dikes, ditches, pumped wells, wellpoints, recharge wells, observation wells, VWPs, gravel drains, treatment facilities, discharge lines, flow meters, recharge wells, and outfall design. The drawings shall include, at a minimum, all dewatering system elements.

7. Capacities of pumps, prime movers, and standby equipment.

8. List all standby equipment and materials to be kept on site and the location it will be stored.

9. Information and technical data on standby generator and automatic transfer switch (ATS).

10. One-line diagram of dewatering system electrical system indicating both utility provided power service locations and standby power.

11. Information supporting the location, size, adequacy and number of any pumped wells, wellpoints, gravel drains and discharge lines, recharge wells, and the adequacy and suitability of pipe sizes, pumps, filters/gravel packs, screens, and treatment facilities.

12. Information supporting the design of the dewatering wells, wellpoints, gravel packs, water treatment systems, and recharge wells.

13. Types and locations of groundwater elevation and potentiometric level monitoring devices to be installed to monitor groundwater drawdown at and beyond the limits of excavations; and description of monitoring plan and how data will be used to control dewatering and mitigate impacts of dewatering.

14. Types and locations of survey points and monitoring equipment and methods to be installed and used to monitor ground surface, structure, utility, and other existing facilities for groundwater lowering-related settlement and movement; description of monitoring plan and how the data will be used to control dewatering and mitigate impacts of dewatering; and description of dewatering system components that allow for control of dewatering drawdown.
15. The location of settlement observation points and a photo log of all structures including walls, slabs, and exposed piping in the ROW that might be affected by settlement due to lowering of the groundwater. Baseline elevation measurements and settlement monitoring are required to be conducted around the complete perimeter of structures.

16. Contractor-completed observation well log form.

17. Dewatering schedule, installation, operation, maintenance, and abandonment procedures.

18. Project descriptions for dewatering projects of similar scope and size completed by the Contractor or their specialty dewatering subcontractor.

19. Daily record of dewatering system operation including list of pumped wells and wellpoints, drawdown and flow from pumped wells and wellpoints, list of sumps and gravel drains, flow from pumps in sumps and gravel drains, flow from entire dewatering system, and recharge well flow and operating pressures. Daily record of observation well and VWP measurements and groundwater elevations and pressures along each side of the roadway right-of-way.

20. Within 8 hours of completion, the Contractor shall submit completed observation and dewatering well logs to the Engineer.

21. The Contractor shall submit changes or modifications to the GWCP at least 2 weeks prior to dewatering any part of the alignment covered by the proposed changes.

2-13.2 Materials

2-13.2(1) Filter Material For Pumped Wells, Wellpoints, and Recharge Wells

A. The Contractor shall provide gravel/sand pack filter material consisting of clean, rounded, washed select gravel or sand free from silt, clay, and other deleterious material conforming to the requirements of 2-13.2(3).

B. The Contractor shall install gravel/sand pack to maximize the flow of water into pumped wells and wellpoints and minimize the amount of fine-grained material removed from the formation.

C. If directed by the Engineer, the Contractor shall alter the sizes of gravel/sand pack material for each installation as necessary in accordance with the grain size distribution of the materials encountered during installation of the pumped wells, wellpoints, and recharge wells.
D. The Contractor shall submit documentation in support of its filter grain size determination including grain size distributions, calculations, and formulae used in matching filter material to formation.

E. The Contractor shall furnish sufficient gravel/sand for initial packing of the pumped wells, wellpoints, and recharge wells, and such additional filter material as the wells or wellpoints may take during development.

F. The Contractor shall furnish to the Engineer a certificate of filter pack material quality and gradation prior to delivery.

2-13.2(2) Screens and Casings for Pumped Wells, Wellpoints, and Recharge Wells

A. Screens, casing, and riser pipes for pumped wells, wellpoints, and recharge wells shall be capable of lasting and performing their intended function throughout the duration of the project.

B. Screens shall be factory slotted and sized appropriately for the filter pack and formation to prevent the removal of fines from the formation.

2-13.2(3) Pumped Wells, Wellpoints, and Recharge Wells

A. The Contractor shall provide, install, operate, maintain, and remove all equipment and materials for complete dewatering systems to control groundwater and potentiometric levels beneath, outside, and inside of the excavation.

B. The Contractor shall provide, install, operate, maintain, and remove all equipment and materials for dewatering systems to lower the piezometric pressures in the lower aquifer to the specified levels.

C. The Contractor shall design and construct shoring systems; excavation bottom seal; and the dewatering system to limit groundwater drawdown beyond the roadway right-of-way to the drawdown limit specified in 2-13.2(6).

D. The Contractor shall construct the pumped and recharge wells using bucket auger, cable tool drill and drive, jetting, or air rotary drilling techniques. The Contractor shall not use flight augers, cable tool drive and drill, mud rotary, or any other drilling technique that will result in the smearing of fine-grained formation over coarse-grained formation. The Contractor shall make allowance for artesian groundwater pressures in selecting the drilling method for the pumped wells and shall maintain the top of casing and water elevation within the casing at or above the specified the height above the groundwater level and piezometric level.
E. Boreholes for pumped and recharge wells installed in drilled holes shall be a minimum of 4 inches diameter greater than the outside diameter of the well casing.

F. When drilling each pumped well and recharge well, and when drilling every fifth wellpoint, the Contractor shall collect soil samples at intervals not exceeding 2.5 feet. The Contractor shall provide plastic sample jars for the soil samples with boring numbers, depth of sample, and date collected indicated on the jar. The Contractor shall store soil samples in a secure and climate protected location and use the information from the drilling and soil samples core to confirm or modify the dewatering design. The Contractor shall provide the Engineer access to the samples whenever requested by the Engineer and shall retain the soil samples until the project is completed and the Engineer approves disposal.

G. The Contractor shall complete the pumped wells with a 6-inch-diameter polyvinyl chloride well screened only within the lower aquifer. Well screens shall be 0.030-slots surrounded by a 12x20 filter sand.

H. The Contractor shall complete the recharge wells with a 4-inch-diameter polyvinyl chloride well screen within the dewatered soil unit and through the excavation subgrade depth. Well screens shall be 0.030-slots surrounded by a 12x20 filter sand.

I. The Contractor shall use cased drilled or water jetted borehole to install vacuum wellpoints. The Contractor shall not use mud rotary, continuous flight auger, hollow stem auger, drive and drill or other technologies that might result in the smearing of fines from silty materials to sandy materials to install vacuum wellpoints.

J. Wells shall be completed and sealed in either the upper aquifer or lower aquifer, as specified. Well screen lengths and filter sand elevation ranges are provided in the Plans and may be modified by the Engineer based on soil information obtained while drilling the wells so as to isolate the screen and filter sand within an aquifer. Screens and filter sand shall not extend across aquifers. When the screen is not installed at the bottom of the boring, boreholes below the selected screen interval shall be sealed. Boreholes shall be sealed above the selected screen interval.

2-13.2(4)  Flow Meters and Sampling Access

A. The Contractor shall provide calibrated, non-resettable effluent flow meters capable of accurately measuring the flow of pumped wells, wellpoint pumps, and sump pumps directly upstream of each disposal point to within 5 percent (plus or minus) of the anticipated/design flow. The Contractor shall provide calibrated, non-resettable effluent flow meters close to each recharge wellhead that are capable of accurately measuring the flow into each recharge well to within 5 percent (plus or minus) of the anticipated/design flow.

B. Flow meters shall be McCrometer, Flow Technology, or approved equal.

C. Flowmeters shall clearly indicate instantaneous flow rates in gallons per minute (gpm) and the total flow volume in gallons. The flowmeter range shall be no more than five times the average flow through the meter. Data used to determine this average shall be recorded at 5-minute intervals and shall be submitted to the County electronically in Excel format once a month. All flowmeters shall be installed in accordance with the manufacturer’s specifications and requirements. The Contractor shall test and document the accuracy of all installed flow meters.

D. The Contractor shall provide flow meter calibration documentation to the Engineer one week prior to any dewatering system pumping other than well development.

E. The Contractor shall submit weekly reports and the digital data of all records with 5-minute maximum reading intervals showing total amount of discharge and recharge at each well and line of connected wellpoints, with meter readings and other data necessary to support the quantity reported.

F. The Contractor shall provide all wells with fittings to attach a temporary in-line flow meter if directed by the engineer to ensure accurate measurement of the total flow from each pumped well and to each recharge well or the common header for connected recharge wells.

G. The Contractor shall provide Kitsap County’s staff and Engineer unrestricted access to the facility and site to inspect, monitor, or verify compliance with Kitsap County’s Permit and Ordinance requirements. Contractor shall make provisions to allow entry to the site for the purposes outlined herein at all times.

2-13.2(5)  Sumps and Sump Pumping

A. The Contractor shall not use sumps as the primary or sole means of groundwater control or lowering. The Contractor shall obtain Owner approval for use of sumps, except as stated in the following paragraph.
B. The Contractor shall only employ sumps to pump direct precipitation and runoff that enters excavations, and perched, pocketed, or undrained water or groundwater not otherwise collected or removed by the pumped wells or wellpoint systems.

C. Sumps, where allowed, shall include a filter to minimize the pumping of fines and a slotted casing. All sumps and sump pumping shall be included in the “Dewatering” bid item.

2-13.2(6) Upper Aquifer Recharge

A. The Contractor shall install, construct, and operate the shoring and dewatering systems, including recharge wells, to limit groundwater drawdown in the upper aquifer and organic soils and peat in accordance with the requirements of Section 2-13.1(3).

2-13.2(7) Pumps, Supply, and Discharge Pipe, and Discharge Locations

A. The Contractor shall select and use pumps for the dewatering system components that are industry standard for their application, with sufficient capacity, head, horsepower, wiring, fittings, and switching facilities to maintain continuous operation throughout the life of the project.

B. The Contractor shall design, furnish, install, reinstall, operate, maintain, and remove all dewatering system components, including risers, discharge pipe, headers, manifolds, fittings, valves, and other piping hardware necessary to transport pumped water to the point of discharge.

C. The Contractor shall design and provide dewatering systems with allowances for friction losses and, for wellpoint systems, with lift sufficient to convey extracted groundwater from the wellpoint to the vacuum pump.

D. The Contractor shall furnish dewatering system components that have sufficient head and volume capacity to transport the water into the Contractor’s water quality treatment facility.

2-13.2(8) Treatment and Disposal Equipment

A. The Contractor shall provide, install, remove, operate, and maintain all materials and equipment (including tanks, filters, pumps, and piping) for distribution and treatment of the discharge from the groundwater control systems as required by the water quality standards defined in Section 2-13.3(6).

B. The Contractor shall install, operate, and maintain a water treatment system to provide for settling of suspended solids in the discharge from the dewatering systems.
C. The treatment system shall be designed and maintained to prevent discharge water from exceeding 20 parts per million (ppm) suspended solids or permit standards and limits. Where dewatering system discharge water is reinjected to the groundwater, the treatment system shall be designed and maintained to treat water to the degree necessary for water to be reinjected through the Contractor-designed reinjection system without clogging or impairing system operation, and in accordance with applicable regulations and permits.

D. The method of desilting and point of disposal of water shall be subject to the Engineer’s acceptance.

2-13.2(9) Observation Wells and VWPs

A. The Contractor shall provide and install observation wells at locations and depths provided in the Plans.

B. VWPs sealed in the ground shall not be used for monitoring groundwater piezometric levels in the lower aquifer. VWPs may be used to record groundwater measurements in observation wells isolated in the lower aquifer.

C. The Contractor shall notify the Engineer both one week and 24 hours prior to installation of any observation wells or VWPs. The Contractor shall not construct any observation well or VWP, except in the presence of the Engineer’s designated representative.

D. Observation wells shall be installed in minimum 6-inch-diameter boreholes.

E. For each observation well or VWP installation, the Contractor shall collect soil samples at intervals not exceeding 2.5 feet. The Contractor shall provide plastic sample jars for the soil samples with boring numbers, depth of sample, and date collected indicated on the jar. The Contractor shall store soil samples in a secure and climate protected location and use the information from the drilling and soil samples core to confirm or modify the dewatering design. The Contractor shall provide the Engineer access to the samples whenever requested by the Engineer and shall retain the soil samples until the project is completed and the Engineer approves disposal.

F. The Contractor shall complete the observation wells with a 2-inch-diameter polyvinyl chloride well screen within the dewatered soil unit and through the excavation subgrade depth. Well screens shall be 0.010-slots surrounded by a 10x20 filter sand. The observations wells shall be completed and sealed in either the upper aquifer or lower aquifer, as specified. Well screen lengths and filter sand elevation range shall be selected and installed to isolate the screen and filter sand within an aquifer. Screens and filter sand shall not extend across aquifers. When the screen
is not installed at the bottom of the boring, boreholes below the selected screen interval shall be sealed. Boreholes shall be sealed above the selected screen interval.

G. The tops of observation wells isolated in the lower aquifer shall be fitted with a removable seal that can be removed to allow measurement of water level in the well and that can withstand and remain in place under a pressure head to elevation 20 feet. The removable well seal shall have quick connect fitting to which a water pressure gage or instrument that can be attached to facilitate measurement of artesian pressure in the well without requiring cap removal.

H. VWPs, where used for monitoring groundwater levels in the upper aquifer, shall be sealed in the holes in accordance with VWP manufacturer recommendations. VWPs and filter sand placed around VWPs shall be installed such that the filter sand shall not extend across aquifers. Boreholes shall be sealed below and above VWPs. Fully grouted VWPs are acceptable.

I. Immediately upon completion, the Contractor shall develop each observation well sufficiently to ensure hydraulic connection with the aquifer. The Contractor shall replace any observation well that does not exhibit hydraulic connection with the aquifer at the Contractor’s cost.

J. The Contractor shall survey measuring point elevations on all observation wells to 0.01-foot precision. The Contractor shall survey the ground surface at VWP installations to 0.01-foot precision. The Contractor shall survey all measuring points to a common datum.

K. The Contractor shall survey the coordinates of each observation well and VWP installation and include them on the log provided to the Engineer.

L. The Contractor shall resurvey, within 24 hours, the elevation of any observation well shortened or lengthened during construction.

M. The Contractor shall assign a unique consecutive number, starting with the Contractor’s initials, to each observation well and VWP installation in the sequence they are drilled.

N. The Contractor shall properly abandon the observation wells that have been installed along the alignment for this project prior to the wells being damaged by construction or, if the wells are protected during construction, after construction is complete. Wells to be abandoned include the existing observation wells from the Shannon & Wilson exploration program completed for the project and observation wells installed for construction-stage monitoring of groundwater levels.

P. The Contractor shall abandon observation well installed in boring B-13WV-19 by drilling out the observation well casing and soil around the casing using a minimum 6-inch diameter drill, to elevation -5 feet. Between elevation -5 feet and 0 feet, this hole shall be backfilled with bentonite to create a seal through the zone -5 feet to 0 feet.

Q. The Contractor shall obtain all necessary licenses and permits to decommission each observation well and VWP installation.

2-13.2(10) Standby Equipment

A. The Contractor shall maintain on site sufficient equipment and materials for necessary modification and to ensure continuous and successful operation of the dewatering and observation systems for all necessary maintenance, and all ordinary emergencies, including power outage and flooding.

B. The Contractor shall provide 100 percent standby electrical generating capacity with automatic switching from line to generator, including all safety features to prevent back-feeding the electrical supply system.

C. The Contractor shall maintain on site sufficient number of pumps, valves, tees, elbows, connections, tools, and parts or other system hardware for immediate repair or modification of any part of the groundwater control system. Spare pumps of each type and size used in the dewatering systems shall be maintained on site at all times.

2-13.3 Construction Requirements

2-13.3(1) General Requirements

A. The Contractor shall provide all equipment necessary for dewatering. The Contractor shall have on hand, at all times, sufficient pumping equipment and machinery in good working condition and shall have available, at all times, competent workers for the operation of the pumping equipment. Adequate standby equipment shall be kept available at all times to insure efficient dewatering and maintenance of dewatering operations during power failure. The contractor shall be responsible for pumping 24 hours per day, 7 days per week during dewatering operations.

B. Pumped wells and wellpoints shall not be operated until all recharge wells, observation wells, and VWPs within 500 feet of those pumped wells and
wellpoints are installed and developed, and the recharge well systems are made operational.

C. The Contractor shall maintain individual wellpoint performance as necessary throughout the Project to maintain target dewatering levels. The Contractor shall redevelop or rehabilitate wellpoints as necessary to maintain original capacity at no cost to the County. Rehabilitation will include but not be limited to swabbing, high-pressure jetting and impulse technologies as necessary to maintain the efficiency and drawdown capacity of the dewatering systems. Chemical treatment will not be allowed. The Contractor shall replace any well that cannot maintain its original wellpoint capacity at no cost to the County, unless otherwise accepted by the Engineer.

D. Dewatering for structures and pipelines shall commence prior to when groundwater is first encountered in excavations and shall be continuous until such times as water can be allowed to rise in accordance with the provisions of this Section or other requirements.

E. Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at the proposed bottom of excavation.

F. If foundation soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with an appropriately engineered backfill dictated by the Engineer at the Contractor’s cost.

G. The Contractor shall dispose of water from the WORK in a suitable manner without damage to adjacent property. The Contractor shall be responsible for meeting the requirements of any permits that may be necessary to dispose of water. No water shall be drained into work built or under construction without prior consent of the Engineer. Water shall be filtered using an approved method to remove sand and fine-sized soil particles before disposal into any discharge point.

H. The return of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted backfill, and prevent flotation or movement of structures, pipelines, and sewers.

I. The Contractor shall use a Washington state licensed water well driller for installation and abandonment of all wellpoints, pumped wells, observation wells, and recharge wells.
2-13.3(2) Monitoring System

A. The Contractor shall install the required observation wells, and any other observation wells and VWPs the Contractor needs to demonstrate the dewatering systems achieve the target drawdown in the upper aquifer, the specified target piezometric level in the lower aquifer, or a drawdown depth necessary to complete the work, prior to excavation.

B. The approximate locations of the minimum number of observation wells to be used are provided in the Plans. The approximate locations and number of additional observation wells the Contractor will install shall be provided in the GWCP submittal. The Contractor shall protect and use existing observation wells installed for the project to monitor groundwater elevations, as called for on the Plans, with the exception of the VWP in the upper aquifer of B-13WV-19, which is interpreted as being affected by pressure in the lower aquifer due to leakage along the backfill placed in the boring during B-13WV-19 observation well and VWP installation. Upon or before conclusion of the contract, the Contractor shall abandon in accordance with Washington standards all existing wells and required wells shown on the Contract Drawings, unless otherwise directed by the Engineer in writing.

C. At least 2 weeks prior to installation of pumped wells and wellpoints, the Contractor shall install groundwater observation wells at the locations shown on the Plans.

D. Prior to performing construction the Contractor shall abandon the existing pumped well, recharge well, observation wells and VWPs, and all wells and VWPs installed for the work if these wells and VWPs could be damaged by the proposed construction. All wells and VWPs shall be abandoned in accordance with the Washington well standards.

E. If, during dewatering pumping, the groundwater is lowered in any observation well or VWP below the target or calculated drawdown elevation indicated in the Plans or GWCP, the Contractor shall immediately notify the Engineer and make provisions to raise the groundwater level at or above this threshold while maintaining the necessary drawdown inside the excavation area and the target piezometric level in the lower aquifer. These measures may include the use of recharge wells.

F. Where depressurization of the lower aquifer is required, the Contractor shall install pumped wells and recharge wells at the locations shown in the Plans. The recharge wells shall be used to reinject groundwater into the upper aquifer to maintain upper aquifer groundwater levels to prevent damage to adjacent properties, structures, utilities, or infrastructure.
G. The Contractor shall install settlement points in accordance with requirements of Section 2-14.3(3) and survey the elevation of the settlement points to 0.01-foot precision. The Contractor shall survey all settlement points to a common datum. The Contractor shall locate, photograph, and measure all cracks in foundations and exterior walls of structures where any part of the structure is within 150 feet of the alignment.

H. The Contractor shall maintain accurate and precise daily records of groundwater level and flow measurements. The Contractor shall measure groundwater levels in all pumping, observation wells, VWPs, and recharge wells to 0.01-foot precision and flow to within 5 gpm. Measurements shall be recorded on forms provided by the Engineer.

I. The Contractor shall begin groundwater level measurements within 24 hours of completing any pumped well, wellpoint, recharge well, observation well, or VWP, including prior to well development, and shall continue daily measurements until the pumped well, wellpoint, recharge well, observation well, or VWP is properly abandoned or the Engineer approves cessation of measurement.

J. The Contractor shall begin water flow measurements within 4 hours of initiating pumping (other than for development in any well or wellpoint system) and shall continue measurements until the Engineer approves cessation of measurement. The Contractor shall report to the Engineer any changes in dewatering discharge flow of 25 percent or more that occur within any 24-hour period within 4 hours following such a change. The Contractor shall notify the Engineer anytime a pump fails, or is turned off or on, for a period of more than 4 hours. Additionally, the Contractor shall note and record when any individual well(s) and/or the dewatering system is turned off and back on. The Contractor shall provide water level and flow measurement records to the Engineer daily in both hard copy and digital form.

K. The Contractor may remove, replace or shorten the casings of observation wells as the work requires. However, the Contractor shall bear full responsibility for the groundwater level information provided by those wells and any consequences stemming from the lack of or error in the information. The Engineer shall be notified of any change in the measuring points of any well. The Contractor shall re-survey any shortened or lengthened observation well casing, and provide such data to the Engineer.

L. Contractor costs shall include continuous system observation and adjustment 24 hours/day, 7 days/week to maintain optimum performance and maximum drawdown from the dewatering system. System observation and adjustment shall be performed by someone experienced in the operation of the various components that make up the dewatering systems.
M. The Contractor shall conduct survey settlement monitoring when existing surface features (structures, curb, gutter, pavement, etc.) are in the area of influence of the dewatering operations, creating a potential for settlement. The monitoring shall consist of elevation surveys of multiple points prior to start of dewatering, at reasonable time intervals (not less than once a day) during the dewatering operation, and at completion of dewatering. The Contractor shall utilize a land surveyor registered in the State of Washington at the Contractor's expense.

N. The Contractor shall begin settlement observation at least 3 days prior to starting any pumping.

O. The Contractor shall submit copies of all settlement monitoring survey sheets, along with a comprehensive summary spreadsheet showing all survey points, including baseline shots, with all dates, to the Engineer. These submittals to the Engineer shall take place as the monitoring happens, and not wait until the end of the Project.

P. Any damage to new work, existing adjacent above and below ground structures, and pipes, due to settlement caused by dewatering activities or any failure of the dewatering system, shall be repaired to the satisfaction of the Engineer, at the Contractor's expense. The Contractor shall notify the Engineer immediately if settlement is recorded.

2-13.3(3) Formation Protection and Well Development

A. The Contractor shall design, construct, operate, and maintain the dewatering system such that foundation soil particles will not be removed upon pumping.

B. The Contractor shall develop all pumped wells and wellpoints to maximize well yield and remove fines resulting from drilling and shall develop all recharge wells to maximize injection flow. The Contractor shall discharge all development water to a sediment settling tank prior to discharge. The Contractor shall not discharge any development water directly to the ground surface or surface water body.

C. If the dewatering system fails to achieve the target piezometric levels in the lower aquifer beneath the excavation and groundwater levels in the upper aquifer outside the excavation, or a drawdown depth necessary to complete the work, due to inadequate or insufficient development, the Contractor shall, at the Contractor’s own expense, redevelop the existing well(s) or install additional pumped wells or wellpoints until the target piezometric and groundwater levels, or a drawdown depth necessary to complete the work, is achieved.
D. If the Contractor disputes the Engineer’s determination that a well has been inadequately developed, the Contractor shall provide access to the pumped wells and wellpoints for the Engineer to evaluate and/or conduct additional well development. If the Engineer’s development and evaluation results in an increase in the pumped well’s or wellpoint’s specific capacity by more than 20 percent, the Contractor shall reimburse the owner for all costs associated with the Engineer’s development and evaluation.

E. The Contractor shall develop individual pumped wells, wellpoints, and recharge wells until the sand/silt content of the discharge water is less than 20 ppm, as determined by a meter such as a Rossum Sand Tester or equivalent.

F. The Contractor shall monitor discharge from all parts of the system to ensure that the sand/silt content of the discharge water does not exceed 20 ppm (as determined by a Rossum Sand Tester or equivalent). The Contractor shall provide all the equipment and fittings for measurement of sand content. The Contractor shall monitor sand/silt content daily for one week after installing and developing any individual dewatering well or wellpoint system and the entire system weekly thereafter. The Contractor shall take sand/silt content measurements in the presence of the Engineer. The Contractor shall notify the Engineer of the time of measurement and provide 24-hour notice of planned measurements.

G. The Contractor shall replace any pumped well or wellpoint that produces more than 20 ppm sand/silt at the Contractor’s own cost, unless otherwise authorized by the Engineer.

H. The Contractor shall obtain all necessary licenses and permits to install and decommission each dewatering pumped well and wellpoint.

2-13.3(4) Standby Equipment

A. The Contractor shall furnish and maintain on site sufficient power-generating and other equipment and materials to ensure continuous and successful operation of the dewatering system. The Contractor shall maintain on site, ready to operate, sufficient standby electrical generating capacity to operate all pumps simultaneously. The Contractor shall test all backup electric systems weekly in the presence of the Engineer. These tests shall include at least 4 hours of operation under full system load. The Contractor shall have on site, a backup pump for each type of pump in the dewatering system and sufficient pipe and fittings for any repair.
2-13.3(5) Discharge Points, Pipes and Headers

A. Discharge piping shall be designed and installed in a manner which minimizes impacts to excavation or construction activities.

B. Design system piping with allowances for friction losses and lift sufficient to convey extracted groundwater to the treatment system and discharge point. The return flow and discharge pipes shall be sized to minimize back-pressure on the system and include air pressure relief valves to eliminate entrained air.

C. Acceptable discharge points and areas are indicated on the Plans. The Contractor shall obtain right of access and permits for discharge as required.

2-13.3(6) Water Quality

2-13.3(6)A Water Quality Standards

A. For water discharged to the storm system, the Contractor shall not allow the water discharged from the dewatering systems to exceed 20 ppm suspended solids (silt/sand content) or exceed 25 nephelometric turbidity units (NTUs).

2-13.3(6)B Water Quality Monitoring

A. The Contractor shall monitor discharge from all parts of the system to ensure that the sand content of the discharge water does not exceed 20 ppm as determined by a Rossum Sand Tester or equivalent.

B. The Contractor shall provide all equipment and fittings for observation and measurement of sand content. The Contractor shall monitor system discharge sand content daily for one week after installing any wellpoint, pumped well, or sump/drain trench and weekly thereafter.

C. The Contractor shall take sand content measurements in the presence of the Engineer. The Contractor shall provide the Engineer a specific time and 24-hour notice of planned measurements.

2-13.3(7) Water Supply for System Installation and Electrical Service

A. The Contractor shall provide water supply and electrical service needed for the dewatering systems. The Contractor shall provide a separate power source for the dewatering system electric service. This power source shall be dedicated solely for the dewatering system and be separate from all other electric service. The Contractor shall provide automatic switching system to transfer power generation from the primary electrical service to the backup service.
2-13.3(8) Dewatering System Protection

A. The Contractor shall take precautions to ensure continuous successful operation of the dewatering system. This includes establishing and/or maintaining adequate marking of all well, pump, and pipeline locations. Wherever wells, vacuum headers, or discharge lines require crossing for access into, out of, or around an excavation, steel ramps shall protect the system from vehicular traffic. All ramps shall have the strength to support the heaviest equipment on site and shall provide at least 4 inches of clearance between the dewatering system element and the underside of the ramp. The Contractor shall clearly identify all vehicular access points across the dewatering system with brightly colored or flagged 8-foot-high poles on each side of the access point. The Contractor shall valve all ramped pipelines on both sides of the ramp.

2-13.3(9) Dewatering System Removal and Abandonment

A. Upon written authorization of the Engineer, the Contractor shall remove all dewatering system facilities and abandon all wellpoints, pumped wells, recharge wells, and Contractor-installed observation wells using a licensed water well Contractor, in accordance with Washington standards.

B. Where abandonment by grouting is allowed by Washington standards, the Contractor shall seal wellpoint holes, pumped well holes, recharge well holes, sumps, gravel drains, or other penetrations with a cement-bentonite grout mixture exhibiting a permeability less than $1 \times 10^{-6}$ centimeters per second.

C. The Contractor shall submit written documentation of abandonment of all pumped wells, wellpoints, recharge wells, observation wells, and other penetrations below the excavation subgrade including unique identification number, location coordinates, date and time of abandonment, and the names of the Contractor’s personnel performing the abandonment.

2-13.4 Measurement

“Dewatering”, excepting dewatering water treatment and conveyance costs, will be paid for on a lump sum basis.

“Dewatering Water Treatment and Conveyance” will be paid for on a lump sum basis.

“Install and Monitor Upper Aquifer Observation Well or VWP” will be measured on a per each basis.

“Abandon Upper Aquifer Observation Well or VWP” will be measured on a per each basis.
“Install and Monitor Lower Aquifer Observation Well or VWP” will be measured on a per each basis.

“Abandon Lower Aquifer Observation Well or VWP” will be measured on a per each basis.

“Pumped Well” will be measured on a per each basis.

“Abandon Pumped Well” will be measured on a per each basis.

“Vacuum Wellpoint” will be measured on a per each basis.

“Abandon Vacuum Wellpoint” will be measured on a per each basis.

“Recharge Well” will be measured on a per each basis.

“Abandon Recharge Well” will be measured on a per each basis.

2-13.5 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:

“Dewatering”, lump sum.

The lump sum Contract price for “Dewatering” shall cover the complete cost of designing, furnishing, installing, pumping, operating, maintaining, and removing a suitable dewatering system, conveyance, and discharge, for use with the required pumped wells, wellpoints, and recharge wells associated with installation of the deep sanitary sewer, and for use with Contractor-selected pumped wells, wellpoints, and sumps necessary to complete the work required in the Plans and Technical Specifications.

Based on the lump sum contract price for “Dewatering”, partial payments will be made as follows:

- 25 percent will be paid when the Contractor design is approved
- 25 percent will be paid after pumped wells, recharge wells, and wellpoints are installed
- 5 percent per month will be paid for dewatering system operation and maintenance… up to 25 percent
- 25 percent will be paid when wells are abandoned

Work performed under the “Dewatering” bid item will be in addition to the “Dewatering Water Treatment and Conveyance” bid item.
“Dewatering Water Treatment and Conveyance”, lump sum. The lump sum Contract price shall cover the complete cost of furnishing, installing, maintaining, and removing conveyance pipelines or hoses and sedimentation tanks and/or filters as required to meet the disposal requirements for sanitary sewer improvements as stated in the Plans and Technical Specifications. Work performed under the “Dewatering Water Treatment and Conveyance” bid item will be in addition to the “Dewatering” bid item.

Based on the lump sum contract price for “Dewatering Water Treatment and Conveyance”, partial payments will follow the percentages established per the “Dewatering” bid item.

“Install and Monitor Upper Aquifer Observation Well or VWP”, per each.

The per each Contract price shall cover the complete cost of installing and monitoring new observation wells and VWPs, as described in the Plans and Technical Specifications.

“Abandon Upper Aquifer Observation Well or VWP”, per each.

The per each Contract price shall cover the complete cost of abandoning the observation wells and VWPs as described in the Plans and Technical Specifications.

“Install and Monitor Lower Aquifer Observation Well or VWP”, per each.

The per each Contract price shall cover the complete cost of installing and monitoring new observation wells and VWPs, as described in the Plans and Technical Specifications.

“Abandon Lower Aquifer Observation Well or VWP”, per each.

The per each Contract price shall cover the complete cost of abandoning the observation wells and VWPs as described in the Plans and Technical Specifications.

“Pumped Well”, per each.

The per each price shall cover the complete cost of designing, furnishing, installing, pumping, operating, and maintaining a pumped well for depressurizing the lower aquifer and integration of the pumped well with the dewatering system.
“Abandon Pumped Well”, per each.

The per each Contract price shall cover the complete cost of abandoning the pumped wells as described in the Plans and Technical Specifications.

“Vacuum Wellpoint”, per each.

The per each price shall cover the complete cost complete cost of designing, furnishing, installing, pumping, operating and maintaining a vacuum wellpoint for lowering the groundwater level in the upper aquifer, within and outside excavations, and integration of the vacuum wellpoint with the dewatering system.

“Abandon Vacuum Wellpoint”, per each.

The per each Contract price shall cover the complete cost of abandoning the vacuum wellpoints as described in the Plans and Technical Specifications.

“Recharge Well”, per each.

The per each price shall cover the complete cost complete cost of designing, furnishing, installing, operating, and maintaining a recharge well for reinjecting water into the upper aquifer and integration of the recharge well with the dewatering system.

“Abandon Recharge Well”, per each.

The per each Contract price shall cover the complete cost of abandoning the recharge wells as described in the Plans and Technical Specifications.

Add the following new section:

2-14 GEOTECHNICAL INSTRUMENTATION AND MONITORING

2-14.1 Description

A. This work shall consist of furnishing, installing, monitoring, reporting, maintaining and removing geotechnical instruments and monitoring points required to monitor vibration levels, shoring movements, settlement of surfaces, structures, and utilities, and existing cracks. Geotechnical instruments include all vibration monitors, crack meters, and monitoring points as specified herein.

B. The Contractor shall provide the Engineer, with unrestricted access to all geotechnical instrumentation, observation wells, piezometers, other instruments, settlement and movement survey monitoring points, wells, wellpoints, recharge wells, flow meters, and the dewatering system such that the County can take independent measurements.
C. The Contractor is not required to furnish, install, monitor, report on, or maintain settlement points and crack meters on existing surfaces, structures, and utilities outside the County right-of-way. The Engineer will monitor surfaces and structures on the adjacent private properties.

2-14.1(1) Submittals

A. Prior to the award, the Contractor shall submit a list identifying field personnel performing vibration and monitoring assigned to the project. The list shall include the field personnel performing the monitoring of vibrations and their qualifications.

The Contractor will establish control for monitoring shoring movements and other measurements.

B. Forty-Five (45) days prior to the start of any dewatering system installation, the Contractor shall submit a detailed monitoring plan for the work. The monitoring plan shall include:

1. A schedule and outline of procedures for instrument installation and performance of monitoring.

2. Detailed description of the Contractor’s proposed method for monitoring the geotechnical instrumentation. The description shall demonstrate that the proposed method will provide the data required to evaluate whether or not the allowable limits have been exceeded.

3. Operating manuals, specifications, and installation procedures for each type of instrumentation.

4. Detailed plan of instrument locations including a designation for each instrument, including proposed vibration monitor locations relative to the active work area.

5. Documentation of calibration checks on individual instruments and readouts including vibration monitors, and survey equipment.

6. Initial calibration certificates:
   a. Periodic checks of readout instruments, as recommended by the manufacturer (maximum of 3-month intervals).
   b. Recalibration after any damage or disturbance.

7. Sample data tables and plots, including sample instrument calibration data, construction information (i.e. station and offset of excavation, excavation depth, etc.) for each instrument type.
8. The manufacturer’s certification that products, materials, and equipment provided meets the specified requirements.

9. Equipment and procedure to be used for pavement breaking and removal; shoring installation and removal; excavation; fill compaction; and pavement restoration. The description shall demonstrate the Contractor’s understanding that allowable limits presented in the Special Provision are not to be exceeded and in particular the sensitivity of the cast-iron water mains to excessive vibrations.

10. Corrective Actions Plan of possible actions that might be required if 75 percent of any of the allowable limits presented in this Special Provision are exceeded for any instrument.

Instrument Installation: The Contractor shall submit within 72 hours of installation, detailed descriptions of instrument installations including as-built drawings of the instrumentation on a maximum scale of 1 inch = 20 feet.

Baseline Readings: A minimum of 2 working days prior to the start of construction the Contractor shall submit to the Engineer, both in the latest version of Microsoft Excel and in paper copies:

1. The raw data from readings of the geotechnical instrumentation.

2. A graph showing the vibration data including the time of its recording.

Daily Vibration Monitoring Summary: The Contractor shall submit to the Engineer daily summary reports of the vibration monitoring prepared by instrumentation specialist within eight working hours after the readings are taken and before construction resumes. The daily summary shall include:

3. A summary of the day’s work that notes the work being performed, list of construction equipment being used during the monitoring period, stations and locations at which the work was being performed, location of vibration monitoring devices, distance from work activity location to vibration monitoring devices, times that monitoring was conducted, and what work required the monitoring. The Contractor shall include observations that will help in describing the monitoring for that day.

4. A description of the work occurring during any peak in the vibration monitoring that exceeds 75% of the ALLOWABLE LIMIT specified in 2-14.3(1), including any possible reasons for the spike.

5. A copy of the day’s raw data (both electronic and hard copy).

6. A graph showing that day’s vibration data including the time of its recording and the work being done during the recording.
7. An overall analysis of all monitoring data to date.

**Overall Project Summary:** The Contractor shall submit to the Engineer at the end of the work an overall summary of all monitoring data collected. The overall summary shall include all the instrumentation readings and all of the information from the daily summary reports as well as an overall evaluation of the data taken as a whole.

**2-14.2 Materials**

**2-14.2(1) Shoring Monitoring Points**

Shoring monitoring points shall consist of fixed reflector targets bonded to the shoring.

**2-14.2(2) Vibration Monitors**

The Contractor shall provide at least four portable seismographs for monitoring the velocities of ground vibrations resulting from construction activities. The number of seismographs provided shall be:

1. Sufficient to monitor the structures specified herein. At least four vibration monitors shall be active at all times during construction activities, with the monitors located in the corner of the buildings nearest the construction activities. During watertight shoring installation, vibration monitors must be located immediately adjacent to buildings at locations required by the Plans and Technical Specifications, or as directed by the Engineer.

2. Determined by the Contractor based on the Contractor's selected means and methods and construction sequencing.

The furnished seismographs shall be Model Blastmate III, as manufactured by Instantel Inc., Multiseis Plus, as manufactured by Vibra-Tech Inc., or approved equal having the following features:

1. External triaxial geophone and air overpressure microphone.

2. Three channels for vibration monitoring plus a fourth channel for air overpressure monitoring.

3. Two power sources: internal rechargeable battery and charger and 115 volts AC. Battery shall be capable of supplying power to monitor vibrations continuously for up to 30 days.

4. Self-triggering waveform capture mode that provides the following information: plot of wave forms, peak particle velocities, peak overpressure, frequencies of peaks.
5. Continuous monitoring mode shall be capable of recording single-component peak particle velocities, and frequency of peaks with an interval of one minute or less.

6. Computer software for performing continuous monitoring, data downloading, analysis, and to produce reports.

The portable seismographs shall meet the following measurement requirements:

1. Seismic range: Up to 10 inches per second.
2. Seismic accuracy: ±5 percent or 0.02 inches per second, whichever is larger between 4 Hertz and 125 Hertz.
3. Seismic resolution: 0.005 inches per second or less.
4. Acoustic range: 88 to 148 dB.
5. Acoustic accuracy: ±10 percent or ±1 dB, whichever is larger between 4 and 125 Hz.
6. Acoustic resolution: 0.0000363 pounds per square inch or less.
7. Acoustic frequency response: 2 to 250 Hertz.
8. Capable of internal dynamic calibration.

2-14.2(3) Surface Settlement Points

Surface settlement points shall consist of PK nails installed where flexible or asphalt pavement exists.

2-14.2(4) Structure Settlement Points

The Contractor shall place structure settlement points on structures along the alignment where these structures are within the work limits and within the County right-of-way. Structures to be monitored by the Contractor include existing manholes, existing utility vaults, pavement and sidewalks not scheduled for replacement, and other structures that could be impacted by construction activities.

The County will place structure settlement points on structures along the alignment where these structures are outside the work limits and outside the County right-of-way.

These settlement points will be used to monitor settlement and movement of the structures. The Contractor shall monitor Contractor-installed structure
settlement points. The County will monitor County-installed structure settlement points. The structure settlement points will consist of survey pins or targets fixed to the structures.

2-14.2(5) Utility Settlement Points

Utility settlement points shall consist of plastic or fiberglass rods fixed to the top of the utility.

2-14.2(6) Crack Meters

Crack meters will be Buildera Crackmon 4020A or equivalent.

The County will place crack meters on existing structures near the project and outside the work limits and outside the County right-of-way. The crack meters will consist of gages installed across existing cracks. The County will monitor the crack meters.

2-14.3 Construction Requirements

2-14.3(1) General Requirements

The geotechnical instrumentation described in this Special Provision, and the Special Provision DEWATERING, delineate the minimum required instruments as a part of this contract. The Contractor shall add instrumentation as necessary to adequately monitor the work.

The Contractor shall not perform any excavation, shoring installation, or dewatering within 300 feet of items requiring monitoring specified herein, until all geotechnical instrumentation is installed and baseline readings are completed and submitted to the Engineer. The Contractor shall furnish and install all instruments as described herein. All reading devices, fixtures, cables, and necessary software for the various monitoring systems are to be furnished by the Contractor. The Contractor shall perform readings and data collection, analyses, record keeping, and preparation of summary reports for all instruments. The Contractor shall perform readings in accordance with the instrumentation monitoring schedule specified in this Section. The Contractor shall maintain and protect all instruments and replace damaged instruments at no additional cost to the Owner. Results and devices are to be provided to the Engineer for use in confirmation monitoring.

The Contractor shall install and operate the instrumentation in strict conformance to the manufacturer’s requirements. The Contractor shall maintain the manufacturer’s minimum calibration requirements for the instrumentation systems at all times during the monitoring program. The Contractor shall replace instruments that fail or for any other reasons of nonperformance within 24 hours of detection with acceptable instruments, at
no cost to Owner. The Contractor shall be fully liable for the additional costs resulting from replacement of instruments for reasons of nonperformance or failure and no adjustments in contract time resulting from the suspension of work will be allowed. The Contractor shall correlate the new instruments with the previously acceptable data from the replaced instruments to develop continuous plots of instrumentation data, but with an arrow and note indicating the date of replacement on each instrument plot and data table.

The Contractor shall monitor survey points to check for settlement. The Contractor shall protect all survey targets and instruments installed for the purposes of monitoring utilities and structures.

The Contractor shall conduct the work in a manner such that displacements or vibrations do not exceed the limits specified herein. The Contractor shall take the following actions if any displacement measurement reaches 75 percent of the limits specified herein or if the Peak Particle Velocity limit specified herein is exceeded:

1. Take immediate steps to stop the cause of displacement or vibration.

2. Notify the Engineer.

3. Implement approved Corrective Actions Plan.


5. If corrective actions are not successful or measurements reach the limits specified herein, cease all related operations contributing to the displacements, or vibrations then:
   a. Notify the Engineer.
   b. Revise Corrective Actions Plan.
   c. Transmit the revised Corrective Actions Plan to the Engineer for review. Allow 48 hours for review.
   d. Implement the revised Corrective Actions Plan.

The Contractor shall be responsible for the delay associated with the exceedance of the Peak Particle Velocity or Vertical Displacement limits and developing the plan to the approval of the Engineer with the exception of the 48-hour review time. If the revised Correction Action Plan does not reduce the Peak Particle Velocity to below the allowable limit or cease vertical displacement, the Contractor shall cease all related operations contributing to the vibrations or vertical displacements and repeat the process of developing and submitting a revised Correction Action Plan as listed above.
The Engineer's review of the revised Correction Action Plan shall not alleviate the Contractor of the responsibility for conducting the work in a manner such that displacements or vibrations do not exceed the following limits.

<table>
<thead>
<tr>
<th>INSTRUMENTATION TYPE</th>
<th>ALLOWABLE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure Settlement Points</strong></td>
<td><strong>Vertical Displacement</strong></td>
</tr>
<tr>
<td>Buildings</td>
<td>0.25 inch differential between existing points</td>
</tr>
<tr>
<td>Buildings</td>
<td>0.5 inch maximum movement of a single point</td>
</tr>
<tr>
<td><strong>Surface Settlement Points</strong></td>
<td><strong>Vertical Displacement</strong></td>
</tr>
<tr>
<td>Ground Surface</td>
<td>0.5 inch</td>
</tr>
<tr>
<td><strong>Utility Settlement Points</strong></td>
<td><strong>Vertical Displacement</strong></td>
</tr>
<tr>
<td>Utilities</td>
<td>0.5 inch</td>
</tr>
<tr>
<td><strong>Shoring Monitoring Points</strong></td>
<td><strong>Horizontal Displacement</strong></td>
</tr>
<tr>
<td>Shored Excavations</td>
<td>0.5 inch</td>
</tr>
<tr>
<td><strong>Vibration Monitors</strong></td>
<td><strong>Peak Particle Velocity</strong></td>
</tr>
<tr>
<td>Buildings (continuous steady-state vibration source)(^b^)</td>
<td>0.2 in./sec.</td>
</tr>
<tr>
<td>Buildings (transient or impact vibration source)(^c^)</td>
<td>0.5 in./sec.</td>
</tr>
<tr>
<td>Water Mains (continuous or transient vibration source)(^b,c^)</td>
<td>1.5 in./sec.</td>
</tr>
</tbody>
</table>

\(^a^\) Allowable limits represent generally accepted limits that will minimize potential for structural damage.

\(^b^\) Continuous steady-state vibration source consists of activities from equipment such as vibratory pile drivers, jackhammers and reciprocating pavement breakers, and compactors.

\(^c^\) Transient or impact vibration source consists of activities from equipment such as impact pile drivers and pavement breakers.

The Contractor shall monitor ground-borne vibration of work operations with calibrated equipment to ensure compliance with vibration limitations specified herein. A record of all vibration measurements shall be retained for
inspection by the Engineer, and be included in daily summary reports and a final report.

The Contractor shall remove all instruments and vibration monitors, and properly decommission all Contractor-installed observation wells at the end of the contract, after requesting and receiving the express written permission of the Engineer.

The Contractor shall not disclose data reports or any other unprocessed data, readings, and observations to third parties outside of the contract without the express written permission of the Engineer.

The Contractor shall increase the frequency of data collection (including hourly if 0.25 inch or greater of total accumulate displacement), install additional instrumentation, or provide additional monitoring at no additional cost to Owner in the event of noted abnormal monitoring data, in the event of construction-induced damage, or in the event that the Contractor or Engineer requires additional data to evaluate the Contractor's performance.

Settlement and vibration less than that presented in the Allowable Limits table above could cause cosmetic damage to buildings, toppling of and damage to unsecured items in buildings, and impact vibration-sensitive equipment operations, processes, or stored goods. Vibration levels below those presented in the Allowable Limits table above could disturb building occupants. The Contractor shall employ methods and perform the work so as to maintain construction-induced ground settlement and vibration levels to the lowest practical level.

2-14.3(2) Definitions

Geotechnical instrumentation

Instruments used to measure vibration, vertical and horizontal movement of structures, horizontal movement of shoring, and vertical movement of utilities.

Crack meters

Meters installed across existing cracks and used to document any changes during construction.

Shoring monitoring points

Fixed markers monitored by optical or laser survey methods to determine horizontal displacements of shoring other than commercially available shoring systems such as trench boxes.
**Surface settlement points**

Fixed markers established on the ground surface, monitored by optical or laser survey methods to determine vertical displacement of the ground surface.

**Structure settlement points**

Fixed markers attached to structures, monitored by optical survey methods to determine horizontal and vertical displacement of the structures.

**Utility settlement points**

Fixed markers attached to utilities, monitored by optical survey methods to determine vertical displacement of the utilities.

**Monitoring points**

Shoring monitoring points, settlement points, and benchmarks.

**Survey control**

A system of precise field measurements of the types and kinds specified herein, utilizing suitable methods and equipment for determination of elevations, coordinates, and distances for performing geotechnical instrumentation monitoring.

**Vibration monitors**

Seismographs used to measure vibration levels in velocity and frequency.

**2-14.3(3) Geotechnical Instrument and Monitoring Point Locations**

The Contractor will locate shoring monitoring points at 50-foot intervals along shoring installed to support the excavation and at the closest points of each shoring wall to nearby structures.

The Contractor shall obtain vibration monitoring measurements for each structure within 50 feet of any work activities that result in ground vibrations (e.g. shoring installation, pavement breaking, etc.). The vibration monitors will be placed immediately adjacent to each structure at the closest point to the work activities that are causing ground vibration. The installation of geophones, and their locations, shall be subject to approval by the Engineer.

Locations of surface settlement points, structure settlement points, utility settlement points, and crack meters will be at the direction of the Engineer. Surface settlement points, structure settlement points, and crack meters for
structures and surfaces outside the project right-of-way will be installed and monitored by the Owner.

2-14.3(4) Instrument and Monitoring Point Installation

The Contractor will install survey benchmarks at least five calendar days prior to beginning construction or earlier if necessary to meet the instrument monitoring schedule. The Contractor shall establish a benchmark a minimum of 1000 feet from the project site.

The Contractor will install shoring monitoring points, immediately after excavation shoring is placed and prior to any excavation below the points.

The Contractor will install surface settlement points and structure settlement points prior to the beginning of construction or as directed by the Engineer. The Contractor will install utility settlement points when the utilities to be monitored are exposed, or as directed by the Engineer.

The Contractor shall place vibration monitors on the ground surface adjacent the structures being monitored. Geophones shall be installed in accordance with the manufacturer’s recommendations. Geophones shall be oriented towards the construction activity. If the geophone is placed on rigid pavement, isolate the geophone in areas of proposed removal by full depth sawcut around the geophone location perimeter to prevent direct seismic transfer of vibration through the concrete.

2-14.3(5) Protection and Maintenance

The Contractor shall protect and maintain all Contractor-installed instruments and monitoring points. The Contractor shall keep protective covers secured when readings are not being taken. The Contractor shall repair or replace damaged or missing instrument or entire instruments as required at no additional cost to the Owner within 24 hours of detection of damage.

2-14.3(6) Monitoring Point and Instrument Monitoring Schedule

The Contractor will make initial readings on all instruments and monitoring points. The Contractor will take at least four sets of initial baseline measurements and readings, comparable and equal within the rated instrument accuracy, at all of the monitoring points specified herein before adjacent construction is started. The Contractor shall take additional readings of the monitoring points until at least two comparable sets are obtained, which are within the rated instrument or survey accuracy.
The Contractor will monitor and report on all instruments on the schedule described below:

1. Monitor shoring monitoring points, all settlement points, crack meters, and vibration monitors within the right-of-way and within 50 feet of active excavations or trenches after each 5-foot increment of vertical excavation, but not less than daily until the excavation or trench is complete. Readings shall then be taken not less than daily until the excavation is backfilled.

2. Monitor all monitoring points and crack meters twice daily within the right-of-way and within 30 feet of removal of concrete pavement, construction of a road subgrade, using hammering or vibratory methods to install or remove shoring, or other activities likely to cause soil or utility displacements. Readings shall then be taken not less than weekly for one month after the cessation of these activities and then one last reading immediately prior to removal of the instruments.

3. Conduct continuous measurements of vibration adjacent to existing buildings within 50 feet horizontally of construction activities that include trenching, shoring installation, compacting, pavement breaking, and removing of concrete pavement with a thickness of 9 inches or greater. Move vibration monitors as necessary to monitor the structures closest to the active construction activity or as specified by the Engineer. The Contractor shall demonstrate that the vibration levels are below the threshold values specified herein at all times.

Should the Contractor’s measures fail to maintain displacements or vibrations within the allowable limits, the Engineer reserves the right to stop work at no additional expense to the Owner until the Contractor implements measures in accordance with the approved contingency plan.

The Contractor shall provide unrestricted access to all instruments and monitoring points to the County and the County’s surveyor.

2-14.3(7) Removal of Instruments

All monitoring points, crack meters, and instrumentation installed by the Contractor shall be removed at the end of the contract and the areas restored to the conditions existing before installation of the monitoring points.
2-14.4 Measurement

“Monitoring Point and Geotechnical Instrument Monitoring” will be measured on a lump sum basis.

“Crack Meters” will be measured on a per each location basis.

“Shoring Monitoring Points” will be measured on a per each location basis.

“Surface Settlement Points” will be measured on a per each location basis.

“Structure Settlement Points” will be measured on a per each location basis.

“Utility Settlement Points” will be measured on a per each location basis.

“Vibration Monitoring” will be measured on a lump sum basis.

2-14.5 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:

“Monitoring Point and Geotechnical Instrument Monitoring”, lump sum.

The lump sum price shall cover the complete cost of monitoring geotechnical instruments and monitoring points, including reporting of the data. Monitoring and reporting of data from all monitoring points (shoring monitoring points, surface settlement points, structure settlement points, and utility settlement points) and geotechnical instruments (vibration monitors, crack meters) specified in the Plans, Contract Documents, and Technical Specifications are paid under this bid item.

“Crack Meters”, per each location.

The per each location price shall cover the complete cost of furnishing, installing, maintaining, and removing crack meters in locations specified in the Plans, Contract Documents, and Technical Specifications or otherwise specified by the Engineer. Monitoring of installed crack meters shall be covered under the bid item “Monitoring Point and Geotechnical Instrument Monitoring”.

“Shoring Monitoring Points”, per each location.

The per each location price shall cover the complete cost of furnishing, installing, maintaining, and installing shoring monitoring points in locations specified in the Plans, Contract Documents, and Technical Specifications or otherwise specified by the Engineer. Monitoring of installed shoring
monitoring points shall be covered under the bid item “Monitoring Point and Geotechnical Instrument Monitoring”.

“Surface Settlement Points”, per each location.

The per each location price shall cover the complete cost of furnishing, installing, maintaining, and installing surface settlement points in locations specified in the Plans, Contract Documents, and Technical Specifications or otherwise specified by the Engineer. Monitoring of installed surface settlement points shall be covered under the bid item “Monitoring Point and Geotechnical Instrument Monitoring”.

“Structure Settlement Points”, per each location.

The per each location price shall cover the complete cost of furnishing, installing, maintaining, and installing structure settlement points in locations specified in the Plans, Contract Documents, and Technical Specifications or otherwise specified by the Engineer. Monitoring of installed structure settlement points shall be covered under the bid item “Monitoring Point and Geotechnical Instrument Monitoring”.

“Utility Settlement Points”, per each location.

The per each location price shall cover the complete cost of furnishing, installing, maintaining, and installing utility settlement points in locations specified in the Plans, Contract Documents, and Technical Specifications or otherwise specified by the Engineer. Monitoring of installed utility settlement points shall be covered under the bid item “Monitoring Point and Geotechnical Instrument Monitoring”.

“Vibration Monitors”, lump sum.

The lump sum price shall cover the complete cost of furnishing, installing, maintaining, relocating throughout the work, and removing geotechnical instruments required to monitor vibration levels in locations specified in the Plans, Contract Documents, and Technical Specifications or otherwise specified by the Engineer. Geotechnical instruments include all vibration monitors as specified in the Plans, Contract Documents, and Technical Specifications.
Add the following new section:

2-15  GROUND FREEZING

2-15.1  Description

Ground Freezing is a method of providing temporary ground support and groundwater cut-off during excavation and construction activities. Ground freezing may be used for shoring and groundwater control for this contract. The contractor assumes responsibility for the implementation of Ground Freezing design developed by a qualified Ground Freezing Design Engineer. All utilities shall remain in service during the ground freezing operations per division 1-07.17(3) Protection and Support of Existing Utilities.

2-15.2  Materials

A. All materials shall conform to the requirements spelled out the Owner’s designated representative and the Ground Freezing Design Engineer consistent with any applicable federal, state or local regulatory regime.

B. Diameters of and depths of freeze pipes shall be as called for in the engineer’s stamped design, consistent with the most efficient and cost-effective operation of the ground freezing system as a whole.

C. All pipe connections for subsurface installation shall be welded and pressure-tested before installation. Threaded couplings are not permitted.

D. Surface piping shall be insulated to minimize energy losses.

2-15.2(1)  Temperature Monitoring Thermocouples

Temperature-monitoring thermocouples are to have the specifications called for by the Ground Freezing Design Engineer and are to be installed and monitored consistent with protocols that provide the engineer with required soil- and brine-temperature data as the ground freezing system is formed and maintained. Temperature sensors shall have an accuracy of 0.5°F or better.

2-15.3  Construction Requirements

The Scope of Work includes the following items, to be provided by the contractor:

A. Implementation procedures covering all phases and aspects of the ground freezing contractor’s work.

B. Detailed frozen-soil system design report and drawings prepared and stamped by a qualified engineer with specialized ground freezing experience and expertise, i.e., the Ground Freezing Design Engineer.
C. Site preparation and layout.

D. Equipment and all necessary piping, valves, manifolds and other materials required to implement the Ground Freezing Design Engineer’s design.

E. Supervision of pipe installation and formation of the frozen-soil system as called for in the Ground Freezing Design Engineer’s design.

F. Submittal of final layout and, if required, pipe-survey data to the Ground Freezing Design Engineer to be incorporated in the As-Built Schematic which is his basis for approval of the installation.

G. Installation and operation of the temperature-monitoring system related to freezing operations with weekly temperature reports made available to the Ground Freezing Design Engineer for review as the frozen soil formation process moves forward.

H. Maintenance of the system until the frozen-soil structure shown on the contractor Ground Freezing Design Engineer’s drawings reaches its design strength and for as long as required.

I. Contractor establishment and implementation of a surveying program to measure and evaluate ground movement in the course of freeze-down, excavation and construction at the ground surface and in the excavation.

J. Protection of frozen-soil system during excavation and supervision of excavation and construction activities to assure proper interface between frozen-soil system and any activities that might produce heat, cause groundwater movement or affect the thickness, strength and stability of the frozen-soil structure.

K. Dismantling and decommissioning of the system after freezing is no longer required.

L. Installation of ground freeze pipes that extend below elevation 0 feet shall be performed such that the pipe is in direct contact with surrounding natural soil, or if drilled installation is use or the installation method could create an annulus around the pipe where soil below elevation 0 feet is penetrated, the annulus around freeze pipe shall be grouted below elevation 0 feet. Where ground freeze pipe extend below elevation 0 feet, the space occupied by ground freeze pipe shall be tremie grouted simultaneous with ground freeze pipe removal so as to fill and seal the void that would otherwise be created or into which soil
could otherwise collapse. Cement-bentonite grout having the consistency and quality required for grouts used to install, backfill, and abandon wells, shall be used to seal the annulus around ground freeze pipes and, on ground freeze pipe removal, fill the space occupied by the ground freeze pipe, in conformance with Chapter 173-160 of the Washington Administrative Code, Minimum Standards for Construction and Maintenance of Wells (Washington Department of Ecology, 2008).

2-15.3(1) Federal, State, and Local Regulations, Codes, & Standards

All work shall be performed in accordance with all applicable federal, state and local regulations, codes and standards.

2-15.3(2) Definitions

A. Frozen Soil: Soil or rock in which the pore water has been frozen into ice by the circulation of a below-freezing liquid (brine) within a closed underground array of pipes to increase the soil’s strength and to cut off groundwater.

B. Design Freeze Pipe Spacing (Sd): Distance in inches between adjacent freeze pipes (center-to-center).

C. Freeze Pipe Spacing Tolerance (St): The horizontal deviation of a freeze pipe relative to vertical at the design tip elevation beyond which (a) additional engineering analysis is required to show the particular spacing is acceptable or (b) an additional freeze pipe is installed in between the two freeze pipes that define the exceeded horizontal freeze pipe spacing tolerance.

D. Frozen Soil Shoring: Excavation support wall and groundwater cut off composed of frozen ground.

E. TMP: Temperature Monitoring Pipe.

2-15.3 (3) Quality Assurance

A. Qualifications

1. Where ground freezing is employed on the project, the contractor shall employ a qualified Ground Freezing Sub-Contractor to design, install, maintain and monitor the frozen soil shoring. The name, address, phone number, and qualifications of the Ground Freezing subcontractor; project descriptions, dates, and owner contacts for 3 projects in similar soils and groundwater conditions completed in the last 10 years shall be submitted with the bid.
2. The frozen soil shoring shall be designed and stamped by a qualified Ground Freezing Design Engineer who is a Professional Engineer having a minimum of 5 years of experience designing frozen-soil structures and related systems comparable to those required on the subject project. The ground freezing engineer shall supervise all on-site quality assurance programs during installation of the ground freezing system and throughout the design life of the frozen soil shoring. The name, address, phone number, and qualifications of the Ground Freezing Design Engineer; project descriptions, dates, and owner contacts for 3 projects in similar soils and groundwater conditions completed in the last 5 years shall be submitted with the bid.

3. The Ground Freezing Subcontractor shall provide a field supervisor/construction manager having a minimum of 5 years’ experience in charge of comparable ground freezing projects within the 10-year period immediately preceding the execution of the Subcontract for the subject installation. The name, address, phone number, and qualifications of the Ground Freezing subcontractor’s field supervisor/construction manager; project descriptions, dates, and owner contacts for 3 projects in similar soils and groundwater conditions completed in the last 10 years shall be submitted with the bid.

B. The Ground Freezing Subcontractor’s qualified ground freezing manager or his designated representative shall be in attendance during installation, testing, startup of the freezing system and when excavation operations are taking place. He shall be provided access to make inspections and take soil temperature readings and collect other data for review by the design engineer.

C. The Ground Freezing Subcontractor shall make all monitoring results available to the Ground Freezing Design Engineer. Contractor shall make all monitoring results available to the Owner within 1 day of monitoring data collection.

2-15.3(4) Tolerances

A. Tolerances related to the installation of the ground-freezing system shall be established by the Ground Freezing Design Engineer. All freeze and temperature pipes in the underground freezing system shall be surveyed and documented in the As-Built, which the Ground Freezing Design Engineer prepared.

B. The horizontal tolerance for freeze pipes (St) shall be determined by the Ground Freezing Design Engineer and shown on the Frozen Soil design drawings. Any set of freeze pipes that exceed this tolerance shall be evaluated by the Ground Freezing Design Engineer who will make a
determination as to whether the spacing is acceptable or whether an additional freeze pipe is needed in the wider-than-design spacing.

2-15.3(5) Documentation

The contractor shall submit the following 45-days prior to beginning installation of ground freeze systems, unless otherwise noted:

A. Qualifications of the Ground Freezing Design Engineer, ground freezing project manager and the experience of the contractor as described above.

B. The Ground Freezing Design Engineer’s analysis of any field and laboratory investigations carried out beyond the scope of the geotechnical report and other components of the Project Documents.

C. Report stamped by the Ground Freezing Design Engineer stating that the design is satisfactory and that the necessary equipment to maintain and monitor the frozen ground under the given conditions are accounted for in the design.

D. Drawings stamped by the Ground Freezing Design Engineer showing planned locations of all freeze pipes, heads and manifolds relative to the excavation and showing information provided by the Owner regarding the location of existing tunnels, existing trees, curbs and streets, underground obstructions, utilities and structures and the footings of nearby buildings and other above-ground structures, where applicable.

E. Procedures for the documentation of freeze-pipe installation and the framework for the As-Built assuring that proofs of achieved tolerances, as established by the Ground Freezing Design Engineer, will be met before the engineer approves the activation of ground freezing operations. Submit as-built drawings and information prior to activation of the ground freezing operations.

F. Product data for refrigerant, brine, chillers, pumps and temperature-monitoring instrumentation.

G. Procedures for determining freeze-wall thickness, strength and stability, including but not limited to the location and depth intervals of temperature measuring devices, type and accuracy of these devices and the schedule for monitoring these devices. Calculations supporting the design and demonstrating required thickness, strength, and stability where ground freezing is used for shoring.
H. Procedures for determining frozen-ground thickness, strength, and stability for resistance to uplift, including but not limited to the location and depth intervals of temperature measuring devices, type and accuracy of these devices, and the schedule for monitoring these devices. Calculations performed supporting the design and demonstrating required thickness, strength, and stability where ground freezing is used for shoring, restricts groundwater flow, or forms the bottom or partial bottom of an excavation.

I. Survey plans and method to monitor ground movement at the surface and within the excavation area, including details about the survey methods, accuracy, location of survey points and schedules for surveying.

J. Quality assurance/quality control plan for installation, operation and maintenance of the freeze system including frequency and reporting format of monitoring.

K. Emergency notification procedures including identification of the chain of command of those responsible for making emergency-response decisions.

2-15.3(6) Field and Laboratory Investigation

A. The Ground Freezing Design Engineer’s freeze design shall be based on soil and groundwater data provided in the Contract. Additional field and laboratory investigation may be planned, implemented and managed by the contractor to provide supplemental information deemed necessary by the contractor for the ground freezing design. Additional field and/or laboratory investigation shall be undertaken at the contractor’s expense.

B. The Ground Freezing Design Engineer’s freeze design shall consider the variable gradation of soil and soil layers along the alignment, presence of relatively high void ratio and hydraulic conductivity sand and gravel along the project alignment, proximity of tidally affected waters, and tidal influence on groundwater levels and pressures within soil units along the alignment.

2-15.3(7) Design Requirements

The design shall be based on the engineer’s analysis of all available data from field and laboratory investigation; tidal influence on groundwater levels and pressures; tidal influence on groundwater flow; and all available data concerning the location of underground obstructions, utilities and structures and the footings of nearby buildings and other above-ground structures. The frozen soil shoring shall be designed to resist earth, groundwater, applied loads, and uplift with a minimum factor of safety of 2.0.
2-15.3(8)  General Requirements for Installation of Freezing System

A. The Ground Freezing Design Engineer shall prepare and submit drawings showing the locations of all freeze pipes, heads and manifolds relative to the excavation and to all known underground and nearby above-ground structures.

B. Number, diameter and spacing of freeze pipes shall be determined by the Ground Freezing Design Engineer on the basis of the design requirements specified in Article 3.2 of this specification.

C. The Ground Freezing Subcontractor shall provide reliable equipment to successfully install freeze pipes through or around obstructions and the soil profile as detailed in the geotechnical information provided by the Owner. Records of each drill hole shall be maintained and shall include location, depth and thickness of any obstructions encountered.

D. Freeze pipes shall penetrate or be installed to avoid obstructions. Additional freeze pipes shall be installed as necessary to obtain a consistent frozen mass of the minimum dimension as determined by the analysis of the design engineer.

E. Freeze pipes shall be surveyed to determine variation from planned position with depth, using acceptable methods such as slope inclinometers or Boretrak surveying equipment. A detailed As-Built shall be produced as the basis for the Ground Freeze Design Engineer's judgment that the soil-freezing system has been installed to his standards and specifications.

F. The contractor shall dispose of any drill cuttings and drilling fluids. All brine and refrigeration fluids shall be considered the property of the contractor for management, spill control, collection and disposal.

G. Ground freeze pipes extending below elevation 0 feet shall be installed and removed such that the installation and removal does not create a path for groundwater to flow between the lower and upper aquifer. Backfill around freeze pipes between elevations 0 feet and -5 feet (minus 5 feet) installed in drilled holes shall consist of bentonite, concrete, or cementitious grout. Ground freeze pipe removal shall be performed such that, below elevation 0 feet, the space occupied by the ground freeze pipe (prior to removal) is filled with bentonite or cementitious grout as the ground freeze pipe is extracted.
H. All work shall be performed within the limits and to the standards specified in the Project Documents.

2-15.3(9) Freezing System Performance Requirements

A. All subsurface pipe connections must be welded and tested. Threaded couplings are unacceptable.

B. Prior to charging the system with brine, all components shall be tested, including the freezing elements, to standards acceptable to the Ground Freezing Design Engineer to ensure that no leakage can occur.

C. Install additional piping if freeze pipe spacing at any depth exceeds the value indicated in the Ground Freezing Design Engineer’s design.

D. Maintain the integrity of frozen ground by whatever means required. This is the sole responsibility of the contractor, including placement of protective covering and insulation on exposed surfaces in conformance with submittals.

E. Install subsurface refrigeration pipes by procedures that will minimize adjacent soil disturbance.

F. Fluids shall be removed from all piping systems prior to removal or abandonment in place. The contractor shall demonstrate that all fluids have been managed and disposed in accordance with all federal, state and local environmental regulations.

G. All elements of the above-ground distribution system shall be removed at the end of the frozen soil shoring. Treatment of underground pipes and exposed pipe heads is to be negotiated in a project-by-project basis.

H. Precautions shall be taken to avoid damage to existing and adjacent facilities.

2-15.3(10) General Requirements for Monitoring

A. The Ground Freezing Contractor shall provide a monitoring system capable of thermo-profiling freezing operations to verify that the system is providing the design thickness, strength and stability called for by the Ground Freezing Design Engineer.
B. All temperature monitoring shall be planned by the Ground Freezing Sub-Contractor and shall be in accordance with the Ground Freezing Design Engineer's design.

C. As a minimum the monitoring system shall include:

1. Temperature monitoring pipes (TMP's) as called for in the Ground Freezing Design Engineer's stamped design.

2. Thermocouple probes for each wall as reviewed and approved by the Ground Freezing Design Engineer.

3. Temperature monitoring of brine supply and return and of soils at increments of depth as called for by the Ground Freezing Design Engineer.

4. Brine flow monitoring including loss of circulation and/or loss of coolant.

5. Monitoring of active freeze units including temperature, flow rate and on/off status.

6. The contractor shall provide reports to the Ground Freezing Design Engineer and Owner, in a format approved by the Ground Freezing Design Engineer.

D. MONITORING FREQUENCY

1. The overall determination of a suitable monitoring frequency shall be made by the Ground Freezing Design Engineer. As a minimum the Ground Freezing Contractor shall obtain at least two (2) initial readings for each instrument prior to the activation of the ground freezing system.

2. Monitor each instrument daily or on a nearly daily basis, or more frequently depending on system performance and environmental conditions, from the start of freezing operations through freeze-down and as long as excavation and construction activities are on-going.

3. Report all monitoring results to the design engineer on a weekly basis along with comparisons to predicted ground temperatures at key locations.
E. REPORT ON SOIL AND BRINE TEMPERATURES

1. Provide a week report on data provided by thermocouples in TMP's.

2. Report shall consist of a plot of temperature versus time for each TMP at key elevations along with comparisons to predicted ground temperatures for these same locations and times.

F. DISPOSAL OF INSTRUMENTATION

Instruments shall be disposed of, backfilled, removed or salvaged subject to instructions from the Owner's designated representative and subject to approval by the design engineer.

2-15.4 Measurement

Freeze wall shoring is considered “Watertight Trench Shoring” and shall be measured in accordance with the provisions of 7-08.4.

2-15.5 Payment

Freeze wall shoring including all costs to maintain and operate the freeze wall system is considered “Watertight Trench Shoring” and shall be paid in accordance with the provisions of 7-08.5.
DIVISION 4 BASES

4-04 BALLAST AND CRUSHED SURFACING

4-04.3 Construction Requirements

4-04.3(7) Miscellaneous Requirements

Supplement this section with the following:

The Contractor must provide the Engineer with written notice at least 24 hours before hauling and placing surfacing materials from off-site locations. This notice is essential in scheduling inspection personnel and item quantity ticket takers. Failure by the Contractor to begin hauling and placing materials at the agreed time may result in a penalty equal to the standby cost incurred by the County. The penalty will be calculated and deducted from the item being hauled.
DIVISION 5 SURFACE TREATMENTS AND PAVEMENTS

5-04 HOT MIX ASPHALT

Delete Section 5-04 and amendments, Hot Mix Asphalt and replace it with the following:

5-04.1 Description

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

Materials shall meet the requirements of the following sections:

- Asphalt Binder 9-02.1(4)
- Cationic Emulsified Asphalt 9-02.1(6)
- Anti-Stripping Additive 9-02.4
- HMA Additive 9-02.5
- Aggregates 9-03.8
- Recycled Asphalt Pavement 9-03.8(3)B
- Mineral Filler 9-03.8(5)
- Crushed Surfacing 9-03.9(3)
- Recycled Material 9-03.21
- Portland Cement 9-01
- Sand 9-03.1(2)
  (As noted in 5-04.3(5)C for crack sealing)
- Joint Sealant 9-04.2
- Foam Backer Rod 9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.
The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

5-04.2(1) How to Get an HMA Mix Design on the QPL

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design – Obtaining Project Approval

No paving shall begin prior to the approval of the mix design by the Engineer.

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

Commercial evaluation will 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. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.
Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.

- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.

- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.**

The mix design shall 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: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- 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), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).

- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation Approval of a mix design for “Commercial Evaluation” will be based on a review of the Contractor’s submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.
For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL’s) appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Processes

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.

- Before using additives, obtain the Engineer’s approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

<table>
<thead>
<tr>
<th>Compacted Thickness (Feet)</th>
<th>Wearing Course</th>
<th>Other Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.10</td>
<td>55°F</td>
<td>45°F</td>
</tr>
<tr>
<td>0.10 to .20</td>
<td>45°F</td>
<td>35°F</td>
</tr>
<tr>
<td>More than 0.20</td>
<td>35°F</td>
<td>35°F</td>
</tr>
</tbody>
</table>

5-04.3(2) Paving Under Traffic

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and
provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the work in accordance with these requirements, including the installation and removal of temporary pavement markings, shall be included in the unit contract prices for the various bid items involved in the contract and no further payment will be made.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Plants used for the preparation of HMA shall conform to the following requirements:

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.
3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.

4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).

5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:

   a. A mechanical sampling device attached to the HMA plant.
   b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

**5-04.3(3)B Hauling Equipment**

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

**5-04.3(3)C Pavers**

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.
The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer’s recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer’s recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

**5-04.3(3)D Material Transfer Device or Material Transfer Vehicle**

(April 4, 2016 WSDOT GSP, Option 1)

Section 5-04.3(3)D is deleted in its entirety
5-04.3(3)E Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer’s recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer’s recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces
that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor’s operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one-part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks ¼ inch in width and greater.

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Sand Slurry: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.
In areas where HMA will not be placed, fill the cracks as follows:

1. Cracks $\frac{1}{4}$ inch to 1 inch in width - fill with hot poured sealant.

2. Cracks greater than 1 inch in width – fill with sand slurry.

**Hot Poured Sealant:** For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer’s recommendations. Furnish a Type 1 Working Drawing of the manufacturer’s product information and recommendations to the Engineer prior to the start of work, including the manufacturer’s recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor’s method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

A. Cracks $\frac{1}{4}$ inch to 1 inch in width - fill with hot poured sealant.

B. Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor’s operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder.
Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material
in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

- HMA Class 1”  
  0.35 feet
- HMA Class ¾” and HMA Class ½”
  - wearing course  
    0.30 feet
  - other courses  
    0.35 feet
- HMA Class ⅜”  
  0.15 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermixing of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in
accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

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 Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

<table>
<thead>
<tr>
<th>Property</th>
<th>Non-Statistical Evaluation</th>
<th>Commercial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Binder</td>
<td>+/- 0.5%</td>
<td>+/- 0.7%</td>
</tr>
<tr>
<td>Air Voids, Va</td>
<td>2.5% min. and 5.5% max</td>
<td>N/A</td>
</tr>
</tbody>
</table>

For Aggregates in the mixture:

a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

<table>
<thead>
<tr>
<th>Aggregate Percent Passing</th>
<th>Non-Statistical Evaluation</th>
<th>Commercial Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”, ¾”, ½”, and 3/8” sieves</td>
<td>+/- 6%</td>
<td>+/- 8%</td>
</tr>
<tr>
<td>No. 4 sieve</td>
<td>+/- 6%</td>
<td>+/- 8%</td>
</tr>
<tr>
<td>No. 8 Sieve</td>
<td>+/- 6%</td>
<td>+/- 8%</td>
</tr>
<tr>
<td>No. 200 sieve</td>
<td>+/- 2.0%</td>
<td>+/- 3.0%</td>
</tr>
</tbody>
</table>
b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2D2).

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

5. **Aggregates** – 2 percent for the aggregate passing the 1½" , 1" , ¾" , ½" , ⅜" , and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

6. **Asphalt Binder Content** – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent.

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day’s production or 800 tons, whichever is less except that the final subplot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will
begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per subplot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer’s discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of Va will at the option of the Contracting Agency. If tested, compliance of Va will use WSDOT 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 FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:
### Table of Price Adjustment Factors

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Factor “f”</th>
</tr>
</thead>
<tbody>
<tr>
<td>All aggregate passing: 1½&quot;, 1&quot;, ¾&quot;, ½&quot;, ⅜&quot; and No.4 sieves</td>
<td>2</td>
</tr>
<tr>
<td>All aggregate passing No. 8 sieve</td>
<td>15</td>
</tr>
<tr>
<td>All aggregate passing No. 200 sieve</td>
<td>20</td>
</tr>
<tr>
<td>Asphalt binder</td>
<td>40</td>
</tr>
<tr>
<td>Air Voids (Va) (where applicable)</td>
<td>20</td>
</tr>
</tbody>
</table>

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriated CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

**5-04.3(9)C5 Vacant**

**5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments**

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.
If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)C7  Mixture Nonstatistical Evaluation - Retests

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, Va. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

5-04.3 (9)D  Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(10)  HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-
foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core” the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core” the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.
Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A  HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor’s option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B  HMA Compaction – Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer’s discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.
5-04.3(10)C  Vacant

5-04.3(10)D  HMA Nonstatistical Compaction

5-04.3(10)D1  HMA Nonstatistical Compaction – Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day’s production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2  HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3  HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference
maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to
determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots
with a calculated CPF in excess of 1.00 will be used to offset lots with CPF
values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be
evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear
moisture-density gauge or cores will be completed as required to provide a
minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming 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 CPF, the quantity of HMA in the compaction control
lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be
rejected. The Contractor may propose, in writing, alternatives to removal and
replacement of rejected material. Acceptability of such alternative proposals will
be determined at the sole discretion of the Engineer. HMA that has been rejected
is subject to the requirements in Section 1-06.2(2) and this specification, and the
Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material
and replace it with new material. Any such new material will be sampled, tested,
and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of
Roadway that appears defective. Material rejected before placement shall not be
incorporated into the pavement. Any rejected section of Roadway shall be
removed.

No payment will be made for the rejected materials or the removal of the
materials unless the Contractor requests that the rejected material be tested. If
the Contractor elects to have the rejected material tested, a minimum of three
representative samples will be obtained and tested. Acceptance of rejected
material will be based on conformance with the nonstatistical acceptance
Specification. If the CPF for the rejected material is less than 0.75, no payment
will be made for the rejected material; in addition, the cost of sampling and
testing shall be borne by the Contractor. If the CPF is greater than or equal to
0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or

2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or

3. When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.
5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed, and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.
Submit a Type 1 Working Drawing consisting of the sealant manufacturer’s application procedure.

Construct the bridge paving joint seal as specified on the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer’s application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or

2. Removal and replacement of the wearing course of HMA, or

3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.
When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving planning (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing (Milling) Bituminous Pavement

The planning plan must be approved by the Engineer and a pre planning meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planning submittals.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor’s planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as deter-mined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.
After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

**5-04.3(14)A Pre-Planing Metal Detection Check**

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor’s failure to conduct a pre-planing metal detection survey, or from the Contractor’s failure to notify the Engineer of any hidden metal that is detected.

**5-04.3(14)B Paving and Planing Under Traffic**

**5-04.3(14)B1 General**

In addition, the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise, or the Engineer approves, the Contractor must comply with the following:

1. Intersections:
   
   a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).
b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.

3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation’s activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation’s traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where peace officers will be
stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day’s traffic control as it relates to the specific requirements of that day’s planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day’s planing, and paving.

2. A copy of each intersection’s traffic control plan.

3. Haul routes from Supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.

4. Names and locations of HMA Supplier facilities to be used.

5. List of all equipment to be used for paving.

6. List of personnel and associated job classification assigned to each piece of paving equipment.

7. Description (geometric or narrative) of the scheduled sequence of planing and of paving and intended area of planing and of paving for each day’s work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordination to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.

8. Names, job titles, and contact information for field, office, and plant supervisory personnel.

9. A copy of the approved Mix Designs.

10. Tonnage of HMA to be placed each day.

11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to
discuss that day’s operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day’s operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both Paving Plan and for Planing Plan:
   a. The actual times of starting and ending daily operations.
   b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.
   c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other contractors who may operate in the Project Site.
   d. Notifications required of Contractor activities and coordinating with other entities and the public as necessary.
   e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.
   f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed.
   g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.
   h. Description of how flaggers will be coordinated with the planing, paving, and related operations.
   i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.
   j. Other items the Engineer deems necessary to address.
2. Paving – additional topics:

   a. When to start applying tack and coordinating with paving.

   b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.

   c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.

   d. Description of contingency plans for that day’s operations such as equipment breakdown, rain out, and Supplier shutdown of operations.

   e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

5-04.4 Measurement

Delete the 11th and 12th paragraphs and replace them with the following:

Temporary pavement marking will not be measured. All costs for provision and removal of temporary pavement marking shall be included the unit contract price per ton for HMA Cl. ___ PG ___, in the proposal.

Supplement this section with the following:

Commercial HMA includes the surfacing material required for the construction of the roadway, thickened edge curb, and curb and gutter to
thickened edge asphalt transition. The quantity in the proposal for “Commercial HMA” is an estimated quantity. The bid item for “Commercial HMA” shall be measured by the actual material delivered to the site. The Contractor shall be paid only for the amount of import material needed for the work. Section 1-04.4 shall not apply.

HMA Cl. ____ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Water will be measured by the M gallon as provided in Section 2-07.4.3

5-04.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

“HMA Cl. ___ PG ___”, per ton.

“Commercial HMA”, per ton.

The unit contract price per ton for “HMA Cl. ___ PG ___”, “HMA for Approach Cl. ___ PG ___”, “HMA for Preleveling Cl. ___ PG ___”, “HMA for Pavement Repair Cl. ___ PG ___”, and “Commercial HMA” shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

Payment for “Temporary Pavement Marking” shall be included the unit contract price per ton for HMA Cl. ___ PG ___, in the proposal.

“Water”, per M gallon.

Payment for “Water” is described in Section 2-07.5.

(April 4, 2016 WSDOT GSP, Option 1)

Asphalt Cost Price Adjustment

The Contracting Agency will make an Asphalt Cost Price Adjustment, either a credit or a payment, for qualifying changes in the reference cost of asphalt binder. The adjustment will be applied to partial payments made according to Section 1-09.9 for the following bid items when they are included in the proposal:

“HMA Cl. ___ PG ___”

“HMA for Approach Cl. ___ PG ___”

Special Provisions 5-31
BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
“HMA for Preleveling Cl. ___ PG ___”
“HMA for Pavement Repair Cl. ___ PG ___”
“Commercial HMA”

The adjustment is not a guarantee of full compensation for changes in the cost of asphalt binder. The Contracting Agency does not guarantee that asphalt binder will be available at the reference cost.

The Contracting Agency will establish the asphalt binder reference cost twice each month and post the information on the Agency website at:

http://www.wsdot.wa.gov/Business/Construction/EscalationClauses.htm

The reference cost will be determined using posted prices furnished by Poten & Partners, Inc. If the selected price source ceases to be available for any reason, then the Contracting Agency will select a substitute price source to establish the reference cost.

The base cost established for this contract is the reference cost posted on the Agency website with an effective date immediately preceding the bid opening date.

Adjustments will be based on the most current reference cost for Western Washington or Eastern Washington as posted on the Agency website, depending on where the work is performed. For work completed after all authorized working days are used, the adjustment will be based on the posted reference cost during which contract time was exhausted. The adjustment will be calculated as follows:

No adjustment will be made if the reference cost is within 5% of the base cost.

If the reference cost is greater than or equal to 105% of the base cost, then Adjustment = (Current Reference Cost – (1.05 x Base Cost)) x (Q x 0.056).

If the reference cost is less than or equal to 95% of the base cost, then Adjustment = (Current Reference Cost – (0.95 x Base Cost)) x (Q x 0.056).

Where Q = total tons of all classes of HMA paid in the current month’s progress payment.

“Asphalt Cost Price Adjustment”, by calculation.

“Asphalt Cost Price Adjustment” will be calculated and paid for as described in this section. For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the total bid by the Contractor.
5-05 CEMENT CONCRETE PAVEMENT

5-05.1 Description
This section is supplemented with the following:

This work shall also consist of constructing Decorative Cement Concrete Pavement, and Decorative Cement Conc. Crosswalk, as noted on the Plans, in conformity with the lines, grades, thicknesses, and typical cross-sections shown on the Plans.

5-05.2 Materials
This section is supplemented with the following:

**Decorative Crosswalk**
Decorative Crosswalk shall be Type II Gray Portland Cement with integral color additive.

Decorative Crosswalk pavement shall be a uniform, “San Diego Buff” (warm buff) color with a heavy broom finish, as shown per Plans.

Integral Color additives for the Decorative Crosswalk shall contain pure concentrated mineral pigments, containing no fillers, adulterants or admixtures, specially processed for mixing into concrete and complying with ASTM C979. Calcium chloride shall not be permitted in the mix.

Integral color liquid dose rate shall be 2.32 lbs per 94 lb sack of cement. Integral color powder dose rate shall be 1.5 lbs per 94 lb sack of cement.

Decorative Crosswalk pavement shall be cured and sealed with a curing compound and sealer to be approved by color additive manufacturer, for use with colored concrete, and shall comply with ASTM C309.

Curing compound and sealer shall be water based, non-flammable, low gloss, non-yellowing, non-clouding and wear resistant. Compound and sealer shall protect against water damage, oil and common stains, formulated for exterior use.

**Decorative Pavement**
Decorative Pavement shall be Type II Gray Portland Cement.

Decorative Pavement shall be finished with architectural scoring, sandblasting and exposed aggregate as shown per Plans.

Decorative Pavement curing compound and sealer shall be water based, non-flammable, low gloss, non-yellowing, non-clouding and wear resistant. Compound and sealer shall protect against water damage, oil and common stains, formulated for exterior use.
5-05.3 Construction Requirements

This section is supplemented with the following:

Decorative Crosswalk shall consist of integrally colored concrete pavement with scoring pattern as detailed on Plans and as specified in these Special Provisions and Decorative Pavement shall consist of sandblasted and exposed aggregate finish, with architecturally scored joints as detailed on Plans and as specified in these Special Provisions.

The final layout of Decorative Crosswalk and Decorative Pavement shall be determined in field and approved by Engineer.

Qualified and competent workman shall have a minimum five (5) years of work experience for same paving type installation, and placement of concrete.

Submittal

The Contractor shall submit Joint Layout Plan to Engineer for approval at least five (5) working days prior to the commencement of any pavement construction. Transverse and longitudinal joints shall be contraction or through joints (including construction joints).

Contractor shall provide color sample (3”x3”) of integral color additive for Decorative Crosswalk, prior to start of mock-up work for approval by Engineer.

Mock-Up

Prior to start of pavement work the Contractor shall provide a five-feet by five-feet mock-up sample of the Decorative Cement Conc. Crosswalk and Decorative Cement Conc. Pavement, pattern to be determined by Engineer; with integral color, broom finish, sandblasting, exposed aggregate finish and scoring. The sample area of the mock-up Decorative Crosswalk and Decorative Pavement shall be approved by Engineer prior to start of work. The final approved samples shall be the standard for the balance of the rest of the work installed, and shall be protected from damage until final acceptance and approval.

The mock-up(s) as needed and provided by Contractor for Engineer’s approval shall be included in the unit bid price for “Decorative Cement Conc. Crosswalk” and “Decorative Cement Conc. Pavement” and per these Special Provisions.

No concrete shall be placed prior to the test panel being approved by the Engineer.

Asphalt mastic joint fillers shall be 3/8” x full depth and of the same material as that used in the curb with matching expansion joint locations. Expansion joints and architectural score joint shall be provided as shown on the Plans, or in locations to be approved by the Engineer for best appearance.
5-05.3(1)  Concrete Mix Design for Paving

The sixth paragraph is supplemented with the following:

The submittal for the concrete mix design shall provide the following date: the date, the amount of materials (i.e. cement, sand, aggregates, water), the type and amount of each admixture, and the designated 28-day compressive strength specific to the mix design being submitted. The design compressive strength shall be a minimum of 4,000 psi.

5-05.3(4)  Measuring and Batching Materials

5-05.3(4)A  Acceptance of Portland Cement Concrete Pavement

The first, second, third and fourth paragraphs are deleted.

This section is supplemented with the following:

Acceptance of concrete will be non-statistical.

5-05.3(8)  Joints

The second paragraph is supplemented with the following:

When new pavement abuts an existing pavement, the locations of the joints in the new pavement shall match with the joints in the existing pavement unless otherwise shown on the plans.

The faces of all joints shall be constructed perpendicular to the surface of the cement concrete pavement or matching the detail scheme shown in the plans.

5-05.3(8)D Isolation Joints

This section is supplemented with the following:

The joint alignment shall be at right angles to the Pavement Structure centerline unless otherwise specified in the Contract.

Isolation joints shall be constructed with pre-molded material, 3/8-inch in thickness and conform to Section 9-04.1(2) Pre-molded Joint Filler for Expansion Joints and as shown on the Standard Details in these Specifications.

The joint material shall be held accurately in place during the placing and finishing of the concrete by a bulkhead, a holder, metal cap or any other approved method. The joint shall be perpendicular to the paved surface and the holder shall be in place long enough to prevent sagging of the joint material.
A wood filler strip or metal cap shall be placed on the top of the pre-molded joint filler to form the groove, and shall remain in place until after the finishing and the concrete is sufficiently set to resist sloughing in the groove. The joint filler shall be stapled together at the ends to preserve continuity.

Immediately after removal of side forms, the edges of the pavement shall be carefully inspected and wherever the joint filler is not fully exposed, the concrete shall be chipped down until the edge of the filler is fully exposed for the entire depth.

Add the following new section:

**5-05.3(8)E Sealing Through Joints**

After the pavement is cured and before carrying any traffic, the space left by the removal of the wood filler strip or the metal cap above the top of the expansion joint filler strip shall be thoroughly cleaned of all loose material. The groove shall be completely free of any projecting concrete from the sides and the groove shall be continuous across the slab to each edge. It shall then be filled level with the pavement surface with joint sealant meeting the requirements of Section 9-04.2 Joint Sealants.

The joint sealant material shall be “black” color SL1 or similar and heated and placed in accordance with the manufacturer’s instructions. Burned material will be rejected. The through joint groove shall be dry at the time of pouring the sealing compound.

**5-05.3(11) Finishing**

The section is supplemented with the following:

Cement concrete pavement at crosswalk shall be scored, as shown and detailed in Plans.

**5-05.3(14) Cold Weather Work**

This section is supplemented with the following:

The following additional requirements for placing concrete shall be in effect from November 1 to April 1:

- Engineer shall be notified at least 24 hours prior to placement of concrete.
- All concrete placement shall be completed no later than 2:00 p.m. each day.
- Where forms have been placed and the subgrade has been subjected to frost, no concrete shall be placed until the ground is completely thawed. At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.
5-05.3(17) Opening to Traffic

This section is supplemented with the following:

Concrete Pavement for roundabout and crosswalk must meet standard specification 5-05.3(17) but the concrete pouring shall occur during a closure area with sufficient time to reach compressive strength prior to opening. Contractor must schedule adequate curing time accordingly.

5-05.4 Measurement

The first, second, and sixth paragraphs are deleted.

This section is supplemented with the following:

“Decorative Cement Conc. Crosswalk” shall be measured by the square yard surface of the scored and finished area, completed and accepted.

“Decorative Cement Conc. Pavement” shall be measured by the square yard surface of scored and finished pavement area, completed and accepted.

No separate measurement will be made for the required mock-up.

5-05.5 Payment

This section is supplemented with the following:

“Decorative Cement Conc. Crosswalk”, per square yard.

The unit Contract price per square yard for “Decorative Cement Conc. Crosswalk”, shall include all labor, materials, costs and equipment necessary including but not limited to concrete, color, dowels, welded-wire fabric, tie-bars, sawcutting, mock-up, finish, and sealing joints as noted in the Plans. Thermoplastics are paid per Plastic Wide Lane Line in 8-22 Pavement Markings.

“Decorative Cement Conc. Pavement”, per square yard.

The unit Contract price per square yard for “Decorative Cement Conc. Pavement”, shall include all labor, materials, costs and equipment necessary including but not limited to concrete, mock-up, light and heavy sandblasting, exposed aggregate finish, sawcutting, finishing, and sealing joints in accordance with the roundabout detail as shown in the Plans.
DIVISION 6 STRUCTURES

6-06 BRIDGE RAILINGS

6-06.1 Description

Supplement this section with the following:

The work also consists of providing and installing handrail and pedestrian rail along stairs and on the thickened edge sidewalk areas as shown in the plans.

6-06.3 Construction Requirements

6-06.3(2) Metal Railings

Supplement this section with the following:

The work also consists of providing and installing handrail and pedestrian rail along stairs and on the thickened edge sidewalk as shown in the plans. All surfaces of the railing shall be powder coated to match the luminaires per Section 6-07.

6-06.4 Measurement

Supplement this section with the following:

“Pedestrian Railing” will be measured by the linear foot along the line and slope at the base of the completed railing.

6-06.5 Payment

Supplement this section with the following:

“Pedestrian Railing”, per linear foot.

6-07 PAINTING

6-07.1 Description

Supplement this section with the following:

This work shall consist of painting systems and colors for metal elements as shown on the Plans including but not limited to luminaire standards and railings.
6-07.2 Materials

Supplement this section with the following:

Paint materials shall comply with the requirements in Section 9-08 unless described in this section.

**Paint Color / Paint System Table**

<table>
<thead>
<tr>
<th>Specification Section</th>
<th>Item</th>
<th>Paint Color</th>
<th>Paint System</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-29.6 9-29.10</td>
<td>Luminaires, and all associated appurtenances</td>
<td>“Jet Black”, RAL 9005</td>
<td>Factory Applied Powder Coat</td>
</tr>
<tr>
<td>9-29.6 9-29.10</td>
<td>Railings, and all associated appurtenances</td>
<td>“Jet Black”, RAL 9005</td>
<td>Factory Applied Powder Coat</td>
</tr>
</tbody>
</table>

**Multicolor Powder Coat**

Multicolor powder coat shall be a low gloss urethane coating system including a brown base powder coat and a metallic copper pigment top coat which yields to a mottled dark brown and reddish brown tones looking like real distressed aged bronze. Multicolor powder coat system shall be resistant to ultraviolet rays, rust and fingerprints.

**Powder Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Specific Gravity:</td>
<td>1.60 +/- .05</td>
</tr>
<tr>
<td>Theoretical Coverage:</td>
<td>48 sq/ft @ 2.5 mils</td>
</tr>
<tr>
<td>Particle Distribution:</td>
<td>+44 microns (325 mesh) 65 - 75%</td>
</tr>
<tr>
<td>Film Thickness:</td>
<td>2.5 to 4.0 mils</td>
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<tr>
<td>Optimal Storage:</td>
<td>&lt; 80°F, 50% RH</td>
</tr>
<tr>
<td>Cure Schedule:</td>
<td>12 min. @ 400°F, 18 min. @ 375°F, 25 min. @ 360°F</td>
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</tbody>
</table>

**Cure Film Properties**

<table>
<thead>
<tr>
<th>Test***</th>
<th>Method</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloss:</td>
<td>ASTM D523</td>
<td>3-7%</td>
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<tr>
<td>PCI Smoothness:</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Direct Impact:</td>
<td>ASTM D2794</td>
<td>20 in./lbs. @ 2.5 mils</td>
</tr>
<tr>
<td>Indirect Impact:</td>
<td>ASTM D2794</td>
<td>20 in./lbs. @ 2.5 mils</td>
</tr>
<tr>
<td>Pencil Hardness:</td>
<td>ASTM D3363</td>
<td>H-2H</td>
</tr>
<tr>
<td>Cross Hatch Adhesion:</td>
<td>ASTM D3359B</td>
<td>5B</td>
</tr>
<tr>
<td>Flexibility:</td>
<td>ASTM D522</td>
<td>3/8 in</td>
</tr>
<tr>
<td>Salt Spray Hours</td>
<td>ASTM B117</td>
<td></td>
</tr>
</tbody>
</table>
**Galvanizing**
All fabricated steel components and materials to be galvanized per ASTM 123.

All steel components, hardware and materials to be galvanized per ASTM 153.

**Anti-Graffiti**
All powder coating for poles, base covers, district signs, and benches shall have anti-graffiti properties as a part of the powder coat system.

**6-07.3 Construction Requirements**
Supplement this section with the following:

- Powder coater shall have Powder Coating Institute PCI certification. Powder coater shall use maximum KV settings during product application.

- The Contractor shall submit three (3) samples of each custom color, textures, and gloss for Engineer’s approval. Metal coupon samples shall be three (3) inches by five (5) inches.

**6-07.3(11)A Painting or Powder Coating of Galvanized Surfaces**
Supplement this section with the following:

- Clean surfaces to be powder coated in accordance with manufacturer’s written instructions for surface preparation.

- Install powder coatings in accordance with applicable codes and regulations, manufacturer’s written instructions.

- Applications of powder coating materials shall be performed in shop conditions, except for touch-ups approved in advance by the Engineer.

- Finished surfaces shall be fully and uniformly coated without pinholes, bubbles, sag, runs, lumps, marks or discoloration.

- Surface finish shall be of consistent and uniform color, texture, and gloss to match the approved sample.

- After powder coating has been in place at least fifteen (15) days, and within thirty (30) days of Substantial Completion, check all powder coated surfaces for damage, missed areas and discoloration.

- Prepare surfaces and touch-up damaged, missed and discolored areas to bring coating system to full dry film thickness, in color and gloss matching that of adjacent coated areas.
6-07.3(14) Painting of Aluminum Surfaces

Add the following New Section:

All aluminum items specified herein to be powder coated shall be factory primed and powder coated in accordance with the manufacturer's recommendations.

This product was designed to be applied by electrostatic spray, on steel, galvanized steel, or aluminum.

Pretreatment before Painting
The substrate pretreatment prior to powder coating is a critical factor in developing maximum corrosion resistance and maximizing the lifetime of the product.

C.R.S. (Iron phosphate): 2 to 5 stages depending upon soil level, and quality desired.

C.R.S. (Zinc phosphate): 5 to 9 stages depending upon soil level, and quality desired.

Galvanized steel (Zinc phosphate): 5 to 7 stages depending on soil level, and quality desired. Galvanized steel must be degassed at 5 degrees above cure temperature to minimize gassing.

Aluminum (Chromate): 5 stage system is normally needed.

Aluminum (phosphate): 5 stage system is normally needed. The paint color of aluminum surfaces shall be per 6-07.2

6-07.4 Measurement

No specific unit of measurement applies for painting and powder coating finishes.

6-07.5 Payment

Supplement this section with the following:

Measurement and payment for all painting and powder coating finishes shall be included in the related bid items that receive the painting and finishes including all labor, equipment, materials and tools necessary to complete the work as shown on the Plans and required by the Specifications.
DIVISION 7 DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATERMAINS AND CONDUITS

7-01 DRAINS

7-01.1 Description

Supplement this section with the following:

This work shall include the installation of flexible drain pipe, couplers and connections to existing systems as noted in the plans.

7-01.2 Materials

Supplement this section with the following:

Materials shall be the size and type noted on the plans. If flexible drain pipe is required it shall be solid poly propylene flex pipe with soil-tight snap together fittings.

7-01.5 Payment

Supplement this section with the following:

“Drain Pipe _ In. Diam.”, per linear foot.

The unit contract price for “Drain Pipe _ In. Diam.” Shall be full pay for all Work to locate the existing stormwater system, identify the size of the existing system and utilize the appropriate coupling as noted on the plans. Drain pipe for retaining walls and plumbing inside Tree Box Biofiltration units shall not be included in this item.

7-04 STORM SEWERS

7-04.1 Description

Add the following new section:

7-04.3(1)F Television Inspection

Following the air testing, Contracting Agency reserves the right to inspect the pipe using a TV camera and measuring equipment. Contracting Agency will be responsible for this inspection. The costs incurred in making the initial inspection shall be borne by Contracting Agency. Contractor shall provide two weeks
advance notice and accommodate and allow up to five (5) days for this inspection to be made.

Any departure from that normally achieved with good construction practices such as pipeline misalignment (vertical or horizontal) will be deemed a deficiency. Pipe shall be excavated, the joint repaired, and the bedding and backfill re-compacted and replaced as necessary. The maximum allowable pipe deflection will be five (5.0) percent (in either horizontal or vertical). The pipe’s internal diameter will be based on the inside dimensions and reasonable tolerances obtained from the pipe manufacturer. Pipe that is misaligned or exceeds the allowable deflection shall be excavated and the bedding and backfill re-compacted and replaced as necessary. Contractor shall bear the cost of correcting such deficiencies as well as the costs of any TV inspections that are required to verify the deficiency has been corrected.

7-04.2 Materials
Supplement this section with the following:

Ductile Iron Storm Sewer Pipe shall meet the requirements of Section 9-05.13.

7-04.3 Construction Requirements
Supplement this section with the following:

The Contractor shall be responsible for maintaining drainage control of the project area at all times during construction of the improvements. The Contractor shall be responsible for preventing sediment-laden water from entering the existing storm sewer system. All equipment, labor, and temporary drainage facilities shall be incidental to the project.

7-04.3(1)A General
Supplement this section with the following:

Cleaning of the existing or new storm sewer resulting from construction site, improvements and/or activities shall be performed at the Contractor’s expense.

7-04.5 Payment
Supplement this section with the following:

“Ductile Iron Storm Sewer Pipe __ In. Diam.”, per linear foot.

The unit contract price per linear foot for “Ductile Iron Storm Sewer Pipe __ In. Diam.” shall be full pay for all labor, tools, materials, and equipment necessary to complete the installation of the storm sewer including, but not limited to, trench
excavation, laying and jointing pipe and fittings, approved couplings and adaptors, import pipe bedding and gravel backfill for pipe zone bedding for all trench backfill, compaction, and cleanup as shown in the Plans.

The unit Contract price per linear foot for storm sewer pipe of the kind and size specified shall be full pay for all work to complete the installation, including but not be limited to structure excavation class B, pipe zone bedding, trench backfill, temporary stormwater bypass systems, beveling of pipe ends and all other work, materials, and equipment necessary for storm sewer pipe installation.

Insertion tees shall be included in the unit contract price for storm sewer pipe.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.1 Description

Supplement this section with the following:

This work shall include the construction of the Storm Drain Cleanouts as shown in the Plans.

This work shall include the construction of the Residential Drain Under Sidewalk as shown in the Plans.

This work shall include the furnishing and installing of Solid Locking Cover on all manholes.

This work shall include installing check valves at manholes as shown in the plans.

This work shall include fabricating low cover lids and frames integrally cast into adjustment sections with flange up for shallow stormwater manholes as noted in the plans.

This work shall include the connection of (a) new catch basin(s) to an existing pipe.

This work shall include the connection of (a) manhole(s) to an existing pipe.

This work shall also include the construction and installation of a fully-functioning internal drop system as shown and detailed in the Plans.

This work includes the furnishing and installation of Tree Box Biofiltration 4’ x 4’ units as shown in the Plans.

This work includes installing manholes as shown at all locations along the microtunnelled sewer system and forming and pouring an integral base to the manhole system if necessary. The casing pipe removal is described in 7-20.3(7)D.
Saddle manholes will not be accepted on this project.

7-05.2 Materials

Supplement this section with the following:

Catch basin grates and covers shall have the words “KITSAP COUNTY” cast into the top surface and shall be the bolt down and locking type as shown on the Plans.

All materials shall be new and any salvaged materials from within the project shall be provided to the Contracting Agency at their request or disposed of by the Contractor.

Materials for the Storm Drain Cleanouts shall conform to the detail shown in the Plans.

Materials for the Residential Drain Under Sidewalk shall conform to the detail shown in the Plans.

Circular Frames and Cover for Sanitary Sewer Manholes and cleanouts shall have solid locking covers marked “sewer” and conform to the County Sewer standard details and requirements shown in the plans.

Circular Frames and Cover for Stormwater Manholes and cleanouts shall have solid locking covers marked “storm” and conform to the County Road standard details and requirements shown in the plans.

The Check Valve/Backflow preventer shall be CheckMate UltraFlex inline check valve manufactured by TideFlex Technologies, 600 North Bell Avenue, Carnegie, PA 15106, or approved equal. Backflow preventer shall be constructed of neoprene synthetic rubber and secured in place with a 316 stainless steel expansion clamp.

Exterior Manhole coating shall be Tnemec 46H-413 Tneme-Tar or approved equal.

Internal drop assembly shall be Reliner/Duran Inc. system or approved equal, and shall include a removable hood, stainless steel hardware and general assembly and materials as shown in the Plans.

Manhole primer and joint wrap shall be ConSeal ConWrap CS-212 Polyolefin Backed Exterior Joint Wrap with CS-75 primer or approved equal.
**Tree Box Biofiltration Units**

Tree Box Biofiltration units shall be the 4’ x 4’ tree box units as shown in the Plans. Each unit shall consist of a precast concrete container with an underdrain system, filter media, and a grated landscape cover as supplied by the Supplier.

Concrete for the precast unit shall conform to the following:

1. The wall thickness shall not be less than 6 inches or as shown on the dimensional drawings. In all cases, the wall thickness shall be no less than the minimum thickness required to meet loading requirements of the application.
2. The precast concrete unit shall be cured by an approved method. The unit shall not be shipped until the concrete has attained 85% of its design compressive strength.
3. The connections shall be provided to accept pipe of the specified size and material.

The plant shall be as shown on the landscaping plan. Plant size shall meet the requirements of the approved drawings and the plant materials will be supplied by a nursery that grows stock materials in conformance with the specifications of American Nursery Association Standards.

**7.05.3 Construction Requirements**

Supplement this section with the following:

**Cleanouts**

Storm Drain Cleanouts shall be installed at the locations shown in the plans and shall be constructed as described in section 7-19.

Grate inlets, cast metal inlets, drop inlets and other structures installed in sidewalks, walkways, and shared-use paths shall have slip-resistant surfaces, be flush with the surface, and match the grade of the sidewalk, walkway, and shared-use path.

Catch basins, manholes and curb inlets for the stormwater system shall be constructed to provide fully watertight connections and visually inspected to observe no infiltration occurs after pipe is grouted into structure.

The connection of the new pipe to an existing drainage structure shall be in accordance with Section 7-05.3 of the Standard Specifications.

The tree box biofiltration Supplier shall furnish engineering assistance required to properly install all components of the unit in accordance with the plans and these specifications. The Contractor will be responsible for unloading and installing of
the delivered product. The Supplier will maintain the tree box biofiltration system for a period of 1-year after activation.

**7-05.3(1) Adjusting Manholes and Catch Basins to Grade**

Supplement this section with the following:

Existing manholes shall be temporarily lowered to allow for the construction of other improvements where called out in the plans. Once other work is complete, the manholes shall be adjusted to final grade.

**7-05.3(4) Drop Manhole Connection**

Replace this section with the following:

Drop manhole connections shall be constructed internally. All materials and products for the internal drop manhole connections shall conform to the details in the Plans.

Add the following new sections:

**7-05.3(5) Quality Control**

The quality of the precast concrete components, underdrain materials, filter media and all other appurtenances shall be subject to inspection by the Inspector upon delivery of the unit to the project site. The unit or components may be rejected, replaced or repaired to the satisfaction of the Inspector and at the expense of the Supplier or Contractor.

All precast component surfaces shall be free of defects. Imperfections may be repaired to the acceptance of the Engineer.

All plant materials shall comply with the type and size required by the Plans and shall be alive and free of obvious signs of damage or disease.

The outlet connection shall be watertight.

**7-05.3(6) Installation**

Each unit shall be installed at the locations and elevations according to the sizes shown in the Plans. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

The unit shall be placed on a compacted sub-grade with a minimum 6-inch crushed surfacing top course at a maximum slope of 3%, with the unit sloping toward the outlet. The top slab shall match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1% to 2% of the
optimum moisture. Unsuitable material below sub-grade shall be replaced to Inspector's approval.

Manholes placed over the sewer pipe in the microtunnel sections shall have poured in place bases with the required base extension as shown in the plans if adequate space is not available to install a precast system. Bases poured in place shall be channeled and base liners provided to the same standard as the standard manhole base as detailed in the Plans and described in these Specifications.

Once the unit is set, the internal wooden forms and protective silt fabric cover must be left intact. The top lid should be sealed onto the box section before backfilling, using a non-shrink grout, butyl rubber or similar waterproof seal. The boards on the top of the lid and boards sealed in the unit throat must NOT be removed. The Supplier will remove these sections at the time of activation.

Outlet connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations. The correct outlet will be marked on the unit. Do NOT use plugged couplings marked, "USE OTHER CONNECTION".

Backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6-inch lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of the unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility Structures" unless otherwise specified in the contract documents.

7-05.3(7) Coatings for Manholes

Unless otherwise specified, concrete surfaces to be coated shall be allowed to age for at least 28 days and allowed to dry to the moisture content recommended by the coating manufacturer. Moisture content may be tested with a moisture detector recommended by the coating manufacturer. In addition, the surfaces shall be brush treated with a 10 percent muriatic acid solution and thoroughly flushed with water after 10 minutes. Loose concrete and laitance shall be removed by sandblasting and chipping, and voids and cracks shall be repaired. Surfaces shall be cleaned with clear water by washing and scrubbing to remove foreign and deleterious substances prior to coating. Coating system shall not be applied until Engineer has inspected the surface to be coated.

Any cracks, scuffs, chips, etc. in the coating shall be touched up in the field.

7-05.3(8) Joint Wrap

Clean the surface with a brush and remove any dirt, debris, flashing, or concrete high points, which could keep the wrap from adhering to the concrete. Apply joint primer to improve adhesion. Allow the primer to dry before placing sealant. Install joint wrap per manufacturer’s recommendations. Where joining two sections, or where two ends meet
together, provide an overlap of approximately 2” and firmly press the overlapping strip onto the end of the underlying strip to seal the joint.

7-05.4 Measurement

Supplement this section with the following:

- Manholes will be measured per each. The cost for additional height in excess of 10 feet shall be included in the unit cost of the manhole.
- Internal Drop Manhole Connection will be measured per each drop connection installed.
- Storm Drain Cleanouts will be measured per each
- Residential Drain Under Sidewalk will be measured by each location constructed.
- Connect Catch Basin to Existing Pipe shall be measured per each connection made.
- Connect Manhole to Existing Pipe shall be measured per each connection made.
- Connection to Existing Manhole shall be measured per each connection made.
- Connection to Drainage Structure shall be measured per each connection made.
- Check Valves will be measured per each.
- Tree Box Biofiltration Unit 4’ x 4’ will be measured per each.

Delete the fourth paragraph and replace it with the following:

Structure Excavation Class B and Structure Excavation Class B including Haul will be measured in accordance with Section 2-09.4 of these Special Provisions.

7-05.5 Payment

Supplement this section with the following:

- Delete the item “Manhole Additional Height ____ In. Diam. Type ____”, per linear foot

  “Internal Drop Manhole Connection” per each

  The unit contract price per each for “Internal Drop Manhole Connection” shall include all materials and work necessary to provide the drop connection as shown in the Plans.
“Storm Drain Cleanout” per each

The unit contract price per each for “Storm Drain Cleanout” shall include all materials and work necessary to provide the cleanout lid, collar, cover and piping as shown in the Plans.

“Residential Drain Under Sidewalk”, per each

The unit contract price per each for “Residential Drain Under Sidewalk” shall be full pay for furnishing all labor, tools, equipment, and materials necessary to install the Residential Drain Under Sidewalk including providing the wire mesh, drain piping with beveled end, curb modifications and ramped sidewalk in accordance with the details in the plans.

“Connect Catch Basin to Existing Pipe”, per each

The unit contract price per each for “Connect Catch Basin to Existing Pipe”, per each shall be full pay to provide knockouts as necessary to connect proposed catch basins to existing piping where shown on the plans and grout piping into the structure to provide a complete system.

“Connect Manhole to Existing Pipe”, per each

The unit contract price per each for “Connect Manhole to Existing Pipe”, per each shall be full pay to pothole and quantify the existing pipe size, material and elevation, provide knockouts at the necessary elevation to provide positive drainage, connect proposed gravity or internal drop piping systems to existing piping, and all other work to provide a complete connection to the existing sewer system.

“Connection to Drainage Structure”, per each

The unit contract price per each for “Connection to Drainage Structure”, per each shall be full pay to modify the knockouts as necessary and re-grout proposed piping into an existing structure and reinstall and reorient the lids as necessary to provide a complete system.

“Connection to Existing Manhole”, per each

The unit contract price per each for “Connection to Existing Manhole”, per each shall be full pay to modify the channeling as necessary, including any filling of channeling and plugging of pipes shown on the plans, re-grouting and installing PVC to sand collar, installing the proposed piping into an existing structure and reinstall and reorient the lids as necessary to provide a complete system.
“Check Valve _ In. Diam.”, per each

The unit contract price per each for “Check Valve _ In. Diam.” shall be full pay to install the check valve inside the piping as shown on the plans per the manufacturer recommendations and provide all materials and work necessary for a fully-functioning system per the contract drawings including providing all fittings and connecting to the corrugated metal outlet piping at the locations and conforming to the details shown in the Plans and providing larger core holes with reducing boots if noted at the outfall.

The unit contract price per each for “Adjust Manhole”, “Adjust Catch Basin” or “Adjust Inlet” shall be full pay for providing new materials including risers, frames and cast iron vaned grate or solid lids depending on existing structure style and making the adjustments to final grade and providing the concrete collar and restoration as shown on the detail in the plans. Lowering the existing structure as required by the Contractor’s work shall also be included in the unit contract price for the adjustment.

“Tree Box Biofiltration Unit 4’ x4’”, per each.

The unit contract price per each for "Tree Box Biofiltration Unit 4’ x4’" shall be full pay for furnishing and installing the complete Tree Box Biofiltration unit in accordance with the Plans and these Specifications including the precast and cast in place concrete components, underdrain materials, drain pipe, filter media, frame and grate, crushed surfacing top course foundation, excavation, backfill and compaction.

Vegetation in the Tree Box Biofiltration unit is included in the “Landscaping” bid item

“Manhole __In. Diam. Type __”, per each

The unit contract price for “Manhole __In. Diam. Type __”, per each shall include the PVC connection boots for sanitary manholes, forming and pouring custom bases in microtunnel limits as necessary, exterior coating, crushed surfacing top course foundation, excavation, backfill and compaction, primer and joint wrap as described in the plans and these special provisions and the manhole base extension as described on the plans. Specialty fabrication for low cover stormwater manholes as noted in the plans shall be considered incidental to this item.

“Catch Basin Type 2 __In. Diam.”, per each

The unit contract price for “Catch Basin Type 2 __In. Diam.”, per each shall be full pay for furnishing all labor, tools, equipment, and materials necessary to install the control structure equipment as shown on the details in the Plans.
“Catch Basin Type __”, per each

The unit contract price for “Catch Basin Type __”, per each shall include the crushed surfacing top course foundation, sand cushion between natural gas line and structure if structure is placed over gas line, inlet protection, excavation, backfill and compaction. Specialty fabrication for low cover stormwater structures and frames integrally cast into adjustment sections or reducing sections on all Catch Basins with low cover as calculated on the stormwater invert and rim elevations, shall be considered incidental to this item.

“Concrete Inlet”, per each

The unit contract price for “Concrete Inlet”, per each shall include the crushed surfacing top course foundation, sand cushion between natural gas line and structure if structure is placed over gas line, inlet protection, excavation, backfill and compaction.

Add the following new section:

7-06 MODULAR WETLANDS

7-06.1 Description

This work shall consist of installing MWS Linear Modular Wetland Units for water quality treatment as shown on the Plans.

7-06.1(1) Submittals

Submittals for the stormwater filters shall include the following items in accordance with Division 1, General Requirements.

1. Shop Drawings for each stormwater treatment system installation including size, location, inlet and outlet inverts, appurtenant piping, valves, access ways, venting details; bedding, backfill, concrete top slab, lid details, and anchorage tiedown system details. The concrete top slab design shall be prepared by a registered structural engineer and provide HS-20 loading for each system.

2. Complete materials list.

3. Manufacturer's recommended installation and maintenance procedures.

4. Manufacturer's certificate of satisfactory installation.
7-06.2 Materials

Modular Wetland stormwater media filter units shall consist of MWS Linear Modular Subsurface Flow Wetland Systems, as manufactured by Bio Clean Environmental Services, Inc., 2972 San Luis Rey Road, Oceanside, CA 92058, (760) 433-7640, or Modular Wetland Systems, Inc., P.O. Box 869, Oceanside, CA 92049, (760) 433-7650.

Modular Wetland units shall have a General Use Level Designation (GULD) for Enhanced treatment from the State of Washington Department of Ecology through the TAPE program.

Each Modular Wetland unit consists of a precast concrete vault containing a pretreatment chamber, biofiltration chamber, and discharge chamber. The pretreatment chamber houses perforated cartridge media filters, and is used for pretreating stormwater before it enters the biofiltration chamber. The pretreatment chamber has a pervious floor connected to the underdrain system, to function as a drain down system. The biofiltration chamber has a peripheral void area around the filtration media cells and a centralized and vertically extending underdrain to collect filtered water from each cell. Treatment media within the biofiltration chamber consists of a sorptive media mix which does not contain any organic material and a layer of plant establishment media. Pretreated stormwater flows horizontally through the biofiltration material from the exterior void to the underdrain at the center. Treated water collected by the underdrain flows horizontally to the discharge chamber, which houses a flow control orifice plat that restricts flows greater than the treatment flow rate. The discharge chamber also contains a drain down filter to treat drain down flows that are not treated by the biofiltration chamber.

Supplied Modular Wetland units shall include inspection and maintenance by the supplier, or a supplier-approved contractor, for a minimum period of one year, consisting of two scheduled visits. The maintenance visits shall include the following tasks:

1. Modular Wetland® unit inspection.
2. Cleaning pretreatment chamber.
3. Pretreatment media evaluation and replacement as necessary.
4. Disposal of all maintenance refuse items.
5. Maintenance records updated, stored, and submitted to the Kitsap County Public Works Department.

Prior to each maintenance visit, the Kitsap County Public Works department shall be notified and allowed to inspect the facility and observe the maintenance of the Modular Wetland unit by the supplier or supplier-approved contractor.
7-06.3 Construction Requirements

Modular Wetland units shall be constructed as detailed in the Plans and in accordance with these Special Provisions and the manufacturer’s installation instructions.

Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved Plans. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

The contractor shall exercise care in the storage and handling of the Modular Wetland unit and all components prior to and during installation. Any repair or replacement costs associated with events occurring after delivery is accepted and unloading has commenced shall be borne by the contractor.

The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base. Compact undisturbed sub-grade materials to 95% of maximum density at +1-2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site Engineer’s approval.

Once the unit is set, the internal wooden forms and protective silt fabric cover must be left intact (if Wetland Media pre-installed). The top lid(s) shall be sealed onto the box section before backfilling, using a non-shrink grout, butyl rubber or similar waterproof seal. The boards on the top of the lid must not be removed. The supplier will remove these sections at the time of activation.

Outlet connections shall be aligned and sealed in accordance with the Plans and approved shop drawings.

Backfilling shall be performed in a careful manner, bringing the appropriate fill material up in 6-inch lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. Installation of the Modular Wetland unit shall conform to ASTM specification C891 “Standard Practice for Installation of Underground Precast Utility Structures”.

If not pre-installed, the contractor shall install Wetland Media in accordance with the manufacturer’s installation instructions.

Manufacturer’s representative shall observe installation of the stormwater filters and shall provide a certificate of satisfactory installation to Owner prior to operation.

The manufacturer’s representative shall participate in and observe operational testing of the stormwater treatment systems for design performance. All observed problems shall be rectified prior to Owner acceptance.
7-06.4 Measurement

Modular Wetlands will be measured per each.

7-06.5 Payment

“Modular Wetland __ Ft. x __ Ft.”, per each

The unit contract prices per each for Modular Wetland Systems unit of the size indicated shall be full pay for furnishing all labor, tools, equipment, and materials necessary to install a Modular Wetland unit according to the Plans and Specifications, including excavation, shoring, gravel base, lids and risers, anti-buoyancy concrete base extensions, backfill, compaction, facility activation, normal trench dewatering, and one year of inspection and maintenance by supplier.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.1 Description

Supplement this section with the following:

The existing asbestos cement sewer line and water line will be encountered during sewer construction throughout the length of the project. The abandoned sewer main shall be removed and disposed of in accordance with section 2-02 and 7-08.3 of these Special Provisions.

7-08.3 Construction Requirements

7-08.3(1) Excavation and Preparation of Trenches

Supplement this section with the following:

Asbestos Abatement

The Contractor shall comply with the terms and conditions set forth in WAC 296-62 part I1, ASBESTOS, TREMOLITE, ANTHOPYLLITE AND ACTINOLITE. The Contractor shall be responsible for compliance with these regulations in accordance with WAC 196-62-07728.

Only a “Certified Asbestos Contractor” as defined by WAC 296-65 shall remove or encapsulate asbestos utility lines. A copy of their current certification shall be provided to the Engineer.

A “Competent Person” as defined by WAC 296-62-07728 shall supervise all work associated with asbestos utility line abatement and shall ensure that the terms and conditions of WAC 296-62 part I1 are adhered to. The Contractor shall name an
Asbestos Supervisor and provide a copy of their current certification to the Engineer in accordance with WAC 296-65-012.

The Contractor shall name all employees working on asbestos utility line abatement and provide a copy of their current certification to the Engineer in accordance with WAC 296-65-010.

Prior to commencing work on asbestos utility line abatement the Contractor shall provide a written Plan and Procedures for asbestos utility line abatement to the Engineer. The Plan and Procedures shall conform to WAC 296-62 part I1 and WAC 296-65. The Plan and Procedures shall detail how the Contractor intends on removing, hauling and disposing of the abandoned utility line and how the Contractor plans to phase the work with other Contract work. In addition, the Contractor may be required to provide the Engineer a copy of the written compliance program, as defined by WAC 296-62-07713, the exposure and monitoring program, as defined by WAC 296-62-07709 or any other documents discussed in the WAC related to asbestos abatement that will confirm compliance.

**Pot-hole Existing Utility**

At least 24 hours prior to commencing installation of any pipe, the Contractor shall expose by pot-holing existing underground telephone cables, gas mains, sewer mains or services, water mains or services or any other underground utility shown in the Plans that crosses the route of any new pipe to be installed under this Contract. Excavation immediately adjacent to the existing utilities shall be by hand methods in compliance with Washington State requirements.

When directed by the Engineer, the Contractor shall expose by pot-holing crossings of new pipe and utilities not shown in the Plans.

**7-08.3(1)A Trenches**

Revise the sixth paragraph to read as follows:

When, after excavating to the foundation level, the material remaining in the trench bottom is determined to be unsuitable by the Engineer, the excavation shall be continued to such additional depth and width as required by the Engineer. Unsuitable foundation materials shall be disposed of at an approved site. The trench foundation shall be backfilled to the bottom of the pipe zone with Special Borrow including Haul and compacted to form a uniformly dense, unyielding foundation, except that where excavation extends below elevation 0 feet and is north of Station 11+50A CDF shall be used for trench foundation backfill placed below elevation 0 feet.
7-08.3(1)B Shoring

Supplement this section with the following:

The Contractor shall use watertight shoring to support the sewer trench and stormwater trenches below the groundwater table south of STA 24+74A (from the south end of project to STA 24+75A). Watertight shoring shall be used for the microtunnel launch and reception shafts. Watertight shoring shall be used for manhole excavation shafts along the microtunneled portion of the sewer alignment. Watertight shoring, except where specified, shall extend to a depth determined by the Contractor, and be compatible with the Contractor-selected excavation bottom seal system, in order to meet the Allowable Limits described in Section 2-14.3(1), and groundwater drawdown limits described in 2-13.2(6) and shown in the Plans, when combined with the specified dewatering system and Contractor’s dewatering system operation. Selection of shoring type shall be determined by the Contractor and is subject to the submittal requirements described in the subsequent paragraphs and Owner approval.

The Contractor shall refer to the approximate groundwater surface and piezometric pressure elevations shown on the profiles and determine which piping utilities other than the deep sewer south of STA 24+75A will be required to utilize watertight shoring to install. Certain stormwater structures and piping will require dewatering and watertight shoring and shall be included in the appropriate dewatering bid items.

Watertight shoring shall be defined as a shoring system installed in advance of excavation that allows little to no water movement that can carry solids (sands or silts) through the shoring system. Interlocking sheet piles, secant piles, deep soil mixed panels, and ground freezing can be used for watertight shoring, provided they are appropriately designed and constructed. Soldier piles with timber lagging, soldier piles with steel-sheet lagging, or other soldier pile shoring system are not permitted for watertight shoring. Slide-rail type systems are not permitted for watertight shoring.

It shall be the responsibility of the Contractor to furnish shoring, place, maintain, and remove shoring supports in accordance with applicable laws, codes, and safety requirements including Chapter 296-155 of WAC, "Safety Standards for Construction Work, Part N, Excavation, Trenching, and Shoring". Design, planning, installation, and removal of sheeting, shoring, sheet piling, lagging, and bracing shall be accomplished in such a manner as to maintain the undisturbed state of soil below and adjacent to excavation.

The Contractor shall provide and install shoring and any necessary bracing and whalers. Type, thickness, and structural details for shoring system components shall be designed by the Contractor. The shoring design shall be prepared by a qualified person as defined by WAC 296-155. Before beginning any excavation that is governed by the shoring requirements, the Contractor shall submit his stamped shoring plan and calculations to the Engineer for review. The stamp
must be present on all plans and calculations, and all submittals must be approved by the Engineer prior to starting work.

Below elevation 0 feet, watertight shoring shall be installed such that the shoring elements are in contact with soil on each side of the shoring and such that a path for water to flow between the lower and upper aquifer is not created by the construction or materials installed to facilitate the construction.

Watertight shoring shall be water tight around penetrations through the shoring required to accommodate laterals and utilities and where casing installed by microtunneling penetrates the watertight shoring for manhole excavation, sending and receiving shafts. Existing utility penetrations are shown on the dewatering plans and the Contractor is required to maintain all utility operation throughout construction and may only bypass existing utilities with approval from the Engineer.

The Contractor shall install and remove sheetpile, or similar watertight shoring, using equipment and methods, e.g., impact hammer, vibratory hammer, or press-in equipment; provided the equipment and methods are such that the Contractor meets the specification requirements for limiting vibrations and limiting vibration induced settlement of loose soil and vibration-induced damage to existing utilities and structures. Predrilling shall not be performed for sheetpile installation.

The Contractor shall install and remove non-sheetpile watertight shoring using equipment and methods appropriate for the work and provided the equipment and methods are such that the Contractor meets the specification requirements for limiting vibrations and limiting vibration induced settlement of loose soil and vibration-induced damage to existing utilities and structures.

Sheetpile, or similar watertight shoring, installed between Stations 14+00A and 18+50A shall be left in place. Structural steel sections installed for non-sheetpile vertical shoring elements shall not be removed (i.e., left in place) below elevation 0 feet. All vertical shoring elements left in place shall be cut off such that their tops are below elevation 10 feet and are 5 feet or greater below the finish ground surface, whichever elevation is lower.

Braces and whalers for shoring shall be removed prior to placing backfill above the elevation at which the braces and whalers are installed.

The excavations shall be backfilled with Class A Foundation Material and compacted to form a uniformly dense, unyielding foundation, except that where excavation extends below elevation 0 feet and is north of Station 11+50A CDF shall be used for backfill placed below elevation 0 feet.

Add the following new sections:

7-08.3(1)D Maintaining Existing Utility Service (NEW)

Where utility services would otherwise be severed or damaged by installation of watertight shoring and/or ground freezing, the Contractor shall be responsible...
for maintaining water, sewer, power, gas, and other dry utility service to buildings. This may include temporary installation of service lines, temporary pumping and handling of sewer services and coordination with dry utilities. All utilities shall remain in service during the shoring operations per division 1-07.17(3) Protection and Support of Existing Utilities.

The Contractor shall coordinate with Cascade Natural Gas if any natural gas lines are severed to reinstate the gas service. Costs for reinstating a severed gas service are the responsibility of the Contractor. The Contractor shall verify that all pilot lights are re-lit when reinstating a gas service.

7-08.3(1)E Submittals

Shop drawings shall be submitted to the engineer prior to any fabrication or construction for all structural items including the following: structural steel, miscellaneous metal, tendons, anchors, grouts, and concretes. Proposed shoring sequence shall be also submitted to the Engineer for review. The shoring design must be sealed by a registered professional engineer licensed in the State of Washington.

7-08.3(2) Laying Pipe

7-08.3(2)B Pipe Laying - General

Supplement this section with the following:

All non-metallic sanitary sewer pipe including side sewers and cleanouts, and domestic water pipe including services and air valve lines, shall include a tracer wire taped every 5 feet to the pipe. Wrap wire around pipe 3-inch diameter and smaller. Loop tracer wire to the surface in accessible locations such as valve boxes, meter vaults, cleanouts, or other surface access. If no access is available for a distance of more than 1,000 feet, provide a cast iron valve box specifically for the tracer wire. Wire shall be solid UF, 12AWG minimum for 2,000 ft. runs and less, or 10AWG for runs longer than 2,000 ft.

7-08.3(3) Backfilling

Supplement this section with the following:

All trench backfill used on this project shall be Special Borrow unless Engineer deems native material acceptable.

Backfilling shall be performed only after inspection and approval of the installed pipe. Backfill material shall be carefully placed in strict accordance with this section of the Standard Specifications.
North of Station 11+50A, all backfill placed below elevation 0 feet shall be CDF. Structural concrete may be placed below elevation 0 feet for construction of working surfaces in trenchless access shafts and manhole excavation shafts.

7-08.3(4) Plugging Existing Pipe

Supplement this section with the following:

All existing non-functional pipes 3-inch and larger, regardless of original purpose, cut or broken during the course of construction shall be removed or plugged as directed by the Engineer.

Asbestos pipes specified on the Plans as being abandoned in place shall be filled entirely with CDF and plugged on each end with grout.

Add the following new section:

7-08.3(5) Temporary Trench Patch

The Contractor shall be required to provide either a cold mix patch or gravel patch at the end of each day. A temporary 2” depth hot mix trench patch, or the permanent paving shall be provided within 48 hours and/or before each weekend following installation of utilities crossing an operational roadway. Patches shall be compacted, rolled, and maintained to a smooth surface until permanent paving is accomplished. Final paving mat shall be one continuous mat and patches are not considered a finished pavement product unless paved as a continuous full-width mat.

Temporary steel plating is an acceptable alternative to asphalt patching. However, Contractor is required to provide an asphalt transition at the plate edge for traffic.

7-08.4 Measurement

Delete the fourth paragraph and replace it with the following:

Structure Excavation Class B and Structure Excavation Class B Including Haul will not be measured in accordance with Section 2-09.4 of these Special Provisions.

Revise the last paragraph to read:

Structure Excavation Class B and Structure Excavation Class B Incl. Haul will not be measured in accordance with Section 2-09.4 of these Special Provisions.
Supplement this section with the following:

Watertight Trench Shoring shall be measured per square foot exposed in excavation for both sides of the trench. The square footage shall be based on the lineal footage of exposed trench or shoring wall and the vertical distance from the excavation bottom to the ground surface. Square footage shall not be measured on a sloping trench wall.

Removal of asbestos cement pipe will be paid by the linear foot.

Abandonment of asbestos cement pipe will be paid by the linear foot. No additional payment will be provided for pipe size variations and sizes are noted on the plans.

Temporary trench patching will not be measured and shall be considered incidental to the corresponding utility being installed.

CDF placed to backfill watertight shored trench excavations, microtunneling access shafts, and manhole excavation shafts shall be measured by the cubic yard of CDF placed below elevation 0 feet.

Pot-holing of existing utilities shown in the Plans crossing the route of new pipe shall be incidental to the item being installed. All costs for such work shall be included in the unit contract price shown on the proposal for the item to be installed and no further payment will be made.

Pot-holing of utilities not shown in the Plans as crossing the route of the new pipe will be measured by force account in accordance with Sections 1-09.6.

7-08.5 Payment

Revise the pay items for Shoring or Extra Excavation Class B to read as follows:

“Shoring or Extra Excavation Class B”, lump sum.

The lump sum price for “Shoring or Extra Excavation Class B” shall cover the complete cost of furnishing, installing, maintaining, and removing a suitable shallow trench shoring safety system (to include a trench box, speed shoring and other equipment as necessary) for any improvements not utilizing watertight trench shoring and/or ground freezing.

Supplement this section with the following:

“Watertight Trench Shoring”, per square foot exposed in excavation.

The price per square foot exposed in excavation for “Watertight Trench Shoring” shall cover the complete cost of furnishing, installing, maintaining, and removing all watertight shoring necessary to support and temporarily cover trenches and
excavations for sanitary sewer and/or storm drainage improvements. Shoring shall be as specified in the Plans and Technical Specifications. Trench boxes, speed shoring, watertight shoring for trenchless construction (Microtunneling) access shafts and manhole excavation shafts along microtunneled portions of the alignment are not paid under this bid item.

“Removal and Replacement of Unsuitable Material”, per cubic yard.

Removal and Replacement of Unsuitable Material shall be used when material outside the trench limits is unsuitable. Material excavated within the structure excavation limits shall be included in the cost of the pipe or structure. This item includes supplying, placing, and compacting the replacement foundation material.

“Unknown Utility Repair” by force account as provided in Section 1-09.6.

Payment for repairs due to unforeseen damage to other utilities shall be paid for under “Unknown Utility Repair.” To provide a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the Contractor’s total bid.

All costs associated with furnishing and installing cushion material for the item “Pipe Crossing Existing Utilities” shall be included in the unit contract prices for the pipe items.

All costs associated with providing “Temporary Trench Patch” shall be included in the unit contract prices for the pipe items.

“Removal of Asbestos Cement Pipe” per linear foot

This item shall include removal and disposing of asbestos cement pipe.

“Abandon Asbestos Cement Pipe” per linear foot

This item shall include cost to plug the pipe with grout and fill the pipe with flowable CDF to abandon the pipe in place.

“CDF backfill” per cubic yard.

The price per cubic yard for CDF backfill in watertight shored trenches, microtunneling access shafts, and manhole excavation shafts below elevation 0 feet shall cover the complete cost of furnishing and installing CDF to backfill the excavations to elevation 0 feet.
“Force Account Pot-hole Utility Crossing”, per force account.

Payment will be made for the bid item “Force Account Pot-hole Utility Crossing”, per force account, as provided in Section 1-09.6 for exposing any utility crossing the new pipe or drainage structure that is not shown in the Plans. To provide a common proposal for all Bidders, the Contracting Agency has entered an amount in the Proposal to become a part of the Contractor’s total bid.

No payment will be made for pot-holing of existing utilities shown in the Plans as crossing the route of the new pipe.

Add the following new section:

7-10 CURED IN PLACE PIPE (CIPP)

7-10.1 Description

7-10.1(1) Description of Project

Sanitary sewer pipeline work in this Contract includes the lining of existing sanitary sewer pipes with CIPP. The timing of this work is anticipated to occur after the mainline sewer work is completed in Washington Avenue and all drop structures and connections have been made to provide a complete system from manhole to manhole.

7-10.1(2) CIPP Referenced Documents

This Technical Provision references American Society for Testing and Materials (ASTM) and National Association of Sewer Service Companies (NASSCO) standards which are made part hereof by such reference, and shall be the latest edition and revision thereof. For steam cured liners, CIPP provisions, methods, tests, materials, etc., not addressed by this Technical Provision shall be governed by ASTM F1216-09 or F1743-08, and D5813. For UV cured liners, CIPP provisions, methods, tests, materials, etc., not addressed by this Technical Provision shall be governed by ASTM F1216-09 or F2019-11. or F1743, and D5813. In the event there is a conflict between the aforementioned references and this Technical Provision, this Technical Provision shall govern.

7-10.1(3) CIPP General

Basic procedure for the sewer rehabilitation shall include an access shaft which may involve sewer flow control and bypassing, cleaning, pre- and post-rehabilitation television inspection, liner installation, testing, reconstruction, and restoration. After completion of the rehabilitation, the CIPP liner shall provide a continuous, watertight, corrosion resistant conduit within the existing sewer line.
Prior to ordering sewer rehabilitation materials, the Contractor shall be responsible for inspecting and confirming the inside dimension, alignment, pipe material, and condition of the existing sewer pipe segments to be lined with CIPP.

7-10.2 Materials

7-10.2(1) CIPP Materials

All materials and components, including resin, tube, and outside layer of tube, shall be compatible and suitable for providing a finished CIPP product which meets the requirements of the Contract Documents. The Contractor shall submit documentation within sixty (60) calendar days of commencing the CIPP Work that the resin, tube, and outside layer of tube are compatible.

The design thickness of the CIPP wall is a function of multiple factors including, but not limited to, product materials and the condition of the existing sewer line. The materials used shall have the capability to vary wall thicknesses to address variations in existing pipe conditions (e.g., circumferences, deterioration, and alignment due to pipe bends). The liner thickness shall be sized for a minimum hydrostatic and earth load as per design criteria or per ASTM F1216-09.

Tube – For steam cured liners, the material shall meet the requirements of ASTM F1216-09, Section 5.1, or F1743-08, Section 5.2.1. For UV cured liners, the material shall meet the requirements of ASTM F2019-11, be continuously woven along the entire tube circumference with an overlap for the tube to expand once inside the host pipe, and have an abrasion layer. The tube shall be compatible with the resin system used. The tube shall be fabricated to a size that, when installed, will fit the internal circumference and the length of the existing pipe. Allowance shall be made for circumferential and longitudinal stretch during installation. The minimum length of each section shall be the distance from the manhole to the next manhole. The Contractor shall verify the section lengths and inside dimensions of the existing sewer section before tube fabrication.

For steam cured liners, the outside layer of the flexible tube (before inversion) shall be plastic coated with a transparent flexible material that is compatible with the resin system used. The plastic coating shall not delaminate after the flexible tube has cured.

The flexible tube shall contain no intermediate or encapsulated elastomeric layers. No material shall be included in the tube that can be subject to delamination in the cured flexible tube.

Resin for Steam Cured Liners – The resin system shall meet the requirements of ASTM F1216-09, Section 5.2, F1743-08, Section 5.2.3, or these Special Provisions, whichever is more stringent.
The resin shall be of suitable, visible color to show that the felt liner is completely and uniformly impregnated. The color used shall not interfere with visual and/or closed-circuit television (CCTV) inspection of the liner or its required properties.

Resin for UV Cured Liners - The resin system shall be a polyester UV curing resin and catalyst system compatible with the UV light curing process including all required catalysts, initiators that when cured within the tube create a composite that satisfies the requirements of ASTM F2019-11 and these Special Provisions, whichever is most stringent. The resin shall produce a UV CIPP that will comply with the structural and chemical resistance requirements of this specification. The finished UV light cured fiberglass pipe lines will withstand internal exposure to domestic sewage having a pH range of 5 to 11 and temperatures up to 150 degrees Fahrenheit.

The wall color of the interior pipe surface of the CIPP after installation shall be a light reflective color. The color used shall not interfere with visual and/or closed-circuit television (CCTV) inspection of the liner or its required properties.

Over Expansion Sleeves for UV Cured Liners – Jean caps shall be used in the following locations and as directed by the Engineer after cleaning and inspection:

A) Each end of the pipe segment.
B) At each section of pipe that has complete or significant wall loss.

**7-10.2(2) Design Parameters**

For steam cured liners the installed CIPP liner design parameters shall meet or exceed the following requirements.

**Minimum CIPP Resin Requirements:**
- Flexural Modulus (short term) 300,000 psi
- Flexural Modulus (long term)* 150,000 psi
- Flexural Strength 4,500 psi

For UV cured liners, the installed CIPP liner design parameters shall meet or exceed the following requirements.

**Minimum CIPP Resin Requirements:**
- Flexural Modulus (long term)* 725,000 psi
- Flexural Strength (ASTM D-790) 6,500 psi

* The long term flexural modulus is defined as fifty (50) years as determined by ASTM D2990 Test Method.

**7-10.2(3) Structural Requirements**

For steam cured liners, the flexible tube shall be designed as per ASTM F1216-09, Appendix X1, or F1743-08, Appendix X1, for each pipe segment with the following additional requirements. For steam cured liners, the finished cured-in-place liner
thicknesses shall meet ASTM F1216-09, Section 8.6, or F1743-08, Section 8.1.6, and the finished cured-in-place liners shall have the following minimum thicknesses.

- 4.5 mm for 8-inch pipe
- 4.5 mm for 6-inch pipe

For UV cured liners, the flexible tube shall be designed as per ASTM F2019-11, Appendix X1, for each pipe segment with the following additional requirements. For UV cured liners, the finished cured-in-place liner thicknesses shall meet ASTM F2019-11, and the finished cured-in-place liners shall have the following minimum thicknesses, including the non-structural layers (abrasion layer and outer foil).

- 3.5 mm for 8-inch pipe
- 3.5 mm for 6-inch pipe

The CIPP design shall include the following assumptions.

- The groundwater table shall be assumed from the elevations presented in the Geotechnical Conditions Recommendations Report for Bay Shore and Washington Improvements Project.
- The wheel load is HS-20 or greater.
- The safety factor is 2.0 or greater.
- The ovality is 2.0% or greater.
- Soil density is 120 lb/ft³ or greater.
- Modulus of soil reaction (or soil modulus) is 1,000 psi.
- Poisson’s ratio is 0.3.
- The enhancement factor is 7.
- No bonding to the existing pipe wall.
- Fully deteriorated host pipe.

With respect to external buckling and because the structural conditions of the existing sewer pipe walls are unknown, the flexible tube shall be designed to act as a standalone pipe within the existing pipe.

Acceptable third party testing, by an agency approved by the Engineer, and verification of the design analysis techniques (ASTM F1216-09, Appendix X1.2.2 for all installation methods of steam cured liners and ASTM F2019-11, Appendix X1 for all installation methods of UV cured liners) shall be submitted for the Engineer to review prior to installation of the liner.

The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing as defined within the relevant ASTM standard. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Retention values exceeding 50 percent (50%) of the short-
term test results shall not be applied unless substantiated by qualified third party test data to the Contracting Agency’s satisfaction. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.

The Enhancement Factor ‘K’ to be used in ‘Partially Deteriorated’ Design conditions shall be assigned a value of 7.

The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If the layers separate during field sample testing, new samples will be required to be obtained from the installed pipe. Any reocurrence may cause rejection of the work.

The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

### Minimum CIPP Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>min. per ASTM F1216</th>
<th>Enhanced Resin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulus of Elasticity</td>
<td>ASTM D790</td>
<td>250,000 psi</td>
<td>400,000 psi</td>
</tr>
<tr>
<td>Flexural Stress</td>
<td>ASTM D790</td>
<td>4,500 psi</td>
<td>4,500 psi</td>
</tr>
</tbody>
</table>

The required structural CIPP wall thickness shall be based, as a minimum, on the design parameters in Section 7-10.2(2) or greater values if substantiated by independent lab testing and in accordance with the design equations in the Appendix X1. Design Considerations of ASTM F1216-09. Thickness design shall assume fully deteriorated host pipe and the soil overburden depths shown on the Plans.

Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

### 7-10.2(4) Product Qualification

For a CIPP product (combination of tube and resin) to qualify for use in the Project, a history of successful commercial viability shall be shown. Products not meeting the minimum requirements established by the Contracting Agency for successful commercial viability may be rejected. The Contracting Agency shall be the sole judge as to whether the requirements have been met. For a proposed CIPP product to qualify as a commercially acceptable product for the Project, the following requirements must be met:

A minimum of 10,000 linear feet of successful wastewater collection system installations in the U.S. shall be documented, for the proposed tube and resin used together as one product, to assure commercial viability of the materials and the
process. In addition, the CIPP product shall have been in service within wastewater collection facilities in the United States for a minimum of three (3) years, unless otherwise approved by the Engineer. Installations of the proposed resin and tube used independently from each other may not be used to qualify the product for the linear footage and years of service requirements.

The manufacturer(s) for both proposed resin and tube shall have successfully produced the material for installation in the U.S. continuously for a minimum of three (3) years, unless otherwise approved by the Engineer. If the manufacturer(s) does not have this minimum three (3) years commercial experience in the U.S., the number of linear feet of product proposed to be installed under this Project shall not exceed three percent (3%) of the total footage (at time of bid) of the product that has been successfully installed in the U.S.

The Contractor shall submit documentation that the proposed product meets the above minimum linear footage and years of service requirements. The documentation shall include for each project the name, address, and reference telephone numbers of the Contracting Agency of the pipe line system that was CIPP lined; date of Contracting Agency acceptance of the completed product installation; length of CIPP installed; diameter of host pipe; and installer name, address, and reference telephone numbers. In addition, the Contractor shall submit documentation in the form of a letter(s) from the manufacturer(s) verifying that the proposed resin and tube materials have been manufactured for a minimum of three (3) years or the project's linear footage does not exceed three percent (3%) of the total footage of the product (at time of bid) that has been successfully installed in the U.S.

The above documentation of product qualification and Manufacturer's letter(s) shall be provided to the Engineer within thirty (30) calendar days of commencing the CIPP Work.

7-10.3 Construction Requirements

7-10.3(1) Submittals

The Contractor shall submit documentation provided by the CIPP Manufacturer that the Contractor is qualified to properly install the proposed product. The documentation shall consist of evidence of Contractor training, testing, and/or certification of being trained to install the Manufacturer's product. The name, address, and phone number of the manufacturer’s representative who issued certification to the contractor installing the CIPP shall also be submitted to the Engineer.

The CIPP Subcontractor shall provide a Superintendent/Foreman having a minimum of 5 years experience personally performing the work or directly supervising construction. The name, address, phone number, and qualifications of the CIPP subcontractor's superintendent/foreman; project descriptions, dates, and owner
contacts for 3 projects in excess of $100,000 in the last 10 years shall be submitted with the bid.

The following shall be provided to the Engineer within sixty (60) calendar days of commencing the CIPP Work.

An itemized list detailing the installation procedures to be used shall be submitted. This shall include the curing method to be used for the CIPP liners on this project (steam or UV), estimated times for each task, the number of required excavations, and any other items unique to each process.

All related ASTM standards or any nationally recognized standards for installation of the product shall be submitted.

Detailed procedures shall be submitted for repairing the product in the event of failure or future damage. These procedures should not require specialized training and/or equipment for the Contracting Agency’s maintenance crews.

Detailed procedures shall be submitted for future tapping of service connections into the product.

Detailed description and physical properties of the lubricant to be used during installation shall be submitted for the Engineer's review.

Detailed procedures for the construction of manhole transition sections along with description and physical properties of the bonding agent to be used shall be submitted for the Engineer's review.

Detailed information on existing pipe inside diameter, pipe material, and alignment of the host sewer pipe, and the condition of each manhole-to-manhole segment to be lined shall be submitted for the Engineer’s review prior to ordering the CIPP liner.

Detailed Product Data: Resin, Tube material, Qualification testing results for laminate sample, resin enhancer, bond enhancer, sealant/ caulking material, resin curing schedule showing time and temperature for each reach, Manufacturer’s recommended installation pressures, minimum and maximum for each reach.

Public Relations: Notification flyers for the Owner’s customers that request limiting water use during construction.

7-10.3(1)A CIPP Design Submittals

Provide sufficient detail to allow the Engineer to judge whether the proposed materials, equipment, and procedures will meet the Contract requirements. All design calculations and shop drawings shall be prepared and stamped by an Engineer licensed in the State of Washington. No materials shall be
manufactured prior to approval of the submittals by the Engineer. The design submittals shall be sent to the Engineer within thirty (30) calendar days following the Preliminary Investigation of Host Sewer Pipe (see section 7-10.3(7)D). Design submittals shall include the following:

1. Design Analysis

For steam cured liners, the CIPP shall be designed per ASTM F1216-09 or F1743-08. For UV cured liners, the CIPP shall be designed per ASTM F1216-09 or F1743-08. The thickness design used for the product shall be submitted for review and approval. Physical properties used in design equations shall be validated by independent testing.

2. Manufacturing and Quality Control

A) Engineering design guides and detailed quality control procedures for rehabilitation materials, manufacturing, and installation shall be submitted for review. This shall include inspection requirements, testing procedures, and allowable manufacturing tolerance levels.

B) The Contractor shall submit certification provided by the product Manufacturer as to the country of manufacture of all major components to be used to produce the final installed work.

7-10.3(2) Installation of Liner

A list of previously completed CIPP projects shall be submitted. See Section 7-10.2(4) of this specification for requirements.

Liner installation shall be in accordance with ASTM F1216-09, Section 7, or F1743-08, Section 6, for steam cured liners or ASTM F2019-11 for UV cured liners, and with the following requirements:

1. Cleaning and Inspection

The sewer line shall be cleaned as necessary for the successful installation of the CIPP in accordance with the National Association of Sewer Service Companies (NASSCO) standards. Cleaning and video inspection records shall be provided to the Engineer before beginning the CIPP installation work. At a minimum, the Contractor shall remove all debris, accumulated grease, roots, intruding pipe gaskets, liquids, and other materials from the host pipe. All roots and intruding pipe gaskets shall be cut flush with the wall of the host pipe. All such debris resulting from cleaning operations shall be removed from the site and disposed in accordance with applicable laws and regulations. Precautions shall be taken to ensure that the cleaning operations will not cause any:
1) damage to the host pipe; 2) damage or flooding to public and/or private property; or 3) movement of settled sediments to the downstream system.

The Contractor shall be responsible for procuring the water supply for cleaning. If the Silverdale Water District’s water supply is used, a hydrant meter must be obtained from Silverdale Water District and all applicable water costs shall be borne by the Contractor.

The Contractor shall conduct a television inspection of the sewer pipe before the insertion of the liner to ensure that the pipe is clean, and existing pipe conditions are acceptable for lining. The interior of the pipe shall be carefully inspected to determine the location of any conditions that may prevent proper installation of the liner, and it shall be noted so that the condition(s) can be corrected. A remote-reading footage counter shall record the footages so that they can be seen while viewing the video. A USB flash drive of the video inspection, complete with a printed copy summary of the pipeline inspection report, shall be kept and submitted to the Engineer a minimum of 10-working days prior to installation of the liner. All pipe characteristics observed and defects found shall be defined and classified in accordance with Pipeline Assessment and Certification Program (PACP) terms. CCTV operators shall be NASSCO PACP Certified.

The Contractor shall inspect the interior of the pipeline to determine the size, location, and activity of all service laterals connected to the host pipe. If the Contractor is unable to determine the activity of a service lateral, the Contracting Agency shall be notified and a dye test shall be conducted.

The Contractor shall clear the line of obstructions, such as protruding services, offset joints, mortar, liquids, and all other obstructions. The obstructions shall be trimmed to within ¼ inch of the host pipe wall. If the pre-installation inspection reveals an obstruction that cannot be cleared, such as a collapse or offset joint, and that reduces the effective pipe area by more than 10 percent (10%), the Contractor shall notify the Engineer within 24 hours of recording the visual evidence of any structural problems, damage, or obstructions, that would prevent the completion of the CIPP lining process to allow time to schedule and perform emergency repairs. The Contracting Agency will also have the option of either:

A) Correcting the problem with a point repair and proceeding with the work, or

B) Terminating the project and paying the Contractor for work completed.
2. Resin Impregnation

A) For steam cured liners, the tube shall be impregnated with resin (wet-out) in accordance with ASTM F1216-09, Section 7.2, or F1743-08, Section 6.2. A vacuum impregnation process shall be used. A roller system shall be used to uniformly distribute the resin throughout the tube.

B) For UV cured liners, the tube shall be impregnated with resin (wet-out) in accordance with ASTM F2019-11. The resin shall be distributed uniformly throughout the tube.

C) The liner will be vacuum-impregnated via factory we-out prior to installation; field wet-out will not be allowed. The manufacturer shall allow the Engineer to inspect the materials and procedures used to vacuum-impregnate the tube.

3. Bypassing

A) If bypassing of sewage flows is required around the sections of pipe designated for rehabilitation, the bypass shall be made in accordance with Section 7-10.3(5) of the Special Provisions.

B) Public advisory services shall be required to notify all parties whose service laterals will be affected and all connected residents to advise minimum water usage. The Contractor shall provide written notification of work activities to all local users fourteen (14) calendar days before interruption of service and provide interim sewer service. This notification shall include a description of the project, the method of construction, and the approximate date and duration that disruption of sewer service will occur. The notification shall also note the potential inconvenience from resin odor, noise, and lights. The Contractor shall maintain a notification log that will include the date and time of the notification, the contact person's name, and if no contact was made, a notation that the information was left at the person's door. The notification shall be submitted to the Contracting Agency for approval at least fourteen (14) calendar days prior to being mailed to affected parties.

If authorized by the Contracting Agency, in-person verbal notification shall be acceptable in lieu of the above written notifications.
4. Insertion of Liner

A) For steam cured liners, insertion shall be in accordance with ASTM F1216-09, Section 7.4, or F1743-08, Section 6.4.

B) For UV cured liners, insertion shall be in accordance with ASTM F2019-11.

C) Tube insertion forces or pressures shall be limited so as not to stretch the tube longitudinally by more than 5 percent (5%) of the original length.

D) Before the insertion begins, the tube manufacturer shall provide values for the minimum pressure required to hold the tube tight against the existing conduit and the maximum allowable pressure so as not to damage the tube. Once the insertion has started, the pressure shall be maintained between the minimum and maximum pressures until the insertion has been completed. Should the pressure deviate from the required, the installed tube shall be removed from the host conduit at the Contractor's expense. The Contractor shall provide the Engineer with a continuous log of pressure during cure.

E) Segments of liner that have been resin impregnated and placed in the host conduit and then are found to be too short, shall be removed without curing and properly discarded at the Contractor's expense. Removal of the uncured, resin impregnated liner shall be accomplished in such a way as to minimize the amount of resin allowed to escape. The Contractor shall be responsible for cleanup of all escaped resin and any odors that may result. The Contractor shall submit a plan to remove any odors and resin impregnated, uncured liner from the host conduit, including protection of the host system from escaping resin to the Engineer for approval a minimum of three (3) weeks prior to the first installation process.

F) The existing sewer line shall be dewatered prior to liner insertion.

G) For steam cured liners, the use of a lubricant during inversion is recommended to reduce friction. This lubricant should be poured into the water in the downtube or applied directly to the tube or inflation bladder. Lubricant shall not be used in processes where impregnated coatings are performed prior to tube installation. The lubricant used shall be a non-toxic, oil-based product that has no detrimental effects on the tube or roller and pump system, and will not support bacterial growth or adversely affect sewage treatment processes.
H) For UV cured liners, the use of a slider tube during liner insertion is required to reduce friction. This slider tube shall be pulled into place prior to pulling the UV liner into place. A constant tension winch should be used to pull the glass fiber liner into position in the pipe. Once inserted, end plugs shall be used to cap each end of the glass fiber liner to prepare for pressurizing the liner. The end plugs should be secured with straps to prevent them from being expelled due to pressure.

I) The tube shall not be exposed to ultraviolet light prior to curing.

J) The tube shall not experience excessive (as defined in Section 7-10.3(2)8(A) of these Special Provisions) bubbling or wrinkling during insertion.

5. Curing for Steam Cured Liners

After insertion of the wetted-out tube is complete, the Contractor shall use suitable steam-generating equipment to distribute steam uniformly throughout the section for a consistent cure of the resin. The curing temperatures shall comply with submittals and manufacturer’s recommendations.

The steam-generating equipment shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing steam supply. Another such gauge shall be placed between the impregnated liner tube and the invert of the host pipe at the termination manhole to determine the temperatures during the resin cure process. The Contractor shall provide the Engineer with a continuous log of temperatures at all gauges during curing.

The Contractor shall be responsible for procuring the water supply for steam curing. If the Silverdale Water District's water supply is used, a hydrant meter must be obtained from the District and all applicable water costs shall be borne by the Contractor.

Initial cure may be considered completed when the exposed portions of the felt tube appear to be hard and the termination manhole temperature sensor indicates the temperature to be adequate to realize an exotherm or cure in the resin as recommended by the resin manufacturer and approved by the Engineer. Curing temperatures and duration shall comply with previously submitted data and information and be approved by the Engineer.

Curing shall be in accordance with ASTM F1216-09, Section 7.6, or F1743-08, Section 6.6.
Any steam used during the curing process shall be free of any pollutants and shall be properly disposed of at ambient temperatures in an environmentally safe manner in accordance with applicable Federal, State, and County rules and regulations. Contractor shall be responsible for obtaining the applicable permits.

6. Curing for UV Cured Liners

After insertion of the wetted-out tube is complete, the Contractor shall use suitable UV light chain equipment for a consistent cure of the resin. The curing temperatures shall comply with submittals and manufacturer's recommendations.

Liner cure schedule shall be adhered to per manufacturer's specifications. The fiberglass liner will then be inspected with a camera mounted on the UV light chain as it is pulled to the end of the liner. After inspection and compete inflation to the manufacturer’s specifications, the UV light bulbs will be turned on. The curing will commence at a rate specified by the manufacturer according to the total dimensions of the liner. As the liner is curing, the UV curing system shall record all curing data for the viewing of the owner. The initial cure shall be deemed to be complete when the UV Chain arrives at the initial entry point of insertion. The Contractor shall provide the Engineer with a continuous log of light temperatures and all gauges during curing.

Curing temperatures and duration shall comply with previously submitted data and information and be approved by the Engineer.

Curing shall be in accordance with ASTM F2019-11.

The inner film material should be removed and discarded after curing to provide optimal quality of the final product.

7. Cool-Down for Steam Cured Liners

The Contractor shall cool the hardened pipe to a temperature below 113 degrees Fahrenheit before relieving the internal pressure. Cool-down may be accomplished by the introduction of cool water into the section to replace the mixture of air and steam being drained from a small hole made at the downstream end. Care shall be taken in the release of the air pressure so that a vacuum will not be developed that could damage the newly installed CIPP. Coupon samples shall be obtained for testing.

Cool-down shall be in accordance with ASTM F1216-09, Section 7.7, or F1743-08, Section 6.7.
8. Finished Pipe

A) The finished CIPP shall be continuous over the entire length of each installation run and be free of such defects as holidays, foreign inclusions, dry spots, lifts, delamination, buckling, creases, and other deformities. Wrinkles with a height that exceeds 5 percent (5%) of the inside diameter of the host pipe or that create voids between the liner and host pipe wall shall be considered unacceptable. Wrinkles in the lower third of the finished CIPP (based on depth of flow) shall be considered unacceptable if their height exceeds 3 percent of the inside diameter of the host pipe or 0.5 inches, whichever is smaller. If defects are present, the Contractor shall remove and replace the liner in these areas, using a method approved by the Engineer, at the Contractor's sole expense.

B) At its termination point(s), the space between the liner and original pipe shall be sealed with an approved hydrophilic rubber gasket, such as Hydrotite, and/or by filling with a resin mixture compatible with both the CIPP and the original pipe. The sealing work performed at the pipe termination shall be guaranteed to be watertight for a period of five (5) years.

7-10.3(3) Service Lateral Connections

1. Service Lateral Connection Verification

The Contractor shall verify the location and number of service lateral connections shown on the Plans during the pre-rehabilitation television inspection (see Section 7-10.3(7)B of the Special Provisions) or from other methods approved by the Engineer. The verification methods utilized by the Contractor shall not require any excavation or removal of existing pipe.

2. Service Lateral Connection Reinstatement

After the CIPP has been cured in place, the existing service lateral connections shall be reinstated. The reinstated opening shall be neat, and its edges smooth and without any hanging fibers, or loose or abraded materials. The opening shall be brushed sufficiently smooth to avoid damage to the service lateral rehabilitation equipment. The invert of the reinstated opening shall match the invert of the original connection. Additionally, the opening shall be reinstated to a minimum of 95 percent (95%) and a maximum of 100 percent (100%) of the original connection opening. Service lateral connections that are overcut must be repaired. The Contractor shall be responsible for restoring/correcting without delay all missed or faulty reconnections, as well as for any damages, which may have resulted.

All connections shall be reinstated within ten (10) hours of commencing the CIPP insertion to minimize disturbance to services. If connections cannot be
reinstated within this period of time, the Contractor shall obtain approval from the Contracting Agency prior to any extension to allow additional bypass/diversion pumping. Added bypass/diversion pumping services shall be incidental to the project and at the Contractor's expense.

The Contractor shall be responsible for maintaining an emergency crew capable of cutting taps and readily available to respond to sewer service customer problems after normal working hours unless otherwise determined by the Contracting Agency. Costs related to the emergency response will be incidental to the Contract and not measured for payment. Contractor's emergency crew shall be qualified and fully equipped to perform service lateral connection reinstatement operations and provide temporary bypassing if required to maintain sewer service.

3. Service Lateral Connection Rehabilitation

One service lateral connection CIPP sealing system product (LMK T-Liner) is acceptable for use on this project. Any other service lateral connection CIPP sealing system must be approved by the Engineer.

Part 1 – General

A. Description

1. Provide all labor, materials, tools, equipment, and incidentals as shown, specified, and required to rehabilitate lateral connections to the mains using the service lateral connection CIPP sealing system.

B. Intent

1. This specification covers material requirements, installation practices, and test methods for the reconstruction of a sewer service lateral pipe and the main connection without excavation. The pipe renovation shall be accomplished by the inversion and inflation of a resin impregnated, single-piece cured-in-place (CIPP) lateral and main connection liner outfitted with engineered, molded hydrophilic gasket seals that are designed specifically for sealing the CIPP/lateral connection interface and lateral termination. When cured, the liner extends over a predetermined length of the service lateral and the full circumference of the main pipe at the lateral connection. The materials and installation practices shall, at a minimum, adhere to the requirements of ASTM F2561-11 “Standard Practice for Rehabilitation of a Sewer Service Lateral and Its Connection to
the Main Using a One-Piece Main and Lateral Cured-in-Place Liner."

2. This specification takes precedence over any other similar specification that may be found in other sections of the bid documents.

C. General

1. The reconstruction shall be accomplished using a resin absorbent textile tube of particular length and a thermo-set resin with physical and chemical properties appropriate for the application. The launching device and launching hose is winched through the mainline and positioned at the appropriate service lateral connection. The mainline bladder is inflated seating the hydrophilic molded gaskets and pressing the connection liner against the main pipe at the connection while the lateral tube inverts up into the lateral pipe by the action of the inversion bladder. The resin-saturated liner is cured with the molded gaskets embedded in-place between the host pipe and the new liner, and the inversion bladder and launching device are removed from the pipe.

D. Installer and Product Requirements

1. This Contract requires work in active sewers. The Contractor shall follow all federal, state, and local requirements for safety in confined spaces and uniform traffic controls.

2. All sewer products must provide a 50-year design life, stamped by a licensed Professional Engineer in order to minimize the owner's long-term risk of failure. Only skilled contractors utilizing products that are manufactured in a controlled factory environment with substantial successful long-term track records and/or manufacturer's certification of training completion will be considered.

3. Product installers must document the following minimum criteria to be deemed commercially acceptable:
<table>
<thead>
<tr>
<th>Product</th>
<th>Unit</th>
<th>Minimum Requirements for Installer*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main/Lateral Connections</td>
<td>EA</td>
<td>200</td>
</tr>
<tr>
<td>Lateral Liner</td>
<td>LF</td>
<td>250</td>
</tr>
<tr>
<td>Lateral Transitions</td>
<td>EA</td>
<td>20</td>
</tr>
</tbody>
</table>

*Installers who have less than the minimum required installation experience can qualify by employing a Manufacturer's Technical Trainer who meets the requirements.

4. For installers to be considered commercially proven, the above referenced minimum number of units of successful wastewater collection system installations must be documented to the satisfaction of the owner to assure commercial viability of the proposed liner system.

5. All sewer rehabilitation products submitted for approval must provide third-party test results supporting the long-term performance and structural strength of the product and such data shall be satisfactory to the owner. Test results are to include the main, laterals, and main/lateral connection materials and hydrophilic molded gasket seals. Test samples shall be prepared so as to simulate installation methods and trauma of the product. No product will be approved without testing verification for all components proposed.

6. The Installer must meet the minimum requirements above or be pre-approved by the owner. This is a company requirement; personal experience will not be considered in evaluating the company’s ability to meet the minimum requirements of this specification. The Contractor must have installed the same product (in the same constructed configuration) proposed for a minimum of one year. Installers who have less than one-year installation experience can qualify by having a manufacturer’s representative present during installation.

E. Submittals

The Contractor shall provide the following submittals pertaining to service lateral rehabilitation:

1. Minimum 48-hour advance written notice of proposed rehabilitation schedules and rehabilitation procedures for review and concurrence of the Engineer.

2. Equipment operating procedures and systems.
3. A letter from the manufacturer of the service lateral connection CIPP sealing system, verifying the certification of the installer.

4. Service lateral connection CIPP sealing system information:
   a. Description of materials (including material properties) to be used.

5. Manufacturers and models of the equipment to be utilized on the project.

6. Upon completion of rehabilitation of each lateral, a report showing the following data for as required by PACP:
   a. Location and stationing of each lateral rehabilitated.
   b. Type of pipe material and diameter (sewer main and lateral).
   c. Operator conducting rehabilitation shall be noted on the reports.
   d. Video recordings, to include:
      i. Rehabilitation operations for each lateral.
      ii. Additional final recording of each lateral after all rehabilitation work is complete.

F. Reference Standards to be Used

The following reference standards shall be used by the Contractor when performing service lateral rehabilitation:

1. National Association of Sewer Service Companies (NASSCO) prepared Pipeline Assessment and Certification Program (PACP), TV inspection form, and sewer condition codes

2. ASTM F2561-11 - Standard Practice for Rehabilitation of a Sewer Service Lateral and Its Connection to the Main Using a One-Piece Main and Lateral Cured-In-Place Liner.
3. ASTM F1216-09 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.

   a. ASTM F2561-11 references several complementing standards; one of which is ASTM F1216-09. The ASTM F1216-09 standard is referenced for purposes of tube design considerations for a CIPP liner. ASTM F1216-09 is not an applicable standard for the sealing of lateral connections where the lateral CIPP forms a verifiable non-leaking connection to the mainline CIPP. ASTM F2561-11 is the industry standard for renewing lateral pipes and main/lateral connections using full-hoop CIPP liners and pre-molded compression gaskets.


Part 2 – Products

A. Service Lateral Connection CIPP Sealing System

The service lateral connection CIPP sealing system shall have the following characteristics:

1. Material

   a. Liner Assembly - The liner assembly shall be continuous in length and consist of one or more layers of absorbent needle punched felt, circular knit or circular braid that meet the requirements of ASTM F1216-09 and ASTM D5813 Sections 6 and 8. No intermediate or encapsulated elastomeric layers shall be in the textile
that may cause delamination in the CIPP. The textile tube and sheet shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe segments, and flexibility to fit irregular pipe sections. The resin saturated textile tube and sheet shall meet ASTM F1216-09, Section 7.2 as applicable, and the tube shall have 5% to 10% excess resin distribution (full resin contact with the host pipe) that when compressed and cured will meet or exceed the design thickness.

b. Mainline Liner Tube - The main liner tube shall be formed from a flat sheet of resin absorbent material suitable for CIPP. The forming of the tube is accomplished by one end of the textile sheet overlapping the second end and sized accordingly to create a circular lining equal to the inner diameter of the lined main pipe. The interior of the textile sheet shall be laminated with an impermeable, translucent flexible membrane. The textile sheet before insertion shall be permanently marked on the membrane as a “Lateral Identification” correlating to the address of the building the lateral pipe provides service.

c. Lateral Liner Tube - The exterior of the lateral liner tube shall be laminated with an impermeable, translucent flexible membrane. Longitudinal seams in the tube shall be stitched and thermally sealed. The lateral tube will be continuous in length. The lateral tube will be capable of conforming to offset joints, bends, bells and disfigured pipe sections. For pipe configurations that contain pipe diameter transitions, the transition liner tube must be formed by the manufacturer prior to installation to ensure proper wall thickness per ASTM F1216-09.

i. The lateral liner tube shall be installed 2 feet up the lateral pipeline, unless otherwise approved by the Owner.

d. Mainline Connection - The main tube and lateral tube shall form a one-piece assembly by stitching the lateral tube to the mainsheet aperture. The connecting end of the lateral tube shall be shaped to match the aperture and curvature of the main tube. The lateral tube and main tube shall be sealed by use of a flexible UV-cured adhesive/sealant applied in a factory-controlled setting. The main/lateral tube assembly shall take the shape of a tee or wye with corresponding dimensions such as a
curved circle or a curved elliptical opening in the pipefitting.

e. Hydrophilic Gasket Seals - The mainline tube shall include a seamless molded flange shaped (aka Hydrohat) gasket attached to the main liner tube at the connection or four molded hydrophilic O-rings at the mainline termination ends. The gasket(s) must be a minimum of 2.5-mm thick and must retain this consistent thickness under installation pressures. The lateral tube shall include two compression molded O-ring gaskets attached six-inches from the terminating end of the lateral tube. The hydrophilic gasket seals must be manufactured in a controlled factory environment with strict quality control and quality assurance protocols. A liquid sealant, adhesives or other fluid like materials having paste like consistency will not be accepted.

f. Mainline End Seal Test Data - The hydrophilic gasket seals shall include test data that supports substantial expansion properties so to form a watertight compression end seal at the terminating ends of the CIP-lateral liner. The test protocol shall simulate subterranean conditions and hydraulic loading at surface. Gasket seal submittals must include tests data simulating hydration/dehydration conditions for a period of 10,000-hours and the test results must successfully demonstrate and document long-term performance without deterioration, loss of material, flexibility, and expansion of the gasket during repeated cycles of hydration and dehydration.

g. Bladder Assembly - The liner assembly shall be surrounded by a second impermeable, inflatable, invertible, flexible translucent membrane bladder that will form a liner/bladder assembly. The translucent bladder shall facilitate vacuum impregnation while monitoring the resin saturation process.

2. Resin System

a. The resin/liner system shall conform to ASTM D5813 Section 8.2.2.

b. The resin shall be a corrosion resistant polyester, vinyl ester or epoxy resin and catalyst system that when properly cured within the composite liner assembly,
meets the requirements of ASTM F1216-09, the physical properties herein, and those which are to be utilized in the design of the CIPP, for this project.

c. The resin shall produce a CIPP, which will comply with the structural and chemical resistance requirements of ASTM F1216-09.

d. CIPP Initial Structural Properties per table below.

<table>
<thead>
<tr>
<th>Property</th>
<th>ASTM Standard</th>
<th>Minimum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength</td>
<td>D790</td>
<td>4,500 psi</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>D790</td>
<td>250,000 psi</td>
</tr>
</tbody>
</table>

3. Design Considerations

a. The CIPP shall be designed per ASTM F1216-09, Appendix X1.

b. The CIPP design for the lateral tube and main sheet shall assume no bonding to the original pipe.

c. The resin saturated lateral tube and the main sheet must place the resin in full contact with the host pipe. The cured liner must provide coating on the interior of the lateral piping for an improved flow rate.

d. The liner must be smooth and have an average roughness coefficient “n” factor of 0.013 or lower.

4. The product manufacturer used shall be LMK Technologies, LLC T-Liner Main-to-Lateral Lining System; or approved equal.

Part 3 – Execution

A. Installation Preparation

1. Access Safety - Prior to entering access areas such as manholes, an excavation pit, performing inspection or cleaning operations, an evaluation of the atmosphere to determine the presence of toxic or flammable vapors or lack of oxygen shall be undertaken in accordance with local, state, or federal safety regulations. The Contractor shall carry out its operations in strict accordance with all OSHA standards and City’s guidelines. Particular attention is drawn to those safety requirements involving entering confined spaces.
2. Cleaning and Inspection - As per NASSCO Standards. Prior to installing the service lateral connection CIPP product, the area around the lateral sealing surface in both the main and lateral shall be inspected. Waste product build-up, hard scale, roots, lateral cutting debris or resin slugs must be removed by using high pressure water jetting or in-line robotic cutters. **The interior coating of the CIPP liner shall be brushed off in the area where the service lateral connection CIPP sealing system will be installed.**

3. Plugging – When steaming out of the cleanout, the upstream side of the cleanout shall be plugged during insertion and curing of the liner assembly to ensure no flow enters the pipe and no air, steam, or odors will enter the building. When necessary, the main pipe flow will be by-passed. The pumping system shall be sized for peak flow conditions. The upstream manhole shall be monitored at all times and an emergency deflating system will be incorporated so that the plugs may be removed at any time without requiring confined space entry.

4. Break-in connection and / or lateral pipe protruding into the mains shall be ground flush to the mainline. Built-up deposits on the main and lateral pipe walls shall be removed. The removal shall reach at least one foot beyond the service lateral connection CIPP product to allow the bladder to inflate tightly against the pipe walls ensuring a smooth transition from the service lateral connection CIPP product to the existing pipe wall.

5. In lined pipes, the lateral reinstatement must be opened 95 percent or more, and shall have a smooth finished edge. The brim of the service lateral connection CIPP sealing system can also be used for overcuts of laterals.

6. Inspection of Pipelines - The interior of the pipeline shall be carefully inspected to determine the location of any condition that shall prevent proper installation, such as roots, severe offsets, and collapsed or crushed pipe sections. Experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television shall perform inspection of pipelines.

7. Line Obstructions - The existing lateral pipe shall be clear of obstructions that prevent the proper insertion and expansion of the lining system. Changes in pipe size shall be accommodated, if the lateral tube is sized according to the pipe diameter and
condition. Obstructions may include dropped or offset joints of no more than 20% of inside pipe diameter.

8. Resin Impregnation - The liner assembly is encapsulated within the translucent bladder (liner/bladder assembly), the entire liner including the flat sheet shall be saturated with the resin system (wet-out) under controlled vacuum conditions. The volume of resin used shall be sufficient to fill all voids in the textile lining material at nominal thickness and diameter. The volume shall be adjusted by adding 5% to 10% excess resin for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe. No dry or unsaturated area in the mainline sheet or lateral tube shall be acceptable upon visual inspection.

9. Liner Insertion - The lateral tube and inversion bladder shall be inserted into the launching hose. The main bladder and flat textile sheet (main liner tube) shall be wrapped around a “T-Launcher” launching device, formed into a tube and secured by use of rubber bands. A seamless molded flange shaped gasket shall be attached to the main liner tube by use of stainless steel snaps. (Alternatively, when the flange shaped gasket is not used, the four hydrophilic O-rings may be used to secure the main bladder and flat textile sheet to the launching device.) The flanged gasket shall be inserted into the lateral pipe at the main/lateral juncture so that the brim of the flanged gasket is firmly seated against the mainline pipe liner. Two hydrophilic O-rings shall be positioned 6-inches from the terminating end of the lateral liner tube one to two inches apart. The launching device is inserted into the pipe and pulled to the point of repair. The pull is complete when the lateral tube is exactly aligned with the lateral pipe connection. The lateral tube is completely protected during the pull. The mainline liner is supported on a rigid T-Launcher device that is elevated above the pipe invert through the use of a rotating skid system. The liner assembly shall not be contaminated or diluted by exposure to dirt or debris during the pull.

10. Bladder - The main bladder shall be inflated causing the main sheet to unwrap and expand; pressing the main tube firmly into contact with the main pipe and embedding the flange shaped gasket (or hydrophilic O-rings) between the main tube and the main pipe at the lateral opening. The lateral tube is inverted through the main tube aperture by the action of the lateral bladder extending into the lateral pipe to a termination point that shall be no less than two (2) feet from the exterior
cleanout or predetermined termination point. The bladder assembly shall extend beyond each end of the liner, so the liner remains open-ended and no cutting shall be required.

B. Service Lateral Connection CIPP Installation

1. Curing - After the liner has been fully deployed into the lateral pipe; pressure is maintained pressing the liner firmly against the inner pipe wall until the liner is cured at ambient temperatures or by steam. The heating equipment shall be capable of delivering a mixture of steam and air throughout the liner bladder assembly to uniformly raise the liner temperature above the temperature required to cure the resin. The curing of the CIPP shall take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of the soil). The heat source temperatures shall be monitored and logged during the cure and cool down cycles. The manufacturer’s recommended cure schedule shall be submitted and followed.

2. CIPP Processing - Curing shall be complete without pressure interruption with air or a mixture of air and steam for the proper duration of time per the resin manufacturer's recommendations. The curing process is complete when the temperature of the CIPP falls back to 100 degrees Fahrenheit or less.

3. Finished CIPP - It shall be a homogenous CIPP liner assembly located at the main/lateral interface and extending into the lateral pipe to the maximum distance of two (2) feet downstream of the outside cleanout (or at the designated termination point if no outside cleanout is available. The CIPP shall be smooth with minimal wrinkling and shall increase flow rate. The profile of the hydrophilic molded gaskets should be visible and verifiable during post-video inspection on liners 6-mm or thinner thickness. The CIPP shall be free of dry spots, lifts, and delamination. The CIPP shall include a textile taper at each end providing a smooth transition to the host mainline liner for accommodating video equipment and maintaining proper flow in the mainline. After the work is completed, the installer will provide the owner with video footage documenting the repair and the visual markings on the CIPP liner assembly identifying the building address. The finished product shall provide a verifiable non-leaking connection between the mainline liner and the CIPP-Lateral liner.
C. Lateral Sealing Verification

1. The Contractor shall record rehabilitation of laterals. After the bladder is deflated and moved, record on video the visual inspection of the lateral.

2. The use of standardized test and seal data sheets and PACP data codes is required.

D. Cleanup

1. The Contractor shall collect and properly dispose of cleaning materials used in the cleaning of the service lateral connection rehabilitation equipment.

2. Upon acceptance of the installation work, the contractor shall reinstate the site affected by its operations to as close to the original condition as possible.

E. Post-construction Inspection

1. After rehabilitation is complete, all pipe sections shall be final inspected by means of a color CCTV system. The inspection shall be conducted as per the NASSCO Pipeline Assessment and Certification Program. One set of USB flash drive(s) and reports shall be submitted within 10 working days of the final CCTV inspection.

F. Sampling and Testing

1. Sampling - The preparation of a CIPP sample is required. The sample shall be prepared by securing a flat plate mold using the textile tube material and resin system as used for the rehabilitated pipe.

2. Pressure - The pressure applied on the plate sample will be equal to the normal pressure exerted on the lateral tube during the cure process.

3. Length - The minimum length of the sample must be able to produce at least five specimens for testing in accordance with ASTM D790-03.

4. Conditioning - Condition the test specimens at 73.4 ± 3.6° F (23 ± 2°C) and 50 ± 5% relative humidity for not less than 40 hours.
prior to test in accordance with Practice ASTM D618, for those tests where conditioning is required.

5. Short-Term Flexural (Bending) Properties – The initial tangent flexural modulus of elasticity and flexural stress shall be measured for gravity and pressure pipe applications in accordance with Test Method D790 and shall meet the minimum requirements of the table in Section 7-08.3(5)C.2.2(d) of the Special Provisions.

6. Gravity Pipe Leakage Testing - Gravity pipes will be tested using an air test method where a test plug is placed adjacent to the upstream and downstream ends of the main sheet CIPP and at the upper most end of the lateral tube. This test should take place no less than 72-hours after returning the lateral pipe back into service. This test is limited to pipe lengths with no service connections. The test pressure shall be 4-PSI for a test time of three-minutes; the pressure shall not drop below 3.5 PSI.

G. Special Warranty

1. All CIPP liners shall be certified by the manufacturer for specified material properties for the repair. The manufacturer warrants the liner to be free from defects in raw materials for ten years from the date of installation. During the warranty period, any defects which affect the integrity, strength or water tightness of the installed pipe shall be repaired at the contractor's expense.

H. Quality Control

1. The Contractor shall conduct warranty CCTV inspection of all rehabilitated laterals. This work shall be completed during conditions of high ground water and shall commence a minimum of eleven (11) months after substantial completion and be completed a maximum of eighteen (18) months after final completion. Any lateral connections which were originally repaired and are observed to be leaking or have any defects with the service lateral connection that affect the performance or cleaning of the lateral connection shall be repaired at no cost to the Owner in a manner acceptable to the Owner to the Engineer within 10-working days of final CCTV inspection 7-10.3(4)
7-10.3(4) Transition Sections

1. Transition sections shall be constructed to channelize the sewage flow and minimize entrance and exit losses as the flow passes through the existing manhole structures affected by the CIPP work.

   For UV cured liners, the Contractor shall install a zippered safety cap around the pipe liner when the pipe liner is placed through manholes.

   When the pipe liner is placed through manholes, the Contractor shall cut away the crown of the cured pipe liner (and safety cap for UV cured liners) to conform to the existing manhole walls. The Cured-in-Place liner shall make a tight seal at the manhole opening with no annular gaps. All sealing materials used shall be approved by the Engineer and shall be compatible with the manhole substrate. Contractor shall seal annular space between host pipe and CIPP liner watertight at manholes.

   Existing benches and channels shall be built up with grout as needed to match the CIPP liner elevations. Smooth transitions shall be formed between the existing surfaces and the CIPP.

2. Prior to applying new concrete, the existing surfaces shall be adequately cleaned, scraped of loose concrete, and roughened. An approved concrete bonding agent shall be applied prior to the construction of the new channels, benches, and/or transition sections. The bonding agent shall meet ASTM C-881 requirements for Type 1, Grade 3, epoxy resin adhesive. The bonding agent shall be Sikadur 31 Hi-Mod Gel or an approved equal.

3. The new channels, benches, and transition sections shall be formed using quick setting, high strength polymer modified Portland cement non-shrink grout. The grout shall meet ASTM C-293, flexural strength 1,900 psi 28-days, ASTM C-495, Splitting Tensile Strength, 750 psi 28-days, ASTM C-882, Bonding Strength 2,200 psi 28-days, and ASTM C-109, Compressive Strength 7,000 psi 28-days. The grout shall be added up to 50 percent (50%) by weight of clean, well graded aggregate conforming to 1 inch by No. 4 Coarse Aggregate grading. This quick-setting grout shall be mixed and applied as per manufacturer's specifications and the Standard Specifications. The grout shall be SikaTop 122 or an approved equal.

7-10.3(5) CIPP Bypassing Sewage

The Contractor, as necessary, shall provide labor and equipment for the flow of sewage around the section or sections of pipe designated for CIPP lining or repair. Plugging the line at an existing upstream manhole or cleanout and pumping the flow into a downstream manhole or adjacent system shall make the bypass. The pump(s) and bypass line(s) shall be of adequate capacity to accommodate sewage flows up to 300 gpm. A detail of the bypass plan shall be submitted to the Contracting Agency for approval at least two-weeks prior
to starting the work. The bypass plan shall include all equipment to be used for the pump(s) and bypass line(s), including ramps and any other equipment used to protect the bypass line(s) in the roadway.

The submittal shall include a plan view map showing temporary pipeline alignments, pump location (primary and backup for mainline bypasses), and all other appurtenances necessary for a reliable bypass system.

The temporary bypass plan shall be stamped and signed by a professional engineer registered in the State of Washington.

### 7-10.3(6) CIPP Pre-liner

#### 7-10.3(6)A Materials

CIPP pre-liner material shall be Griffolyn TX-1200, or an equivalent approved by the Engineer. The pre-liner material shall conform to the following physical properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>ASTM Test Method</th>
<th>U.S. Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>D-751</td>
<td>38 lb./1,000 ft²</td>
</tr>
<tr>
<td>3” Load @ Yield</td>
<td>D-882</td>
<td>90 lb-f.</td>
</tr>
<tr>
<td>3” Load @ Break</td>
<td>D-882</td>
<td>54 lb-f.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,500 psi</td>
</tr>
<tr>
<td>3” Elongation @ Break</td>
<td>D-882</td>
<td>400%</td>
</tr>
<tr>
<td>Tongue Tear</td>
<td>D-2261</td>
<td>22 lb-f.</td>
</tr>
<tr>
<td>Trapezoidal Tear</td>
<td>D-4533</td>
<td>29 lb-f.</td>
</tr>
<tr>
<td>PPT Resistance</td>
<td>D-2582</td>
<td>29 lb-f.</td>
</tr>
<tr>
<td>Dart Impact Strength</td>
<td>D-1709</td>
<td>1.6 lb.</td>
</tr>
<tr>
<td>Cold Impact Strength</td>
<td>D-1790</td>
<td>-40°F</td>
</tr>
<tr>
<td>Permeance</td>
<td>E-96</td>
<td>0.040 Grain/Hr·ft²·in.Hg</td>
</tr>
</tbody>
</table>

#### 7-10.3(6)B Installation

CIPP pre-liner material shall be installed where required by the Engineer. Where a pre-liner is required, the following installation steps shall be followed:

1. Upon completion of the final pre-video inspection of the pipe, a bypass shall be made in accordance with Section 7-10.3(5) of the Special Provisions and the pre-liner shall be attached, with a rope, to the camera/tractor equipment.

2. The pre-liner material shall be either rolled out above ground or suspended on a stand to allow unspooling as it enters the manhole, to minimize any damage/wrinkling to the pre-liner.
3. The pre-liner shall be strung through the pipe so that there are at least 2 feet of excess pre-liner at each end of the pipe. Should the length of pre-liner be insufficient to span the entire section of the sewer main to be lined, duct tape shall be used to join sections of pre-liner together so there is sufficient pre-liner to span the required length.

4. On the end of the pipe opposite from the CIPP installation manhole, the pre-liner shall be attached, using duct tape, to a manhole blower. The manhole blower shall be used to pre-inflate the pre-liner throughout the entire length of the pre-liner.

5. With the pre-liner inflated, the CIPP liner shall be fed into the end of the pre-liner in accordance with Section 7-10.3(2), item 4 of the Special Provisions. The entire length of the pre-liner shall be kept inflated during the CIPP insertion process to ensure that the pre-liner is not damaged or run over during the CIPP insertion process.

6. After the CIPP liner is inserted, the CIPP shall be cured in accordance with Section 7-10.3(2), item 5 of the Special Provisions for steam cured liners and Section 7-10.3(2), item 6 of the Special Provisions for UV cured liners.

7. For steam cured liners, the CIPP shall be cooled in accordance with Section 7-10.3(2), item 7 of the Special Provisions after the CIPP is cured.

8. After the CIPP is cured and cooled (for steam cured liners), the ends of the pre-liner shall be cut off flush with the CIPP liner at each end of the lined pipe, the CIPP shall be finished, the pipe terminations shall be sealed, and the transition sections shall be constructed in accordance with Sections 7-10.3(2), item 8 of the Special Provisions.

9. Service connections shall be reinstated rehabilitated in accordance with Section 7-10.3(3) of the Special Provisions.

7-10.3(7) Cleaning and Testing

7-10.3(7)A General

The provisions of 7-17.3(2)A of the Standard Specifications also apply to this work

Testing of all pipe materials may be required prior to installation at option of the Engineer. Such tests, if required, shall be conducted in accordance with the reference material specification for the material being used. Testing shall be performed on the new mainline and service laterals, simultaneously prior to the new sewer being placed in service.

Installation of the CIPP must be performed by a work force that is experienced in such installation work. At minimum, the Contractor's CIPP
work force shall include a CIPP work supervisor and a work crew member experienced in liner wet-out and insertion and a remote cutter operator.

7-10.3(7)B Television Inspection

Paragraphs 2 and 3 of section 7-17.3(2)H of the Standard Specifications also apply to this work.

Prior to the television inspection, the new sewer pipe shall be flushed to remove all debris and water no more than 12 hours before inspection and allowed to fill all pipe "bellies." The deviation from pipe grade (depth of pipe "bellies") shall be determined by towing a 2-inch ball ahead of the video camera while the water is stagnant in the pipe "bellies."

Once the television inspection has been completed the Contractor shall submit to the Engineer the written reports for the inspection plus the USB flash drive within 5-working days of performing the work. Said recordings are to be in color and compatible with the Contracting Agency's viewing and recording systems. The Contractor shall notify the Contracting Agency at least 48 hours in advance of video-inspections. It shall be the Contractor's responsibility to confirm that the video file format is compatible with the Contracting Agency’s viewing software and equipment.

7-10.3(7)C CIPP Product Test Data

No product shall be installed without submittal of test data, prior to construction, supporting the product performance requirements listed below. Materials tested to provide the required test data shall be like those proposed for use in the Project. All test samples shall be prepared to simulate the conditions and procedures the product will experience during the Project. All testing shall have been performed by an independent third party qualified to perform such testing.

Chemical resistance – For steam cured liners, tests shall be conducted for domestic sewage with light-industrial discharges in accordance with ASTM F1216-09, Appendix X2, or F1743-08, Section 7.2, and meet the minimum requirements listed therein. For UV cured liners, tests shall be conducted for domestic sewage with light-industrial discharges in accordance with ASTM F2019-11, and meet the minimum requirements listed therein.

Hydraulic capacity – Calculations shall be submitted which support that the finished in-place flexible tube shall be able to provide a minimum of 100 percent of the existing sewer line's original design capacity. (Original design capacity of the existing sewer line shall be calculated using a roughness coefficient "n" of 0.015.) The typical roughness coefficient "n" to be used for the proposed flexible tube shall be verified by independent third party (hired by the product Manufacturer) test data, but shall not be less than 0.011, unless otherwise approved by the Engineer.
Flexural modulus and strength—to verify the proposed product's past performance, the Contractor shall submit detailed test results from a minimum of ten (10) previous successful installations of the proposed product. The test results of field samples from each of the ten (10) previous installations shall verify that the minimum requirements for short-term flexural modulus and flexural strength specified in this special provision had been achieved.

7-10.3(7)D  CIPP Preliminary Investigation of Host Sewer Pipe

Prior to ordering rehabilitation materials, the Contractor shall be responsible for inspecting and confirming the inside diameter, pipe material, and alignment of each segment of the host sewer pipe, and determining the condition of each manhole-to-manhole segment to be lined. All host sewer pipe shall be inspected using video equipment. The Contractor shall use the data and information collected from this inspection to finalize the liner size, refine the liner design, and refine the installation techniques. If unknown physical conditions in the work area are encountered during the investigation that materially differ from those ordinarily encountered, the Contractor shall notify the Engineer. The Contractor shall provide a copy of all inspection videos on a USB flash drive, notes, reports, and photographs to the Engineer within 5-working days of performing the work.

Cleaning of the lines shall be performed carefully in accordance with NASSCO standards to avoid further damaging the existing pipelines.

7-10.3(7)D(1)  Host Sewer Pipe Point Repairs

If the Contractor determines that point repairs are needed to the host sewer pipe before the host sewer pipe can be lined with CIPP, the Contractor shall notify the Engineer immediately. If the point repairs are approved by the Engineer, the Contractor shall repair the sewer pipe with a trenchless or open cut point repair prior to lining the sewer pipe as directed by the Engineer.

If the Engineer directs the Contractor to provide and install a trenchless point repair, the point repair shall be performed with a segmental liner to cover the defect(s) in the sewer pipe. The segmental liner shall be Source One Environmental's (S1E) Pipepatch or an approved equal.

If the Engineer directs the Contractor to provide and install an open cut point repair, the Contractor shall dig up, cut out and remove the defective pipe section, replace the defective pipe section with PVC pipe of the same diameter and length, and provide and install couplings between the new PVC pipe and existing sewer pipe. The couplings shall be a Mission or Fernco strongback transition coupling or an approved equal.
The Contractor shall submit a list of materials and procedures for approval by the Engineer prior to installing the point repair. Any point repairs shall be installed prior to the Contractor lining the host sewer pipe with CIPP.

7-10.3(7)E  CIPP Tests

CIPP Tests for Steam Cured Liners
The Contractor shall collect a minimum of one field sample of the CIPP and perform the tests listed below per each 1,000 linear feet of CIPP installed or as required by the contracting agency. The test sample must be cut from a section of liner that was confined to the same diameter as the host pipe being lined.

For 18-inch-diameter pipes and smaller, a constrained sample will be obtained by pulling through a like diameter section of pipe or from an intermate manhole. For pipes with a diameter greater than 18 inches but no greater than 24 inches, a constrained sample will be obtained from an intermate manhole. Constrained samples shall be held in place by a suitable heat sink, such as sandbags.

Samples for this test shall be provided from one of the following two ASTM methods:

A) ASTM F1216-09, Section 8.1.1, or F1743-08, Section 8.1.1. If a length of CIPP is installed through intermediate manholes, samples may be taken at the intermediate manhole as well as at the termination point.

B) ASTM F1216-09, Section 8.1.2, or F1743-08, Section 8.1.2.

Where testing is performed on CIPP samples, the Contractor shall be responsible for providing the necessary samples and for hiring a qualified, independent third party to perform the required tests. This third party shall be approved by the Engineer. Immediately upon completion of the sample testing, the Contractor shall submit two (2) copies of a detailed report on the testing to the Engineer. The report shall outline test procedures, present data, provide diagrams as required, and summarize test results for each length of CIPP installed.

The layers of the CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe so that the layers separate cleanly. If separation of the layers occurs during testing of field samples, new samples will be cut from the manhole samples. Any reoccurrence may cause rejection of the work. Contractor shall provide all labor and material necessary to produce samples for laboratory and or field testing. Contractor to contract directly with certified laboratory for testing as required. Contractor shall contact testing lab prior to first insertion and determine sample size.
requirements. Samples shall be large enough to perform wall thicknesses, flexural strength, and modulus of elasticity test.

Samples used for testing shall be individually labeled to record the following:
   1. Contract number and title
   2. Sample Number
   3. Date of Installation
   4. Location of Installation
   5. Contractor Name including person responsible for collecting samples
   6. Upstream and downstream manhole numbers from where sample was taken

Lengths of CIPP which fail any of the required tests may be required by the Engineer to be removed and replaced at the Contractor's cost.

1. Short-term flexural (bending) properties – Testing shall be in accordance with ASTM F1216-09, Section 8.1.3.1, or F1743-08, Section 8.1.4.

2. CIPP wall thickness – Testing shall be in accordance with ASTM F1743-08, Section 8.1.6. The minimum wall thickness at any point shall not be less than the minimum CIPP wall thickness requirement specified in Section 7-10.2(3) of the Special Provisions unless otherwise allowed by the Engineer.

Samples will be provided to the Engineer if requested.

**CIPP Tests for UV Cured Liners**

The Contractor shall collect a minimum of one field sample of the CIPP and perform the tests listed below per each 1,000 linear feet of CIPP installed or as required by the Owner. **The test sample must be cut from a section of liner that was confined to the same diameter as the host pipe being lined.**

For all pipes, a constrained sample will be obtained by pulling through a like diameter section of a zippered safety cap. Samples for this test shall be provided from the following ASTM method:

A) ASTM F2019-11, Section 7.1.2. If a length of CIPP is installed through intermediate manholes, samples may be taken at the intermediate manhole as well as at the termination point.

Where testing is performed on CIPP samples, the Contractor shall be responsible for providing the necessary samples and for hiring a qualified, independent third party to perform the required tests. This third party shall be approved by the Engineer. Immediately upon completion of the sample testing, the Contractor shall submit two (2) copies of a detailed report on the testing to the Engineer. The report shall outline test procedures, present data, provide
diagrams as required, and summarize test results for each length of CIPP installed.

The layers of the CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe so that the layers separate cleanly. If separation of the layers occurs during testing of field samples, new samples will be cut from the manhole samples. Any reoccurrence may cause rejection of the work. Contractor shall provide all labor and material necessary to produce samples for laboratory and or field testing. Contractor to contract directly with certified laboratory for testing as required. Contractor shall contact testing lab prior to first insertion and determine sample size requirements. Samples shall be large enough to perform wall thicknesses, flexural strength, and modulus of elasticity test.

Samples used for testing shall be individually labeled to record the following:
1. Contract number and title
2. Sample Number
3. Date of Installation
4. Location of Installation
5. Contractor Name including person responsible for collecting samples
6. Upstream and downstream manhole numbers from where sample was taken

Lengths of CIPP which fail any of the required tests may be required by the Engineer to be removed and replaced at the Contractor’s cost.

CIPP wall thickness will be measured in accordance with the applicable sections of ASTM Test Method D 5813 and D 3567. Flexural strength and flexural modulus of elasticity shall be determined in accordance with ASTM D-790.

Samples will be provided to the Engineer if requested.

7-10.3(7)F  CIPP Inspection and Acceptance

The finished installation shall be inspected by the Contractor by closed-circuit television camera as specified in Section 7-10.3(7)B of the Special Provisions in the presence of the Contracting Agency, unless otherwise directed by the Contracting Agency. Variations from true line and grade will only be acceptable if proven by the Contractor that the variations existed under the original conditions of the existing sewer lines. The CIPP work will be deemed unacceptable if infiltration of groundwater is detected. All service lateral connections and entrances must be accounted for and shall be unobstructed.

7-10.3(7)G  CIPP Clean-Up

Upon acceptance of the CIPP installation, the Contractor shall restore the Project area to original conditions or as directed by the Contracting Agency.
7-10.4 Measurement

No specific unit of measurement shall apply to the lump sum item Pre-Cleaning Video Inspection for CIPP.

No specific unit of measurement shall apply to the lump sum item Clean and Prep Sewer for CIPP.

No specific unit of measurement shall apply to the lump sum item Video Inspection Prior to CIPP Installation.

No specific unit of measurement shall apply to the lump sum item Temporary Bypass for CIPP Installation.

The length of __ In. Cured-in-Place Pipe (CIPP) and _-Inch CIPP Pre-Liner will be measured by the Linear Foot of CIPP installed.

Trenchless Lateral Connection Reinstatement and Rehabilitation will be measured per each service lateral reinstated and rehabilitated.

7-10.5 Payment

“Pre-cleaning Video Inspection for CIPP”, Lump Sum

The lump sum price shall be full compensation for conducting a video inspection of the sewer main lines along the project limits prior to cleaning and preparing the sewer main lines for construction. The purpose of this video inspection is to determine the appropriate cleaning methods for the existing sewer main lines. Service lateral connection pipe locations and pipe conditions shall be confirmed as part of the sewer main video inspection. The price shall also include the cost to provide the Contracting Agency with a USB flash drive copy of the inspection. This bid item shall only be paid for the pre-cleaning video inspection. Video inspections required to demonstrate the adequate finished product and video inspections immediately prior to lining shall be paid for in other bid items as indicated.

“Clean and Prep Sewer for CIPP”, Lump Sum

The lump sum price shall be full compensation for cleaning sewer main lines using standard National Association of Sewer Service Companies (NASSCO) methods or other method as approved by the Contracting Agency. Work paid under this item includes cleaning and preparing the sewer main lines completely to enable video inspections, CIPP installation in the main line and trenchless reinstatement of the service lateral connections. Work paid here shall also include removing roots intruding pipe gaskets and obstructions from host pipe.

The lump sum price for this item shall include up to four cleanings (or passes) for each sewer main line to prepare the sewer main line for CIPP installation. Any additional
cleaning needed to prepare the sewer main line for CIPP installation after the fourth cleaning shall be paid for in the item “Additional Clean and Prep of Sewer Prior to CIPP”.

If a pass cannot be made through the entire sewer main line for cleaning, the lump sum price for this item shall include up to four hours of cleaning for the sewer main line to prepare the sewer main line for CIPP installation. Any additional cleaning needed to prepare the sewer main line for CIPP installation after the four hours of cleaning shall be paid for in “Additional Clean and Prep of Sewer Prior to CIPP”.

“Video Inspection Prior to CIPP Installation”, Lump Sum

The lump sum price shall be full compensation for conducting a video inspection of the sewer main lines along the project limits prior to construction. The Contractor shall confirm pipe material and diameter during video inspection. The Contractor shall not order CIPP liners until the Contractor has confirmed host pipe material and diameter by video inspection and internal measurements. Service lateral connection pipe locations and pipe conditions shall be confirmed as part of the sewer main video inspection. The price shall also include the cost to provide the Contracting Agency with printed pipeline inspection reports and a USB flash drive copy of the inspection. This bid item shall only be paid for the video inspection prior to placing the liner. Video inspections required to demonstrate the adequate finished product and pre-cleaning video inspections shall be paid for in other bid items as indicated.

“Temporary Bypass for CIPP Installation”, Lump Sum

The lump sum price shall cover the complete cost of providing all materials, equipment and labor necessary for construction of temporary sewer bypass. Work includes, but is not limited to: coordination with purveyor; pipe; fittings; valves; earthwork; connections to customers; testing; protection and maintenance of systems; removal and disposal; and all other work necessary for complete temporary sewer systems. Price shall also include labor costs for planning, notification, logistical coordination with the affected customers for the timing of when their services are not connected to the permanent system and service is briefly interrupted. Also included in the price are all cost and time impacts to other portions of the work affected by temporary systems.

“__ In. Cured-in-Place Pipe (CIPP)”, Linear Foot

The price per linear foot shall be full compensation for furnishing and installing the size of cured in place pipe per plans and specifications. The price shall include, but not be limited to, coordination with businesses affected by construction, installing, curing, testing, TV inspecting upon liner completion, water supply for steam curing (if applicable), slider tube and zippered safety caps for UV curing (if applicable), providing USB flash drive of inspection to the Contracting Agency and replacing any deficient sections of CIPP. The price per lineal foot shall also include connecting
CIPP to manholes, excavation and exposing of manholes, adjusting manholes to the surface, providing new frame and covers at manholes to remain, demolishing existing manhole bench, providing new overflow weirs, and building manhole transitions and all labor, equipment and materials to seal the annular space between the new CIPP and the host pipe water tight. Ten percent (10%) of the unit price shall be withheld until coupon testing results and video inspections for each run of pipe have been provided to the Contracting Agency.

“__ In. CIPP Pre-Liner”, Linear Foot

The price per linear foot shall be full compensation for furnishing and installing the size of pre-liner for the cured-in-place-pipe shown in the plans. The price shall include, but not be limited to, joining, installing, inflating, trimming, and finishing the pre-liner material.

Measurement shall be per linear foot of pre-liner installed. This item shall not be subject to Section 1-04.4 of the Special Provisions. Quantities are susceptible to change. Any change in quantity shall not be grounds for renegotiating.

If UV cured liners are used on this project, this bid item will be eliminated from this project.

“Trenchless Lateral Connection Reinstatement and Rehabilitation” per each

The price per each shall be full compensation for reinstating existing service laterals from within the CIPP lined main line pipe and rehabilitating the reinstated lateral connections. The price shall include, but not be limited to, cutting holes in the CIPP to reinstate the lateral connections, preparing and smoothing the lateral connection reinstatement holes as necessary, preparing and cleaning the lateral as necessary, and rehabilitating the reinstated lateral connections using the service lateral connection sealing system as described in the Specifications. The reinstated lateral connections shall not be rehabilitated until a minimum of 24 hours after CIPP lining of the associated sewer main.

“Additional Clean and Prep of Sewer Prior to CIPP”, by Force Account as provided in Section 1-09.6.

Payment for this force account item shall be for cleaning sewer main lines using standard National Association of Sewer Service Companies (NASSCO) methods or other method as approved by the Contracting Agency.

This item shall only be used if the cleanings specified in “Clean and Prep Sewer for CIPP” are deemed inadequate for preparation of the sewer main line for CIPP installation. Prior approval by the Engineer is required for payment of this item.

“Host Sewer Pipe Point Repairs” by force account as provided in Section 1-09.6.
Payment for point repairs to the existing sewer mains prior to CIPP lining due to the condition of the existing sewer main shall be paid for under “Unknown Utility Repair.” To provide a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the Contractor’s total bid. All other CIPP lining work identified in the plans shall be paid by the associated bid items.

7-17 SANITARY SEWERS

7-17.2 Materials

Supplement this section with the following:

- Detectable Marking Tape 9-05.12(4)
- Gravel Backfill for Pipe Zone Bedding 9-03.12(3)

Pipe for gravity mainline sanitary sewer shall be C-900/C-905 PVC Sanitary Sewer Pipe, DR-25 rating. All PVC pipe not noted as C-900/C-905 in the plans and/or designated as mainline shall be SDR35 in accordance with Section 9-05.12(1).

Pipe Plugs and Caps: All plugs shall be of the same material as the pipe being plugged. The plug shall be capable of withstanding all test pressures without leakage.

Manhole Joints: Concrete to PVC manhole adapters shall be “Kor-N-Seal” boots, or equivalent, grouted flush to the inside of manhole.

All metal products and fitting components (e.g. bolts, gaskets, etc) are to be of domestic fabrication and construction.

7-17.3 Construction Requirements

Add the following new section:

7-17.3(1)A Sewer Connections, Transfers and Abandonment

7-17.3(1)A(1) Temporary Sewage Bypassing

Continuous operation of the Owner’s facilities is of critical importance. The Contractor shall schedule and conduct activities to enable existing facilities to operate continuously, unless otherwise specified. The Contractor shall not proceed with work affecting a facility’s operation without obtaining Owner’s and Engineer’s advance written approval of the need for, and duration of, such work. Where existing facilities are to be modified during the course of work, the Contractor shall obtain Engineer’s review of submittals for temporary shutdown, demolition, modification, corrections between new and existing work, and other related work and shall conform to other Contract conditions as applicable.
The Contractor shall be responsible for developing the sequence of the work and for ensuring that current operations are not interrupted or compromised.

At least three weeks prior to starting the work, Contractor shall confer with the Engineer and Contracting Agency’s representative to develop a work schedule which will permit facilities to function as normally as practical. Certain parts of the construction work may be required outside normal working hours in order to avoid undesirable conditions. The Contractor shall do this work at such times and at no additional cost to the Contracting Agency. Connections between existing facilities and new work shall not be made until all necessary inspection and tests have been completed on the new work and the new work is found to conform in all respects to the requirements of the Contract Documents.

Provide Temporary Sewage Bypass Plan(s) at least 21 days prior to starting the work, including drawings and complete design data showing methods and equipment to be utilized to temporarily bypass sanitary sewage systems while making connections to the existing system or installing new facilities that require the temporary bypass of the existing facilities for Engineer and Contracting Agency review. Temporary Sewage Bypass Plan shall be stamped and signed by a professional engineer registered in the State of Washington.

Connection to existing services or utilities, or other work that requires temporary shutdown of any existing operations or utilities shall be planned in detail with appropriate scheduling of the work and coordinated with the Contracting Agency or Engineer.

The Contracting Agency and Engineer consider the Contractor’s schedule and construction sequencing to be paramount to ensure that the work is properly planned, coordinated, and executed. A number of pump stations feed or are fed by the facilities that will be replaced by the work under this contract. Those pump stations are currently and continuously receiving and pumping sewage and their functions cannot and shall not be interrupted except as specified herein or as specifically allowed by Contracting Agency. The Contractor shall properly coordinate and execute the work to avoid interference with normal operations.

Work during low flow periods (between the hours of 12 am and 5 am) and sewer bypassing may be required to complete portions of the work. Such work shall be minimized to the extent possible through proper sequencing and execution of the work.

The Contractor shall provide all pumps, piping, and tanker trucks and be responsible for filling tanker trucks, hauling, and properly disposing of sewage. The Contractor shall schedule and conduct his/her work in a manner that will minimize the number of times and length of time that temporary/bypass pumping is required.
The Contractor shall provide sufficient pumping capacity to convey the following wastewater flowrates:

<table>
<thead>
<tr>
<th></th>
<th>gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Sewer Dry Weather</td>
<td>300</td>
</tr>
<tr>
<td>Gravity Sewer Wet Weather</td>
<td>400</td>
</tr>
<tr>
<td>Force Main</td>
<td>1,800</td>
</tr>
</tbody>
</table>

All bypass pumping capacity provided by the contractor shall be redundant, that is, there shall be at least one backup pump for every pump required to meet the pumping capacities listed in the table above.

Spills or bypasses of sewage to surface waters or drainage courses are prohibited. In the event sewage spills are caused by the Contractor, the Contractor shall take immediate action to contain the spill, and shall be responsible for cleanup and any consequential damages. The Contracting Agency shall be entitled to take whatever supplemental actions are deemed necessary to stop a spill. Contractor is fully responsible for any damage that may result from an inadequate or improper installation, maintenance or operation, or failure of any kind of the bypass system.

Costs incurred by the Contractor or Contracting Agency, including penalties imposed on the Contracting Agency as a result of any sewage spill caused by the Contractor, its employees, or subcontractors, shall be borne in full by the Contractor, including legal fees and other expenses to the Contractor or Contracting Agency resulting directly or indirectly from the spill. If the system has to be drained to complete the work, such as for a cut-over/connection, Contractor shall provide the necessary temporary pumping and/or storage equipment to drain or remove the sewage from the excavation and/or system.

Operation of the existing pump station facilities, including those operations which may be necessary to facilitate the Contractor’s work will be provided by the Contracting Agency. For minor assistance/operations, the Contractor shall provide a minimum of 3 working days advance notice. When major assistance or the Contractor’s work needs to be done during the low flow period, which will require coordination of more than one individual, or more than a few hours of one individual of the Contracting Agency’s personnel, Contractor shall provide a minimum of 14 working days advance notice.

The Contractor shall not at any time undertake to close off any lines or open valves or take any other action which would or might affect the operation of any part of the Contracting Agency’s existing systems without first discussing it with the Engineer and/or Contracting Agency. Unless permission is specifically granted, the Contracting Agency or responsible utility will open and close valves.
7-17.3(2) Cleaning and Testing

7-17.3(2)A General

The first paragraph is replaced with the following:

All PVC gravity sewer and sewer appurtenances shall be cleaned per specification and tested after backfilling by the low pressure air test per 7-17.3(2)F. Testing shall occur for each section of mainline pipe between manholes inclusive of proposed side service piping out to the proposed cleanout locations at back of Right-of-Way.

Supplement this section with the following:

Cleaning and Flushing

All gravity sewer pipe, including new service lateral piping, shall be cleaned and flushed after side sewer installation and after backfilling and compaction. Any obstruction such as cemented grout or debris found in the completed section shall be removed.

Alignment and Grade

Alignment and grade will be inspected with an approved video monitoring system (TV inspection). Any section or portion which exceeds the allowance for variance in line or grade shall be re-excavated and relaid at no additional cost to the owner.

7-17.3(2)H Video Inspection

Supplement this section with the following:

The Engineer will require all sanitary sewer lines be inspected by the use of a television camera prior to final acceptance. Prior to the television camera inspection, the new sewer pipe shall be flushed to remove all debris and water allowed to fill all pipe “bellies.” Video inspections shall be performed after all laterals are installed and prior to placing the new sewer in service.

7-17.4 Measurement

Supplement this section with the following:

Check dams will be measured per each check dam installed per the Plans.

PVC sanitary sewer pipe will not be measured where installed in the microtunnel casing limits and is measured and paid per section 7-20 Microtunneling.
7-17.5 Payment

Replace the following pay item in its entirety with the following:

“PVC Sanitary Sewer Pipe ___ In. Diam.” Per lineal foot

The unit contract price for each size and kind of pipe shall be full pay for all work to complete the installation of the sewer main including but not limited to excavation; bedding; providing and installing pipe, fittings, caps, concrete encasement (where shown on the plans); check dams (where shown on the plans); backfill; locate tape; tracer wire; trench patches; testing; flushing; and cleanup. Payment shall only be provided for the pipeline lineal foot once the pipe is backfilled and has been pressure tested successfully.

Supplement this section with the following:

“Check Dam” per each

The unit contract price per each for check dams shall be full pay for all work to complete the installation of the check dams along the sewer main alignment including but not limited to excavation; bedding; Bentonite or CDF backfill material to the roadway subgrade and all other work as shown in the Plans.

“Temporary Sewer Bypass for Gravity Sewer” Lump Sum

The lump sum price shall cover the complete cost of providing all materials, equipment and labor necessary for construction of temporary sewer bypass. Work includes, but is not limited to: coordination with purveyor; pipe; fittings; valves; earthwork; connections to customers; testing; protection and maintenance of systems; removal and disposal; and all other work necessary for complete temporary sewer systems. Also included in the price are all cost and time impacts to other portions of the work affected by temporary systems.

“PVC Sanitary Sewer Casing Pipe ___ In. Diam.” Per lineal foot

The unit contract price for “PVC Sanitary Sewer Casing Pipe ___ In. Diam.” shall be full pay for all work to install the sewer casing pipe sized to accommodate the carrier size noted on the Plans, including but not limited to installing the carrier pipe within the casing, placing carrier pipe to grade with pipe supports and providing end seals on the casing pipe.
7-18 SIDE SEWERS

7-18.1 Description

Supplement this section with the following:

This work shall include providing reconnection of sanitary side sewers encountered during trenching operations for sanitary sewer installation.

7-18.2 Materials

Supplement this section with the following:

All materials shall conform to the requirements of Kitsap County Standard Plans and the Standard Specifications.

7-18.3 Construction Requirements

Supplement this section with the following:

The Contractor shall coordinate with the Sewer Utility Division of Kitsap County Public Works when selecting materials to complete the final connections to existing side sewers once existing side sewer materials are known.

7-18.5 Payment

Supplement this section with the following:

“Reconnect Sewer Service”, per each

Payment for reconnect sewer service shall be for sewer services when connecting to existing service lines. The unit contract price shall include all work to reconnect the service including all fittings to align with existing and owner coordination. This also includes removing CDF where owner service lines are encased in CDF to complete the connection to the service line.

7-19 SEWER CLEANOUTS

7-19.2 Materials

Supplement this section with the following:

All materials shall conform to the requirements of Kitsap County Standard Plans and the Standard Specifications.
7-19.3 Construction Requirements

Supplement this section with the following:

All cleanouts shall be extended to the surface and have collars and covers per the
details in the Plans.

7-18.5 Payment

Supplement this section with the following:

“Sewer Cleanout”, per each

The unit contract price for sewer cleanouts shall include providing the casting and
covers and installing per the Kitsap County Standard Plans and the Standard
Specifications.

Add the following new section:

7-20 MICROTUNNELING

7-20.1 Description

This Work consists of microtunneling installation of Casing Pipe and Carrier Pipe
where shown on the Plans. Microtunneling is a construction technique used to
excavate and jack into place a pipeline using a remotely controlled microtunnel
boring machine (MTBM). The MTBM circulates slurry through the excavation
chamber to remove all soil and rock cuttings, while simultaneously installing Casing
Pipe. The slurry pressure provides support of the excavation face and balances soil
and groundwater pressure as the tunnel excavation advances. The MTBM is
operated from a console at the ground surface adjacent to the launch shaft and uses
a laser or theodolite guidance system to control tunnel line and grade. Personnel
entry is not required for routine operation.

7-20.1(1) Qualifications

All microtunneling work shall be performed by an experienced subcontractor or
Contractor who has completed at least 4 projects with similar drive lengths and
casing dimensions in the last 10 years.

The microtunneling operator(s) shall have technical training in the operation of the
proposed equipment and shall have completed at least 4 projects with similar drive
lengths and casing dimensions in the last 10 years.

The project superintendent shall have at least 3 years of experience involving
microtunneling construction.
The site safety representative and personnel responsible for air quality monitoring shall be experienced in tunnel construction and shall be certified by OSHA.

The Contact Grouting subcontractor or Contractor shall have three years’ experience in placing contact grout behind Carrier Pipes similar to those indicated.

The Annular Space Grouting subcontractor or Contractor shall have a minimum ten years of experience grouting the interiors of Casing Pipes of similar size and length.

Welders must be qualified under the provisions of AWS D1.1 by an independent local approved testing agency not more than six months prior to commencing work on the Casing Pipe unless continuously employed in similar welding jobs since last certification.

The Contractor shall utilize a Landline Surveyor registered in Washington State to provide all necessary staking and alignment for the microtunnel operations and set the initial Casing Pipe grade and alignment. The surveyor responsible for this work shall have appropriate training and experience necessary to accurately perform this work.

7-20.1(2) Submittals

For submittals requiring calculations, calculations shall be prepared, stamped, signed, and dated by a Professional Engineer licensed in the State of Washington. Detail all assumptions used in the calculations.

The information submitted shall include, but not be limited to:

1. Qualifications and project references including a description of referenced microtunnel projects including owner's name and contact information, project superintendent, and machine operators.
3. Written statement verifying that the thrust reaction frame backstop loads have been used in the design of launch shaft.
4. Location and description of the power source of the microtunneling operations and the power systems for all other equipment.
5. Launch Shaft Site Layout Drawings: A plan view drawing for the launch shaft showing tunneling operation including: (a) configuration, size, and location of shaft, (b) location of truck access, (c) separation plant, (d) ancillary equipment, (e) pipe material storage, (f) electrical equipment, and (g) operator control container.
6. Reception Shaft Site Layout Drawings: A plan view drawing for the reception shaft including: (a) configuration, size, and location of shaft and (b) location of truck access.
7. Thrust Block backstop calculations and design.
8. Pipe entrance and exit seal drawings and details.
9. Ground modification at each shaft to limit soil and groundwater flow into the shaft at launch and retrieval.
10. Shaft ventilation and lighting layout details.
11. Detailed descriptions of the microtunneling activities, sequencing,
equipment, and methods to be used during the microtunneling installation. This shall include: (a) The manufacturers’ specifications and operating manual for the MTBM machine and related equipment, (b) the machine type, dimensions, weight, power, torque, rotational capabilities, machine articulation and steering capabilities, (c) grade and alignment control system, (d) cutterhead configuration with reasoning for selected tools and configuration to excavate site-specific geotechnical conditions, (e) method of tunnel spoils removal, decanting, and disposal, (f) method of handling Cobbles and Boulders, (g) selected overcut dimension and reasons for selecting the amount, and (h) detailed maintenance records showing refurbishment of the machine (if applicable). Include pictures of the equipment to be used.

12. Jacking mechanism design including, but not limited to: (a) the capacity, number, location, and arrangement of main jacks and intermediate jacking station jacks, (b) details of thrust restraint for jacking reaction frames, (c) a description of how the jacking forces will be monitored and recorded, and (d) shop drawings for Intermediate Jacking Stations, if used, showing size, location, and details of seals on the Intermediate Jacking Stations.

13. Casing Pipe calculations that demonstrate that the Casing Pipe is adequate for design and construction loads. Design the Casing Pipe for the following conditions: (a) combination of soil, hydrostatic, bending, buckling, jacking, and grouting loads, (b) soil loads equal to the uniform radial load equal to the depth of the overburden from the crown of the Casing Pipe to the ground surface multiplied by 125 pounds per cubic foot of soil – adjust for buoyancy where groundwater is present, (c) groundwater equal to the depth from the ground surface to the Casing Pipe, (d) a bending-induced moment from a diameter change equivalent to 0.2 percent of the pipe diameter, (e) adequate resistance to buckling forces, (f) the Maximum Anticipated Jacking Load with a minimum factor of safety of 2.0, (g) handling and erection loads, (h) maximum Contact Grouting pressure, and (h) anticipated Annular Space Grouting pressures.

14. Casing Pipe details including: (a) material, (b) wall thickness, (c) yield strength, (d) pipe class, (e) joint configuration, (f) layout and details of Grout Ports, and (g) details of Grout Port closures.

15. Dimensional information and drawings confirming the proposed Casing Pipe, Carrier Pipes, and casing spacer system will be dimensionally compatible as a system.

16. Casing Pipe mill certificates of the physical and chemical properties of the pipe.

17. Details of pipe jacking lubrication injection system to be used during Casing Pipe jacking including Injection Port locations, anticipated injection pressures, and pipe jacking lubrication mix.
18. Details of and description of the slurry separation plant, including the layout with connecting piping and size and flow diagram including screen sizing of slurry separation system equipment. Also include a list of all components of the separation system and their function including, but not limited to: shakers, centrifuges, clarifier, and mud separation plant. Include sufficient details to demonstrate that the slurry separation system is designed for the ground conditions indicated in Appendix C – Geotechnical Report and that it is integrated with the planned production rate.

19. Tunnel spoils handling and disposal plan.

20. Layout drawings, design calculations, connection details, materials of construction, and manufacturer information for Carrier Pipe support system components for each Carrier Pipe installation. Include details on the casing spacers, connections, fasteners, and other appurtenances.

21. Calibration certificates for gauges and meters to be used in grouting operations.

22. Contact Grout mix design including source of supply for each grout ingredient and certificates of compliance for materials specified herein.

23. Contact Grouting program details including: (a) injection locations, sequence, and pressures, (b) method for assuring uninterrupted grouting at pressures that do not exceed the maximum allowable, (c) method for preventing soil and water inflows into the Casing Pipe during grouting, (d) method for demonstrating complete filling of the External Void Space, (e) layout and description of grouting equipment and facilities, and (f) methods for cleaning tunnel of wasted materials and debris and treating excess or waste grout in water discharge. Provide sufficient details on the means and methods to identify proportioning and grout mixing methods, measuring grout pressure and injection rate, maintaining grout pressure below allowable limits, sequencing grouting and establishing basis and threshold values for modifying mixes, and means and methods of preparing, cleaning, plugging, and sealing Injection Ports.

24. Contact Grout reports, submitted no later than the beginning of the following working day including list of idle or inoperative equipment and reason for downtime. Also include a location, orientation, and conditions observed at each Inspection Port, grout mix type and batch number, grouting time spent on each Injection Port broken down by quantity injected, injection pressure, and pumping rate, and notes on grout communication to other Injection Ports. When grouting is competed at any given Injection Port, provide a separate Injection Port Completion Record that includes a summary of backfilling details, Injection Port plug insertion details, Plug sealing details, and Casing Pipe repair details, if performed.
25. Contact Grout test records of strength tests on grout samples as soon as practicable after performing tests.

26. Carrier Pipe Installation Methods and Work Plan, including: (a) details of the installation of the Carrier Pipes in the Casing Pipe, (b) methods of limiting deflection of Carrier Pipes during pipe installation and Annular Space Grouting, (c) methods and procedures for maintaining Carrier Pipes at required alignment, (d) layout drawings, design calculations, connection details, materials of construction and manufacturer information for Carrier Pipe support system components (casing spacers, Carrier Pipe support brackets, and connections, fasteners, and appurtenances), (e) methods and procedures to stabilize Carrier Pipes against grout forces and maintain grade while reacting against buoyancy forces during Annular Space Grouting, and (f) verification that the plan is compatible and coordinated with Annular Space Grouting.

27. Annular Space Grouting Work Plan and Methods Statement that includes detailed descriptions and drawings of proposed work indicating proposed locations of: surface mixing equipment, subsurface injection points, flow lines, waste grout recovery, grout pressure limiting equipment, bulkheads, and venting system. Also include the grout mix design, including the densities and viscosities, initial set time of the grout, anticipated hydration temperature, and 24-hour and 28-day minimum compressive strength. Include grouting method and grouting equipment details such as the maximum injection pressures, proposed grout stage volumes, bulkhead designs and grouting and vent location plans. Other items to include are: (a) buoyant force calculations, (b) flow control measures, (c) grout head pressure calculations and buckling calculations for the Carrier Pipe, (d) plan to stabilize pipe against buoyant forces while grout is setting, (e) verification that heat of hydration will not adversely affect the Casing Pipe and Carrier Pipe, (f) methods to verify the Annular Space is filled completely, and (g) pressure gauge certification.

28. Before delivery of Annular Space Grout or materials, submit certified reports of the compressive strength, viscosity, and density. Accompany the certified reports on previously tested materials with the manufacturer's certified statement that the previously tested material is of the same type, quality, manufacture, and make as that proposed for use in this Work.

29. During Annular Space Grouting, submit 24-hour penetration resistance test results performed in accordance with ASTM C403. After grouting is completed, submit 28-day compressive strength test results performed in accordance with ASTM C495 or ASTM C109.

30. Provide batch tickets for each load of Annular Space Grout in accordance with ASTM C94.

31. Provide a submittal comparing the measure Annular Space Grout...
32. Detailed schedule showing major construction activities and durations, including starting and completion dates for: (a) MTBM setup and testing, (b) ground modification, (c) microtunneling launch, (d) Casing Pipe installation, (e) stripping utilities from Casing Pipe and cleaning, (f) contact grouting, (g) Carrier Pipe installation, (h) Annular Space Grouting, and (i) demobilization.

33. MTBM operational data in electronic form and submitted to the Engineer daily, no later than noon, for the previous days’ operation. The electronic data shall be compatible with Microsoft Excel and be collected at intervals of one minute or less. PDF file formats are not acceptable.

34. During excavation, monitor and provide a jacking report with the following for each Casing Pipe section installed: (a) description of ground conditions encountered, (b) effectiveness of the slurry separation system relative to the progress of the MTBM, (c) quantity and type of lubrication used including pressures at pump and all points of injection, (d) density of the slurry being returned to the MTBM, (e) quantity of the muck removed, (f) description of any unusual conditions or special actions taken, and (g) personnel on site.

35. Operational Records including: (a) torque, (b) slurry flow rates and pressures, (c) MTBM position relative to the laser, (d) position of the steering jack and pressures, (e) by-pass value position, (f) penetration rate, (g) jacking pressure and forces, (h) IJS pressure and forces at each location, and (i) advance rate.

36. As-built Survey of the Casing Pipe including maximum vertical Casing Pipe deviation from the design grade shown in the Drawings and verification that Carrier Pipe can be installed to the design grade shown in the Drawings along the alignment.

37. As-Built Survey of Casing Pipe.

38. Microtunneling system tests prior to drive.

39. Contingency Plans in the event: (a) jacking forces increase dramatically or suddenly, (b) jacking forces reach design capacity of pipe, jacking frame, or thrust wall, and (c) surface settlement beyond allowable limits.

40. Safety Plan

7-20.1(3) Quality Assurance

Failure to meet the qualification requirements is failure to fulfill the Contract and the Contractor will be required to obtain a subcontractor that meets the qualification requirements.

Allow access for the Engineer and furnish all necessary assistance and cooperation to aid the Engineer in observations, measurements, data, and sample collection, including. The Engineer shall have full access to the launch and reception shafts
prior to, during and following all microtunneling operations. This shall include, but not be limited to, visual inspection of installed pipes, and verification of line and grade. Provide safe access in accordance with all safety regulations. The Engineer shall have full access to the soil separation plant prior to, during, and following all microtunneling operations. This shall include, but not be limited to, full access to visually inspect storage and mixing tanks, slurry pressures and pumping rates, and amount and type of slurry on site.

In welding qualification tests, use machines and electrodes similar to those to be used in the work. Furnish all material and bear the expense of qualifying welders. Welding qualification tests must include longitudinal and girth or special welds for pipe cylinders, Casing Pipe joint welds, reinforcing plates, and Grout Port connections.

For Contact Grouting, demonstrate conformance with the specified requirements as indicated herein, provide the services of an Independent Testing Laboratory. Field quality control shall include three 3-inch minimum diameter grout cubes and test in accordance with ASTM C109 for each ten cubic yards of grout mixed.

During Annular Space Grouting, provide sufficient gauges, monitoring devices and tests to determine the effectiveness of the grouting operation and to ensure compliance with the design parameters and Carrier Pipe manufacturer recommendations. Perform production tests during grout production. This includes collecting test samples near the point of grout injection, providing sampling valves in the pipe transporting the grout, and providing testing of the materials and methods for each grouting lift. Check viscosity with a flow cone provided by the Contractor and test in accordance with ASTM C939. Verify density by ASTM C138 or by other methods as approved by the Engineer.

**7-20.1(4) Definitions**

- **Annular Space** - Void space between the inside surface of the Casing Pipe and the outside surface of the Carrier Pipes. The annular space contains the Carrier Pipe support system to support the Carrier Pipes inside the Casing Pipe.

- **Annular Space Grout** - The grout injected to fill the Space.

- **Annular Space Grouting** - The process of injecting Annular Space Grout to completely fill the Annular Space.

- **Boulders** - Rock particles that will not fit through a 12-inch by 12-inch opening, no matter how oriented.

- **Carrier Pipe** - A pipe directly enclosing a transmitted fluid and installed within the Casing Pipe from one of the shafts at either end of the Casing Pipe.

- **Casing Pipe** - A pipe designed to advance a MTBM forward by directly jacking the pipe with a pipe jacking system located in the launch shaft. The Casing Pipe serves as the initial construction lining and tunnel support between the launch shaft and the reception shaft. The Casing Pipe is designed for all design loads and conditions.
Cobbles - Rock particles between 3 inches and 12 inches in size as described in Unified Soil Classification System.

Contact Grout - The grout injected into the External Void Space between the installed Casing Pipe and the soil at the completion of the Casing Pipe jacking operation. Mixture of cement, water, and sand which meets the indicated criteria.

Contact Grouting - Pressure injection of Contact Grout through Injection Ports to achieve continuous contact between the external face of the Casing Pipe and the surrounding ground.

External Void Space - Void created between the in-situ soil that has been excavated by the MTBM and the outer-diameter of the Casing Pipe installed by microtunneling.

Grout Ports - Holes in the Casing Pipe which are used to perform Contact Grouting.

Injection Port - See Grout Ports.

Intermediate Jacking Station (IJS) - A series of hydraulic jacks spaced around the pipe circumference and temporarily installed between two Casing Pipe segments. The jacks are installed inside a pipe fabricated to the same outside diameter as the Casing Pipe. The jacking station is used to distribute the thrusting force along the Casing Pipe string by dividing the string into independent reaches.

Maximum Anticipated Jacking Load - The calculated maximum jacking force required to complete the Microtunnel Drive.

Microtunnel Drive - The drive starts after the penetration of the extrados of the launch shaft wall and ends with the contact of the extrados of the reception shaft.

Obstruction - An object or feature that lies completely or partially within the cross-sectional area excavated by the MTBM and prevents forward movement of the jacked Casing Pipe after all diligent efforts to advance past the object have failed.

Pipe Jacking Lubricant - The bentonite and/or polymer injected into the External Void Space to reduce friction between the jacked Casing Pipe and the in situ soil during the pipe jacking operation.

Slurry Pressure Balance System - A tunneling system that uses a pressurized fluid to counter balance the soil and groundwater pressure at the face of the tunnel and to transport the excavated spoil to the surface.

7-20.1(5) Reference Standards

This Section incorporates by reference the latest revisions of the standards referenced herein. In case of conflict between the requirements of this Section and those of a listed document, the requirements of this Section shall prevail.

<table>
<thead>
<tr>
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<tr>
<td>ANSI B40</td>
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<tr>
<td>API 13A</td>
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</table>
7-20.1(6) Site Conditions and Geotechnical Baselines

The available geotechnical data for the project is included in Appendix C – Geotechnical Data.

Be responsible for the impacts and excavation of any and all Cobbles without consideration of number, nests, compressive strength, and orientation.

Be responsible for the impacts of excavating all Boulders up to 14-inches without consideration of: number, compressive strength, and orientation. Boulders greater than 14-inches must meet the definition of an Obstruction to be eligible for payment under the Differing Site Condition clause.
7-20.2 Materials

7-20.2(1) Casing Pipe

Design of the Casing Pipe is the responsibility of the Contractor. The Casing Pipe wall thickness shall be uniform throughout the pipe and joint. Wall thickness shall comply with Casing Pipe calculations and requirements. Base minimum inside diameter on permanent installation requirements of the Carrier Pipe.

7-20.2(2) MTBM and Accessories

The Contractor shall be responsible for the selection and design of the MTBM and its associated components in consideration of the minimum indicated requirements. Use a new MTBM or a MTBM that is fully refurbished prior to launch. The MTBM will have a full face cutting wheel and be configured with combination head. The MTBM shall provide adequate torque and power to the cutter head so that the machine is not torque limited while operating under any of the ground conditions indicated in the Contract Documents. The MTBM will be a slurry pressure balance shield type that is capable of supporting the face of the excavation both during excavation and during shut down. The MTBM shall be capable of positively measuring and recording the earth pressure at the face of the excavation and be equipped with automatic, continuous, real-time electronic data logging. The MTBM shall be designed for the drive length and indicated ground conditions. This includes the capacity to pass, crush, excavate, transport and break gravel, Cobbles and Boulders as outlined herein.

The MTBM shall be laser guided and articulated to enable steering of the system to allow continuous alignment monitoring and course correction. The laser guidance system with a continuous digital readout display of x and y coordinates correlated to the location of the machine along the z axis; and pitch, yaw, and roll of the MTBM to plus or minus 0.01 foot and plus or minus one degree. The laser guidance equipment shall be calibrated prior to the drive and shall be checked regularly and kept in calibration.

The Jacking System shall be capable of jacking each Casing Pipe section forward as the excavation progresses in such a way as to provide complete and adequate ground support at all times. It shall be suitable to jack the Casing Pipe into place under the ground conditions indicated in Appendix C – Geotechnical Report and the Geotechnical Baselines specified herein. Jacking arrangement shall develop a uniform distribution of the jacking force around the circumference of the Casing Pipe. The thrust reaction backstop shall be designed to support the Maximum Anticipated Jacking Load with a minimum factor of safety of 2.0. The thrust reaction backstop shall be square with the pipe alignment and remain square throughout the jacking operation and shall be capable of continuously monitoring the jacking pressure and providing a continuous electronic record.

Methods and equipment shall control surface settlement and heave above the pipeline to prevent damage to existing utilities, facilities, and improvements.
Ground movements (settlement/heave) shall be limited to values that do not cause damage or distress to surface features, utilities, or improvements. Refer to Section 2-14 for allowable limits.

Provide launch and retrieval seals at all shaft exit and entry locations. Provide ground improvement as necessary to prevent loss of ground and uncontrolled inflows at entry and exit seal locations.

The Contact Grouting equipment shall provide for continuous circulation of grout within the system. The mixer shall use a high-speed colloidal-type mixer with a tangential return flow from the mixer pump capable of providing a homogenized mix. It shall be sized to ensure an uninterrupted supply of grout to the pump and provide with a means of accurately measuring and metering grout ingredients, including modifying the water/cement ratio. The agitator shall be equipped with baffles to induce turbulence and rotating paddles to assure thorough mixing of the grout prior to and during injection. Pumps shall be appropriate for the grout type, volume, and pressures specified herein and be equipped with a water connection to facilitate flushing the system and a pressure gage accurate to ± 2 psi through the allowable grouting pressure range. Packers shall be capable of sealing Grout Ports and holes without leakage when grouting at the maximum specified pressure. Provide a manifold system of valves and pressure gauges in the line at the collar of the hole to permit accurate control and monitoring of grouting pressure, bleeding, and regulation of flow. Maintain an adequate supply of spare parts and equipment to assure uninterrupted grouting operations.

The Annular Space Grouting equipment shall be of sufficient size and capacity to provide the desired amount of grout material for each stage in a single operation. Pumping equipment shall be of a size sufficient to inject grout at a velocity and pressure relative to the size of the Annular Space. The Annular Space Grouting equipment shall be capable of mixing the grout at densities required for the approved procedure and shall also be capable of changing density as dictated by field conditions any time during the grouting procedure.

Gauges used in conjunction with Annular Space Grouting shall conform to an accuracy of no more than 1/2 percent error over the full range of the gauge. The range of the gauge shall not be more than 100 percent greater than the design grout pressure. Pressure gauges shall be instrument oil-filled and attached to a saddle-type diaphragm seal (gauge saver) to prevent clogging with grout. All gauges shall be certified and calibrated in accordance with ANSI B40, Grade 2A.

7-20.2(3) Carrier Pipe

See Division 7-17.

7-20.2(4) Lubricants

Lubricants shall conform to API 13A and shall be bentonite or non-toxic, environmentally safe materials.
7-20.2(5) Casing Pipe

New welded steel pipe, unlined and uncoated, meeting the requirements of ASTM A36 or ASTM A283 Grade A or B (straight seam only). Yield strength of the material: 35,000 pounds per square inch, minimum. Welding procedures used to fabricate steel casings shall be consistent with the provisions of AWS D1.1 and AWWA C206.

The maximum acceptable difference between the major and minor outside diameters at any point in a length of casing is one percent of the nominal diameter or 1/4 inch, whichever is less. The outside circumference at any point in a length of pipe within one percent of the nominal circumference or within 1/2 inch, whichever is less. The maximum acceptable straightness deviation for any length of casing is 1/8 inch. The pipe ends shall be perpendicular to the longitudinal axis of the pipe within 1/16 inch per foot of diameter with a maximum deviation of 1/4 inch measured with a straight edge and square across the end of the pipe.

Joints shall be in full compliance with the requirements of AWWA C206, and as required for the Contractor’s operation. Full circumferential butt-welded joints or integral press fit system joints that are watertight for the water head anticipated and capable of developing the full strength of the pipe are required.

Factory installed Grout Ports are required. Grout Ports installed in the field are not permitted. Provide three Grout Ports per Casing Pipe section with one at Casing Pipe crown and one on each side at spring line. Maximum distance between each set of Grout Ports shall be ten feet on center along the casing length and not less than one set per section of Casing Pipe. Grout Port plugs shall be designed for test pressures.

7-20.2(6) Contact Grout

Design grout mixes with appropriate properties to serve the intended purpose. The Contact Grout shall have a seven-day, minimum unconfined compressive strength of 500 psi. The basic design shall be a neat cement mix with water/cement ratio in the range by weight of 0.5:1.0. Utilize sand in grout mix in an amount no greater than six times the cement content by weight.

Contact grout shall include cement meeting the requirements of ASTM C150, Type II. Sand, if used shall meet the requirements of ASTM C33; Fine aggregate 100 percent minus No. 16 mesh, and admixtures. Any admixtures shall conform to ASTM C494 Type A and be non-corrosive and compatible with proposed mixing water and containing no more than 0.1 percent chloride ion by weight of cement.

7-20.2(7) Annular Space Grout

Annular space grout shall contain Portland Cement and/or additives including other lightweight materials that minimizes the buoyant forces on the Carrier Pipe.
Acceptable Annular Space Grout Manufacturers (Grout Mix Series) include: (a) Pacific International Grout Company LDB 662, (b) Masterflow 713, and (c) Approved Equal.

To completely fill the Annular Space, develop one or more mixes based on the following requirements: (a) size of the Annular Space, (b) sufficient strength and durability to prevent movement of the Carrier Pipe, (c) provision of adequate retardation, (d) low hydration temperature, and (e) provide less than 1 percent shrinkage by volume.

Design a grout mix with a density to prevent floating of the Carrier Pipe and to meet the requirements of the approved grouting procedure.

The apparent viscosity shall not exceed 35 seconds in accordance with ASTM C939.

The grout shall have a typical penetration resistance of 100 psi in 24 hours when tested in accordance with ASTM C403. In addition, the grout shall have a typical compressive strength of 300 psi in 28 days when tested in accordance with ASTM C495 or ASTM C109.

7-20.2(8) Casing Spacers and Carrier Pipe Support Systems

Provide support and mechanism to adjust position for the Carrier Pipe within Casing Pipe installed by microtunneling.

7-20.3 Construction Requirements

Installation shall be in accordance with the requirements of the Plans and permits, whichever is more restrictive. The Contractor shall be responsible for the means and methods employed using the MTBM, the slurry separation system, and all ancillary equipment. Jacking operation shall not result in settlement exceeding the criteria established in Section 2-14. The tolerance of Casing Pipe between launch shaft and reception shaft from the design line and grade shall be less than six inches horizontal and less than six inches vertical at any point along the alignment. In addition, the vertical deviation of Casing Pipe shall be minimized and the diameter of the Casing Pipe sized to allow the Carrier Pipe installation with the required casing spacers and pipe support and match the grades shown in the Drawings.

7-20.3(1) Pre-Activity Meeting

Within 30 days prior to the start of the Microtunnel Drive, hold a meeting with a minimum of the following participants: Owner, Engineer, Microtunneling Superintendent, MTBM Operator, and the Contractor Representative. The meeting shall discuss, at a minimum, the following: (a) status of submittals, (b) microtunnel operations, (c) status of shaft seal installations and ground improvement, (d) safety training and plans, (e) haul routing and disposal site approvals, (f) water discharge plans, (g) erosion control plans, (h) hours of work
and milestones, (i) settlement control plans and monitoring, (j) contingency plans, (k) routine and emergency personnel responsibilities, (l) planned adherence to the environmental control requirements, (m) specific requirements of each launch and reception shafts, and (n) items determined by the Engineer.

7-20.3(2) Preparations and Testing

Perform a full microtunnel system test including recording the baseline torque reading upon completion of the set-up and prior to commencing the Microtunnel Drive. Prior to the commencement of a Microtunnel Drive, demonstrate that all required set-up procedures and system checks have been completed and that the baseline torque reading has been recorded.

Alignment survey and checks shall be performed by a Licensed Surveyor in the State of Washington. Survey the location and orientation of the jacking frame prior to initiation of the jacking operations to ensure proper alignment. Submit the results of this survey and the verification of proper orientation. Check baseline and benchmarks at the beginning of the work and submit immediately any changes, errors, or discrepancies. Establish control points sufficiently far from the tunnel operation so as not to be affected by tunneling ground movement.

7-20.3(3) Microtunneling

The microtunneling operation shall be in accordance with the Microtunneling Methods and Work Plan. Do not launch the MTBM from launch shaft until the reception shaft is completely in place and ready to accept the MTBM. This does not include the installation of the reception seal which is constrained by the MTBM progress. Provide, operate, and maintain required ventilation system, air quality monitoring system, and lighting system for: (a) the duration of the microtunnel operation and the Carrier Pipe installation and testing, (b) inspections by the Engineer, and (c) required personnel entries during microtunneling operations. Be responsible for and obtain the required power source so as not to impact the work and schedule.

Contractor shall submit all alternative requests in writing with a specific description of the method and reasons for the alternate method. Alternate methods must be approved by the County in writing, and the County's decision is final.

7-20.3(4) Contact Grouting

Grout the External Void Space following completion of Microtunnel Drive. Perform Contact Grouting through Grout Ports in the crown of the pipes. Perform Contact Grouting at the springline of the pipes through Grout Ports if voids are observed.

Do not pump grout into more than one hole simultaneously. Relieve air and water through the closest valved, open, ungrouted Grout Port. Completely fill the
External Void Space. Determine and control Contact Grout pressure to ensure that the Casing Pipe is not damaged, and that grout is not forced to ground surface. Do not close any valved, open, ungrouted Grout Port if communication is noted until grout of the same consistency as that being injected issues forth and grout issues forth at the volume rate being injected. Grout each Grout Port to refusal. Use packers in the Grout Ports during grouting to prevent soil and water from entering the Casing Pipe. At completion of grouting, seal all Grout Ports with plugs designed to prevent long-term infiltration of soil and water into the Casing Pipe. No leakage will be allowed.

7-20.3(5) Carrier Pipe Installation

The installation of the Carrier Pipe shall be in accordance with the Carrier Pipe Installation Methods and Work Plan. Maintain the Annular Space indicated in the Drawings between the Casing Pipe and the Carrier Pipes. Anchor the Carrier Pipes against flotation and install air release ports as required to facilitate the Annular Space Grouting process. Install Carrier Pipe spacers and support systems at locations and spacing recommended by manufacturer to provide required Carrier Pipe alignment. Minimize the joints for the Carrier Pipes within the Casing Pipe.

7-20.3(6) Annular Space Grouting

7-20.3(6)A General

Complete pressure testing of the Carrier Pipe in accordance requirements of Division 7-17 before Annular Space Grouting. Prior to grouting of annular space between carrier pipe and casing provide appropriate bulkheads and venting. Accomplish Annular Space Grouting by either filling the Carrier Pipe with water to offset the grout head pressure, or by grouting in lifts so that the net external pressure does not exceed the allowable buckling pressure. Accomplish grouting using methods that do not float the Carrier Pipe during the grouting operation. Completely fill (100%) the Annular Space with grout.

7-20.3(6)B Preparation

After installing the Carrier Pipe and prior to grouting, capping, and/or bulk heading of the ends, supply appropriate venting. Perform capping, bulk heading and pressure/leakage testing. Fill the Carrier Pipe as required with water to help stabilize the pipe and to provide a counter force to the grouting pressure.

7-20.3(6)C Injection Pressure and Procedure

The gauged pumping pressure shall not exceed the Carrier Pipe manufacturer’s approved recommendations. Place gauges to monitor grout pressure immediately adjacent to each injection port.
7-20.3(7) Launch and Reception Shafts

7-20.3(7)A General

Excavation, shoring and backfill for the launch and reception shafts shall be in accordance with the requirements of the Plans.

7-20.3(7)B Pipe Launch Shaft

Microtunneling launch shafts shall be constructed at the locations shown on the drawings to facilitate the installation of sewer pipe casing along the sewer alignment. The microtunneling launch shafts shall be approximately 32 feet long by 12 feet wide by 15 feet deep and may increase in size due to Contractor installation methods. Suitable watertight shoring, in accordance with Section 7-08.3(1)B, and dewatering shall be implemented in the entry shaft to complete the work. See site plans for approximate shoring limits. Pipe launch shafts are to be utilized for receiving the microtunnel casing and machine when launch shafts are placed at a reception shaft location. Utility penetrations in the launch shaft are shown on the dewatering plans and shall be accounted for in the construction methods to preserve the utilities and or bypass if approved by the Engineer.

7-20.3(7)C Pipe Reception Shaft

Microtunneling reception shafts shall be constructed at the locations shown on the drawings to facilitate the installation of sewer pipe casing along the sewer alignment. The microtunneling reception shaft shall be approximately 12 feet long by 12 feet wide by 15 feet deep and may increase in size due to Contractor installation methods. Suitable watertight shoring, in accordance with Section 7-08.3(1)B, and dewatering shall be implemented in the exit shaft to complete the work. See site plans for approximate shoring limits. Pipe reception shafts are to be utilized for installation of manholes when manholes are placed at a reception shaft. Utility penetrations in the launch shaft are shown on the dewatering plans and shall be accounted for in the construction methods to preserve the utilities and or bypass if approved by the Engineer.

7-20.3(7)D Manhole Excavation Shaft

Manhole excavations shafts shall be constructed at the locations shown on the drawings to facilitate the installation of manholes along the microtunnelled sewer alignment. Each manhole excavation shaft shall be approximately 10 feet long by 10 feet wide and may increase in size due to Contractor installation methods. The microtunnel casing pipe shall be cut and removed as necessary to install the manholes at the locations shown in the Plans. Suitable watertight shoring, in accordance with Section 7-08.3(1)B, and dewatering shall be implemented at the manhole excavation shaft to complete the work. Utility penetrations in the launch
shaft are shown on the dewatering plans and shall be accounted for in the construction methods to preserve the utilities and or bypass if approved by the Engineer.

7-20.3(7)E Backfill

The Contractor shall backfill the launch, reception and manhole excavation shafts in accordance with the requirements of Specifications Section 7-08.3(3) Backfilling. All pipe zone bedding and backfill shall conform to the standards for other sewer pipe installed in the Work and in accordance with the requirements of the Plans. Backfill from the bottom of the launch and reception shafts to elevation 0 feet shall be CDF.

7-20.3(7)F Restoration

Final surface restoration of the area shall be in accordance with the Plans and paid under the appropriate surfacing bid items.

7-20.3(8) Settlement Monitoring

Contractor is responsible for damage as a result of settlement, resulting in damage to underground and surface structures, utilities, and to the ground surface and any improvements thereon. Fill voids from within the Casing Pipe. All settlement monitoring to be performed per Section 2-14. Surface settlement limits are included in Section 2-14. Record baseline measurements at locations indicated prior to commencement of microtunneling operations. Record and analyze instrumentation measurements as indicated and submit daily.

7-20.3(9) Execution

Microtunneling shall not begin until the following has been completed:

1. Required submittals have been reviewed and accepted by the Engineer.
2. Launch and reception shafts excavation and support has been completed in accordance with requirements of Section 7-08.3.(1)B.
3. Soil and groundwater control for breaking out of launch shafts and into reception shafts has been established.
4. Site safety representative has prepared a code of safe practices in accordance with OSHA requirements. Provide the Engineer with a copy of each prior to starting shaft construction or microtunneling. Hold safety meetings and provide safety instruction for new employees as required by OSHA.

Furnish all necessary equipment, power, water, and utilities for equipment, pipe lubricant mixing and pumping, removal and disposal of spoil, and other associated work required for methods of construction.
Conduct all operations such that trucks and other vehicles do not create a dust or noise nuisance in the streets and adjacent properties. Promptly clean up, remove, and dispose of any spoil of slurry spillage.

All work shall be done so as not to disturb roadways, adjacent structures, landscaped areas, or utilities. Any damage shall be immediately repaired to the satisfaction of the Engineer at no additional cost to the Contracting Agency.

Notify the Engineer at least fifteen (15) working days before beginning any excavation.

Size and locate shafts so as to minimize interference with vehicular and pedestrian traffic. All equipment and operations must be contained within the allowable construction zones shown on the Plans. All work shall be in accordance with the applicable permits. Open pits shall be protected at all times throughout construction with barriers, temporary fencing and/or high visibility fencing to maintain a safe construction zone.

The Contractor shall notify the USA North One Call system (811) to request marking of utilities by utility owners/operators that subscribe to One Call and the Washington State Department of Transportation for utilities within the State right of way. Contractor shall individually notify all other known or suspected utilities to request marking of these utilities prior to any excavations. The Contractor shall confirm that all requested locates are made prior to commencing tunneling operations. The Contractor shall visually confirm and stake all existing lines, cables, or other underground facilities. The Contractor shall control drilling and grouting practices to prevent damage to existing utilities.

7-20.3(9)A Microtunneling

Carrier Pipe and Casing Pipe installation by microtunneling shall be completed in accordance with the shop drawings, accepted submittals, and permit conditions. Be responsible for operating and maintaining the MTBM in accordance with the Manufacturer’s recommendations. Excavate to the line and grade indicated in the Drawings. Steering corrections made to the MTBM shall be carried out in such a manner that the correction does not exceed one inch in 25 feet in length or as required by the manufacturer of the Casing Pipe.

Provide stability of the face at all times during the microtunneling process. Discontinue procedures that result in over-excavation and take immediate action to remedy the cause.

Remove tunnel spoils material from the Site to a disposal area legally permitted for the type and content (including moisture) of the material to be disposed. Provide decanting and dewatering for processing tunnel spoils to meet legal disposal requirements. Only use the disposal sites identified in the submittals for muck disposal. Stockpiling excavated material on site will not be permitted. At a minimum, clean Site daily to remove spillage or spoils.
Jack each Casing Pipe section forward as the excavation progresses to provide complete and adequate ground support at all times. Provide a uniform distribution of jacking forces around the circumference of the Casing Pipe with a jacking frame. Positively prevent backward movement of the Casing Pipe while jacks are retracted for placement of new Casing Pipe sections. Install Casing Pipe with factory installed Grout Ports such that one of the Grout Ports per Casing Pipe section is located at the crown of the pipe. During excavation, monitor and provide a Jacking Report.

Apply lubricant around the Casing Pipe during all jacking operations. Pump continuously at the heading and along the Casing Pipe throughout the Casing Pipe jacking operation. Initiate lubrication prior to having no more than 50 feet of Casing Pipe installed from the shaft.

Perform full circumferential butt-welded joints capable of developing the full strength of the Casing Pipe. Perform welding in the field in full conformance with the requirements of AWWA C206.

At completion of Casing Pipe installation remove components of IJS, including thrust rings, to provide clearance for full inside diameter of Casing Pipe. Following removal of the IJS, jack the Casing Pipe together to form a continuous string. No visible leakage permitted at the location of the IJS.

Visually inspect the Casing Pipe prior to installation of the Carrier Pipe. No visible leakage is allowed. Clean the casing pipe leaving it free of debris.

Install Casing Spacers at locations and spacing recommended by manufacturer. There shall be a minimum of three (3) casing spacers to support each end of the carrier pipe and the mid-span of the carrier pipe at a minimum.

**7-20.3(9)B Control of Line and Grade**

The Contractor shall verify benchmarks by survey prior to the start of construction and shall confirm positions or report any errors or discrepancies in writing to the Engineer.

When satisfied that all benchmarks and control points are correct, use this control to furnish and maintain all reference lines and grades for microtunneling.

The guidance system shall be mounted independently from the thrust block and jacking frame to maintain the alignment of the system. Stop microtunneling operations and reset the guidance system if alignment shifts or is moved off of design alignment and/or grade for any reason. Guidance system should only be reset by qualified surveying personnel in accordance with approved procedures.

Stop tunneling when either the horizontal or vertical tolerances listed in Special Provisions Section 7-20.3, Construction Requirements, are exceeded. Do not resume tunneling until a correction plan is agreed to with the Engineer. Check laser at a minimum of once per shift and any time the tunnel is moving out of tolerance. Allow the Engineer access to the survey information to verify line and grade as desired and provide assistance as needed.
Survey Casing Pipe upon completion of Microtunnel Drive. Deviations in line and grade of the Casing Pipe will only be allowed to the extent that the Carrier Pipe can be shifted within the Casing Pipe to compensate for the deviation.

Contractor shall pothole the Strawberry Creek crossing prior to conducting the Microtunnel drive to make adjustments to line and grade in the casing driving as necessary and confirm the carrier installation will conform to the line and grade prior to installation of casing.

7-20.3(9)C Cleanup and Restoration

After completion of the microtunneling and Casing Pipe and Carrier installation, all construction debris, slurry, and other materials shall be removed from the launch and reception shafts, and all Contractor work areas. Cleaning shall be incidental to the construction. No separate payment shall be made for cleanup.

Restoration shall follow construction as the work progresses and shall be completed as soon as reasonably possible. Restore and repair any damage resulting from surface settlement caused by shaft excavation or microtunneling. Any property damaged or destroyed shall be restored to a condition equal to or better than existing prior to construction. Initial restoration shall be completed no later than thirty (30) days after the pipe is in place along any tunnel segment.

7-20.3(9)D Safety

Methods of construction shall be such as to ensure the safety of the work, Contractor's employees, the public, and adjacent property and improvements.

All work shall conform to the requirements of OSHA. Perform all work in accordance with the current applicable regulations of the Federal, State, and local agencies. In the event of conflict, comply with the more restrictive applicable requirement. Gas testing shall be performed by a certified gas tester in accordance with OSHA requirements.

No gasoline powered equipment shall be permitted in launch and reception shafts. Diesel, electrical, hydraulic, and air powered equipment are acceptable, subject to applicable local, State, and Federal regulations.

Furnish and operate a temporary ventilation system and air monitoring system conforming to the requirements of OSHA when personnel are in the shaft or underground. Operate and maintain a ventilation system that provides a sufficient supply of fresh air and maintains an atmosphere free of toxic or flammable gasses in all underground work areas.

Perform all work in accordance with the current applicable regulations and safety requirements of OSHA and the Federal, State, and local agencies. In the event of conflict, comply with the more restrictive requirement.
7-20.3(10) Carrier Pipe Testing

Following installation, the Carrier Pipe shall be visually inspected to insure there are no defects, the pipe is free of debris, and that the final position of the Carrier Pipe meets the line and grade requirements.

7-20.4 Measurement

The length of microtunneling sewer pipe will be the number of linear feet of completed installation of microtunneled casing pipe and installed carrier pipe measured along the invert of the microtunnel casing pipe. The casing pipe measurement will only extend to the tight shoring limits and no casing will be compensated for within the tight-shoring limits. All piping installed outside of the microtunneling casing pipe limits shall be measured and paid as sewer pipe per 7-17.4 and 7-17.5.

"Microtunnel Launch Shaft" will be measured per each.

"Microtunnel Reception Shaft" will be measured per each.

"Manhole Excavation Shaft" will be measured per each.

The measurements for Microtunnel Launch Shaft, Microtunnel Reception Shaft and Manhole Excavation Shaft are measured per each and where Work to complete the project has overlapping actions, only one payment will be made for the associated shaft on the Plans and the shaft noted shall be utilized for all Work as necessary.

7-20.5 Payment

"Gravity Sewer Microtunneling _ In. Diam.", per lineal foot

Payment for “Gravity Sewer Microtunneling _ In. Diam.” shall include all work associated with furnishing and installing the Carrier Pipe size and material shown in the plans and Casing Pipe sized to accommodate the carrier with microtunneling construction methods, including but not limited to installing the carrier pipe within the casing, placing carrier pipe to grade with pipe supports, contact grouting and cleaning and testing the Carrier Pipe. The unit price shall also include the cost of maintenance and restoration of existing utilities impacted by construction, and daily cleanup around the worksite.

"Microtunnel Launch Shaft", per each.

Payment for "Microtunnel Launch Shaft" shall include all work required to create and maintain each microtunnel launch shaft as described in this Special Provision.
“Microtunnel Reception Shaft”, per each.

Payment for “Microtunnel Reception Shaft” shall include all work required to create and maintain each microtunnel reception shaft as described in this special provision and remove the necessary casing pipe to install a manhole as shown in the Plans.

“Manhole Excavation Shaft”, per each.

Payment for “Manhole Excavation Shaft” shall include all work required to create and maintain each manhole excavation shaft as described in this special provision and remove the necessary casing pipe to install a manhole as shown in the Plans.

Add the following new section:

7-21 PIPE BURSTING

7-21.1 Description

This work consists of pipe bursting the sanitary sewer service laterals.

If pipe bursting method is chosen by Contractor in lieu of open-cut construction for 8-inch PVC service line piping shown in the plans, the 8-inch PVC Pipe shall be replaced with 8-inch SDR 17 or SDR 11 HDPE pipe. Pipe shall be made from a material designation code of PE 4710. The pipe shall have a light interior to enhance video inspection.

7-21.2 Materials

All HDPE pipe shall be SDR 17 or SDR 11 IPS unless otherwise noted. Pipe shall be made from a material designation code of PE 4710. The pipe shall have a light interior to enhance video inspection.

7-21.3 Construction Requirements

When pipe bursting is used, sags in the burst pipe will not be subject to the grade requirements of Section 7-08.3(2)B of the APWA/WSDOT Standard Specifications.

7-21.3A Submittals

The Contractor shall submit documentation provided by the Pipe Bursting System Manufacturer that the Contractor is qualified to properly install pipe using their system. The documentation shall consist of evidence of Contractor training, testing and/or certification of being trained to install pipe using the Manufacturer's system. The name, address and phone number of the manufacturer’s representative who
issued certification to the contractor performing pipe bursting shall also be submitted to the Engineer.

The above documentation of Contractor's training shall be delivered to the Engineer within 30 calendar days of beginning the pipe bursting work.

An itemized list detailing the installation procedures to be used shall be submitted. This shall include estimated times for each task, the number of required excavations, and any other items unique to each process.

Polyethylene pipe joining shall be performed by personnel trained in the use of thermal butt-fusion equipment and recommended methods for new pipe connections. Electrofusion shall not be used unless specifically permitted by the Engineer. Personnel directly involved with installing the new pipe shall receive training in the proper methods for handling and installing the polyethylene pipe. Training shall be performed by a qualified representative.

Any nationally recognized standards for pipe bursting shall be submitted.

All related ASTM standards or any nationally recognized standards for HDPE pipe shall be submitted.

Detailed description and physical properties of any lubricants to be used for pipe bursting shall be submitted for the Engineer's approval.

**7-21.3B  Pipe Bursting Installation of New Pipe**

Pipe bursting shall be in accordance with the following requirements:

1. **Cleaning and Inspection**
   
   The sewer line shall be cleaned and televised prior to pipe bursting installation. Cleaning and video inspection shall be approved by the Engineer before beginning the pipe bursting installation work. The Contractor shall remove all debris, roots and other materials from the host pipe. All roots shall be cut flush with the wall of the host pipe. All such debris resulting from cleaning operations shall be removed from the site and disposed in accordance with applicable laws and regulations. Precautions shall be taken to ensure that the cleaning operations will not cause any damage or flooding to public and/or private property. The Contractor shall conduct a television inspection of the sewer pipe before pipe bursting to assure that the pipe is clean, and existing pipe conditions are acceptable for installing the new pipe. Video inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit color television. The interior of the pipe shall be carefully inspected to determine the location of any conditions that may prevent proper installation of the new pipe, and it shall be noted so that the
condition(s) can be corrected. A remote-reading footage counter shall record the footages so that they can be seen while viewing the video. A DVD of the video inspection and suitable log shall be kept and submitted to the Engineer within 10-working days of completing the work. The Contractor shall clear the line of any obstructions or collapsed pipe that will prevent proper installation of the new pipe. The Contractor shall perform point repairs at any location(s) where the pipe is collapsed or obstructions cannot be cleared by conventional cleaning methods.

2. **Bypassing**
   If bypassing of sewage flows is required around the sections of pipe designated for rehabilitation, the bypass shall be made in accordance with Section 7-17.3(1)A(1) of the specifications.

3. **Insertion and Reception Pits**
   Insertion and reception pits shall be excavated to allow for the launch and termination of the new pipe with the pipe bursting equipment.

4. **Pipe Joining**
   a) The polyethylene pipe shall be assembled and joined at the site using the thermal butt-fusion method to provide a leak proof joint. Threaded or solvent-cement joints and connections are not permitted. The electrofusion method shall not be used unless specifically permitted by the Engineer.
   b) All equipment and procedures used in thermal butt-fusion shall be used in strict compliance with the manufacturer's recommendations. Fusing shall be accomplished by personnel certified as fusion technicians by a manufacturer of polyethylene pipe and/or fusing equipment. The Contractor shall submit copies of certification cards of employees to be performing HDPE fusion work. All certifications must be current.
   c) The butt-fused joint shall be properly aligned and shall have uniform roll-back beads resulting from the use of proper temperature and pressure. The joint surfaces shall be smooth. The fused joint shall be watertight and shall have tensile strength equal to that of the pipe. All joints shall be subject to acceptance by the Engineer and/or his representative prior to insertion. All defective joints shall be cut out and replaced at no cost to the District. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness, shall not be used and must be removed from the site. However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above. In addition, any section of pipe having other defects such as concentrated ridges, discoloration, excessive spot roughness, pitting, variable wall thickness or any other defect of manufacturing or handling as determined by the Engineer and/or his representative shall be discarded and not used.
d) All fused HDPE pipe joints shall be internally debeaded.

5. **Pipe Bursting**

   a) The pipe bursting method shall at least consist of a bursting head, which will be pulled through the existing pipe to break it into fragments and form a tunnel for the new pipe. The maximum outside diameter of the bursting head shall be greater than the maximum inside diameter of the existing sewer pipe, and shall form a tunnel with a maximum diameter no larger than the maximum outside diameter of the new pipe plus one inch.

   b) The new pipe shall be installed to match the alignment and invert of the existing pipe with some lowering allowance due to varied diameters of the new and existing pipe.

   c) Equipment used to perform the work shall be located away from buildings as much as possible, so as to lessen the noise impact. Provide silencers or other devices to reduce machine noise as required to meet requirements.

   d) The Contractor shall install all pulleys, rollers, bumpers, alignment control devices and other equipment required to protect the pipe from damage during installation. Lubrication may be used as recommended by the manufacturer. Under no circumstances will the pipe be stressed beyond its yield stress.

**7-21.4 Measurement**

Pipe burst lateral shall be measured by the linear foot

**7-21.5 Payment**

“Pipe Burst Lateral”, linear foot

The unit contract price shall include all work required to pipe burst and re-connect each sewer lateral to the sewer main and the cleanout and includes all coordination with the property owners, restoring the areas on private property to the original condition and all other work necessary for a fully-operational sewer service system.
DIVISION 8 MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.1 Description

Supplement this section with the following:

Kitsap County has a Washington State Department of Ecology NPDES Construction Stormwater General Permit for this project. The Contractor shall assume and transfer the permit into their name and include in the bid full compliance and administration with the requirements of the General Permit for this Project. A copy of the general permit is included in Appendix D of these Special Provisions.

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

8-01.3 Construction Requirements

8-01.3(1)A Submittals

Delete the first sentence and replace it with the following:

The Contractor shall prepare a Temporary Erosion and Sedimentation Control (TESC) Plan for the contract and shall submit this TESC Plan to the Engineer 5 days prior to the preconstruction conference.

A TESC Plan consists of a narrative section and plan sheets that meets Ecology’s Stormwater Pollution Prevention Plan (SWPPP) requirement in the CSWGP. When the Contracting Agency has developed a TESC Plan for a Contract the narrative is included in the appendix to the Special Provisions and the TESC plan sheets are included in the Contract Plans. The Contracting Agency TESC plan will not include off-site areas used to directly support construction activity.

A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by the Contractor and submitted for approval by the Engineer. The plan shall consist of the Contractor’s complete strategy to meet the requirements of the CSWGP. The SWPPP shall include and modify as necessary the TESC Plan drawings if provided as part of the Contact Plans. The Contractor shall prepare, review and modify the SWPPP as necessary to be consistent with the actual work schedule, sequencing, and construction methods that will be used on the project.

The SWPPP shall document all the erosion and sediment control Best Management Practices (BMPs) proposed, whether permanent or temporary. The plan shall document installation procedures, materials, scheduling, and maintenance procedures for each erosion and sediment control BMP. The Contractor shall submit
the SWPPP for the Engineer’s approval before any work begins. The Contractor shall allow at least five working days for the Engineer’s review of the initial SWPPP or any revisions to the modified SWPPP. Failure to approve all or part of any such plan shall not make the Contracting Agency liable to the Contractor for any work delays. The Contractor may not begin work without an approved Contractor’s SWPPP.

Contractor TESC Plans shall include all high visibility fence delineation shown on the Contracting Agency Contract Plans. All TESC Plans shall meet the requirements of the current edition of the WSDOT Temporary Erosion and Sediment Control Manual M 3109 and be adapted as needed throughout construction based on site inspections and discharge samples to maintain compliance with the CSWGP. The Contractor shall develop a schedule for implementation of the TESC work and incorporate it into the Contractor’s progress schedule.

The Contractor shall submit their TESC Plan and implementation schedule as Type 2 Working Drawings. At the request of the Engineer, updated TESC Plans shall be submitted as Type 1 Working Drawings.

8-01.3(1)C Water Management
(August 6, 2012, WSDOT GSP)

Off-site Stormwater
The total area tributary to the drainage system on the project site is approximately 41.35 acres, as detailed in the Engineered Drainage Report (EDR). Stormwater is known to enter the project site through overland flow and stormwater pipes at a number of locations throughout the project site, as detailed in the EDR.

8-01.3(2) Seeding, Fertilizing and Mulching
8-01.3(2)B Seeding and Fertilizing

Supplement this section with the following:

Seed: Grass seed, of the following composition, proportion, and quality shall be applied at the rate of 80 pounds per acre on all areas requiring roadside seeding within the project:

<table>
<thead>
<tr>
<th>Kind and Variety of Seed in Mixture</th>
<th>% By Weight</th>
<th>Minimum % Pure Seed</th>
<th>Minimum % Germination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chewing Fescue</td>
<td>40</td>
<td>39.2</td>
<td>90</td>
</tr>
<tr>
<td>Colonial Bentgrass (Var.Astoria)</td>
<td>10</td>
<td>9.8</td>
<td>85</td>
</tr>
<tr>
<td>Perennial Rye</td>
<td>40</td>
<td>39.2</td>
<td>90</td>
</tr>
<tr>
<td>White Dutch Clover</td>
<td>10</td>
<td>9.8</td>
<td>90</td>
</tr>
<tr>
<td>Weed Seed</td>
<td>0.5 % maximum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inert and Other Crop</td>
<td>1.5 % maximum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.00 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8-01.3(2)B3 Fertilizer

Supplement this section with the following:

Fertilizer shall not be used on this project site due to its close proximity to a fish bearing stream.

8-01.3(2)D Mulch

Supplement this section with the following:

Mulch for Erosion Control Seeding:

Mulch shall be Short Term Mulch applied at a rate of 2500 pounds per acre.

8-01.4 Measurement

Revise the 13th paragraph to read:

Seeding, Fertilizing and Mulching will be measured by the acre by ground slope measurement.

8-01.5 Payment

Supplement this section with the following:

“Erosion / Water Pollution Control”, lump sum.

The lump sum Contract price for Erosion/Water Pollution Control shall be full pay for all labor, tools, equipment, and materials for the installation, maintenance, and removal of erosion and water pollution control measures including the preparation and implementation of the TESC Plan.

“Seeding, Fertilizing and Mulching”, per acre.

“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 transfer of the permit, annual permit fees, sampling, monitoring, reporting, coordinating, inspecting and any other expenses, materials and labor necessary to transfer and fully comply with the requirements of the NPDES Construction Stormwater General permit, and terminate it upon completion of the project.
8-02 ROADSIDE RESTORATION

8-02.1 Description

Supplement this section with the following:

This work shall consist of the planting area restoration as indicated on the Landscaping Plan sheets.

8-02.3 Construction Requirements

Supplement this section with the following:

Prior to the placement and incorporation of compost, the application and incorporation methods shall be approved by the Engineer.

Compost shall not be placed when a condition exists, such as frozen or water saturated soil that may be detrimental to successful application, incorporation or soil structure. Compost shall be uniformly and evenly placed in all designated areas to the depth indicated on the Plans. After placement of the compost, the Contractor shall incorporate the layer uniformly into the existing soil by tilling to the depth indicated on the Plans.

The Contractor shall notify the Engineer a minimum of five working days prior to the start of compost work.

8-02.3(4) Topsoil

Supplement this section with the following:

The Contractor shall place topsoil to the depths shown and in the locations to be planted or seeded as shown in the Plans.

8-02.3(16) Lawn Installation

8-02.3(16)A Lawn Installation

Supplement this section with the following:

Contractor shall submit a residential seed mix for and application rate for approval.

8-02.4 Measurement

Supplement this section with the following:

No specific unit of measurement shall apply to the lump sum item for landscaping.
Topsoil Type C will be measured by the cubic yard.

Coarse Compost will be measured by the cubic yard.

Bark or Wood Chip Mulch will be measured by the acre.

8-02.5 Payment

Supplement this section with the following:

“Landscaping” lump sum
The lump sum price for Landscaping shall be full pay for furnishing and installing all plants shown on the Landscaping plan including all labor, tools, equipment and materials required to complete the work.

“Topsoil Type C”, per cubic yard.
The unit contract price per cubic yard for “Topsoil Type C” shall be full pay for providing the source of the material for topsoil Type C, for pre-excavation weed control, excavating, loading, hauling, intermediate windrowing, stockpiling, weed control on stockpiles or windrows, and removal, placing spreading, processing, cultivating and compacting Topsoil Type C.

“Coarse Compost”, per cubic yard.
The unit contract price per cubic yard for “Coarse Compost” shall be full pay for furnishing and spreading the compost onto the existing soil.

“Bark or Wood Chip Mulch”, per acre.
The unit contract price per cubic yard for “Bark or Wood Chip Mulch” shall be full pay for furnishing and spreading the mulch onto the existing soil.

8-03 IRRIGATION SYSTEMS

8-03.2 Materials

Supplement this section with the following:

Materials for irrigation system and utility repair shall be accepted by visual inspection.

8-03.3 Construction Requirements

Supplement this section with the following:

The Contractor shall repair, relocate, and/or replace irrigation systems impacted within the construction limits. The Contractor shall be responsible for repairing
and/or replacing all damaged private irrigation facilities located outside of the construction limits at the contractor’s expense. Irrigation lines must be capped and marked the same day encountered if damaged. Repairs must be completed within 2 working days between June 1st and October 31st. Otherwise repairs must be completed in two weeks. Contractor will only be compensated one time per division 1-09.6 per unknown irrigation line. Once line is located and marked, damage incurred will be the responsibility of the contractor and irrigation lines shall be repaired per the timelines noted on the plans and in this section.

8-03.5 Payment

Supplement this section with the following:

“Unknown Utility Repair” by force account as provided in Section 1-09.6. All work/modifications to existing irrigation systems shall be paid for under “Unknown Utility Repair.”

Payment for repairs due to unforeseen damage to irrigation systems and other utilities shall be paid for under “Unknown Utility Repair.” To provide a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the Contractor’s total bid. All other irrigation work identified in the plans shall be paid by the associated bid items.

8-04 CURBS, GUTTERS AND SPILLWAYS

8-04.3 Construction Requirements

Supplement this section with the following:

The thickened cement conc. curb and gutter shall have the same general dimensions and construction as the typical cement conc. curb and gutter with exception of the depth.

8-04.5 Payment

Supplement this section with the following:

“Cement Conc. Traffic Curb and Gutter” per linear foot.

The unit contract price for “Cement Conc. Traffic Curb and Gutter” shall be full compensation for all materials, tools, equipment, and labor to install all Cement Conc. Traffic Curb and Gutter including the thickened section of the curbing as shown in the Plans.
8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES

8-06.3 Construction Requirements

Supplement this section with the following:

The Contractor shall be responsible to barricade, patrol, or otherwise protect the newly placed concrete to prevent damage from occurring to the concrete. Damaged, vandalized or unsightly concrete shall be removed and replaced at the expense of the Contractor.

Construction of Cement Concrete Driveway Entrances shall be in accordance with this section and section 1-07.23(3). Excavation and embankment for driveways shall be considered part of Cement Concrete Driveway Entrance and included therein. Modifications of existing driveways shall be accomplished by cutting the existing pavement cleanly and in a straight line with cutting equipment approved by the Engineer. Crushed surfacing shall be placed and compacted in accordance with the Plans and Specifications.

8-06.4 Measurement

Supplement this section with the following:

Measurement for Cement Concrete Driveways will be by the Square Yard.

Cement concrete driveway entrances if match material is shown as concrete shall match the adjacent driveway type and be measured by the square yard of finished match surface.

8-06.5 Payment

Supplement this section with the following:

“Cement Conc. Driveway Entrance Type _____” per square yard

All costs in constructing the driveway entrance in segments and installing and removing the temporary approach, including any temporary surfacing as outlined per the sidewalk replacement schedule shall be included in the unit cost. The unit cost shall be full compensation for all materials, tools, equipment, and labor to install the driveway match area if designated as concrete on the plans. The work required to replace with matching material type including but not limited to exposed-aggregate concrete where shown in the plans shall also be included in the unit cost.
8-12  CHAIN LINK FENCE AND WIRE FENCE

8-12.1  Description

Supplement this section with the following:

This work shall include the construction of vinyl coated chain link fence with a top rail in conformance with the detail shown in the Plans.

8-12.2  Materials

Supplement this section with the following:

**Coated Chain Link Fence**
Chain link fence fabric shall be coated as described in the plans.

Samples of the coated fencing materials shall be approved by the Engineer prior to installation on the project.

8-12.5  Payment

Supplement this section with the following:

“Coated Chain Link Fence with Top Rail”, per linear foot.

The unit contract price per linear foot for “Coated Chain Link Fence with Top Rail” shall be full payment for coating, fabric, coring posts and setting sleeves with grouting and installing type 4 fence in accordance with the plans.

8-14  CEMENT CONCRETE SIDEWALKS

8-14.1  Description

Supplement this section with the following:

This work shall include construction of the thickened edge sidewalk and furnishing and placing the reinforcing based on the height of the thickened edge as shown in the Plans.

The work also includes the cement concrete stairway, with reinforcement and finishing as shown in the plans.

This work also includes the placement and stamping of pigmented colored concrete sidewalk as shown in the plans.
8-14.3 Construction Requirements

Supplement this section with the following:

The existing brick walkway shall be carefully removed and re-laid as shown in the plans. The contractor shall attempt to re-use the existing brick. If brick is damaged, the contractor shall supply replacement brick that matches the existing brick at no additional charge.

**All sidewalks shall be replaced within 14 calendar days of finishing the work requiring the sidewalk removal.** The Contracting Agency will consider work completed and require the final sidewalk placement when there is a minimum of 200 SY of sidewalk, ramps and driveway improvement area free of future construction project impacts. The contractor is required to maintain a walking surface to all businesses throughout construction, which may require temporary asphalt patching, steel plating, plywood and/or crushed surfacing. Acceptable surfacing is shown in the following list for approximate scheduled duration without sidewalks in a given area.

<table>
<thead>
<tr>
<th>Material</th>
<th>Calendar day duration without sidewalks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt patching</td>
<td>&gt; 30 days</td>
</tr>
<tr>
<td>Steel plating</td>
<td>14 days to 30 days</td>
</tr>
<tr>
<td>Plywood</td>
<td>&lt; 14 days</td>
</tr>
<tr>
<td>Crushed Surfacing</td>
<td>Engineer Discretion</td>
</tr>
</tbody>
</table>

The Contractor shall be aware of more stringent timelines agreed with property owners for sidewalk placement in Special Provisions Section 1-07.24, Rights of Way.

The Contractor shall construct cement concrete stairs as shown in the Plans with the stair width, height and depth. Reinforcing steel and stair nosing shall be placed where shown in the plans. A class 1 surface finish is required to the exposed surface of the stairs.

The stamped cement concrete sidewalk shall be colored using a pigmented color with a “brick-red” coloring to be submitted and accepted by the County. The stamped impression shall be a “Running Bond Brick” pattern made from an interlocking stamp pattern. The surface texture shall be that of new, unused brick with straight edges and square corners. Any existing features adjacent to the colored concrete shall be protected during pouring. The Contractor will be required to remove and replace, or clean any surfaces which are damaged at no expense to the Contracting Agency.

Integral Color additives for the stamped sidewalk shall contain pure concentrated mineral pigments, containing no fillers, adulterants or admixtures, specially processed for mixing into concrete and complying with ASTM C979. Calcium chloride shall not be permitted in the mix.
Integral color liquid dose rate shall be 2.32 lbs per 94 lb sack of cement. Integral color powder dose rate shall be 1.5 lbs per 94 lb sack of cement.

Stamped sidewalk shall be cured and sealed with a curing compound and sealer to be approved by color additive manufacturer, for use with colored concrete, and shall comply with ASTM C309.

Curing compound and sealer shall be water based, non-flammable, low gloss, non-yellowing, non-clouding and wear resistant. Compound and sealer shall protect against water damage, oil and common stains, formulated for exterior use.

8-14.3(5) Detectable Warning Surface

Supplement this section with the following:

Detectable warning surfaces shall extend along the entire width of the ramp. Any joints shall be uniformly and equally spaced. Detectable warning surfaces panels shall be no less than 24” x 24”.

8-14.4 Measurement

Supplement this section with the following:

Brick walkway replacement will be measured by the square foot of brick installed.

Stamped cement conc. sidewalk will be measured per square yard of the completed and accepted sidewalk.

Cement Conc. Staircase shall be measured per each concrete staircase regardless of steps in its entirety where shown in the plans

Thickened Edge Cement Conc. Sidewalk will be measured per linear foot along the top back edge of the thickened edge sidewalk.

Reinforced Thickened Edge Cement Conc. Sidewalk will be measured per linear foot along the top back edge of the reinforced thickened edge sidewalk.

No unit of measurement will apply to the temporary surfacing and patching area and shall be considered incidental to the cost of the sidewalk being installed.
8-14.5 Payment

Supplement this section with the following:

“Cement Conc. Sidewalk” per square yard

The unit price for Cement Conc. Sidewalk shall also include the costs to ramp the sidewalk to businesses and making tie-in’s to existing sidewalks including where shown on the Plans.

“Brick Walkway Replacement” per square foot

The unit price for Brick Walkway Replacement shall include all labor, equipment, and material to preserve the existing brickwork and replace the brickwork as shown in the Plans.

“Stamped Cement Conc. Sidewalk” per square yard

The unit price for Stamped Cement Conc. Sidewalk shall include all labor, equipment, and material to construct a stamped and colored cement concrete sidewalk, including but not limited to color, stamping pattern, mock-up, finish, and sealant in accordance with the Plans.

“Cement Conc. Staircase” per each

The unit price for Cement Conc. Staircase shall include all labor, equipment, and material to construct the cement concrete stairs in accordance with the Plans. Reinforcing steel of the size and locations shown in the plans along with nosing protection strip for stairs shall be included in this bid item.

“Thickened Edge Cement Conc. Sidewalk” per linear foot

The unit price for Thickened Edge Cement Conc. Sidewalk shall include all labor, equipment, and material to construct the additional thickened edge concrete below the standard sidewalk section regardless of concrete depth.

“Reinforced Thickened Edge Cement Conc. Sidewalk” per linear foot

The unit price for Reinforced Thickened Edge Cement Conc. Sidewalk shall include all labor, equipment, and material to construct the additional thickened edge concrete below the standard sidewalk section regardless of concrete depth and provide and install the reinforcing steel and construction joints as shown in the plans.

Temporary surfacing and patching shall be considered incidental to the cost of the sidewalk being installed.
8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL

8-20.1 Description

Supplement this section with the following:

Work includes furnishing all materials and performing all work necessary for the following:

1. Installing street illumination along Bay Shore and Washington.

Equipment to be installed is located by station and offset on the plans. These locations may be adjusted in the field by the Engineer, if necessary, to interface with other improvements or existing conditions.

All work shall be performed as shown in the Plans in accordance with applicable Standard Specifications and Standard Plans included herein and the following Special Provisions. Work shall include the supply, testing, and installation of all illumination hardware.

The work includes, but shall not be limited to, the following:
1. Electrical service, enclosures, connections, and bases
2. Foundations
3. Junction boxes
4. Conduit and wire
5. Luminaires
6. Luminaire poles and bases
7. Receptacles
8. Future luminaire foundations
9. Coordination of existing PSE and Silverdale Water District luminaire removals where removal is noted on the Plans

8-20.1(1) Regulations and Code

Supplement this section with the following:

National Electrical Safety Code (NESC), Secretary NESC, NESC Committee, IEEE Post Office Box 1331445 Hoes Lane, Piscataway, NJ 08855-1331.

All requirements of the Washington State Department of Labor and Industries and Puget Sound Energy shall be incorporated into the project. It shall be the Contractor's responsibility to determine these requirements and to coordinate all inspections.

Prior to start of work, all necessary licenses, permits, and approvals shall be obtained by the Contractor. The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to the performance of the
work, the protection of adjacent property, and the maintenance of all other facilities. The Contractor will be required to comply with all the provisions of these instruments and shall save and hold Kitsap County harmless from any damage that may be incurred as a result of the Contractor’s failure to comply with all the terms of these permits.

8-20.2 Materials

Supplement this section with the following:

**General**
All materials for the completion of the Work shall be furnished and installed by the Contractor as a part of this Contract.

**Guarantees**
The supplier shall furnish any guarantee or warranty furnished as a normal trade practice in connection with any equipment supplied for this Contract.

8-20.2(1) Equipment List and Drawings

Supplement this section with the following:

All equipment shall be approved for use in writing by the Engineer prior to ordering the equipment.

Materials not approved by the Engineer will not be permitted on the jobsite.

Pole base to light source distances (H1) for lighting standards with preapproved plans shall be as noted in the Plans.

**All illumination materials for review shall be incorporated in a single submittal.**

The following equipment has been pre-approved for use:

**Service Cabinet**
Tesco Controls Class 27-000LB-M-A
8-20.3 Construction Requirements

8-20.3(1) General

Supplement this section with the following:

**Product Handling**
All equipment shall be handled and protected so as to prevent damage. Damaged equipment, if any, shall be repaired or replaced by the Contractor to the satisfaction of the Engineer at no additional cost to the Owner.

**Delivery to the County**
All spare equipment, equipment requiring testing, and salvaged equipment shall be delivered to:

Kitsap County Signal Shop  
Public Works Annex  
8600 SW Imperial Way  
Bremerton, WA 98312

Contact: Daren Miller  
Telephone: 360.337.5777, ext. 5710

The Contractor shall provide minimum five working days notice prior to delivery of any materials.

**Serving Utility Connection**
Service connections are subject to serving utility requirements. The Contractor is responsible for determining the serving utility requirements for all equipment installed from the meter to the point of connection to the utility system, including the meter location. Customer owned equipment installed as part of the service connection shall be Code compliant, but is still subject to utility approval. All costs associated with the materials, equipment, and labor required to install a service connection are included in the lump sum bid price for the associated Illumination System items as designated in the Plans.

8-20.3(2) Excavating and Backfilling

Supplement this section with the following:

Underground utilities of record are shown on the construction plans insofar as information is available. These, however, are shown for convenience only and the Owner assumes no responsibility for improper locations or failure to show utility locations on the construction plans.
At least 24 hours prior to commencing installation of any illumination equipment, the Contractor shall expose by pot-holing existing underground telephone cables, gas mains, sewer mains, water mains or any other underground utility shown in the Plans that crosses the route of the new illumination equipment to be installed under this contract. Excavation immediately adjacent to the existing utilities shall be by hand methods in compliance with Washington State requirements.

All foundation excavation for luminaire bases shall utilize hydroexcavation methods and augering bases will not be acceptable including luminaire bases for future use. Numerous utilities exist, and contractor shall coordinate foundation placements with Engineer during excavation to allow adjustments along curb line if necessary.

The Contractor shall be entirely responsible for coordination with the utility companies and arranging for the movement or adjustment, either temporary or permanent, of their facilities within the project limits.

If a conflict is identified, the Contractor shall contact the Engineer. The Contractor and Owner shall locate alternative locations for poles, cabinet, or junction boxes. The Contractor shall get approval from the Engineer prior to installation. The Contractor may consider changing depth or alignment of conduit to avoid utility conflicts.

Before beginning any excavation work for foundations, vaults, junction boxes or conduit runs, the contractor shall confirm that the location proposed on the Contract Plans does not conflict with utility location markings placed on the surface by the various utility companies. If a conflict is identified, the following process shall be used to resolve the conflict:

1. Contact the Engineer and determine if there is an alternative location for the foundation, junction box, vault or conduit trench.

2. If an adequate alternate location is not obvious for the underground work, select a location that may be acceptable and pothole to determine the exact location of other utilities. Potholing must be approved by the Engineer.

3. If an adequate alternate alignment still cannot be identified following potholing operations, the pothole area should be restored and work in the area should stop until a new design can be developed.

The Contractor shall not attempt to adjust the location of an existing utility unless specifically agreed to by the utility owner.

All conduit will be installed by open trench unless otherwise approved by the Engineer.
Backfill for all illumination trenches shall be crushed surfacing top course meeting the requirements of Section 9-03.9(3) of the Standard Specifications.

All backfill shall be mechanically compacted by a power-operated mechanical tamper or other mechanical compaction device approved by the Engineer. All trenches to be restored shall be compacted as specified in Section 2-03.3(14)C, Method C, of the Standard Specifications.

The temporary restoration of conduit trenches shall be as directed by the Engineer. All costs for temporary trench restoration shall be included in the applicable lump sum bid item and no additional measurement shall be made.

8-20.3(4) Foundations

Supplement this section with the following:

Anchor bolts shall be positioned horizontally and vertically prior to final set of the concrete. All concrete on the anchor bolts shall be immediately removed following pouring of the foundation. Conduits shall be temporarily capped during the pour to prevent concrete from entering.

The void between the foundation and the pole flange shall be no larger than 4 inches and shall be completely filled around the conduit(s) with dry pack mortar and neatly troweled. A plastic drain, 1/2 inch diameter, shall be placed in the mortar to provide drainage from the interior of the pole to the exterior. The plastic drain pipe shall be neatly trimmed flush with the surfaces.

Pole foundations within the sidewalk area shall be constructed in a single pour up to the bottom of the cement concrete sidewalk. The sidewalk shall be constructed in a separate pour.

All foundations not in the sidewalk area shall have a 4-inch-thick cement concrete collar poured around the foundation extending out two feet from the pole centerline all around.

All foundations shall utilize Method 1 construction with hydro-excavation in lieu of auger installed bases including luminaires for future use. Method 2 base excavation and installation will not be accepted.

8-20.3(5) Conduit

Supplement this section with the following:

Each conduit run shall contain a 200-pound breaking strength polyolefin pull cord, which shall be tied off at both ends.
All conduit installed underground shall have polyethylene underground hazard marking tape, 6 inches wide, red, legend “Caution-Electric Line Buried Below,” placed approximately 12 inches above the conduit.

**8-20.3(5)B Conduit Type**

Supplement the second paragraph of this Section with the following:

1. All conduit between the service cabinet and the service pole or vault.
2. All conduit between the nearest junction box and a pole or cabinet foundation.

Supplement the fourth paragraph of this section with the following:

All conduits under driveways shall be Schedule 80 polyvinyl chloride (PVC).

**8-20.3(5)E3 Boring**

Supplement this section with the following:

Should the contractor elect to utilize a boring method of installation, they shall first obtain approval by the Owner before proceeding. The Owner reserves the right to require open trench excavation.

A complete set of as-built plans showing all bores (successful and failed) within 10 calendar days of completing the boring shall be submitted to the Engineer. The plans shall be copies of the Contract Plans and include roadway profile, cross-section, boring location and subsurface conditions. The plans must include elevations of the installation.

**8-20.3(6) Junction Boxes, Cable Vaults, and Pull Boxes**

The first paragraph is revised to read as follows:

Standard junction boxes, pull boxes, and cable vaults shall be installed at the location specified in the Plans. Locations may be field adjusted to match grade, curb or sidewalk edges, or to avoid obstructions, with the approval of the Project Engineer. Junction boxes receiving stub conduits from light standards may not be placed more than ten feet from the pole served. The Contractor may install, at no expense to the Contracting Agency, such additional boxes as may be desired to facilitate the Work or to accommodate the requirements of the material used by the Contractor. Junction box installation shall conform to the details in the Standard Plans.
All junction boxes placed out of the sidewalk shall have a 2-inch thick cement concrete collar constructed around the box. The collar shall extend 4 inches out from the box, except where the box is located at the back of sidewalk or pedestrian curb in which case the collar shall abut and be flush with the back of sidewalk or curb.

All junction boxes placed in the sidewalk area shall have a non-slip surface meeting the requirements of Section 9-29.2(1)A of these Special Provisions.

**8-20.3(8) Wiring**

The first sentence of the thirteenth paragraph is deleted and replaced by the following:

All wiring, shall be labeled in all junction boxes, pull boxes, cable vaults, and cabinets.

Supplement this section with the following:

The unfused service wires between the Puget Sound Energy transformer pole and the service cabinet shall be labeled "Unfused Service" at all terminal ends.

**Cabinet Wiring**

All wiring, cable, and cords within cabinets shall be neatly bundled and secured with nylon ties. Wiring, cable, and cords shall be secured to rack frames or cable trays as appropriate.

All work areas shall be clean and orderly at the completion of work and as required by the Engineer during the progress of the work.

**8-20.3(9) Bonding, Grounding**

Supplement this section with the following:

Contractor shall provide and install bonding and grounding wires as described in Standard Specifications and the National Electric Code for any modified existing junction boxes that are not properly bonded/grounded. For the purposes of this section, a box shall be considered "modified" if new cables (including current-carrying conductors and/or low-voltage cables) are installed.
8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS) Cabinets

Supplement this section with the following:

The County has completed an electrical service connection with Puget Sound Energy and made arrangements for a new electrical service connection. The Contractor shall coordinate with PSE to schedule the service connection, meter installation, and all required inspections.

8-20.3(13) Illumination Systems

Supplement this section with the following:

If an existing street light is in conflict with construction sequencing, a temporary lighting system shall be installed prior to removal of the existing street light.

8-20.3(13)C Luminaires

Supplement this section with the following:

All roadway luminaires shall be provided with a houseside shield as shown in the drawings. Fixtures shall be installed, directed, shielded, and maintained to avoid light trespass and to minimize direct light and glare on neighboring properties. The Contractor shall make a night inspection and subsequent shield adjustments as necessary to provide shielding as required by the Engineer. Installation and/or adjustment of shielding is considered incidental.

All luminaires shall be provided with markers for positive identification of light source type and wattage. Markers shall conform to ANSI C136.15-2011 “American National Standard for Roadway and Area Lighting Equipment – Luminaire Field Identification”

8-20.4 Measurement

Supplement this section with the following:

Measurement for “Illumination System_________” will be by lump sum. The lump sum measurement will include furnishing and installing all components associated with the illumination systems including removal of existing systems.

Coordination of existing luminaire removals and service connections with Puget Sound Energy and any necessary permits and fees associated with the service connections shall be considered incidental to the bid items included herein and no additional compensation will be made.
All potholing associated with the bid items herein shall be considered included in the bid items included herein and no additional compensation will be made.

Use of a vacuum truck for excavation, including potholing, shall be considered included in the bid items included herein and no additional compensation will be made.

Adjustment of junction boxes to final grade (including any interim adjustment to facilitate construction staging) shall be incidental and included in the bid items included herein and no additional compensation will be made.

Restoration of facilities destroyed or damaged during construction shall be considered incidental to the bid items included herein and no additional compensation will be made.

8-20.5 Payment

Supplement this section with the following:

“Illumination System _________”, lump sum.

The lump sum price for “Illumination System _________” shall be for the total of all items for complete illumination system. All items and labor necessary to supply, install, and test the: luminaire poles and arms, LED luminaires, foundations, conduit, wiring, junction boxes, connections with existing conduit and junction boxes, adjusting junction boxes to grade, excavation, crushed surfacing top course backfilling, directional boring, restoring facilities destroyed or damaged during construction, removing existing luminaire poles, luminaires, foundations, associated equipment and providing temporary lighting if necessary, salvaging existing materials, removal of existing conduit, testing, as-built plans and all other components necessary to make a complete system shall be included within the lump sum measurement. This work shall also include components shown in the plans for the future system. All painting of components shall be considered incidental to the lump sum payment.

The Contractor shall provide an additional one (1) complete decorative roadway luminaire and pole assembly and one (1) complete decorative pedestrian luminaire and pole assembly and deliver both to the County. The assembly shall be complete in all respects and include luminaire, luminaire arm, pole, base cover, anchor bolts, banner arm and all hardware required for assembly. The costs for spare pole assemblies shall be included in the lump sum “Illumination System Washington” and no additional measurement shall be made.

The Electrical Service Cabinet will be paid for under the Illumination System Washington bid item.
8-21 PERMANENT SIGNING

8-21.1 Description

Supplement this section with the following:

This work also consists of placement and installation of sleeves for future sign posts at the locations specified in the contract drawings.

8-21.3 Construction Requirements

8-21.3(9)F Foundations

Supplement this section with the following:

Signs called out as foundation for future signs, shall have a type ST-2 County Standard base installed with a 3" PVC sleeve centered in the concrete foundation. Sleeve shall be filled with gravel and a 2" deep concrete cap poured. Full depth expansion material shall surround the 2" concrete cap for ease of removal in the future and allow for future installation of a sign support bracket within the sleeve.

8-22 PAVEMENT MARKINGS

8-22.2 Materials

Supplement this section with the following:

Plastic pavement marking material shall be Type A-Liquid Hot Applied Thermoplastic.

8-22.3 Construction Requirements

Supplement this section with the following:

Contractor shall be responsible for establishing the necessary control points to enable spotting of the new pavement markings prior to installation.

When placing new striping which ties into existing striping such as edge lines, parking lines, handicap symbols, traffic arrows etc, match existing symbol and/or line width, style, colors and layout.

Prior to installing pavement markings, the Contractor shall pre-mark the layout of all channelization and receive approval from the Engineer. Pre-marks shall consist of painted spot markings. The Contractor shall notify the Engineer and request approval of the pre-mark channelization at least 48 hours prior to placement of the pavement markings.
8-22.4 Measurement

Supplement this section with the following:

Plastic Parking Delineation Symbols shall be measured per each

8-22.5 Payment

Supplement this section with the following:

All costs to match existing symbols and or lines, shall be included in the cost for the closest matching bid item, no additional payment will be made for adjustments to items to match existing sizes, styles or colors.

“Plastic Parking Delineation Symbol”, per each

The cost for “Plastic Parking Delineation Symbol” shall include all costs to provide the plastic symbols where shown on the plans.

8-24 ROCK AND GRAVITY BLOCK WALL AND GABION CRIBBING

8-24.2 Materials

Supplement this section with the following:

Gravel Backfill for Walls 9-03.12(2)
Perforated Corrugated Polyethylene Underdrain Pipe 9-05.2(7)

Crushed Surfacing Base Course can be used for wall backfill in place of gravel backfill for no additional cost.

Gravity block walls shall be manufactured by Redi-Rock and the County shall decide the finish and color based on samples submitted by the Contractor. Only one finish and color will be allowed on the project.

Shear Connectors shall be installed as required by the manufacturer.

Gravity block wall units and hardware shall be accepted based on the manufacturer’s certificate of compliance.
8-24.5 Payment

Supplement this section with the following:

“Gravity Block Wall” per Square Foot

The unit contract price per square foot for “Gravity Block Wall” shall be full pay for all wall materials, labor, equipment, and material necessary to install the wall in conformance with these Special Provisions, Plans, and Standard Specifications including excavation, embankment, blocks, and anchoring, geotextile fabric, gravel backfill, underdrain pipe, crushed surfacing, placing and compacting native material and other work necessary to complete the gravity block retaining wall.

Add the following new section:

8-26 COMCAST SYSTEM

8-26.1 Description

This work shall consist of providing earthwork and installation services for the Comcast conduit systems in accordance with the Plans, these Specifications, the Standard Plans, and as ordered by the Engineer in accordance with Section 1-04.4.

The Contractor shall provide the following:

- Coordination with Comcast, including their inspectors and Contractors.
- Excavation, bedding, backfill, and installation of conduits and equipment for Comcast system. This includes the removal of unsuitable materials within the trench and replacement with crushed surfacing top course. It is assumed all trench excavation material is unsuitable for backfill.
- Coordinating and installing conduit in the existing Comcast vaults as shown on the plans.

Comcast will provide conduits and vaults and provide and install final wiring and connections.

8-26.2 Materials

Materials for Comcast shall be as specified by Comcast and their standards. Comcast will furnish the conduits, vaults and equipment necessary for the Contractor’s utility installation work.

8-26.3 Construction Requirements
8-26.3(1) Conduit Placement

The Contractor is advised that the layout shown on the Plans is approximate. The layout of the vaults, pedestals, and other equipment shall be adjusted as necessary to avoid conflicts with utilities, both existing and to be constructed under this Contract. Any adjustments to the layout shown in the Plans must be reviewed and approved by the Engineer.

The Contractor shall determine vertical alignment of the conduit based on minimum cover requirements, existing utility locations, and proposed utility locations. It shall be the Contractor’s responsibility to construct the utility trench so that it will not require adjustments or replacements for other items of Work.

The Contractor is also advised that all improvements for the system must remain within County-obtained easements and right of way, which are indicated on the Plans.

All locations shown on the plans are to the center of vault, pedestal, or other equipment as noted. Where vaults are within proposed sidewalk, the Contractor shall install non-slip lids. Minor adjustments to location or rotation may be required in order to align vaults and/or lids with proposed improvements; i.e. install parallel to the nearest edge of final concrete surfaces, and fully within or fully outside concrete surfaces, unless shown otherwise on the Plans.

The Contractor shall perform all franchise utility work under the supervision and inspection of the utility representatives. The Contractor shall reference each utility’s requirements/standards for configuration of conduits entering and exiting vaults and pedestals.

All conduits shall be proofed with mandrels of a size and type approved by the facility owner.

8-26.3(2) Structures and Conduit Furnished By Others

The Contractor shall install conduit and vaults as furnished and delivered to the site by the franchise utilities. The Contractor shall coordinate delivery and storage of structures as necessary and provide labor and equipment to unload all material.

The Contractor shall provide ten (10) working days’ written notice to Comcast to schedule delivery of all materials to be installed by the Contractor.
8-26.3(3) Inspection, Proofing and Approval of Comcast Conduit and Structures

All conduit installed by the Contractor for Comcast shall be proofed by passing a mandrel through each conduit and leaving a pull-rope in place per Comcast standards. The pull-rope shall be provided by Comcast.

8-26.3(4) Utility Coordination

The Contractor shall be responsible for coordination and scheduling of any required franchise utility (gas, power, fiber, telephone, cable television, water, and sewer) relocations, installations, adjustments, and other items of work to be performed by franchise utilities. At a minimum coordination shall include:

- Providing each utility with an overall project schedule showing the private utility work window.
- Providing each utility with a three week look ahead schedule at each weeks construction meeting showing all private utility work required that could impact the Critical Path of the project schedule. This includes but is not limited to items of work such as utility adjustments, conversion work, material deliveries, required utility relocations, holding utility poles, etc.
- Provide the owner with a copy of all correspondence with franchise utilities.

The Contractor shall make available to the utilities necessary staging locations so that they can perform work necessary for completing the joint utility trench, hydrant and meter relocations, and other items of work.

The Contractor shall coordinate delivery of structures from others for installation by the Contractor. The Contractor shall coordinate with the utilities to schedule relocations of existing facilities so as to not conflict with other items of work to be constructed as part of this Contract.

The Contractor shall provide a secure staging area for the delivery and storage of franchise and County-owned utility materials to be installed by the Contractor. The staging area shall be fenced, secured and locked. All materials delivered to the staging area for installation by the Contractor shall become his or her property until installation and acceptance of the Comcast system. The secure staging area must be capable of storing Comcast conduit, as well as structures of varying sizes as shown on the Plans.

The Contractor shall provide equipment and labor as required to unload materials into the secured staging area for all delivered conduits and structures.
The Contractor shall adjust shoring limits, methods and means in order to support and protect existing utilities which are to remain operational while trenching is completed within the proximity.

The Contractor shall install all utility structures and conduits, proof the conduit and structures, and notify the utilities that the conduit and structure system are complete.

Additional coordination requirements:

- The Contractor shall provide traffic control for delivery of all utility materials.
- Traffic control for splicing and secondary connections after completion and approval of the Comcast system shall be provided by Others.

All coordination shall be included in the lump sum Bid Item “Utility Coordination”. The Contractor shall provide utilities with a written description of any utility work required in order to avoid impacts to the Contractor’s schedule. Utility work which impacts the critical path shall be shown on the Contractor’s project schedule and 3-week look-ahead schedule. The Agency shall be included on all correspondence. Prior to work on private property, the Contractor shall provide property owners a minimum of 5 working days’ notice.

8-26.4 Measurement

“Install Conduit, 4- Inch PVC Schedule 40” will be measured per linear foot horizontally along the centerline of the Comcast conduit install.

“Connect to Comcast Installed 18x36 Vault” will be measured per each for the connections the contractor coordinates with Comcast and completes per Comcast standards. The vaults will be installed by Comcast and the measurement will be per structure that conduits are installed and connected to.

“Connect to Existing Pedestal” will be measured per each for each pedestal the conduits are installed into the existing Comcast pedestals at the locations designated in the plans and any minor adjustments required to fit with improvements.

No specific unit of measurement shall apply to the lump sum item for franchise utility coordination.

8-26.5 Payment

“Install Conduit, 4- Inch PVC Schedule 40”, per linear foot.

The contract bid price above, including all incidental work, shall be full compensation for all unsuitable excavation incl. haul, Crushed Surfacing Top
Course backfill, labor, material, tools and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions.

“Connect to Comcast Installed 18x36 Vault”, per each.

The contract bid price above, including all incidental work, shall be full compensation for all labor, material, tools and equipment necessary to install conduits to the structure and complete the work as defined in the Standard Specifications and these Special Provisions.

“Connection to Existing Pedestal”, per each.

The contract bid price above, including all incidental work, shall be full compensation for all labor, material, tools and equipment necessary to install the conduit in the existing utility vault designated on the plans, and satisfactorily complete the work as defined in the Standard Specifications and these Special Provisions.

“Franchise Utility Coordination”, lump sum.

The lump sum Contract price for “Franchise Utility Coordination” shall be full payment for necessary coordination with all franchise utility companies and County-owned utilities to coordinate delivery, allow access for franchise utilities to complete their work, scheduling for inspections and approvals, allowing franchised utility companies complete access during the utility window, and all other work necessary to complete the work as shown in the Plans and in accordance with these Special Provisions.

Add the following new section:

8-27 STONE SLAB

8-27.1 Description

This work consists of furnishing and installing the Stone Slabs of the types specified, in accordance with the Plans, these Specifications, the Standard Plans, and as ordered by the Engineer in accordance with Section 1-04.4.

8-27.2 Materials

Materials shall meet the requirements of the Plans. Contractor shall submit a sample matching the size, style and surface finish detailed in the plans.

8-27.3 Construction Requirements

Contractor shall verify and field measure all Stone Slab locations for Engineer’s approval prior to installation.
Contractor shall repair any minor damages to finish in accordance with manufacturer’s instructions and as approved by Engineer.

Stone Slab shall be cleaned promptly after installation in accordance with manufacturer’s instructions.

Contractor shall not use harsh cleaning materials or methods that could damage finish.

Protect installed Stone Slab to ensure that, except for normal weathering, Stone Slab will be without damage or deterioration at time of Substantial Completion.

**Submittal**

Contractor shall submit Stone Slab manufacturer’s product data, storage and handling requirements and recommendations, installation methods and selected colors, styles, patterns and textures for Engineer’s approval.

8-27.4 Measurement

“Stone Slab” shall be measured per each installed Stone Slab.

8-27.5 Payment

Payment will be made for the following bid item:

“Stone Slab”, per each.

The unit Contract price per each for “Stone Slab” shall be full payment for all materials, equipment, and labor to furnish and install the stone slabs as shown on the Plans.

Add the following new section:

8-28 FIELD OFFICE BUILDING

8-28.1 Description

This work shall consist of furnishing and setting-up a temporary office building for the sole use of the Contracting Agency.

8-28.3 Construction Requirements

The Contractor shall provide a field office on or adjacent to the Project Site for the use of the Engineer’s staff within five (5) Calendar Days from the Notice to Proceed Date. The field office, its location, and an alternate date if necessary, shall be subject to the approval of the Engineer and shall be established at the
The field office shall meet the following requirements: The field office shall be a weather-tight building; either portable or permanent structure a minimum of 10 feet wide with not less than 440 square feet of clear floor space, two (2) private offices, indoor restroom, at least one door, and a window area of not less than 40 square feet. Windows shall open to allow ventilation. Doors and windows shall be provided with bug screens. The interior walls shall be covered with material suitable for displaying Contract Plans and progress charts, etc.

To deter break-in and theft, window and door glass shall be protected with heavy security screens on metal frames bolted to the walls and doors. At a minimum all doors shall have 1 deadbolt cylinder lock. The Contractor shall provide 6 sets of keys for each lock.

The field office shall be level and, if portable, the structure shall be supported on blocks. If more than three (3) steps are required to enter the office, a floor-level landing of at least 12 square feet with railing shall be provided. Steps and landing shall be stable and slip resistant. A 3 sided boot brush shall be provided at each field office entrance.

On-site parking shall be provided with a minimum of 2 parking stalls.

The Contractor shall be responsible for maintaining and cleaning the field office; repairing any damage to the structure, equipment and appurtenances; providing outside janitorial services including supplying appropriate toilet room paper products; refilling applicable dispensers with drinking water cups, and paper towels; cleaning windows and sweeping floors; and emptying trash receptacles and recyclables, disposing trash, and relining trash receptacles and recyclables.

The office shall be furnished with the following furniture, equipment and appurtenances reasonably presentable, in good working order, and acceptable to the Engineer:

1. Executive chair (two), each with seat cushion, adjustable height seat, tilt back, arm rests, and floor wheels,
2. Office desk (Four), 30” x 60” minimum size, with at least 4 drawers which can be locked with key & one of which is set up for file folders, 2 sets of keys each desk,
3. Office table 36” x 72” (two), 1 Conference table 4’ x 10’,
4. Office chairs with seat & back cushion (twelve),
5. White board (3’H x4’W) with dry erase markers and 1 white board eraser,
6. Drinking water with disposable cup dispenser filled with cups,
8. Trash receptacles and recycle bins,

9. Heating and air-conditioning of sufficient capacity to heat to keep the office temperature between 68°F and 76°F during hours of operation,

10. Color Photocopy/Color Printer/Color Scanner/Fax multifunction machine with multiple tray frontload including 3 paper trays (8-1/2 x 11-inch, 8-1/2 x 14-inch, and 11 x 17 inch) with the following:
   a. Under storage cabinet, floor wheels to accommodate service technician.
   b. Preset reduction to 50% and enlarge to 200% plus zoom in 1% increments.
   c. Bypass tray
   d. Replacement toner cartridge (1 cartridge for each color)
   e. Capability to scan directly to PDF color at 300 dpi
   f. Plain paper fax capable
   g. Direct phone line connection and programmable capable to directly send scanned documents and faxes by e-mail.
   h. 400 sheets of each size 20 lb. bright paper with no more than 30% recycle post-consumer content.
   i. Repair and maintenance service contract with 4-hour service response on-site parts and labor;

The Contractor shall provide a commercial grade broadband internet access with a static IP address (Cable or DSL at a minimum speed of 2.0 Mbps upload & 6.0 Mbps download) between the field office and an Internet Service Provider (ISP). The Contractor shall provide for 24-hour technical support and a local or 1-800 phone number to troubleshoot and maintain the broadband connectivity. The Contractor shall provide inside wiring to support a Local Area Network inside the field office and shall include a 4-plex jack to at least 5 workstations (desk or table locations to be addressed at the pre-construction meeting per Section 1-08.1(2)). The Contractor shall provide necessary equipment to allow internet connectivity and shall be configured to allow VPN access from individual machines to the Contracting Agency. Color Printer/Color Copier/Scanner/Fax multifunction machine shall be connected to the office network and programmed to send scanned documents by e-mail.

Electric power of sufficient capacity to operate an electric heater, air conditioner, mini-refrigerator, microwave oven and other required equipment. After obtaining inspection and approval of the field office electrical system and the proposed temporary power connection hook-up from County, the Contractor shall provide a minimum 15 Calendar Days advance notice to the local power utility requesting a temporary power drop and connection. Generators (gas and diesel) for producing electrical power will not be allowed unless the Engineer
permits such in writing.

If the Contractor fails to provide a field office at the location on the date agreed to at the pre-construction meeting, the Engineer will provide Written Notice of such and shall have the right to withhold progress payments in accordance with Section 1-09.9(3). If within five (5) Calendar Days of delivery of such notice the Contractor has not provided the field office, then the Engineer will have the option to provide the field office. If the Engineer elects to provide the field office, the Engineer will give the Contractor a second Written Notice of such; will within three (3) Calendar Days of delivery of the second Written Notice provide the field office meeting the requirements specified in this Section and will charge the Contractor by deducting from monies due or to become due the Contractor on progress payments, all costs associated with the field office as specified in this Section. Upon deliverance of the second Written Notice, the Contractor’s right to provide the field office shall be forfeited.

The field office, equipment, and appurtenances supplied by the Contractor shall revert to and be removed by the Contractor when the Engineer, via the Written Notice of Physical Completion to the Contractor, establishes the Physical Completion Date. If the Contractor removes, closes, or discontinues the services specified in this Section prior to receiving the Written Notice of Physical Completion without first obtaining approval from the Engineer, the Contractor responsible for all cost of relocation of County staff and cost associated with acquiring a replacement office.

8-28.5 Payment

Payment will be made for the following bid item when included in the proposal:

"Field Office Building", lump sum.

The lump sum contract price for "Field Office Building" shall be full pay for furnishing, installing, maintaining, and removing the facility, including all costs associated with all required utility hook-ups and disconnects, and monthly utility charges for all utilities except telephone.

The monthly telephone costs will be paid by the Contracting Agency. All costs for the work required to provide and maintain the field office including regular expenses for telephone, internet, electricity, etc.; incidental constructions to accommodate; and to procure all permits and licenses required for the field office to meet the requirements of this Section, shall be included in the lump sum Contract Price Bid for "Mobilization." All costs for the work required to relocate the field office, if required, shall be considered incidental to the Bid item “Mobilization”
DIVISION 9 MATERIALS

9-03 AGGREGATES

9-03.8 Aggregates for Hot Mix Asphalt

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:

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<th>Aggregate, percent passing</th>
<th>Nonstatistical Evaluation</th>
<th>Commercial Evaluation</th>
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<tr>
<td>1”, ¾”, ½” and ⅜” sieves</td>
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<td>±8.0%</td>
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<td>U.S. No. 8 sieve</td>
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<tr>
<td>Air Voids</td>
<td>2.5% Minimum and 5.5% Maximum</td>
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</tbody>
</table>

9-03.14 Borrow

Add the following new subsection:

9-03.14(5) Special Borrow

Material for special borrow shall consist of granular material, either naturally occurring or processed, and shall meet the following requirements for grading and quality:
9-03.21 Recycled Materials

Supplement this section with the following:

The Contracting Agency encourages bidders to use recycled materials to the maximum extent feasible.

9-05 DRAINAGE STRUCTURES AND CULVERTS

9-05.12 Polyvinyl Chloride (PVC) Pipe

Add the following new section:

9-05.12(4) Detectable Marking Tape

Detectable marking tape shall consist of inert polyethylene plastic that is impervious to all known alkalies, acids, chemical reagents, and solvents likely to be encountered in the soil, with a metallic foil core to provide positive detection for pipeline locators.

The tape shall be color coded and shall be imprinted continuously over its entire length in permanent black ink. The message shall convey the type of line buried below and shall also have the word “Caution” prominently shown. Color coding of the tape shall be as follows:

<table>
<thead>
<tr>
<th>Utility Tape</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Blue</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Purple or Blue</td>
</tr>
<tr>
<td>Sewer</td>
<td>Green</td>
</tr>
<tr>
<td>Electrical</td>
<td>Red</td>
</tr>
<tr>
<td>Gas/Oil</td>
<td>Yellow</td>
</tr>
<tr>
<td>Telephone/CATV</td>
<td>Orange</td>
</tr>
</tbody>
</table>

The width of the tape shall be as recommended by the manufacture for the depth of installation.

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 in</td>
<td>100</td>
</tr>
<tr>
<td>1.5 in</td>
<td>70-100</td>
</tr>
<tr>
<td>3/4 in.</td>
<td>50-85</td>
</tr>
<tr>
<td>No. 4</td>
<td>30-60</td>
</tr>
<tr>
<td>No. 40</td>
<td>8-24</td>
</tr>
<tr>
<td>No. 200</td>
<td>3-10</td>
</tr>
<tr>
<td>Sand Equivalent</td>
<td>35 Min.</td>
</tr>
</tbody>
</table>
9-05.15  Metal Castings

9-05.15(1)  Manhole Ring and Cover

Revise this section with the following:

All covers shall be interchangeable within the dimensions shown on the Drawings. All mating surfaces shall be machine finished to ensure a non-rocking fit. Sanitary sewer and stormwater manholes frames and covers shall be the bolt down and locking type and size as specified in the Drawings and cast with the markings shown in the standard details within the Drawings. Covers shall contain integral heavy duty cam locks with ¼" round neoprene gaskets. Cam lock wrench shall only be removable when the cover is in the locked position. Subject to compliance with the contract documents the following manufacturers are acceptable:

1. EJ Group, Inc.
2. Neenah Foundry.
3. Deeter Foundry.
4. Olympic Foundry.
5. Approved Equal, shall be determined based on requirements within this section, materials specifications, and conformity with the dimensions and custom logo design provided on the Kitsap County Standard Details for sewer and stormwater.

9-14  EROSION CONTROL AND ROADSIDE PLANTING

9-14.2  Topsoil

9-14.2(1)  Topsoil Type A

Add the following new subsection:

9-14.2(1)A  Mineral Aggregate for Topsoil Type A

Mineral aggregate for Top Soil Type A shall meet the following gradation:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inch</td>
<td>100</td>
</tr>
<tr>
<td>No. 4</td>
<td>60 – 100</td>
</tr>
<tr>
<td>No. 10</td>
<td>40 – 100</td>
</tr>
<tr>
<td>No. 40</td>
<td>15 - 50</td>
</tr>
<tr>
<td>No. 200</td>
<td>2 - 5</td>
</tr>
</tbody>
</table>
9-29 ILLUMINATION, SIGNAL, ELECTRICAL

Supplement this section with the following:

**General**
All bolts, nuts, washers, and other fasteners shall be stainless steel unless otherwise specified herein.

Where applicable, all materials, equipment, and installation procedures shall conform to the current requirements and standards of the State of Washington Department of Labor and Industries.

9-29.1 Conduit, Innerduct, and Outerduct

Supplement this section with the following:

The type of conduit to be used at specific locations is noted in Section 8-20.3(5) of these Special Provisions.

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

9-29.2(1) Standard Duty and Heavy-Duty Junction Boxes

Supplement this section with the following:

Junction boxes shall conform to the latest WSDOT Standard Plans for locking junction boxes of the type specified.

Junction boxes shall be marked for their use in accordance with the following schedule:

<table>
<thead>
<tr>
<th>System Type</th>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illumination</td>
<td>LT</td>
</tr>
<tr>
<td>Interconnect Only</td>
<td>COMM</td>
</tr>
</tbody>
</table>

Junction boxes shall have metallic lids. All frames and lids shall be hot-dip galvanized.

All junction boxes placed in the sidewalk area shall have a non-slip surface on the lid meeting the requirements of SlipNOT Plate Grade 3 Surface or IKG Industries Mebac #1 or approved equivalent.
9-29.2(1)A Standard Duty Junction Boxes

Supplement this section with the following:

**Standard Duty Junction Boxes**
Both the non-slip lid and non-slip frame shall be treated with Mebac1 (their most aggressive surface) as manufactured by IKG industries, or SlipNOT Grade 3-coarse as manufactured by W.S. Molnar Co. Where the exposed portion of the frame is 1/2 inch wide or less the non-slip treatment may be omitted. The non-slip lid shall be identified with permanent marking on the underside indicating the type of surface treatment ("M1" for Mebac 1; or "S3" for SlipNot3) and the year of manufacturer. The permanent marking shall be 1/8 inch line thickness formed with a stainless steel weld bead.

9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable

Supplement this section with the following:

Chemically cross-linked polyethylene type USE shall be used for insulation of conductors in raceways. No alternate will be allowed.
DIVISION 10 SILVERDALE WATER DISTRICT MEASUREMENT AND PAYMENT

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

BAY SHORE / WASHINGTON / BYRON WATER MAIN IMPROVEMENTS PROJECT

2020

SILVERDALE WATER DISTRICT
OF
KITSAP COUNTY, WASHINGTON

5300 NW NEWBERRY HILL ROAD
SILVERDALE, WA. 98383
TELEPHONE: (360) 447-3500
FAX: (360) 447-3590
DIVISION 10 - MEASUREMENT AND PAYMENT

10-01 GENERAL

This Division shall supersede those sections of Division 2 through Division 9 of the Standard Specifications, which refer to "measurement", "payment" and/or "measurement and payment", unless specifically provided for elsewhere in the Special Provisions.

This section of the Specifications covers the measurement and payment for the various bid items contained in the proposal. The contract unit prices as submitted shall be full compensation to the Contractor for all labor, materials and equipment required to complete the work as outlined herein and as shown on the plans.

The cost of work which is required to complete the project in a first-class, workmanlike manner, and which is referred to by these Specifications or is shown on the plans, but which has no specific bid item provided, shall be considered incidental to the contract and the Contractor shall adjust his bid accordingly.

It has been the intent to outline briefly how the quantity for each bid item will be determined and also the principal costs to be included. No effort has been made to restrict any costs from being included in the individual bid items or to try to itemize all costs that might be included. It shall be the Contractor's responsibility to include all costs for the completed project in the bid items as listed.

All bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications. They will all be will paid at the original bid price.

10-02 STANDARD SPECIFICATIONS

This section shall supersede those sections of the standard specifications, which refer to "measurement", "payment" and/or "measurement and payment", unless specifically provided for elsewhere in these special provisions.

10-03 MOBILIZATION

Mobilization shall conform to section 1-09.7 of the standard specifications. Payment will be made when at least 5% of the contract has been completed.

10-04 DUCTILE IRON WATER MAIN – POTABLE WATER

10-04.1 Measurement

Measurement for payment will be per lineal foot of pipe laid, tested, and shall be along the centerline of the pipe through fittings, valves and couplings.

10-04.2 Payment

The unit price per lineal foot for each size of Ductile Iron Water Main for Potable Water shall be full compensation for all labor, materials and equipment necessary or incidental to the furnishing and installing of the water main as per Section 1 of the Technical Provisions, complete with locator wire installed above the pipe, installation of Field-Lok gaskets in all the joints, mega lugs in all the fittings, including but not limited to clearing and grubbing, trench excavation, potholing for all potential utility conflicts prior to installation, bedding where required, laying and jointing pipe and fittings, backfilling including compaction, compaction testing, concrete thrust blocking, hydrostatic pressure testing, flushing, disinfection of the pipe line, maintenance and restoration of existing utilities impacted by construction, and daily cleanup around the worksite.

Any costs associated with dewatering, replacement of culvert disturbed during installation, sheeting and the reanchoring of existing poles shall be included in the unit contract price under this item.

Also included in the unit price shall be all costs associated with the removal, disposal, and temporary restoration of any pavement and/or concrete sidewalk affecting the installation of the water main. Temporary restorations shall be done to the satisfaction of the Engineer and County.

10-2 Special Provisions

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENT
Other restorations not mentioned shall be considered incidental to the work of constructing the water main and all costs shall be included in the unit contract price under this item.

The cost of the removal and disposal of the 6” ductile iron pipe shall be included in this item. The cost to adjust existing valve boxes and existing water meter boxes shall be included in this item.

10-05  VALVES or FITTINGS

10-05.1  Measurement

Measurement for payment of valves or fittings shall be per each for each type and size actually installed.

10-05.2  Payment

The unit price per each valve or fitting shall be full compensation for all labor, materials, equipment and tools necessary or incidental to furnishing and installing the valve or fitting complete in place as shown on the plan for the water main including trenching, jointing, painting, concrete thrust blocking, disinfecting, hydrostatic testing, backfilling, restoration, valve box and marker post. All tie rods and mega lugs required between valves or fittings shall be considered incidental.

10-06  FIRE HYDRANT ASSEMBLY

10-06.1  Measurement

Measurement for payment of Fire Hydrant Assembly shall be per each assembly installed.

10-06.2  Payment

The unit price per each for Fire Hydrant Assembly shall include furnishing and installing the fire hydrant with STORZ adapter, 6” gate valve, valve box, 6” ductile iron pipe, shackles rods, concrete block, gravel, locator wire, field-lok, mega lugs, and guard posts when required.

10-07  BLOW OFF ASSEMBLY

10-07.1  Measurement

Measurement for payment of Blow Off Assembly shall be per each assembly installed.

10-07.2  Payment

The unit price per each Blow Off Assembly shall include furnishing and installing the tie back block where required, valve where required, cap or plug, galvanized pipe and fittings, brass pipe, and meter box. See Standard Detail and Recycled Standard Detail.

10-08  TEMPORARY BLOW OFF ASSEMBLY

10-08.1  Measurement

Measurement for payment of Temporary Blow Off Assembly shall be per each assembly installed.

10-08.2  Payment

The unit price per each Temporary Blow Off Assembly shall include furnishing and installing the tie back block where required, valve where required, cap and plug, galvanized pipe and fittings, and meter box. Also included in this item is the removal of the blow off assembly, cap, and block (when required) after the main is accepted for use and operation.

10-09  CONNECTION to EXISTING MAIN

10-09.1  Measurement

Measurement for payment for connections shall be per each connection to the existing water system.
10-09.02  Payment

The lump sum price for each connection shall be full compensation for all labor, materials, equipment and tools necessary or incidental to complete the connection. Also included in this item are costs for locating and verifying existing main, pressure testing of existing valve, removal of existing flange, cap, plug or blow off assembly & air vac, installation of the tie back blocking to restrain existing facilities, cut-in costs, solid sleeves with mega lugs, dewatering, and coordination with the Silverdale Water District or other agencies for the connections.

All work shall be done under close supervision and to the satisfaction of Silverdale Water District.

Any temporary interruption required by the connection shall be the full responsibility of the contractor.

This item shall also include the cost of fire watch and coordination of the with Kitsap County Fire Marshall and Fire Department during temporary interruption of service for buildings with fire sprinkler system.

10-10  BANK RUN GRAVEL FOR TRENCH BACKFILL (PROVISIONAL ITEM)

10-10.1  Measurement

Measurement for payment shall be per ton measured in trucks at the point of delivery.

The quantity as listed in the proposal is an estimate of material required for trench backfilling where native soils are determined unsuitable and written instruction for its use are delivered by the Owner.

10-10.2  Payment

Payment will be made at the unit contract price per ton for Bank Run Gravel for Trench Backfill which price shall be full compensation for the furnishing, hauling, placing and compacting of the material in the trench. Payment shall also include removal and disposal of unsuitable native material.

10-12  WATER SERVICE INSTALLATION - 1” & 2” DIAMETER SERVICE LINE

10-12.1  Measurement

Measurement for payment of Water Service Installation 1” & 2” Diameter Service Line shall be per each service installed.

10-12.2  Payment

The unit price per each for the Water Service Installation – 1” & 2” Diameter Service Line shall include furnishing and installing the saddle on the main and corporation stop, service pipe, angle meter stop, and other necessary fittings as shown on the Standard Detail # 4B, #4D & # 5B – Byron/Washington/Bayshore – Water Main Improvements Project, including hydrostatic pressure testing, flushing, disinfection of the service line, excavation backfill and compaction. This includes the cost for the contractor to coordinate with SWD and the customer affected by the shutdown.

10-13 WATER SERVICE INSTALLATION 1” & 2” DIAMETER SERVICE LINE & CONNECTION TO EXISTING SERVICE LINE

10-13.1  Measurement

Measurement for payment of Water Service Installation 1” & 2” Diameter and connection to existing service line shall be per each service installed.

10-13.2  Payment

The unit price per each for the Water Service Installation – 1” & 2” Diameter & Connection to Existing Service Line shall include furnishing and installing the saddle on the main and corporation stop and other necessary fittings as shown on the Standard Detail # 4C & 5C – Byron/Washington/Bayshore – Water Main Improvements Project, including hydrostatic pressure testing, flushing, disinfection of the corporation stop, excavation backfill and compaction. This includes the cost for the contractor to coordinate with SWD and the customer affected by the shutdown.
10-14  CONTROL DENSITY FILL (CDF)

10-14.1  Measurement

Measurement for payment of CONTROL DENSITY BACKFILL (CDF) shall be by cubic yards measured in trucks at the point of delivery.

The quantity as listed in the proposal is an estimate of material required for water main backfill where required on the plans.

10-14.2  Payment

Payment will be made at the unit contract price per cubic yard for CDF which price shall be full compensation for furnishing, hauling, and placing of material for water main backfill. Payment shall also include removal and disposal of excess native material.

This item also includes the cost and installation of visqueen to cover the water main prior to backfilling with CDF.

10-15  DUCTILE IRON WATER MAIN – RECYCLED WATER

10-15.1  Measurement

Measurement for payment shall be per lineal foot of pipe laid, tested, and shall be along the centerline of the pipe through fittings, valves and couplings.

10-15.2  Payment

The unit price per lineal foot for each size of Ductile Iron Water Main for Recycled Water shall be full compensation for all labor, materials and equipment necessary or incidental to the furnishing and installing of the water main as per Section 1 of the Technical Provisions, complete with locator wire installed above the pipe, installation of Field-Lok gaskets in all the joints, mega lugs in all the fittings, including but not limited to clearing and grubbing, trench excavation, potholing for utility conflicts, bedding where required, laying and jointing pipe and fittings, backfilling including compaction, compaction testing, concrete thrust blocking, hydrostatic pressure testing, flushing, disinfection of the pipe line, maintenance and restoration of existing utilities impacted by construction, and daily cleanup around the worksite.

Any costs associated with dewatering, replacement of culvert disturbed during installation, sheeting and the reanchoring of existing poles shall be included in the unit contract price under this item.

Also included in the unit price shall be all costs associated with the removal and disposal and restoration of any pavement affecting the installation of the water main. Restorations shall be done to the satisfaction of the Engineer and County.

Also included in this item is the cost of a 12" C-900 PVC Sleeve at Station 15+95B, where the recycled water main crosses under the existing sewer force main.

Also included is the cost of furnishing and placing CDF to support the existing sewer force main above the 12" C-900 PVC Sleeve.

Other restorations not mentioned shall be considered incidental to the work of constructing the water main and all costs shall be included in the unit contract price under this item.

Also included in the unit price shall be the cost and installation of the Identification Tape, Tracer Tape, and Locate Wire. The identification tape shall be at least 3 inches wide with black 2-inch high lettering which shall read “CAUTION: RECLAIMED WATER – DO NOT DRINK” printed at 2-foot interval. The tape shall be spiral wrapped around the pipe with maximum 12-inch spacing between stripes. The tracer tape shall be installed 12 to 18 inches above the center line of the buried pipe. The tracer tape shall be 6 inches wide, pantone purple 512 or 522, with black lettering, and shall be made of aluminum foil encased in a protective, high-visibility, and color-coded inert plastic material suitable for direct bury. Tracer tape shall read “CAUTION RECLAIMED WATER PIPE BURIED BELOW. DO NOT DRINK” with bold letters 2 inches high. Message shall be printed at maximum interval of 2 feet. The tracer tape shall be spread flat with the message side up before final backfilling. Tape shall be manufactured by Allen Systems, W.H. Brady Co. Seton Name plate Corporation, Making Services Inc., or equal. The locator wire shall be pantone purple 512 or 522 coated copper wire 14-gauge diameter. The wire shall be taped to the top of the pipe.
10-16  REMOVAL AND DISPOSAL OF 6" ASBESTOS CEMENT (AC) PIPE

10-16.1  Measurement

Measurement for REMOVAL AND DISPOSAL OF 6" ASBESTOS CEMENT (AC) PIPE shall be per lineal foot.

10-16.2  Payment

The unit price per linear foot for REMOVAL AND DISPOSAL OF 6" ASBESTOS CEMENT (AC) PIPE shall be full payment for all labor, material, and equipment needed to drain existing water main, cut (snapped off), remove and dispose of said pipe in conformance with the current Policies and Procedures of the Kitsap County Health Department, the Puget Sound Air Pollution Control Agency and other public offices.

Prior to REMOVAL AND DISPOSAL OF 6" ASBESTOS CEMENT (AC) PIPE, the Contractor shall obtain all permits from, and provide notification to, the Washington State Department of Labor and Industries, the United States Environmental Protection Agency (USEPA), the local air pollution control agency, and other permitting and regulatory agencies with jurisdiction over the work involving asbestos as required in WAC Chapter 296-65, “Asbestos removal and encapsulation.” All work involved in the removal, salvage, or disposal of AC pipe shall be the responsibility and at the expense of the Contractor. The Contractor shall ensure the safety of all workers, visitors to the site, and general public in accordance with all applicable laws, rules, and regulations. All contractors working with AC pipe must be state-certified. The Contractor shall designate a Washington State Certified Asbestos Supervisor (CAS) to personally supervise the asbestos removal and to ensure that the handling and removal of asbestos is accomplished by certified asbestos workers, pursuant to Washington State Department of Labor and Industries Standards. The Contractor shall ensure that the removal and disposal of asbestos meets the requirements of USEPA Regulation 40 CFR Part 61, local health department regulations, and all other applicable regulations. The Contractor shall provide protective clothing and equipment (coveralls, gloves, boots, head covering, goggles, respirators, etc.) to crews working with asbestos cement pipe in order to ensure the worker’s exposure to asbestos material is at or below the limits prescribed in WAC 296-62-07705.

10-17  SHORING AND EXTRA EXCAVATION

10-17.1  Measurement

Measurement for SHORING AND EXTRA EXCAVATION shall be by lump sum.

10-17.2  Payment

The lump sum payment of SHORING AND EXTRA EXCAVATION shall be full compensation for all the costs of material, labor and equipment necessary to shore the trench when needed to protect the work, existing property, utilities, pavements, etc., and to provide safe working conditions in the trench. Damages resulting from improper shoring shall be the responsibility of the Contractor.

Also included in this item are the costs of time, labor, and equipment for extra excavation. Disposal of all native material that cannot be used for trench backfill shall be included in this item.

10-18  INSTALLATION OF TEMPORARY WATER SERVICES

10-18.1  Measurement

Measurement for INSTALLATION OF TEMPORARY WATER SERVICES shall be per each temporary service installed.

10-18.2  Payment

The unit price per each temporary service installed shall be full compensation for all the cost of material, labor, and equipment necessary to install temporary 1" IPS service and other fittings to supply water to the building that would be out of service water during construction. This item also includes the coordination between the contractor and building owner with the supervision of the District Inspector and disinfection of the temporary service prior to connection.
10-19.1 **Measurement**

Measurement for INSTALLATION OF ISOLATION VALVE OR CAPPING AC WATER MAIN shall be by lump sum.

10-19.2 **Payment**

The lump sum payment of INSTALLATION OF ISOLATION VALVE OR CAPPING AC WATER MAIN shall be full compensation for all the costs of material, labor, and equipment necessary to install an isolation valve or capping the AC water main prior to construction. The contractor shall be responsible for notifying the Fire Department and Fire Marshall and all the customers that will be affected by the water main shutdown during constructions.

10-20 **SHORING AND EXTRA EXCAVATION**

10-20.1 **Measurement**

Measurement for payment of SHORING AND EXTRA EXCAVATION shall be by lump sum.

10-20.2 **Payment**

The lump sum payment for SHORING AND EXTRA EXCAVATION shall be full compensation for all the costs of material, labor and equipment necessary to shore the trench when needed to protect the work, existing property, utilities, pavements, etc., and to provide safe working conditions in the trench. Damages resulting from improper shoring shall be the responsibility of the Contractor.

10-21 **REMOVAL OF EXISTING AND TEMPORARY FACILITIES**

10-21.1 **Measurement**

Measurement for payment of REMOVAL OF EXISTING AND TEMPORARY FACILITIES shall be by lump sum.

10-21.2 **Payment**

The lump sum payment for REMOVAL OF EXISTING AND TEMPORARY FACILITIES shall be full compensation for all the costs of material, labor and equipment necessary to remove existing facilities and other temporary facilities that were installed during construction. The existing facilities includes existing fire hydrant assembly, valves, blow off assembly, and other existing appurtenances. The temporary facilities includes the temporary 8”x 6” reducer, temporary 6” gate valve, and the installation of 8” blind flange and concrete thrust block at Station 13+49A, the temporary isolation valve at Station 23+33A, removal of the temporary service and installation of 1” brass plug on the saddle at Station 23+67A, and other temporary appurtenances that were installed during construction.

This item shall include the delivery of the existing fire hydrant to Silverdale Water District.

This item shall exclude the removal of AC Water Main which is covered by a separate bid item.

10-22 **PVC CONDUIT SCH. 40 - 2” DIAMETER**

10-22.1 **Measurement**

Measurement for payment will be per lineal foot of 2inch schedule 40 conduit laid.

10-22.2 **Payment**

The unit price per lineal foot of 2inch schedule 40 conduit including sweeps, couplers, and caps shall be full compensation for all labor, materials and equipment necessary or incidental to the furnishing and installing of the conduit complete with locator wire installed above the conduit. Also included in this item is the proof and installation of pull string, trench excavation, potholing for utility conflicts, bedding, backfilling including compaction, compaction testing, maintenance and restoration of existing utilities impacted by construction, and daily cleanup around the worksite. Installation of the conduit shall be in accordance with the following standards: ANSI, TIA, EIA, NEC, NESC, and local codes and ordinances.
Also included in the unit price shall be all costs associated with the removal, disposal, and temporary restoration of any pavement and/or concrete sidewalk affecting the installation of the conduit. Temporary restorations shall be done to the satisfaction of the Engineer and County.

The conduit shall have a default depth of 3 feet.

10-23 ABANDON IN PLACE OF 6" ASBESTOS CEMENT (AC) PIPE

10-23.1 Measurement

Measurement for ABANDON IN PLACE OF 6" ASBESTOS CEMENT (AC) PIPE shall be per lineal foot.

10-23.2 Payment

The unit price per linear foot for ABANDON IN PLACE OF 6" ASBESTOS CEMENT (AC) PIPE shall be full payment for all labor, material, and equipment needed to remove the water from the existing water main, and provide the labor, material and equipment needed to fill the 6" Asbestos Cement Pipe with Control Density Fill (CDF). The contractor shall use a CDF mix equal to the CDF mix below.

Mix I.D. : 11CDAROG - Miles Sand and Gravel

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<th>Absorption</th>
<th>Specific Gravity</th>
<th>Material</th>
<th>Batch Weight SSD</th>
<th>Units</th>
<th>Material Volume</th>
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<tbody>
<tr>
<td>2.14</td>
<td>2.65</td>
<td>ASTM C-33 Sand</td>
<td>2,240</td>
<td>lbs.</td>
<td>13.55</td>
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<tr>
<td>3.15</td>
<td></td>
<td>ASTM C-150 Type I-II (Cement)</td>
<td>100</td>
<td>lbs.</td>
<td>0.51</td>
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<tr>
<td>2.26</td>
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<td>ASTM C-618 Class F (Fly Ash)</td>
<td>500</td>
<td>lbs.</td>
<td>3.55</td>
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<tr>
<td>1.00</td>
<td></td>
<td>ASTM C-1602 Water</td>
<td>308.0</td>
<td>lbs.</td>
<td>4.94</td>
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<tr>
<td>%Air (design)</td>
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<td>MasterPolyheed 997 (WRA)</td>
<td>10 - 80</td>
<td>oz.</td>
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<tr>
<td>W/C Ratio:</td>
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<td>Density: 116.0</td>
<td></td>
<td></td>
<td>27.13</td>
</tr>
</tbody>
</table>

10-24 PROJECT TEMPORARY TRAFFIC CONTROL

10-24.1 Measurement

Measurement for payment of “Project Temporary Traffic Control” shall be by lump sum for Schedules C and D of the Contract.

10-24.2 Payment

The lump sum contract payment shall be full compensation for all costs incurred by the Contractor in providing, installing and maintaining all Project Temporary Traffic Control equipment. All traffic control devices and procedures furnished or provided shall conform to the standards established on latest WSDOT adopted edition of MUTCD. The contractor shall perform all procedures necessary to support the contract work. The contractor’s ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible.

The cost of flaggers and traffic control supervisor shall be included in this item.

10-25 SIDEWALK RESTORATION

10-25.1 Measurement

Measurement for payment shall be per square yard of concrete sidewalk removed and restored including curb and gutter.

10-25.2 Payment
The unit price per square yard of concrete sidewalk restored including curb and gutter shall be full compensation for the costs of all labor, materials, and equipment required for removal, disposal, and restoration of existing sidewalk, curb, and gutter to its original or better condition.
SECTION 1

PIPING

1-01. GENERAL

This section covers the materials, installation and testing of all piping systems for the water system.

Pipe sizes are nominal inside diameter and shall be of the sizes as noted on the plans. All pipe and fittings delivered to the job site shall be clearly marked to identify the material, class and thickness. Materials shall be new and free of blemishes.

Acceptance of installed piping shall be based upon inspection and leakage tests as specified herein.

1-02. DUCTILE IRON PIPE & FITTINGS

a. Material. Ductile iron pipe shall be standard thickness, Class 52 cement lined, centrifugally cast in metal molds and conforming to ANSI A21.51 (AWWA C-151), ANSI A21.4 (AWWA C-104) Specification WW-P-421(c). Joint Details shall be in accordance with ANSI A21.11 (AWWA C-111). Laying lengths shall be eighteen feet (18').

Rubber gasket pipe joint shall be push-on-joint (Tyton) or mechanical joint (M.J.) in accordance with USA Standard A21.11, (AWWA-C-111).

Flange joint shall conform to ANSI 21.15 (AWWA C-115).

The Contractor shall furnish certification from the manufacturer of the pipe and gasket being supplied that the inspection and all of the specified tests have been made and the results thereof comply with the requirements of this standard.

b. Fittings. Fittings for ductile iron pipe shall be ductile iron or cast iron, short body, cement lined and for pressure rating of 150 psi unless otherwise noted. Metal thickness and manufacturing process shall conform to applicable portions of AWWA C-110, C-111 and C-153.

Holding Follower retainer glands for mechanical joint fittings, where specified, shall be equal to MEGA-LUG. Flange adapters are to be slip-on type retained by setscrews they are to be manufactured of ductile iron. Flange adapters must conform to ANSI B16-1 and AWWA Specifications and use a standard MJ gasket.

Standard cement lining shall be in accordance with ANSI A21.4 (AWWA C-104).

Rubber gaskets for push-on-joints shall be in accordance with ANSI A21.11 (AWWA C-111).

Gasket material for flanges shall be neoprene, Buna N, chlorinated butyl, or cloth-inserted rubber.

Use Field-Lok gaskets and Megalug mechanical joint restraint or other approved restraint systems.

1-03. GALVANIZED IRON PIPE AND FITTINGS

Where galvanized iron pipe is specified, the pipe shall be standard weight, Schedule 40, steel pipe per Standard Specifications for black and hot-dipped, zinc-coated (galvanized) welded and seamless steel pipe for ordinary uses (ASTM A120). Fittings for steel pipe 4 inches in diameter and smaller shall be malleable iron threaded type with a pressure rating of 150 psi. Dimensions shall conform to ANSI B16.3. Threading shall conform to ANSI B2.1. Material shall conform to ASTM A 47, Grade 32510. All fittings shall be banded and hot-dip galvanized inside and out.
Unions shall be malleable iron with a pressure rating of at least 150 psi. Material shall conform to ASTM A 47, Grade 32510. Unions shall be ground joint, bronze to iron type.

1-04. BRASS PIPE AND FITTINGS

Where brass pipe is specified, the pipe shall meet the chemical requirements of ASTM B-43. Brass nipple and brass fittings shall conform to specification of ASTM B687-88 and ANSI/ASME B16.15 respectively.

Brass pipe and fittings shall comply with the Safe Drinking Water Act, as amended, and the U.S. environmental Protection Agency (EPA).

Brass fittings and pipe in contact with the potable water shall be minimum compliant with ANSI/NSF Standard 61.

Brass pipe and fittings shall withstand 200 psi during pressure testing of the water main.

Brass pipe and fittings shall no lead brass products and domestic.

1-05. STEEL PIPE

Steel pipe shall conform to AWWA Standard C-200, pressure class 150. Steel pipe shall be cement-mortar lined in accordance with AWWA Standard C-205. The exterior of the steel pipe shall be coal tar coated in accordance with AWWA Standard C-203. Flanges and welded steel fittings shall be in accordance with AWWA Standards C-207 and C-208 respectively.

1-06. VALVES AND ACCESSORIES

a. Gate Valves

The minimum requirements for buried gate valves shall, in design, material and workmanship, conform to the Standards of AWWA C-515.

Buried gate valves shall be ductile iron body, bronze mounted, resilient-seated, clockwise closing, and non-rising stem. The operating stems shall be equipped with Standard two-inch (2") operation nut and O-ring stem seals, and shall be suitable for installation with the type and class of pipe being installed. Ends to be as specified.

Gate valves not buried (4" and larger) shall be the same as above with hand wheel unless specified for outside screw and yoke (O.S. & Y).

Gate valves not buried (3" and smaller) shall be red-white 291 union bonnet gate valve or equal. Ends to be as specified.

b. Butterfly Valves

The minimum requirements for buried butterfly valves shall, in design, material and workmanship, conform to the standard of AWWA C-504, Class 150 B.

Buried butterfly valves shall be iron body, rubber-seated, clockwise closing, tight-closing butterfly valves with standard two-inch (2") operation nut, suitable for installation with the type and class of pipe being installed; ends to be as specified.

Butterfly valves not buried shall be the same as above with hand wheel unless otherwise specified.

c. Valve Boxes

Shall be cast iron, two (2) piece, for forty-two-inch (42") trench with extension, slip type with base corresponding to the size of the valve, equal to Rich Manufacturing Company or Olympic Foundry Company. The cover shall have the word "WATER" cast in it and shall be equal to 940 Seattle deep lid. The box shall be coal tar painted by the manufacturer using its standard.
1-07. DUCTILE IRON PIPE INSTALLATION (ABOVE GROUND WATER PIPES)

a. Flanged joints. Shall be bolted up tight. Flanges shall be clean, faced and provided with ring gaskets as specified hereinbefore.

b. Threaded joints. Connections shall be made metal to metal tight. Joints shall be made with male threads coated with thread compound. All burrs shall be removed from the pipe ends prior to joint make-up.

c. Pipe Supports and Brackets. All exposed piping shall be supported by anchors, brackets, or hangers, secured to the concrete as shown on plans or as required. All metallic supports shall be painted or galvanized after fabrication and secured with galvanized bolts and anchors. All supports shall be of ample strength for the duty required. All pressure piping shall be adequately blocked against surge.

The specifications and plans cover the principal items and do not necessarily include each and every item. Other supports or accessories necessary for the completion of the work shall be furnished and installed in order to produce a first-class, neat, and workmanlike plant.

1-08. DUCTILE IRON PIPE INSTALLATION (BURIED WATER MAINS)

a. The Contractor shall clear and grub within the right-of-way or easement limits as necessary for his construction. The Contractor shall remove all ground cover, trees and miscellaneous vegetation within said limits and dispose of debris by burning or removal to a waste site.

b. Trench Excavation and Pipe Laying. Trench excavation and pipe laying shall be in accordance with the Standard Specifications except excavation shall be sufficient to provide a minimum of four feet (4') of cover from the top of the pipe to the future road subgrade in all areas, unless greater depth is indicated on the plans or ordered by the Engineer. The Contractor shall maintain a trench width of thirty-six inches (36") maximum. Pipe shall be laid according to the manufacturer's recommendations.

c. Additional Depth Excavation. Certain areas may require installation of water mains at depths greater than the minimum four feet (4') of cover specified above. These locations shall be determined by the Contractor and the cost thereof shall be considered incidental to pipe construction.

d. Unsuitable Material. Where in excavating the trench for water mains the bottom of the trench exposes peat, soft clay, quicksand or other material which is unsuitable, such material shall be removed and disposed of by the Contractor. The material thus removed shall be replaced by suitable surplus material obtained from trench excavation within the limits of the project or shall be bank run gravel Class B, which shall be deposited and compacted in eight-inch (8") layers by mechanical compaction. No extra compensation shall be paid for removal of unsuitable material or replacement with suitable material from the site.

e. Backfilling Trenches and Bedding Materials. Backfilling of trenches shall be made with the same materials excavated from the trenches unless these materials are found to be unsuitable by the Engineer.

f. Compaction of Backfill. On unimproved areas, compaction of backfill shall be in accordance with the Standard Specifications.

g. Compaction of Backfill Under Pavement or on Roadway Shoulders. At locations where paved streets, driveways or sidewalks will be constructed or reconstructed over the trench, or where provided for in the special provisions or directed by the Engineer, the backfill shall be placed in successive layers and be compacted by mechanical tampers. In such cases the backfill material shall be placed in successive layers, not exceeding eight inches (8") in thickness and each layer shall be compacted with mechanical tampers to a density equal to ninety-five percent (95%) of the theoretical maximum density (ASTM designation D-1557, Method D). Mechanical tamping will always be required below utilities crossing the trench to prevent their rupture when additional backfill is placed or compacted above. Tamping will not be paid for separately.

h. Sheetng and Shoring. The Contractor shall be required to provide sheeting or shoring during pipe construction where trench widths are excessive and will endanger existing property or improvements, or when the trenching operation does not comply with established safety standards. The cost of sheeting and shoring shall be considered incidental to pipe
construction. Additional work due to increased trench width will not be cause for additional compensation for excavation, 
backfill, pavement reinstatement or other items.

i. **Sheeting Left In Place.** When in the opinion of the Engineer the withdrawal of sheeting from the trench will result 
in damage to adjacent utilities or other property, the Engineer may order all or a portion of the sheeting to be left in place, in 
which case it shall be cut off twenty-four inches (24") below grade.

j. **Dewatering.** The Contractor shall be responsible for all dewatering required to provide a dry trench condition for 
pipe laying and backfilling. The costs associated with the dewatering operation, including disposal of water, shall be 
considered incidental to the pipe construction.

k. **Concrete Blocking.** Concrete blocking shall be placed at all fittings where joint restraint is required. Construction 
details shall be in accordance with the District's Standard Detail. Payment for concrete blocking shall be considered 
incidental to water main construction.

l. **Locator Wire.** Installation of water mains and service lines shall include locator wire buried along the entire length 
of the pipe. Locator wire to be insulated copper wire, 14 gauge or larger. The wire shall be connected to a bolt on each 
above ground hydrant flange with 6" of slack at the end for connecting the locator device. Locator wire to be run to 12" 
above ground at each meter, blow off, and air/vacuum valve. All splices in the locator wire shall be made using a 3M direct 
bury splice kit, model DBY. The kit shall be installed per the manufactures specifications. The wires shall be tied in a knot 
six (6) to eight (8) inches from the splice. The color of the locator wire insulation of the potable and recycled water mains 
shall be blue and pantone purple 512 or 522 respectively. The locate wire shall be taped to the top of the water main.

m. **Connections to Existing Pipelines.** Connections may be made to existing pipes under pressure with the use of a 
tapping machine. The size and type of pipe must be determined. Then the appropriate sized stainless steel tapping sleeve 
complete with tapping gate valve may be installed.

Where cut-ins are permitted to be made in existing pipes, the work shall be conducted at such a time and in such a manner 
as to minimize the interruption of service. Cut-in time must be approved by the District. Necessary pipe, fittings and gate 
valves shall be assembled at the site ready for installation prior to the shutting-off of water in the existing main. Once the 
water has been cut off, the work shall be prosecuted vigorously and shall not be halted until the line is restored to service. 
Unless specifically provided for elsewhere in these specifications, the Contractor shall have the responsibility of giving at 
least 48 hours' notice to the Water Superintendent of intention to disrupt service.

When existing asbestos cement pipe is encountered on a project all cutting, tapping, removal and disposal of said pipe shall 
be in conformance with the current Policies and Procedures of the Kitsap County Health Department, the Puget Sound Air 
Pollution Control Agency and other public offices with jurisdiction in this matter. At this time the policy is that:

1. Pipe shall be "snapped off" rather than being cut with an abrasive saw.
2. Abandoned pipe shall be left in the trench or disposed of in an approved method.

n. **Hydrostatic/Leakage Tests.** After sterilization, flushing, passage of the preliminary bacteria sample(s) taken by the 
owner and prior to acceptance of the work, the installation shall be subjected to a hydrostatic pressure test of 200 psi at the 
highest elevation of the portion of the system being tested. The test pressure shall not be more than 225 psi, at the lowest 
elevation. The test pressure shall not exceed the rated pressure of any resilient seated gate valve or butterfly valve. No 
valve shall be operated in either the opening or closing direction at a differential pressure above it's rated pressure.

The water pumped into the system for the pressure test shall be chlorinated to a minimum concentration of fifty (50) PPM. 
The test shall be for a minimum period of 15 minutes, at the discretion of the Engineer. At the conclusion of the test period 
the system shall be re-pumped to the initial pressure. The volume of water used will be measured and must be within the 
limits set forth in AWWA C-600-82, Section 4.2.

Any leaks or imperfections developing under said pressure shall be remedied by the Contractor before final acceptance of 
work. Leakage shall be measured by approved means. The Contractor shall provide all necessary equipment and shall 
perform all work connected with the tests. Tests shall be made after corporation stops and services are installed. Insofar as 
is practical, tests shall be made with pipe joints, fittings, and valves exposed for inspection.

Upon passage of the pressure test, each valve in the installation will be tested for leakage by systematically closing each 
valve and relieving the pressure behind it.
The Contractor shall perform the test to assure that the equipment to be used for the test is adequate and in good operating condition, the air in the line has been released, and that the system will pass the test before requesting Engineer to witness the test. The Engineer shall then witness the test.

o. Sterilization and Flushing of Water & Recycled Water Mains. Sterilization of the water mains shall be accomplished by the Contractor in accordance with the requirements of the state health department and in a manner satisfactory to the Engineer. During construction calcium hypochlorite granules shall be placed at the upstream end of each length of pipe laid such that, upon filling the main, the initial concentration of chlorine will be 50 mg/l. The following tables lists the approximate weight and volume of 65% high test calcium hypochlorite required per 20 feet length of pipe.

<table>
<thead>
<tr>
<th>Pipe Diameter (In.)</th>
<th>Calcium Hypochlorite Granules (Oz.)</th>
<th>Volume (fl. oz.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0.13</td>
<td>0.10 (1 tsp.)</td>
</tr>
<tr>
<td>6</td>
<td>0.30</td>
<td>0.24 (1/2 tbls.)</td>
</tr>
<tr>
<td>8</td>
<td>0.53</td>
<td>0.43 (1 tbls.)</td>
</tr>
<tr>
<td>10</td>
<td>0.84</td>
<td>0.68 (1-1/2 tbls.)</td>
</tr>
<tr>
<td>12</td>
<td>1.18</td>
<td>0.96 (2 tbls.)</td>
</tr>
<tr>
<td>16</td>
<td>3.20</td>
<td>1.71 (3.5 tbls.)</td>
</tr>
</tbody>
</table>

When installation is complete, the mains shall be filled with water such that the maximum velocity of flow will be less than 1 fps. All air pockets shall be bled from the system during the filling operation. All valves and hydrants shall be operated while the chlorine solution is in the system. During the soaking period all valves and hydrants shall be open, except the connection to the existing system. After a minimum soaking period of 24 hours, the new system shall be flushed at a minimum velocity of 2.5 fps until no trace of chlorine remains. The District must be notified when the flushing is to be done and of the planned method of disposal of the chlorinated water. After an additional 24-hour minimum period, bacteria samples shall be taken from the system by the Water District.

Flushing of chlorinated water shall be done in such a way that NO chlorinated water enters a storm sewer or stream. The chlorinated water may be discharged to a field or undeveloped land where the water will not run into a storm sewer or stream. During the entire time the water is flowing the water must be monitored to determine its course. Temporary dams must be used if necessary to retain the water. If it cannot be assured that NO chlorinated water enters a storm sewer or stream, then the water must be transported to a suitable location, dumped into a sanitary sewer, or dechlorinated using sulfur dioxide or a comparable chemical. The dechlorination process must be approved by the District. If the chlorinated water is dumped into a sanitary sewer, a permit must be obtained from the Kitsap Co. Public Works Dept.

1-09 WATER SERVICE / PRV INSTALLATION

The installation of the saddle on the main, corporation stop, service line, angle meter stop or meter setter, meter box, PRV if required, and pipe and materials to make the connection to the existing service line shall be according to the standard detail on the plans. The long side water service will include a push across the road if the road can not be cut for service lines. After the new main and service line have been tested up to the angle meter stop or meter setter, the contractor will abandon the existing service, move it to the location shown on the plans and make the connection to the existing service line to the customer. The line will then be flushed. If a pressure reducing valve is required, the pressure shall be adjusted to 60 psi at the main floor of the house using an accurate pressure gauge. All work shall be coordinated with the district and the customer. The district shall indicate which services shall receive PRVs.

1-10 ABANDON OR REMOVAL EXISTING FACILITIES

Fire hydrants shall be removed and the main plugged with concrete. Valve boxes shall be removed and the valve operator nuts cut off or as specified per plan. Saddle shall be plugged with galvanized plug when a valve is removed from existing water main. Services, blow offs and air-vac valves shall be removed and existing piping to mains shall be plugged.
SECTION 2

CLEAN-UP

2-01 GENERAL
This section covers the requirements for clean-up of the construction area during and at the termination of the work.

2-02 CLEAN-UP DURING CONSTRUCTION
During the progress of the work, the Contractor shall maintain the construction area in a neat and orderly condition, free from construction trash, unauthorized material stockpiles, waste and debris; disposal shall be the responsibility of the Contractor.

2-03 FINAL CLEAN-UP
Prior to final acceptance of the work by the Owner, the Contractor shall clean-up the work and premises, remove all temporary structures built by or for him, and remove all surplus construction material from the area. The construction site shall be left in a neat condition, acceptable to the Engineer. Disposal of excess construction materials, trash, waste and debris shall be off the site by the Contractor.
The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 16-048, effective September 3, 2019 is made a part of this contract.

The Standard Plans are revised as follows:

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-70.1

B-10.60
DELETED

B-82.20
DELETED

B-90.40
Valve Detail – DELETED

C-1
Delete Note 1.

Revise Note 2 to read “Remove all rail washers, also called “Snow Load Rail Washers”, when encountered during raising beam guardrail work and the guardrail raising work requires removal of the rail.

Re-number all notes.

C-4b
DELETED

C-4e
DELETED

C-8a
Delete “Section A-A, Type 4 Detail

C-20.11
Delete Notes 1 & 2. Re-Number all notes. Delete “Snow Load Post Washer” and “Snow Load Rail Washer” details.

C-22.14
DELETED

C-22.16
Note 3, formula, was: “Elevation G = (Elevation S – D x (0.1) + 31” is revised to read: “Elevation G = (Elevation S – D x (0.1) + 31/12”

C-40.14
DELETED

C-70.10
Sheet 1, Note 1 was - “1. PERMANENT INSTALLATION requirements: Embed barrier 3” (in) minimum; …” is revised to read: “1. Installation requirements: Embed barrier 3” (in) minimum in asphalt or concrete; embed barrier 10” (in) minimum in soil; …”

Sheet 1, existing Notes 2 and 4 are deleted. Existing Note 3 is renumbered to Note 2.

Sheet 1, add new Note 3, “3. See Sheet 2 for barrier with a 2’-10” reveal installed in asphalt or concrete. See Sheet 3 for barrier with a 3’-6” reveal installed in asphalt or concrete.”

Sheet 2, the detail titled “3’ – 6” BARRIER FOR USE WITH A 0” (IN) TO 5” (IN) MAX. GRADE SEPARATION” has the following changes:
1. The detail title is changed to “3’ – 6” BARRIER FOR USE WITH A 0” (IN) TO 4” (IN) MAX. GRADE SEPARATION”.
2. The callout “GRADE SEPARATION--5” MAX.” is changed to “GRADE SEPARATION--4” MAX.”

C-85.11
Add new Note 3 “3. Contact the HQ Bridge traffic barrier specialist before using this barrier placement plan for projects involving new or reconstructed bridges.”

C-90.10
DELETED

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-10.30**
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 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-25.10
Key Note 3, second sentence, was – “For single-post installations, divide the (#2w/diamond shape symbol) post MAX. XYZ in half.” Is revised to read: “For single-post installations, divide the two-post MAX. XYZ in half.”

G-60.10
DELETED

G-60.20
DELETED

G-60.30
DELETED

G-70.10
DELETED

G-70.20
DELETED

H-70.20
Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is revised to H-70.10

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.”

Note 1, was – “…socket box mounting detail, see Standard Plan J-3b.” is revised to read to read: “…socket box mounting detail, see Standard Plan J-10.20.”

Note 6, was – “…See door hinge detail, Standard Plan J-3b.” is revised to read: “…See door hinge detail, Standard Plan J-10.20.”

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, Elevation View, Round Concrete Foundation Detail, callout – “ANCHOR BOLTS ~ ¾” (IN) x 30” (IN) FULL THREAD ~ THREE REQ’D. PER ASSEMBLY” IS REVISED TO READ: “ANCHOR BOLTS ~ ¾” (IN) x 30” (IN) FULL THREAD ~ FOUR REQ’D. PER ASSEMBLY”
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.
Detail F, callout, “Heavy Hex Clamping Bolt (TYP.) ~ 3/4” (IN) Diam. Torque Clamping Bolts (see Note 3)” is revised to read; “Heavy Hex Clamping Bolt (TYP.) ~ 3/4” (IN) Diam. Torque Clamping Bolts (see Note 1)”
Detail F, callout, “3/4” (IN) x 2’ – 6” Anchor Bolt (TYP.) ~ Four Required (See Note 4)” is revised to read; “3/4” (IN) x 2’ – 6” Anchor Bolt (TYP.) ~ Three Required (See Note 2)”

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 – LOCK NIPPLE, 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-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 ½”
(IN) S. S. FLAT WASHER”

J-75.20
Key Notes, note 16, second bullet point, was: “1/2” (IN) x 0.45” (IN) Stainless Steel Bands”, add the following to the end of the note: “Alternate: Stainless steel cable with stainless steel ends, nuts, bolts, and washers may be used in place of stainless steel bands and associated hardware.”

J-81.10
Power Distribution Block Diagram, lower left corner, Sheet 1 of 3; Switch Pack 2; circuit 623 (T4-5) [middle ckt] is revised to read; circuit 622 (T4-5).

K-80.30
DELETED

K-80.35
Add New Note 1 – “1. The intended use of this plan is for the temporary installation of Type 2 concrete barrier (See Standard Plan C-8) on cement concrete pavement, bridge decks, or hot mix asphalt pavement.”

Re-number all notes.

Remove all references to Type F barrier shown on the Standard Plan.

K-80.37
Revise Note 1 to read: “1. The intended use of this plan is for the temporary installation of F-Shape NARROW BASE concrete barrier (See Standard Plan C-60.10) on cement concrete pavement, bridge decks.”

Replace all references stating “NARROW BASE, ALTERNATIVE TEMPORARY CONCRETE BARRIER SEGMENT” with “F-Shape NARROW BASE concrete barrier segment.”
M-3.50
Double-Left Turn Channelization (with Right Turn Pocket) view, dimension, upper left corner, “taper” dimension; callout – was “40’ if Posted Speed is 40 MPH or less 100’ if Posted Speed is more than 40 MPH” is revised to read; “See Contract”

M-5.10
Right-Turn Channelization view, dimension, upper right corner, “taper” dimension; callout – was “50’ MIN.” is revised to read; “See Contract”

M-24.50
DELETED

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-40.00-00........8/11/09  A-50.30-00........11/17/08
A-10.20-00........10/5/07  A-40.10-04........7/31/19  A-50.40-00........11/17/08
A-10.30-00........10/5/07  A-40.15-00........8/11/09  A-60.10-03........12/23/14
A-20.10-00........8/31/07  A-40.20-04........1/18/17  A-60.20-03........12/23/14
A-30.10-00........11/8/07  A-40.50-02........12/23/14  A-60.30-01........6/28/18
A-30.30-01........6/16/11  A-50.10-00........11/17/08  A-60.40-00........8/31/07
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Amendment to the Standard Plans  S-9

BAY SHORE DRIVE AND WASHINGTON AVE NW ROADWAY AND UTILITY IMPROVEMENTS
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| J-28.22-00  | 8/07/07 | J-50.30-00  | 6/3/11 |
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| J-28.26-01  | 12/02/08| J-60.11-00  | 5/20/13|
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| M-9.60-00   | 2/10/09 | M-40.10-03  | 6/24/14 |
APPENDIX A - WASHINGTON STATE PREVAILING WAGE RATES, STATE BENEFIT CODE KEY AND SUPPLEMENTAL (L&I STATEMENT)
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: 2/21/2020

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<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Curb &amp; Gutter, Sidewalks</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Curing Concrete</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Finish Colored Concrete</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Floor Grinding</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Floor Grinding/Polisher</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
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<td>Kitsap</td>
<td>Cement Masons</td>
<td>Green Concrete Saw, self-powered</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Grouting of all Plates</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Grouting of all Tilt-up Panels</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Gunite Nozzleman</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Hand Powered Grinder</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Journey Level</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Patching Concrete</td>
<td>$62.47</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Pneumatic Power Tools</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Power Chipping &amp; Brushing</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Sand Blasting Architectural Finish</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Screed &amp; Rodding Machine</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Spackling or Skim Coat Concrete</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Troweling Machine Operator</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Troweling Machine Operator on Colored Slabs</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Cement Masons</td>
<td>Tunnel Workers</td>
<td>$62.97</td>
<td>7A</td>
<td>4U</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Bell/Vehicle or Submersible Operator (Not Under Pressure)</td>
<td>$116.20</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Dive Supervisor/Master</td>
<td>$79.23</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Diver</td>
<td>$116.20</td>
<td>7A</td>
<td>4C</td>
<td>8V</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Diver On Standby</td>
<td>$74.23</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Diver Tender</td>
<td>$67.31</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Manifold Operator</td>
<td>$67.31</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Manifold Operator Mixed Gas</td>
<td>$72.31</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Remote Operated Vehicle Operator/Technician</td>
<td>$67.31</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Divers &amp; Tenders</td>
<td>Remote Operated Vehicle Tender</td>
<td>$62.69</td>
<td>7A</td>
<td>4C</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Dredge Workers</td>
<td>Assistant Engineer</td>
<td>$56.04</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Dredge Workers</td>
<td>Assistant Mate (Deckhand)</td>
<td>$56.00</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Dredge Workers</td>
<td>Boatmen</td>
<td>$56.44</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Dredge Workers</td>
<td>Engineer Welder</td>
<td>$57.51</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td>Dredge Workers</td>
<td>Leverman, Hydraulic</td>
<td>$58.67</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
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<td>Kitsap</td>
<td>Category</td>
<td>Level</td>
<td>Wage</td>
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<tr>
<td>Kitsap</td>
<td><strong>Dredge Workers</strong></td>
<td>Mates</td>
<td>$56.44</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Drywall Applicator</strong></td>
<td>Journey Level</td>
<td>$62.44</td>
<td>5D</td>
<td>1H</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Drywall Tapers</strong></td>
<td>Journey Level</td>
<td>$62.94</td>
<td>5P</td>
<td>1E</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electrical Fixture Maintenance Workers</strong></td>
<td>Journey Level</td>
<td>$30.59</td>
<td>5L</td>
<td>1E</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Oiler</td>
<td>$56.00</td>
<td>5D</td>
<td>3F</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Cable Splicer</td>
<td>$83.17</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Cable Splicer (tunnel)</td>
<td>$89.34</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Certified Welder</td>
<td>$80.36</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Certified Welder (tunnel)</td>
<td>$86.25</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Construction Stock Person</td>
<td>$41.48</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Journey Level</td>
<td>$77.55</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Inside</strong></td>
<td>Journey Level (tunnel)</td>
<td>$83.17</td>
<td>7C</td>
<td>4E</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Motor Shop</strong></td>
<td>Craftsman</td>
<td>$15.37</td>
<td>1</td>
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<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Motor Shop</strong></td>
<td>Journey Level</td>
<td>$14.69</td>
<td>1</td>
<td></td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Cable Splicer</td>
<td>$79.60</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Certified Line Welder</td>
<td>$72.98</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Groundperson</td>
<td>$47.94</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Heavy Line Equipment</td>
<td>$72.98</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Journey Level Lineperson</td>
<td>$72.98</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Line Equipment Operator</td>
<td>$62.06</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Meter Installer</td>
<td>$47.94</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Pole Sprayer</td>
<td>$72.98</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electricians - Powerline Construction</strong></td>
<td>Powderperson</td>
<td>$54.55</td>
<td>5A</td>
<td>4D</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Electronic Technicians</strong></td>
<td>Journey Level</td>
<td>$51.07</td>
<td>7E</td>
<td>1E</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Elevator Constructors</strong></td>
<td>Mechanic</td>
<td>$94.22</td>
<td>7D</td>
<td>4A</td>
<td>View</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Elevator Constructors</strong></td>
<td>Mechanic In Charge</td>
<td>$101.73</td>
<td>7D</td>
<td>4A</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Fabricated Precast Concrete Products</strong></td>
<td>Journey Level</td>
<td>$13.50</td>
<td>1</td>
<td></td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Fabricated Precast Concrete Products</strong></td>
<td>Journey Level - In-Factory Work Only</td>
<td>$13.50</td>
<td>1</td>
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<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Fence Erectors</strong></td>
<td>Fence Erector</td>
<td>$43.11</td>
<td>7A</td>
<td>4V</td>
<td>8Y</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Fence Erectors</strong></td>
<td>Fence Laborer</td>
<td>$43.11</td>
<td>7A</td>
<td>4V</td>
<td>8Y</td>
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<tr>
<td>Kitsap</td>
<td><strong>Flaggers</strong></td>
<td>Journey Level</td>
<td>$43.11</td>
<td>7A</td>
<td>4V</td>
<td>8Y</td>
</tr>
<tr>
<td>Kitsap</td>
<td><strong>Glaziers</strong></td>
<td>Journey Level</td>
<td>$66.51</td>
<td>7L</td>
<td>1Y</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Heat &amp; Frost Insulators And Asbestos Workers</strong></td>
<td>Journeyman</td>
<td>$76.61</td>
<td>5J</td>
<td>4H</td>
<td>View</td>
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<tr>
<td>Kitsap</td>
<td><strong>Heating Equipment Mechanics</strong></td>
<td>Journey Level</td>
<td>$85.88</td>
<td>7F</td>
<td>1E</td>
<td>View</td>
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</tbody>
</table>

https://secure.lni.wa.gov/wagelookup/ 2/21/2020
| Kitsap | Hod Carriers & Mason Tenders | Journey Level | $52.44 | 7A | 4V | 8Y | View |
| Kitsap | Industrial Power Vacuum Cleaner | Journey Level | $29.89 | 7 | View |
| Kitsap | Inland Boatmen | Boat Operator | $61.41 | 5B | 1K | View |
| Kitsap | Inland Boatmen | Cook | $56.48 | 5B | 1K | View |
| Kitsap | Inland Boatmen | Deckhand | $57.48 | 5B | 1K | View |
| Kitsap | Inland Boatmen | Deckhand Engineer | $58.81 | 5B | 1K | View |
| Kitsap | Inland Boatmen | Launch Operator | $58.89 | 5B | 1K | View |
| Kitsap | Inland Boatmen | Mate | $57.31 | 5B | 1K | View |
| Kitsap | Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control | Cleaner Operator, Foamer Operator | $13.50 | 1 | View |
| Kitsap | Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control | Grout Truck Operator | $13.50 | 1 | View |
| Kitsap | Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control | Head Operator | $13.50 | 1 | View |
| Kitsap | Insulation Applicators | Journey Level | $62.44 | 7A | 4C | View |
| Kitsap | Ironworkers | Journeyman | $72.18 | 7N | 1O | View |
| Kitsap | Laborers | Erosion Control Worker | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Air, Gas Or Electric Vibrating Screed | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Airtrac Drill Operator | $42.30 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Ballast Regular Machine | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Batch Weighman | $38.59 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Brick Pavers | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Bruch Cutter | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Brush Hog Feeder | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Burner | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Caisson Worker | $42.30 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Carpenter Tender | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Cement Dumper-paving | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Cement Finisher Tender | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Change House Or Dry Shack | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Chipping Gun (30 Lbs. And Over) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Chipping Gun (Under 30 Lbs.) | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Choker Setter | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Chuck Tender | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Clary Power Spreader | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Clean-up Laborer | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Concrete Dumper/Chute Operator | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Concrete Form Stripper | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Concrete Placement Crew | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Concrete Saw Operator/Core Driller | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Crusher Feeder | $38.59 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Curing Laborer | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Demolition: Wrecking & Moving (Incl. Charred Material) | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Ditch Digger | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Digger | $42.30 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Drill Operator (Hydraulic, Diamond) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Dry Stack Walls | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Dump Person | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Epoxy Technician | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Faller & Bucker Chain Saw | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Fine Graders | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Firewatch | $38.59 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Form Setter | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Gabian Basket Building | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Gaurdrail Erector | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | General Laborer | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Grade Checker & Transit Person | $42.30 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Grinders | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Grout Machine Tender | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Groutmen (Pressure) Including Post Tension Beams | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Hazardous Waste Worker (Level A) | $42.30 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Hazardous Waste Worker (Level B) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Hazardous Waste Worker (Level C) | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | High Scaler | $42.30 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Jackhammer | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Laserbeam Operator | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Maintenance Person | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Manhole Builder-Mudman | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Material Yard Person | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Motorman-Dinky Locomotive | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Nozzleman (Concrete Pump, Green Cutter When | $41.79 | 7A | 4V | 8Y | View |
Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Blaster, Vacuum Blaster)

<p>| Kitsap | Laborers | Pavement Breaker | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pilot Car | $38.59 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pipe Later Lead | $42.30 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pipe Layer/Tailor | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pipe Pot Tender | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pipe Reliner | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pipe Wrapper | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Pot Tender | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Powderman | $42.30 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Powderman's Helper | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Power Jacks | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Railroad Spike Puller - Power | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Raker - Asphalt | $42.30 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Re-timberman | $42.30 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Remote Equipment Operator | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Rigger/Signal Person | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Rip Rap Person | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Rivet Buster | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Rodder | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Scaffold Erector | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Scale Person | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Sloper (Over 20&quot;) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Sloper Sprayer | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Spreader (Concrete) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Stake Hopper | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Stock Piler | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Tamper &amp; Similar Electric, Air &amp; Gas Operated Tools | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Tamper (Multiple &amp; Self-propelled) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Timber Person - Sewer (Lagger, Shorer &amp; Cribber) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Toolroom Person (at Jobsite) | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Topper | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Track Laborer | $41.09 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Track Liner (Power) | $41.79 | 7A | 4V | 8Y | View |
| Kitsap | Laborers | Traffic Control Laborer | $40.90 | 7A | 4V | 9C | View |
| Kitsap | Laborers | Traffic Control Supervisor | $40.90 | 7A | 4V | 9C | View |
| Kitsap | Laborers | Truck Spotter | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Tugger Operator | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Tunnel Work-Guage and Lock Tender | $42.40 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Tunnel Work-Guage and Lock Tender | $42.40 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Vibrator | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Vinyl Seamer | $41.09 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Watchmen | $35.20 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Welder | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Well Point Laborer | $41.79 | 7A | 4V | 8Y | View |
| Kitsap Laborers | Window Washer/Cleaner | $35.20 | 7A | 4V | 8Y | View |
| Kitsap Laborers - Underground Sewer &amp; Water | General Laborer &amp; Topman | $50.86 | 7A | 4V | 8Y | View |
| Kitsap Laborers - Underground Sewer &amp; Water | Pipe Layer | $51.80 | 7A | 4V | 8Y | View |
| Kitsap Landscape Construction | Landscape Construction/Landscaping Or Planting Laborers | $39.18 | 7A | 4V | 8Y | View |
| Kitsap Landscape Construction | Landscape Operator | $66.05 | 7A | 3K | 8X | View |
| Kitsap Landscape Maintenance | Groundskeeper | $13.50 | 1 | View |
| Kitsap Lathers | Journey Level | $62.44 | 5D | 1H | View |
| Kitsap Marble Setters | Journey Level | $58.82 | 5A | 1M | View |
| Kitsap Metal Fabrication (In Shop) | Fitter | $26.96 | 1 | View |
| Kitsap Metal Fabrication (In Shop) | Laborer | $13.50 | 1 | View |
| Kitsap Metal Fabrication (In Shop) | Machine Operator | $13.83 | 1 | View |
| Kitsap Metal Fabrication (In Shop) | Welder | $13.83 | 1 | View |
| Kitsap Millwright | Journey Level | $63.94 | 7A | 4C | View |
| Kitsap Modular Buildings | Cabinet Assembly | $13.50 | 1 | View |
| Kitsap Modular Buildings | Electrician | $13.50 | 1 | View |
| Kitsap Modular Buildings | Equipment Maintenance | $13.50 | 1 | View |
| Kitsap Modular Buildings | Plumber | $13.50 | 1 | View |
| Kitsap Modular Buildings | Production Worker | $13.50 | 1 | View |
| Kitsap Modular Buildings | Tool Maintenance | $13.50 | 1 | View |
| Kitsap Modular Buildings | Utility Person | $13.50 | 1 | View |
| Kitsap Modular Buildings | Welder | $13.50 | 1 | View |
| Kitsap Painters | Journey Level | $43.40 | 6Z | 2B | View |
| Kitsap Pile Driver | Crew Tender | $67.31 | 7A | 4C | View |
| Kitsap Pile Driver | Crew Tender/Technician | $67.31 | 7A | 4C | View |
| Kitsap Pile Driver | Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI | $77.93 | 7A | 4C | View |
| Kitsap Pile Driver | Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI | $82.93 | 7A | 4C | View |
| Kitsap Pile Driver | Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI | $86.93 | 7A | 4C | View |
| Kitsap Pile Driver | $91.93 | 7A | 4C | View |
| Kitsap | Pile Driver | Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI | $94.43 | 7A | 4C | View |
| Kitsap | Pile Driver | Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI | $99.43 | 7A | 4C | View |
| Kitsap | Pile Driver | Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI | $101.43 | 7A | 4C | View |
| Kitsap | Pile Driver | Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI | $103.43 | 7A | 4C | View |
| Kitsap | Pile Driver | Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI | $105.43 | 7A | 4C | View |
| Kitsap | Pile Driver | Journey Level | $62.69 | 7A | 4C | View |
| Kitsap | Plasterers | Journey Level | $59.42 | 7Q | 1R | View |
| Kitsap | Playground &amp; Park Equipment Installers | Journey Level | $13.50 | 1 | View |
| Kitsap | Plumbers &amp; Pipefitters | Journey Level | $74.72 | 5A | 1G | View |
| Kitsap | Power Equipment Operators | Asphalt Plant Operators | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Assistant Engineer | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Barrier Machine (zipper) | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Batch Plant Operator: concrete | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Bobcat | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Brokk - Remote Demolition Equipment | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Brooms | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Bump Cutter | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Cableways | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Chipper | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Compressor | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Concrete Finish Machine - Laser Screed | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Concrete Pump: Truck Mount With Boom Attachment Over 42 M | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Concrete Pump: Truck Mount With Boom Attachment Up To 42m | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Conveyors | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Cranes friction: 200 tons and over | $69.20 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: 100 tons through 199 tons, or 150’ of boom (including jib with attachments) | $67.84 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: 20 Tons Through 44 Tons With Attachments | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: 200 tons- 299 tons, or 250’ of boom including jib with attachments | $68.53 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: 300 tons and over or 300’ of boom including jib with attachments | $69.20 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: 45 Tons Through 99 Tons, Under 150’ Of Boom (including Jib With Attachments) | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: A-frame - 10 Tons And Under | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: Friction cranes through 199 tons | $68.53 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Cranes: through 19 tons with attachments, A-frame over 10 tons | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Crusher | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Deck Engineer/Deck Winches (power) | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Derricks, On Building Work | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Dozers D-9 &amp; Under | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Drill Oilers: Auger Type, Truck Or Crane Mount | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Drilling Machine | $67.84 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Elevator And Man-lift: Permanent And Shaft Type | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Finishing Machine, Bidwell And Gamaco &amp; Similar Equipment | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Forklift: 3000 Lbs And Over With Attachments | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Forklifts: Under 3000 Lbs. With Attachments | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Grade Engineer: Using Blue Prints, Cut Sheets, Etc | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Gradechecker/Stakeman | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Guardrail Punch | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. &amp; Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators</strong> | | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards | Horizontal/Directional Drill Locator | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Hydralifts/Boom Trucks Over 10 Tons | Horizontal/Directional Drill Operator | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Hydralifts/Boom Trucks, 10 Tons And Under | Hydralifts/Boom Trucks | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Loader, Overhead 8 Yards &amp; Over | Loader, Overhead 8 Yards. But Not Including 8 Yards | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Loader, Overhead Under 6 Yards | Loaders, Overhead Under 6 Yards | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Loaders, Plant Feed | Loaders, Plant Feed | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Loaders: Elevating Type Belt | Loaders: Elevating Type Belt | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Locomotives, All | Locomotives, All | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Material Transfer Device | Material Transfer Device | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic) | Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic) | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Motor Patrol Graders | Motor Patrol Graders | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield | Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Oil Distributors, Blower Distribution &amp; Mulch Seeding Operator | Oil Distributors, Blower Distribution &amp; Mulch Seeding Operator | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Outside Hoists (Elevators And Manlifts), Air Tuggers, Strato | Outside Hoists (Elevators And Manlifts), Air Tuggers, Strato | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Overhead, Bridge Type Crane: 20 Tons Through 44 Tons | Overhead, Bridge Type Crane: 20 Tons Through 44 Tons | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Overhead, Bridge Type: 100 Tons And Over | Overhead, Bridge Type: 100 Tons And Over | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Overhead, Bridge Type: 45 Tons Through 99 Tons | Overhead, Bridge Type: 45 Tons Through 99 Tons | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Pavement Breaker | Pavement Breaker | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Pile Driver (other Than Crane Mount) | Pile Driver (other Than Crane Mount) | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Plant Oiler - Asphalt, Crusher | Plant Oiler - Asphalt, Crusher | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Posthole Digger, Mechanical | Posthole Digger, Mechanical | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Power Plant | Power Plant | $63.17 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Pumps - Water | $63.17 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Quad 9, Hd 41, D10 And Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Quick Tower - No Cab, Under 100 Feet In Height Based To Boom | $63.17 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Remote Control Operator On Rubber Tired Earth Moving Equipment | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Rigger and Bellman | $63.17 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Rigger/Signal Person, Bellman (Certified) | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Rollagon | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Roller, Other Than Plant Mix | $63.17 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Roller, Plant Mix Or Multi-lift Materials | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Roto-mill, Roto-grinder | $66.57 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Saws - Concrete | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Scraper, Self Propelled Under 45 Yards | $66.57 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Scrapers - Concrete &amp; Carry All | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Scrapers, Self-propelled: 45 Yards And Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Service Engineers - Equipment | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Shotcrete/Gunite Equipment | $63.17 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons | $66.57 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons | $67.84 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Shovel, Excavator, Backhoes: Over 90 Metric Tons | $68.53 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Slipform Pavers | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Spreader, Topsider &amp; Screedman | $67.16 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Subgrader Trimmer | $66.57 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Tower Bucket Elevators | $66.05 | 7A | 3K | 8X | View |
| Kitsap Power Equipment Operators | Tower Crane Up To 175' In Height Base To Boom | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Tower Crane: over 175’ through 250’ in height, base to boom | $68.53 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Tower Cranes: over 250’ in height from base to boom | $69.20 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Transporters, All Track Or Truck Type | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Trenching Machines | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Truck Crane Oiler/driver - 100 Tons And Over | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Truck Crane Oiler/Driver Under 100 Tons | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Truck Mount Portable Conveyor | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Welder | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Wheel Tractors, Farmall Type | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators | Yo Yo Pay Dozer | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Asphalt Plant Operators | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Assistant Engineer | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Barrier Machine (zipper) | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Batch Plant Operator, Concrete | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Bobcat | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Brokk - Remote Demolition Equipment | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Brooms | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Bump Cutter | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Cableways | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Chipper | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators - Underground Sewer &amp; Water | Compressor | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators- Underground Sewer &amp; Water</strong> | <strong>Concrete Finish Machine - Laser Screed</strong> | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure</strong> | <strong>Concrete Pump: Truck Mount With Boom Attachment Over 42 M</strong> | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Concrete Pump: Truck Mount With Boom Attachment Up To 42m</strong> | <strong>Conveyors</strong> | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Cranes: 200 tons and over</strong> | <strong>Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)</strong> | $67.84 | 7A | 3K | 8X | View |
| Kitsap | <strong>Cranes: 20 Tons Through 44 Tons With Attachments</strong> | <strong>Cranes: 200 tons- 299 tons, or 250’ of boom including jib with attachments</strong> | $68.53 | 7A | 3K | 8X | View |
| Kitsap | <strong>Cranes: 300 tons and over or 300’ of boom including jib with attachments</strong> | <strong>Cranes: 45 Tons Through 99 Tons, Under 150’ Of Boom (including Jib With Attachments)</strong> | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Cranes: A-frame - 10 Tons And Under</strong> | <strong>Cranes: Friction cranes through 199 tons</strong> | $68.53 | 7A | 3K | 8X | View |
| Kitsap | <strong>Cranes: through 19 tons with attachments, A-frame over 10 tons</strong> | <strong>Crusher</strong> | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Deck Engineer/Deck Winches (power)</strong> | <strong>Derricks, On Building Work</strong> | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Dozers D-9 &amp; Under | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Drill Oilers: Auger Type, Truck Or Crane Mount | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Drilling Machine | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Elevator And Man-lift: Permanent And Shaft Type | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Finishing Machine, Bidwell And Gamaco &amp; Similar Equipment | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Forklift: 3000 Lbs And Over With Attachments | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Forklifts: Under 3000 Lbs. With Attachments | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Grade Engineer: Using Blue Prints, Cut Sheets, Etc | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Gradechecker/Stakeman | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Guardrail Punch | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. &amp; Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Horizontal/Directional Drill Locator | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Horizontal/Directional Drill Operator | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Hydralifts/Boom Trucks Over 10 Tons | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Hydralifts/Boom Trucks, 10 Tons And Under | $63.17 | 7A | 3K | 8X | View |
| Kitsap | | | $67.84 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Loader, Overhead 8 Yards. &amp; Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Loader, Overhead, 6 Yards. But Not Including 8 Yards | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Loaders, Overhead Under 6 Yards | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Loaders, Plant Feed | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Loaders: Elevating Type Belt | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Locomotives, All | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Material Transfer Device | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic) | $67.84 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Motor Patrol Graders | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Oil Distributors, Blower Distribution &amp; Mulch Seeding Operator | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Outside Hoists (Elevators And Manlifts), Air Tuggers, Strato | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Overhead, Bridge Type Crane: 20 Tons Through 44 Tons | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Overhead, Bridge Type: 100 Tons And Over | $67.84 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Overhead, Bridge Type: 45 Tons Through 99 Tons | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Pavement Breaker | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Pile Driver (other Than Crane Mount) | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators - Underground Sewer &amp; Water</strong> | Plant Oiler - Asphalt, Crusher | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Posthole Digger, Mechanical | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Power Plant | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Pumps - Water | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Quad 9, Hd 41, D10 And Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Quick Tower - No Cab, Under 100 Feet In Height Based To Boom | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Rigger and Bellman | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Rigger/Signal Person, Bellman (Certified) | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Rollagon | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Roller, Other Than Plant Mix | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Roller, Plant Mix Or Multi-lift Materials | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Roto-mill, Roto-grinder | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Saws - Concrete | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Scraper, Self Propelled Under 45 Yards | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Scrapers - Concrete &amp; Carry All | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Scrapers, Self-propelled: 45 Yards And Over | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Service Engineers - Equipment | | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Shotcrete/Gunite Equipment | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Shovel, Excavator, Backhoes: Over 90 Metric Tons | $68.53 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Slipform Pavers | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Spreader, Topsider &amp; Screedman | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Subgrader Trimmer | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Tower Bucket Elevators | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Tower Crane Up To 175’ In Height Base To Boom | $67.84 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Tower Crane: over 175’ through 250’ in height, base to boom | $68.53 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Tower Cranes: over 250’ in height from base to boom | $69.20 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Transporters, All Track Or Truck Type | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Trenching Machines | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Truck Crane Oiler/driver - 100 Tons And Over | $66.57 | 7A | 3K | 8X | View |
| Kitsap | Power Equipment Operators- Underground Sewer &amp; Water | Truck Crane Oiler/Driver Under 100 Tons | $66.05 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators- Underground Sewer &amp; Water</strong> | Truck Mount Portable Conveyor | $66.57 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators- Underground Sewer &amp; Water</strong> | Welder | $67.16 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators- Underground Sewer &amp; Water</strong> | Wheel Tractors, Farmall Type | $63.17 | 7A | 3K | 8X | View |
| Kitsap | <strong>Power Equipment Operators- Underground Sewer &amp; Water</strong> | Yo Yo Pay Dozer | $66.57 | 7A | 3K | 8X | View |
| kitsap | <strong>Power Line Clearance Tree Trimmers</strong> | Journey Level In Charge | $50.96 | 5A | 4A | View |
| Kitsap | <strong>Power Line Clearance Tree Trimmers</strong> | Spray Person | $48.35 | 5A | 4A | View |
| Kitsap | <strong>Power Line Clearance Tree Trimmers</strong> | Tree Equipment Operator | $50.96 | 5A | 4A | View |
| Kitsap | <strong>Power Line Clearance Tree Trimmers</strong> | Tree Trimmer | $45.54 | 5A | 4A | View |
| Kitsap | <strong>Power Line Clearance Tree Trimmers</strong> | Tree Trimmer Groundperson | $34.51 | 5A | 4A | View |
| Kitsap | <strong>Refrigeration &amp; Air Conditioning Mechanics</strong> | Journey Level | $74.71 | 5A | 1G | View |
| Kitsap | <strong>Residential Brick Mason</strong> | Journey Level | $22.01 | 1 | View |
| Kitsap | <strong>Residential Carpenters</strong> | Journey Level | $46.43 | 7A | 4C | View |
| Kitsap | <strong>Residential Cement Masons</strong> | Journey Level | $39.88 | 1 | View |
| Kitsap | <strong>Residential Drywall Applicators</strong> | Journey Level | $46.43 | 7A | 4C | View |
| Kitsap | <strong>Residential Drywall Tapers</strong> | Journey Level | $25.84 | 1 | View |
| Kitsap | <strong>Residential Electricians</strong> | Journey Level | $30.69 | 1 | View |
| Kitsap | <strong>Residential Glaziers</strong> | Journey Level | $44.15 | 7L | 1H | View |
| Kitsap | <strong>Residential Insulation Applicators</strong> | Journey Level | $18.03 | 1 | View |
| Kitsap | <strong>Residential Laborers</strong> | Journey Level | $19.20 | 1 | View |
| Kitsap | <strong>Residential Marble Setters</strong> | Journey Level | $22.01 | 1 | View |
| Kitsap | <strong>Residential Painters</strong> | Journey Level | $22.19 | 1 | View |
| Kitsap | <strong>Residential Plumbers &amp; Pipefitters</strong> | Journey Level | $27.27 | 1 | View |
| Kitsap | <strong>Residential Refrigeration &amp; Air Conditioning Mechanics</strong> | Journey Level | $20.05 | 1 | View |
| Kitsap | <strong>Residential Sheet Metal Workers</strong> | Journey Level | $32.91 | 1 | View |
| Kitsap | <strong>Residential Soft Floor Layers</strong> | Journey Level | $22.03 | 1 | View |
| Kitsap | <strong>Residential Sprinkler Fitters (Fire Protection)</strong> | Journey Level | $31.53 | 1 | View |
| Kitsap | <strong>Residential Stone Masons</strong> | Journey Level | $58.82 | 5A | 1M | View |
| Kitsap | <strong>Residential Terrazzo Workers</strong> | Journey Level | $14.86 | 1 | | View |
| Kitsap | <strong>Residential Terrazzo/Tile Finishers</strong> | Journey Level | $39.09 | 1 | | View |
| Kitsap | <strong>Residential Tile Setters</strong> | Journey Level | $35.40 | 1 | | View |
| Kitsap | <strong>Roofers</strong> | Journey Level | $53.27 | 5A | 3H | View |
| Kitsap | <strong>Roofers</strong> | Using Irritable Bituminous Materials | $56.27 | 5A | 3H | View |
| Kitsap | <strong>Sheet Metal Workers</strong> | Journey Level (Field or Shop) | $85.88 | 7F | 1E | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Boilermaker | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Carpenter | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Crane Operator | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Electrician | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Heat &amp; Frost Insulator | $76.61 | 5J | 4H | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Laborer | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Machinist | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Operating Engineer | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Painter | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Pipefitter | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Rigger | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Sheet Metal | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Shipfitter | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Warehouse/Teamster | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | New Construction Welder / Burner | $36.36 | 7V | 1 | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Boilermaker | $46.15 | 7X | 4J | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Carpenter | $44.95 | 7X | 4J | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Crane Operator | $45.06 | 7Y | 4K | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Electrician | $46.15 | 7X | 4J | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Heat &amp; Frost Insulator | $76.61 | 5J | 4H | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Laborer | $46.15 | 7X | 4J | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Machinist | $46.15 | 7X | 4J | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Operating Engineer | $45.06 | 7Y | 4K | View |
| Kitsap | <strong>Shipbuilding &amp; Ship Repair</strong> | Ship Repair Painter | $46.15 | 7X | 4J | View |
| Kitsap | Shipbuilding &amp; Ship Repair | Ship Repair Pipemaker | $46.15 | 7X | 4J | View |
| Kitsap | Shipbuilding &amp; Ship Repair | Ship Repair Rigger | $46.15 | 7X | 4J | View |
| Kitsap | Shipbuilding &amp; Ship Repair | Ship Repair Sheet Metal | $46.15 | 7X | 4J | View |
| Kitsap | Shipbuilding &amp; Ship Repair | Ship Repair Shipwright | $44.95 | 7X | 4J | View |
| Kitsap | Shipbuilding &amp; Ship Repair | Ship Repair Warehouse / Teamster | $45.06 | 7Y | 4K | View |
| Kitsap | Sign Makers &amp; Installers (Electrical) | Journey Level | $50.90 | 0 | 1 | View |
| Kitsap | Sign Makers &amp; Installers (Non-Electrical) | Journey Level | $31.52 | 0 | 1 | View |
| Kitsap | Soft Floor Layers | Journey Level | $51.07 | 5A | 3J | View |
| Kitsap | Solar Controls For Windows | Journey Level | $13.50 | 1 | View |
| Kitsap | Sprinkler Fitters (Fire Protection) | Journey Level | $81.39 | 5C | 1X | View |
| Kitsap | Stage Rigging Mechanics (Non Structural) | Journey Level | $13.50 | 1 | View |
| Kitsap | Street And Parking Lot Sweeper Workers | Journey Level | $16.00 | 1 | View |
| Kitsap | Surveyors | Assistant Construction Site Surveyor | $66.05 | 7A | 3K | 8X | View |
| Kitsap | Surveyors | Chainman | $63.17 | 7A | 3K | 8X | View |
| Kitsap | Surveyors | Construction Site Surveyor | $67.16 | 7A | 3K | 8X | View |
| Kitsap | Telecommunication Technicians | Journey Level | $51.07 | 7E | 1E | View |
| Kitsap | Telephone Line Construction - Outside | Cable Splicer | $41.81 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Hole Digger/Ground Person | $23.53 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Installer (Repairer) | $40.09 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Special Apparatus Installer I | $41.81 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Special Apparatus Installer II | $40.99 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Telephone Equipment Operator (Heavy) | $41.81 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Telephone Equipment Operator (Light) | $38.92 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Telephone Lineperson | $38.92 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Television Groundperson | $22.32 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Television Lineperson/Installer | $29.60 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Television System Technician | $35.20 | 5A | 2B | View |
| Kitsap | Telephone Line Construction - Outside | Television Technician | $31.67 | 5A | 2B | View |
| Kitsap | | Tree Trimmer | $38.92 | 5A | 2B | View |</p>
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<th>Occupation</th>
<th>Level</th>
<th>Industry</th>
<th>Rate</th>
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<tr>
<td>Telephone Line Construction - Outside</td>
<td>Terrazzo Workers</td>
<td>Journey Level</td>
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<td>Tile Setters</td>
<td>Journey Level</td>
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<td>4Y</td>
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<tr>
<td>Kitsap</td>
<td>Truck Drivers</td>
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<td>Truck Drivers - Ready Mix</td>
<td>Transit Mix</td>
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<td>Well Drillers &amp; Irrigation Pump Installers</td>
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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.**

   A. 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.

   B. 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.

   C. 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.

   D. 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.

   E. 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.

   F. 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 Sunday shall be paid at double the hourly rate of wage.

   G. All hours worked on Saturdays and Sundays shall also be paid at double the hourly rate of wage.

   H. All hours worked on Saturdays and Sundays 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.
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.

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.
Overtime Codes Continued

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.

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.
3. 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.

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.

J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a 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.

K. 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 5 am to 6pm 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, and all hours worked in excess of twelve (12) hours in a single shift 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. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.

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.
Overtime Codes Continued

4. 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.

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.

H. 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 overtime hours worked, except Labor Day, and all hours on Sunday 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.

I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
Overtime Codes Continued

4. **L.** The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.

**M.** All hours worked on Sunday and Holidays shall be paid at double the hourly rate. Any employee reporting to work less than nine (9) hours from their previous quitting time shall be paid for such time at time and one-half times the hourly rate.

**N.** 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, and all work performed between the hours of midnight (12:00 AM) and eight AM (8:00 AM) every day shall be paid at double the hourly rate of wage.

**O.** All hours worked between midnight Friday to midnight Sunday shall be paid at one and one-half the hourly rate of wage. After an employee has worked in excess of eight (8) continuous hours in any one or more calendar days, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of six (6) hours or more. All hours worked on Holidays shall be paid at double the hourly rate of wage.

**P.** All hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage.

**Q.** The first four (4) 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 over twelve (12) hours Monday through Saturday shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

**R.** All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

**S.** All hours worked on Saturdays and Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.

**T.** The first two (2) hours of overtime for hours worked Monday-Friday 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 shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. For work on Saturday which is scheduled prior to the end of shift on Friday, the first six (6) hours work shall be paid at one and one-half times the hourly rate of wage, and all hours over (6) shall be paid double the hourly rate of wage. For work on Saturday which was assigned following the close of shift on Friday, all work shall be paid at double the hourly rate of wage.

**U.** 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. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
Overtime Codes Continued

4. V. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established or outside the normal shift (5 am to 6pm), and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

In the event the job is down due to weather conditions, 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 work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

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.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

W. 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.

When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

X. 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. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.
4. Y. 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. 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.

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.

**Holiday Codes**


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


Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the 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.

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.

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.
Holiday Codes Continued


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.


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 Working 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.

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.

Holiday Codes Continued

7. 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, 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.

V. Holidays: New Year's Day, President’s Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year’s Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

W. Holidays: New Year's Day, Day After New Year’s, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year’s Day, and a Floating Holiday.

X. 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 the day before or after Christmas. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.

Y. Holidays: New Year's Day, Presidents’ Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.

Z. Holidays: New Year's Day, President’s Day, Independence Day, Memorial 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.

15. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the 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.


**Holiday Codes Continued**


**Note Codes**

8. **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.

**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.

**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.
8. V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

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 101’ to 150’ - $3.00 per foot for each foot over 101 feet. Over 151’ to 220’ - $4.00 per foot for each foot over 220 feet. Over 221’ - $5.00 per foot for each foot over 221 feet.

Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25’ to 300’ - $1.00 per foot from entrance. 300’ to 600’ - $1.50 per foot beginning at 300’. Over 600’ - $2.00 per foot beginning at 600’.

W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

X. 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. Special Shift Premium: Basic hourly rate plus $2.00 per hour.

When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Z. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)
9. A. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Certified Crane Operator Premium: Crane operators requiring certifications shall be paid $0.50 per hour above their classification rate.

Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:

(A) – 130’ to 199’ – $0.50 per hour over their classification rate.
(B) – 200’ to 299’ – $0.80 per hour over their classification rate.
(C) – 300’ and over – $1.00 per hour over their classification rate.

B. 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.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

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.

D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. 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.
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.

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>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</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>4. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>5. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>8. Anchor Bolts &amp; 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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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).</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>10. Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td>X</td>
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</tr>
<tr>
<td>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).</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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..</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>14. Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.</td>
<td>X</td>
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<tr>
<td>15. Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.</td>
<td>X</td>
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<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>17. Precast Concrete Inlet - with adjustment sections. See Std. Plans</td>
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<td>X</td>
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<tr>
<td>18. Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.</td>
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<td>X</td>
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<tr>
<td>19. Precast Grate Inlet Type 2 with extension and top units. See Std. Plans</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>20. Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
| 22. Vault Risers - For use with Valve Vaults and Utilities  
X  
Vaults.                                                                                                                                                                                                                                                                                                                                                   |     | X  |
<p>| 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  |</p>
<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>27. Precast Railroad Crossings - Concrete Crossing Structure Slabs.</td>
<td></td>
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<tr>
<td>28. 12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast</td>
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<tr>
<td>Prestressed Girder for use in structures. Fabricator plant has annual approval</td>
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<tr>
<td>of methods and materials to be used. Shop Drawing to be provided for approval</td>
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<tr>
<td>prior to casting girders. See Std. Spec. Section 6-02.3(25)A</td>
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<tr>
<td>29. Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders</td>
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<tr>
<td>for use in structures. Fabricator plant has annual approval of methods and</td>
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<tr>
<td>materials to be used. Shop Drawing to be provided for approval prior to casting</td>
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<tr>
<td>girders. See Std. Spec. Section 6-02.3(25)A</td>
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<tr>
<td>30. Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in</td>
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<tr>
<td>structures. Fabricator plant has annual approval of methods and materials to</td>
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<td>be used. Shop Drawing to be provided for approval prior to casting girders.</td>
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<tr>
<td>See Std. Spec. Section 6-02.3(25)A</td>
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<tr>
<td>31. Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core</td>
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<tr>
<td>slab for use in structures. Fabricator plant has annual approval of methods and</td>
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<td>materials to be used. Shop Drawing to be provided for approval prior to casting</td>
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<tr>
<td>girders. See Std. Spec. Section 6-02.3(25)A</td>
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<tr>
<td>32. Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in</td>
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<tr>
<td>structures. Fabricator plant has annual approval of methods and materials to be</td>
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<tr>
<td>used. Shop Drawing to be provided for approval prior to casting girders.</td>
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<tr>
<td>See Std. Spec. Section 6-02.3(25)A</td>
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<td></td>
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<tr>
<td>33. Monument Case and Cover</td>
<td></td>
<td></td>
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<tr>
<td>See Std. Plan.</td>
<td></td>
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</tr>
<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>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.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td>X</td>
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<tr>
<td>37. Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>38. Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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 Special Provisions for pre-approved drawings.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>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</td>
<td></td>
<td>X</td>
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<tr>
<td>41. Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.</td>
<td></td>
<td>X</td>
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<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>42. Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the</td>
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<tr>
<td>sources of the following materials must be submitted and approved for</td>
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<tr>
<td>reflective sheeting, legend material, and aluminum</td>
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<tr>
<td>sheeting. <strong>NOTE:</strong> *** Fabrication inspection required. Only signs tagged</td>
<td>X</td>
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</tr>
<tr>
<td>&quot;Fabrication Approved&quot; by WSDOT Sign Fabrication Inspector to be installed</td>
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<tr>
<td>43. Cutting &amp; bending reinforcing steel</td>
<td></td>
<td>X</td>
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<tr>
<td>44. Guardrail components</td>
<td>X</td>
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<td>45. Aggregates/Concrete mixes</td>
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<td>X</td>
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<td>46. Asphalt</td>
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<td>X</td>
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<td>47. Fiber fabrics</td>
<td></td>
<td>X</td>
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<td>48. Electrical wiring/components</td>
<td></td>
<td>X</td>
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<tr>
<td>49. treated or untreated timber pile</td>
<td></td>
<td>X</td>
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<tr>
<td>50. Girder pads (elastomeric bearing)</td>
<td></td>
<td>X</td>
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<tr>
<td>51. Standard Dimension lumber</td>
<td></td>
<td>X</td>
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<tr>
<td>52. Irrigation components</td>
<td></td>
<td>X</td>
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<tr>
<td>ITEM DESCRIPTION</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>53. Fencing materials</td>
<td></td>
<td>X</td>
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<tr>
<td>54. Guide Posts</td>
<td></td>
<td>X</td>
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<tr>
<td>55. Traffic Buttons</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>56. Epoxy</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>57. Cribbing</td>
<td></td>
<td>X</td>
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<tr>
<td>58. Water distribution materials</td>
<td></td>
<td>X</td>
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<tr>
<td>59. Steel &quot;H&quot; piles</td>
<td></td>
<td>X</td>
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<tr>
<td>60. Steel pipe for concrete pile casings</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>61. Steel pile tips, standard</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>62. Steel pile tips, custom</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

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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APPENDIX B - WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HYDRAULIC PERMIT APPROVAL, MINOR MODIFICATION, MINOR MODIFICATION 1
Project Name: Bay Shore and Washington Improvements Project

Project Description: The project involves wastewater and stormwater utility replacements, roadway repair, and sidewalk upgrades within Bay Shore Drive NW, Washington Avenue NW, and NW Byron Street, to bring these areas up to current County standards. The project will replace and upgrade the existing approximately 2,850 lineal feet (LF) of 8-inch and 10-inch asbestos cement (AC) sewer main in Bay Shore Drive NW and Washington Avenue NW with a 12-inch PVC pipe, and replace 13 manholes along this alignment. The project will also replace approximately 1,500 LF of existing 8-inch AC sewer pipe within alleys and parking lots on Washington Avenue NW with 8-inch cured-in-place-pipe (CIPP). Existing 12-inch corrugated metal pipe (CMP) stormwater infrastructure will be replaced with similarly sized corrugated polyethylene pipe (CPEP), catch basins will be replaced, and the existing oil-water separators will be replaced with Filterra® units and Modular Wetlands® bio-retention boxes. The existing 6-inch AC water main will be replaced and upgraded by Silverdale Water District.

The roadway will be graded to improve stormwater flow to catch basins, and roadway subgrade and asphalt will be improved to current County standards. Ramps, sidewalks, and driveways will be replaced with ADA-compliant structures, and the sidewalk along the east side of Bay Shore Drive NW will be widened to accommodate users of the Clear Creek Trail. The previously-described utility and roadway improvements will necessitate relocation of existing telephone, cable, power, and gas lines. Site lighting, including luminaires and conduits for electrical cable along Bay Shore Drive NW and conduits for future light installation along Washington Avenue NW, will be installed. Streetscaping is planned along Washington Avenue NW and Bay Shore Drive NW, along with shoreline planting along Bay Shore Drive NW, and future planting/screening of the existing lift station.

PROVISIONS

1. TIMING - PLANS: You may begin the project on July 16 and you must complete the project by October 15th of a given year.

2. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled Bay_Shore_Permit_Plans_REVISED 1, 2, and 3, dated March 31, 2017, and received on March 31, 2017, except as modified by this Hydraulic Project Approval. You must have a copy of these plans available on site during all phases of the project construction.

3. INVASIVE SPECIES CONTROL: Thoroughly clean all equipment and gear before arriving and leaving the job site to prevent the transport and introduction of aquatic invasive species. Properly dispose of any water and chemicals used to

NOTIFICATION REQUIREMENTS

4. NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting work. The notification must include the permittee's name, project location, starting date, and the Hydraulic Project Approval permit number.

5. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

6. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

7. Design and locate new temporary access roads to prevent erosion and sediment delivery to waters of the state.

8. Clearly mark boundaries to establish the limit of work associated with site access and construction.

9. Limit the removal of native bankline vegetation to the minimum amount needed to construct the project.

10. Retain all natural habitat features on the bed or banks including large woody material and boulders. You may move these natural habitat features during construction but you must place them near the preproject location before leaving the job site.

11. Confine the use of equipment to the specific access and work corridor shown in the approved plans.

12. Limit the use of equipment waterward of the ordinary high water line to that necessary to gain position for the work.

13. Remove soil or debris from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to operating the equipment waterward of the ordinary high water line.

14. If wet or muddy conditions exist, in or near a riparian zone or wetland area, use equipment that reduces ground pressure.

15. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

16. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.
CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

17. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.

18. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.

19. Straw used for erosion and sediment control, must be certified free of noxious weeds and their seeds.

20. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

21. Prevent project contaminants, such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials, from entering or leaching into waters of the state.

22. Route construction water (wastewater) from the project to an upland area above the limits of anticipated floodwater. Remove fine sediment and other contaminants before discharging the construction water to waters of the state.

CONSTRUCTION MATERIALS

23. Store all construction and deconstruction material in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

24. Do not stockpile construction material waterward of the ordinary high water line.

25. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.).

UTILITY CROSSING

26. Align the conduit as perpendicular as possible to the watercourse.

27. Install the conduit well below scour depth of the watercourse to prevent natural scouring of the stream bed from exposing the pipeline or cable.

28. If construction involves boring or jacking:
   a. Isolate pits from surface water flow to prevent bore hole collapse; and
   b. Before discharging wastewater to state waters, route wastewater from project activities and dewatering to an area outside the watercourse to allow removal of fine sediment and other contaminants.

29. If construction involves directional drilling:
   a. Design the drill path to an appropriate depth below the watercourse to minimize the risk of frac-out and to a depth to prevent exposure of the line from natural scouring of the stream bed; and
   b. Locate the drill entry and exit points away from the banks of the watercourse to minimize impact on these areas.
   c. Do not disturb the streambed. If the streambed collapses and flow enters the drilling area, work activities must cease and the Habitat Biologist listed below must be contacted immediately.

DEMOBILIZATION AND CLEANUP

30. Do not relocate removed or replaced structures within waters of the state. Remove and dispose of these structures in an upland area above the limits of anticipated floodwater.
31. Upon completion of the project, restore the disturbed bed, banks, and riparian zone to preproject condition to the extent possible.

32. Completely remove any temporary fill before the end of the in-water timing window if the fill material could erode and deliver sediment-laden water into waters of the state.

33. To minimize sediment delivery to the stream or stream channel, do not return in-stream flows to the work area until all in-channel work is completed and the bed and banks are stabilized.

34. Stabilize the bed with clean material sized to match undisturbed sediments.

35. Seed areas disturbed by construction activities with a native seed mix suitable for the site that has at least one quick-establishing plant species.

36. Complete replanting of riparian vegetation during the first dormant season (late fall through late winter) after project completion per the approved plan. Maintain plantings for at least three years to ensure at least eighty percent of the plantings survive. Failure to achieve the eighty percent survival in year three will require you to submit a plan with follow-up measures to achieve requirements or reasons to modify requirements.

37. Upon completion of the project, remove all materials or equipment from the site and dispose of all excess spoils and waste materials in an upland area above the limits of anticipated floodwater.

38. Return water flow slowly to the in-water work area to prevent the downstream release of sediment laden water. If necessary, install silt fencing above the bypass outlet to capture sediment during re-watering of the channel.

39. Remove temporary erosion and sediment control methods after job site is stabilized or within three months of project completion, whichever is sooner.

### LOCATION #1:

Site Name: Bay Shore Drive NW and Washington Avenue NW right-of-way (ROW), Silverdale, WA 98383

<table>
<thead>
<tr>
<th>WORK START:</th>
<th>WORK END:</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 4, 2017</td>
<td>August 31, 2021</td>
</tr>
</tbody>
</table>

**WRJA**

15 - Kitsap

**Waterbody:**

Strawberry Creek

**Tributary to:**

Dyes Inlet

**1/4 SEC:**

Section: 20

Township: 25 N

Range: 01 E

Latitude: 47.644517

Longitude: -122.695251

County: Kitsap

**Location #1 Driving Directions**
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.

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 unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. 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 did 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 APP ID 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 HPApplications@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 did 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 APP ID 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 if 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 may email your request for a major modification to HPAapplications@dfw.wa.gov, but must send a check or money order for payment by surface mail. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

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 220-660-460 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 HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, 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 220-660-470 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 HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, 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.
APPENDIX C - GEOTECHNICAL CONDITIONS RECOMMENDATIONS
REPORT FOR BAY SHORE AND WASHINGTON IMPROVEMENTS
PROJECT- KITSAP COUNTY PUBLIC WORKS DEPARTMENT
SILVERDALE, WASHINGTON
(Dated January 22, 2019)
APPENDIX D – CONSTRUCTION STORMWATER GENERAL PERMIT
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January 7, 2019

Gunnar Fridriksson
Kitsap County Public Works Dept
614 Division St MS-26
Port Orchard, WA 98366-4614

RE: Coverage under the Construction Stormwater General Permit (CSWGP)

Permit number: WAR307180
Site Name: Bay Shore and Washington Improvements
Location: Bay Shore Drive from NW Bucklin Hill Rd
Poulsbo, WA County: Kitsap
Disturbed Acres: 2.8

Dear Gunnar Fridriksson:

The Washington State Department of Ecology (Ecology) received your Notice of Intent for coverage under Ecology’s Construction Stormwater General Permit (CSWGP). This is your permit coverage letter. Your permit coverage is effective January 7, 2019. Please retain this permit coverage letter as the official record of permit coverage for your site.

Ecology has approved use of electronic formats as long as they are easily produced on your construction site. A mobile friendly copy of the CSWGP permit, permit forms, and information related to your permit can be viewed and downloaded at www.ecology.wa.gov/eCoverage-packet. Please contact your Permit Administrator, listed below, if you would like to receive a hard copy of the CSWGP.

Please take time to read the entire permit and contact Ecology if you have any questions.

Electronic Discharge Monitoring Reports (WQWebDMR)
This permit requires that Permittees submit monthly discharge monitoring reports (DMRs) for the full duration of permit coverage (from issuance date to termination). DMRs must be submitted electronically using Ecology’s secure online system, WQWebDMR. To sign up for WQWebDMR go to www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html. If you have questions, contact the portal staff at (360) 407-7097 (Olympia area), or (800) 633-6193/option 3, or email WQWebPortal@ecy.wa.gov.
Appeal Process
You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB). Appeals must be filed within 30 days of the date of receipt of this letter. Any appeal is limited to the general permit’s applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2). For more information regarding your right to appeal, go to https://fortress.wa.gov/ecy/publications/SummaryPages/1710007.html to view Ecology’s Focus Sheet: Appeal of General Permit Coverage.

Ecology Field Inspector Assistance
If you have questions regarding stormwater management at your construction site, please contact Evan Dobrowski of Ecology’s Northwest Regional Office in Bellevue at evan.dobrowski@ecy.wa.gov, or (425) 649-7276.

Questions or Additional Information
Ecology is committed to providing assistance. Please review our web page at www.ecology.wa.gov/constructionstormwaterpermit. If you have questions about the Construction Stormwater General Permit, please contact your Permit Administrator, Josh Klimek at josh.klimek@ecy.wa.gov or (360) 407-7451.

Sincerely,

[Signature]

Vincent McGowan, P.E., Manager
Program Development Services Section
Water Quality Program
APPENDIX E – DISPUTES REVIEW BOARD – THREE-PARTY AGREEMENT
DISPUTES REVIEW BOARD - THREE-PARTY AGREEMENT

I. PARTIES

A. ________________________ herein after referred to as the Contracting Agency.

B. ________________________ herein after referred to as the Contractor.

C. Disputes Review Board, hereinafter referred to as the DRB, consisting of three members:
   1. __________________________
   2. __________________________
   3. __________________________

II CONTRACT

A. The Contractor and Contracting Agency have entered into a Contract for the construction of the project titled Contract Number, _______________________________, hereinafter referred to as the Project.

B. The Contract for the Project provides for the establishment and operation of a DRB to assist in resolving disputes.

C. The DRB is composed of three members, selected in accordance with the Project Specifications.

III PURPOSE OF DRB

Assist in and facilitate avoidance of disputes and the timely and impartial resolution of disputes that are referred to it.

IV DRB SCOPE OF WORK

A. General:
   1. Stay abreast of Project developments by means of periodic meetings and site visits, review of progress reports, meeting minutes, and other job documents, and by other means as mutually agreed by all parties.
   2. Examine site conditions or specific construction problems relating to an existing or potential dispute, unless such examination is not practical, or, in the judgment of either the Contracting Agency or the Contractor, would result in a delay to the Project.
   3. One of the selected members shall serve as Chair.
   4. Execute this Agreement not later than the first Board meeting with representatives of the Contracting Agency and the Contractor.

B. Establish DRB operating procedures consistent with the requirements and general guidelines set forth in the Contract for the Project.
   1. Establish operating procedures mutually agreeable to all parties and consistent with the Contract between the Contracting Agency and Contractor, such as administrative duties; content and format of information which may be presented at DRB hearings; conduct of hearings; and invoicing details. Establish these procedures at the first meeting with representatives of the Contracting Agency and the Contractor.
   2. Provide all parties with these operating procedures in written form.
C. Recommend Resolution of Disputes:

1. Upon receipt by the DRB of a referral of a dispute from either the Contracting Agency or Contractor, the DRB shall schedule and conduct a hearing at a time and location set by the DRB following consultation with the Contracting Agency or Contractor. When proper evaluation of the dispute requires expertise that is not within the collective experience of the DRB, the DRB shall request written approval from the Contractor and the Contracting Agency to engage the services of one or more outside consultants as may be needed to advise the DRB as provided in the Contract.

2. The DRB shall convene internal meetings as needed to review and discuss the dispute, and to formulate the report.

3. Following each hearing and DRB deliberation, the DRB shall issue a timely executed written recommendation to the Contracting Agency and the Contractor, including the supporting rationale.

4. When requested and deemed appropriate by the DRB, the DRB shall provide executed written responses to requests for clarification or reconsideration made by either the Contracting Agency or the Contractor.

5. All DRB reports and responses to requests for clarification or reconsideration shall be signed by all three DRB members.

D. The DRB shall perform services and assume responsibilities, as agreed by all parties, as may be required, including those necessary but not listed herein, to achieve the purpose of this Agreement.

V RESPONSIBILITIES OF THE PARTIES

A. DRB Responsibilities:

1. Comply with the requirements for Board Members and the DRB Process as found in the contract (Special Provisions Section 1-09.11(1)) between the Contracting Agency and the Contractor.

2. Do not discuss, individually or collectively, issues with the Contracting Agency or the Contractor that could possibly be construed as compromising the DRB’s ability to impartially resolve future disputes, such as the conduct of the work and the resolution of construction problems.

3. Do not express an individual or collective opinion of merit, in whole or in part, for any potential or other dispute at any time prior to the issue of a report.

4. Except as required when performing the duties of the Chair, do not meet or communicate with either the Contracting Agency or Contractor in the absence of the other.

5. Consider the facts and conditions forming the basis for a referred dispute impartially, and independently and evaluate the merits based on careful consideration of all Contract requirements, applicable law and regulations, and the facts and circumstances of the dispute.

6. Do not ignore or undermine the clear intent of the Contract, or disregard or alter any requirements of the Contract or allocation of risk specified therein.

7. Do not supplant or otherwise interfere with the respective rights, authority, duties, and obligations of either the Contracting Agency or Contractor as set forth in the Contract documents.
8. Make every effort to reach unanimous recommendations. If this cannot be accomplished, include written minority recommendations and supporting rationale with the report.

B. Contracting Agency Responsibilities:

1. Except for participation in the DRB’s activities as provided in the Contract documents and this Agreement, do not solicit advice or consultation from the DRB or its members on matters dealing with the conduct of the work or resolution of problems which might compromise the DRB’s ability to impartially resolve future disputes.

2. Furnish to each DRB member one copy of the Contract documents, progress schedule and updates, weekly progress reports, minutes of progress meetings with the Contractor, change orders, and other documents pertinent to the performance of the Contract and necessary for the DRB to conduct its operations.

3. Coordinate DRB operations in cooperation with the Contractor.

4. Arrange for or provide conference facilities at or near the site and provide copying services.

5. cooperate with the Contractor and the DRB to facilitate prevention of disputes and the timely and impartial resolution of disputes.

C. Contractor Responsibilities:

1. Except for participation in the DRB’s activities as provided in the Contract documents and this Agreement, do not solicit advice or consultation from the DRB or its members on matters dealing with the conduct of the work or resolution of problems which might compromise the DRB’s ability to impartially resolve future disputes.

2. Furnish to each DRB member and to the Contracting Agency, one copy of pertinent documents other than those furnished by the Contracting Agency as may be requested by the DRB.

3. Cooperate with the Contracting Agency and the DRB to facilitate prevention of disputes and the timely and impartial resolution of disputes that are referred to it.

VI TIME FOR BEGINNING AND COMPLETION OF DRB ACTIVITIES

A. The DRB shall begin its activities by selecting the Chair. After selection of the Chair, DRB activities shall proceed with preparation for the first meeting, including preparation of the DRB operating procedures.

B. This Agreement shall survive the termination, resignation or death of any member.

C. The DRB’s jurisdiction under this Agreement shall end by mutual agreement of the Contracting Agency and Contractor.

VII PAYMENT

A. Payments made to the DRB members shall constitute full compensation for work performed, travel time and services rendered, and for all materials, supplies and incidentals necessary to serve on the DRB.

B. Payment for services rendered by DRB members shall be at the following rates:

1. For time performing the duties of the DRB for this Project, such as preparing for and attending meetings or hearings; reviewing the parties’ submittals, plans and specs
in preparation for a hearing; deliberating with DRB members; preparing or reviewing a DRB written recommendation: $200.00/hour.

2. For time travelling from home office to hotel or job site: $100.00/hour.

C. DRB members shall be reimbursed for actual direct, non-salary expenses including automobile mileage, parking, travel expenses from the point of departure to the initial point of arrival, automobile rental, taxi fares, lodging, printing, long distance telephone, postage, and courier delivery. Meals will be reimbursed at the State of Washington per diem rate. Payment made to DRB members in the form of bonus, commission, or consideration of any nature other than that specified hereinabove for performance and service provided under this Agreement, before, during or after the period that this Agreement is in effect, is prohibited.

D. DRB members shall individually submit invoices for work completed to the Contractor:
   1. Not more often than once per month.
   2. Based on the agreed billing rate and conditions and on the number of hours expended, together with direct, non-salary expenses including an itemized listing supported by copies of original bills, invoices, and expense accounts.
   3. Accompanied by a description of activities performed daily during that period.

E. The Contractor shall pay acceptable invoices, approved by the Contracting Agency, within 30 calendar days of their receipt.

F. The Contractor shall be reimbursed for the Contracting Agency's portion of the DRB costs in accordance with payment provisions specified in the Contract for the Project.

VIII CONFIDENTIALITY AND RECORDKEEPING

A. No DRB member shall divulge information identified as confidential that has been acquired during DRB activities without obtaining prior written approval from the Contracting Agency and the Contractor.

B. DRB members shall maintain cost records pertaining to this Agreement for inspection by the Contracting Agency or the Contractor for a period of three years following the end or termination of this Agreement.

IX ASSIGNMENT

No party to this Agreement shall assign any duty established under this Agreement.

X. TERMINATION

A. This Agreement may be terminated by mutual agreement of the Contracting Agency and Contractor at any time upon not less than four weeks written notice to the other parties.

B. Individual DRB members may be terminated by agreement of both the Contracting Agency and the Contractor, or a DRB member may be terminated by the agreement of the other two DRB members, with not less than five calendar days written notice.

C. If a DRB member resigns, is unable to serve, or is terminated he or she shall be replaced within 30 calendar days using the procedure set forth in Section 1-09.11(1)E of the Contract for the Project. This Agreement shall be amended to indicate the member replacement.

XI LEGAL RELATIONS

A. The parties to this Agreement expressly acknowledge that each DRB member, in the performance of his or her duties on the DRB, is acting in the capacity of an independent agent and not as an employee of the Contracting Agency or the Contractor.
B. DRB members shall not participate in subsequent claim proceedings.

C. The Contracting Agency and the Contractor acknowledge that each DRB member is acting in a capacity intended to facilitate the resolution of claims. Accordingly, it is agreed and acknowledged that, to the fullest extent permitted by law, each DRB member shall be accorded quasi-judicial immunity for any actions or decisions associated with DRB activities. Each DRB member shall be held harmless for any personal or professional liability arising from or related to DRB activities. To the fullest extent permitted by law, the Contracting Agency and the Contractor shall indemnify and hold harmless all DRB members for claims, losses, demands, costs, and damages (including reasonable attorney fees) for bodily injury, property damage, or economic loss arising out of or related to DRB members carrying out DRB activities. The foregoing indemnity is a joint and several obligations.

XII DISPUTES REGARDING THIS THREE-PARTY AGREEMENT

A. Claims among the parties arising out of this Agreement that cannot be resolved by negotiation and mutual concurrence and actions to enforce any right or obligation under this Agreement shall be initiated in the Superior Court of Kitsap County, Washington.

B. All questions shall be resolved by application of Washington State Law.

C. The DRB members hereby consent to the personal jurisdiction of the Court of Kitsap County.

XIII FUNDING AGENCY REVIEW

An agency that provided funding (grant) for this Project has the right to review DRB recommendations and to attend DRB hearings, but not to attend private DRB deliberations.

XIV REQUIREMENTS FOR NON DISCRIMINATION

Non-discrimination: The DRB Board, with regard to the work performed during this Agreement shall not discriminate on the grounds of race, color, sex, or national origin.

XV THREE-PARTY AGREEMENT

Entered into on ____________________________, __________, between:

(month) (day) (year)
DRB MEMBERS

By: ________________________  ______________________________ 
    (Signature)     (name)

________________________  ______________________________ 
    (Signature)     (name)

________________________  ______________________________ 
    (Signature)     (name)

CONTRACTOR:

By: ________________________  By:  ___________________________
    (signature)      (signature)

________________________   ___________________________ 
    (name)       (name)

________________________   ___________________________ 
    (title)       (title)

________________________   ___________________________ 
    (company)      (company)

CONTRACTING AGENCY

By: ________________________ 
    (signature)

________________________   
    (name)

________________________   
    (title)

________________________   
    (company)