City of Ferndale

Whatcom County, Washington

Contract Documents for the Construction of

RESERVOIR No.1 OVERFLOW MODIFICATION PROJECT

Wilson Engineering LLC - Project # 2015-087 City of Ferndale – Project # WA2015-05

> WILSON ENGINEERING, L.L.C. 805 Dupont Street, Suite 7 Bellingham, Washington 98225 Tel. (360) 733-6100 August 8, 2016 www.wilsonengineering.com



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ADVERTISEMENT FOR BIDS

Project Name:
Bid Date:
Estimated Cost Range:
Engineer:

Ferndale – Reservoir No.1 Overflow Modification September 1, 2016 \$70,000 to \$90,000 Wilson Engineering L.L.C., Bellingham, WA

NOTICE TO BIDDERS: Sealed bids will be received from contractors by the Public Works Director, City of Ferndale, 2095 Main Street, P.O. Box 936, Ferndale, WA 98248 until 2:00 pm, Thursday, September 1, 2016 for the Reservoir No.1 Overflow Modification. All bids shall be received in sealed envelopes with "RESERVOIR NO.1 OVERFLOW MODIFICATION" marked plainly thereon. The Project involves modifying the existing reservoir overflow piping from below grade to above grade with a gooseneck and air gap, including excavating to an approximate depth of twenty (20) feet below existing grade for installation of a new 48" manhole with top slab, $25\pm$ LF of new 8" ductile iron pipe and fittings, site work, and related work. Said bids will then and there be opened and read aloud. Bidders and other properly interested parties are invited to be present at the bid opening. Bids received after the time fixed for opening cannot be considered.

Please contact Curt Schoenfelder, Wilson Engineering, (360) 733-6100, for project information. Only bids from bidders, who have obtained the Contract Documents and have requested to be listed on the Planholders' List, will be accepted. Copies of plans and specifications are on file for review and purchase from the Public Works Department at the City of Ferndale, 2095 Main Street, Ferndale, WA 98248. Hard copies are available for purchase (\$50 non-refundable fee), or online at http://www.cityofferndale.org/resoverflow1.

A deposit in the form of a postal money order, cashier's check, or bond in the amount of 5% of the greatest amount bid must be submitted with each bid proposal. Should the successful bidder fail to enter into a contract or furnish a satisfactory contract bond within the time stated in the specifications, the deposit shall be forfeited to the City.

There will be a pre-bid meeting for the Project held at 4:00 pm, Thursday, August 25, 2016, at City Hall, 2095 Main Street, Ferndale, WA 98248. A site visit will follow the meeting. Pre-bid meeting is not mandatory.

The City shall reject any bid not accompanied by bid security. The City reserves the right to reject any or all bids if such action is in the best interest of the City. The City of Ferndale is an equal opportunity and affirmative action employer. Small, Minority and Women-owned businesses are encouraged to submit bids.

The project will be funded by the City of Ferndale. Neither the State of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract resulting from this solicitation for bids. All bidders must be licensed contractors registered in the State of Washington. All work performed on this project will be subject to prevailing state wage rates.

INSTRUCTIONS TO BIDDERS

1. Bidder Qualifications

- A. Prospective Bidders shall be registered by the Washington State Department of Labor and Industries in accordance with state law.
- B. Corporations shall be registered with the State of Washington, Office of the Secretary of State.
- C. Bidders shall be regularly employed in the type of work contemplated herein.

2. Bidder's Representations

Submittal of a bid shall be deemed conclusive evidence that the bidder has:

- A. Carefully examined the proposed work site, become familiar with conditions impacting the work, and incorporated such observations into the bid.
- B. Read and understands the bidding and contract documents.
- C. The bid is without exception based on the materials, equipment and systems required by the bidding documents.
- D. The bid was made based on a complete set of Bidding Documents. The Owner is not responsible for any bidding errors resulting from the use of incomplete documents.

3. Document Interpretation

- A. The bidder shall carefully study and review the Bid Documents and promptly report any errors or omissions to the Engineer.
- B. Bidders or sub-bidders shall make any requests for clarification to the Engineer. If so directed, the Engineer may require the Bidder submit request in writing.
- C. Interpretations, corrections and changes to the Bidding Documents shall be made by Addendum. Interpretations, corrections and changes to the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely on them.
- D. Substitutions shall not be considered prior to the receipt of bids. The Owner is not responsible for any bidding errors resulting from the use of substitutions.

4. Addenda

- A. Addenda will be mailed, delivered or faxed to all who are known by the Engineer to have received a complete set of Bidding Documents. Copies will also be provided to the locations where plans are available for review.
- B. The Bidder shall acknowledge receipt of addenda in their bid.

5. Bidding Procedures

- A. To be considered responsive, bids shall be submitted on the enclosed form and shall be filled in by typewriter or manually in ink.
- B. The Bid form shall include the Bidder's legal name exactly as it appears on his/her registration. Form shall be signed by the individual authorized to represent the Bidder.
- C. A list of subcontractors individually accounting for more than 10-percent of the Contract Sum and the work said subcontractor will perform shall be submitted with the bid or within one hour of the published bid time.

6. **Pre-Bid Meeting**

- A. There will be a pre-bid meeting at date and time shown on the Invitation to Bid.
- B. Prior to attending the pre-bid conference bidders shall have carefully studied and compared all drawings, specifications and other instructions to identify any inconsistency or omission. Also any discrepancies between the contract documents and the physical condition of the locality shall be identified. The intent is to identify any questions or concerns regarding the proposed improvements that the bidders may have.

7. Bid Security

- A. Each Bid shall be accompanied by a Bid Security in the form of a cashier's check, certified check or surety bond equal to 5-percent of the total Bid amount. Security shall pledge that the Bidder shall enter into a contract with the Owner in accordance with the terms of the Bid Documents including furnishing payment and performance bonds.
- B. In the event a Bidder refuses to enter into such contract or fail to furnish such bonds as required, the bid security shall be forfeited to the Owner as liquidated damages.
- C. The Owner may retain bid securities submitted with the bid until such time as; (1) the contract has been executed and bonds received, (2) 30-days have elapsed, (3) all Bids have been rejected.

8. Submission of Bids

- A. Bids shall be submitted in a sealed envelope. Envelopes shall clearly show (1) the project's name and owner as it appears on the Bid Solicitation, (2) the Contractor's name and registration number, and (3) the time and date of the bid opening.
- B. Bids received after the published bid time and date will be returned unopened. The Bidder shall assume full responsibility for timely delivery of Bid.

- C. Bids submitted by mail shall conform with the above requirements and be sent to City of Ferndale – City Hall, 2095 Main Street, P.O. Box 936, Ferndale, WA 98248, Attention: *Reservoir No.1 Overflow Modification*. Bidder shall assume full responsibility for timely delivery of bid documents and the Owner is not responsible for bids received late.
- D. Oral, facsimile or telegraphic bids, modifications, or adjustments are not valid and will not receive consideration.

9. Modification or Withdrawal of Bid

- A. After the bid opening, bids shall not be withdrawn, modified or canceled by the Bidder during the stipulated time period.
- B. Bids submitted by mail prior to the bid opening may be modified or withdrawn by notice to the Owner. Such notice shall be in writing and signed by the same authorized individual signing the bid form. If such modifications or withdrawals are transmitted electronically, the original document shall be mailed and postmarked on or before the date and time of the bid opening.
- C. Withdrawn bids may be resubmitted up until the date and time of the bid opening and in accordance with these Instructions to Bidders.
- D. Bid security shall be in an amount sufficient for the bid as modified or resubmitted.

10. Opening of Bids

- A. Bids received on time will be opened and read aloud at the time and place stipulated in the Bid Solicitation. An abstract or tabulation will be made available to Bidders.
- B. Should a Bidder discover an error in his/her bid after submittal, the Bidder may request withdrawal of the bid with the following conditions:
 - 1. The Bidder must document the error(s) for the Owner. The Owner will review documentation and determine if the bid withdrawal and release of the Bid Security will be allowed.
 - 2. The Owner must receive the Bidder's intent to withdraw his/her bid submittal in writing no more than 30-hours after the bid opening (faxed notice is acceptable).
 - 3. The Owner alone will approve or disapprove the request for withdrawal. If approved, the Bidder will no longer be considered for Contract award and the Bid Security will be returned.
 - 4. If the Bidder fails to notify the Owner in accordance of an error as set forth above, and the Owner awards the Bidder the Contract, the Bidder shall either execute the Contract for the bid amount or withdraw the bid and forfeit the Bid Security.

11. Rejection of Bids

A. The Owner reserves the right to reject any or all bids, reject a bid not accompanied by a proper bid security or other material required by the Bidding Documents, or reject a bid which is in anyway irregular or incomplete.

12. Acceptance of Bids

- A. The Owner intends to award the Contract to the lowest responsible responsive bidder whose bid submittal does not exceed available funds and conforms with the requirements described herein. The Owner shall have the right to waive informalities or irregularities in a bid submittal and to accept the bid that, in the opinion of the Owner, is in the Owner's best interest.
- B. Where called for, the Owner reserves the right to accept alternates in any combination and determine the low bidder on the basis of the base bid and alternates accepted.

13. Contract Bond

A. Bidders shall provide a contract bond as attached. Contract bond shall be signed by an approved surety or sureties, be in the full contract amount, and cover the faithful performance of the work described in the Contract Documents. The Contract Bond shall be in full effect until one year after Substantial Completion.

14. Contract Agreement and Award

- A. Owner's execution of the contract is contingent on the timely receipt of the Contract Bond and other submittals required by the Contract Documents.
- B. The award of the Contract, if it be awarded, shall be made within 45-days of the bid opening to the Bidder deemed by the Owner to be the lowest responsible responsive bidder.
- C. The 45-day period may be extended by mutual consent of the bidder and the Owner. If, after the 45-day period and no agreement to time extension has been made, the Contractor may withdraw his bid.

15. Execution of Contract

- A. The Bidder to whom the contract has been awarded shall sign the contract and return it and other submittals within 10 calendar days of the award.
- B. The Owner shall have the right to reject a contract submitted by a bidder if it is qualified by reservations or conditions stipulated by the bidder or its surety.
- C. No bid is binding on the Owner until executed by the City of Ferndale. No work shall be performed within the project site prior to the Notice to Proceed. Material or equipment orders or work undertaken away from the project site prior to contract execution shall be at the sole risk of the bidder.

16. Failure to Execute Contract

- A. If the bidder to whom award has been made fails to sign the contract and furnish satisfactory bonds within 10 calendar days of the award, or declares in writing its intent not to execute the contract, the bid security will be forfeited to the Owner and the second lowest responsible bidder will be notified of its receipt of award.
- B. If the second lowest responsible responsive bidder fails to execute the contract and furnish bonds within 20 calendar days after such notification, forfeiture of its bid security shall also be made and the third lowest responsible responsive bidder will be notified of its receipt of award, and in like manner until either (1) the contract and bond are executed by a responsible responsive bidder, (2) or further bid submittals are rejected, or (3) the number of bids submitted is exhausted.
- C. If the contract is not executed by the Contractor and Owner within the stipulated time, and it is evident that circumstances warrant an extension of time, the Owner may extend the time for executing the contract and/or bond for a period not to exceed 10 additional calendar days.

17. Return of Bid Security

- A. When bid submittals have been examined, bid securities and deposits accompanying submittals ineligible from further consideration will be returned.
- B. All other bid securities and deposits will be held until the contract has been properly executed, after which bid securities and deposits except those subject to forfeiture will be returned.

SCOPE OF WORK AND DESCRIPTION OF BID ITEMS

Payment for the various items of the Proposal, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of WORK being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).

No separate payment will be made for any item that is not specifically set forth in the Proposal, and all costs therefore shall be included in the prices named in the Proposal for the various appurtenant items of WORK.

BASE BID ITEMS

1. Mobilization, Demobilzation

Includes mobilization, demobilization, pre-construction expenses and the costs of preparatory work and operations performed by the Contractor. Work includes, but is not limited to: mobilization of labor and equipment, necessary permits, temporary construction fencing, demobilization of labor and equipment, and site cleanup prior to final acceptance. Refer to WSDOT Section 1-09.7 for costs that may **not** be included. This bid amount may not be more than 10-percent of the base bid, with partial payments as follows:

- i. 20% paid at project onset
- ii. 20% paid upon approval of all submittals
- iii. 40% paid after construction starts
- iv. 20% paid with the final payment.
- 2. Temporary Erosion Control, Lump Sum

This work consists of all temporary erosion and sediment control work (per Section 02370), whether shown on the plans or not, in accordance with WSDOT, WSDOE, City of Ferndale, and other applicable rules and regulations.

3. Trench Safety and Shoring, Lump Sum

This work consists of installing trench safety systems in accordance with WSDOT, OSHA, and other applicable rules and regulations.

- 4. Reservoir No.1 Overflow Modification, Lump Sum
 - A. Measurement for payment for individual items of the Reservoir No.1 Modification will be based upon the unit values listed in the Schedule of Values submitted by the CONTRACTOR and reviewed and approved by the Engineer.
 - B. Payment for the Reservoir No.1 Overflow Modification will be made at the Lump Sum Price shown on PROPOSAL for the Bid Item, which will constitute full compensation for all WORK as described in the Contract Documents.

BID PACKAGE

PROPOSAL

Name of Bidder:

Submittal of this Bid proposal warrants that the undersigned has:

- 1. Examined the site, plans and specifications, and laws and ordinances governing the work;
- 2. Agreed to perform the work complete and provide a facility in full operation, including all labor, materials and equipment in accordance with the terms and provisions of the Contract Documents and for the prices tendered;
- 3. Agreed to perform the work in accordance with the time of completion as set forth in Supplemental Conditions, after which specified liquidated damages will be assessed.
- 4. Not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action restraining free competitive bidding for the project.

BID SCHEDULE

The award of Bid Schedule shall be based on the lowest bid for Items 1-4, Alternatives (if any) will not be considered in the award of the bid. Should the use of alternate equipment require any changes in the layout or design of the facilities shown on the drawings, including modifications to structural or piping work, the undersigned agrees to prepare and submit detailed drawings and specifications to the Engineer for review and approval showing all modifications in structures or piping work required to adapt the plans to the alternate equipment.

BI	D ITEMS:		
<u>B</u> A	ASE BID ITEMS	Quantity/Unit	Amount
1.	Mobilization, Demobilization	Lump Sum	\$
2.	Temporary Erosion Control	Lump Sum	\$
3.	Trench Safety and Shoring	Lump Sum	\$
4.	Reservoir No. 1 Overflow Modification	Lump Sum	\$
	SUBTO	OTAL (Bid Items 1-4	4) \$
	SALES TAX (8.7%) (Bid Items 1-4) \$		
	T	OTAL (Bid Items 1-	4) \$
			· · · · · · · · · · · · · · · · · · ·

TOTAL in Words _____

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WA

Contractor:		
Address:		
Phone:		Date:
Contractor's State License Number:		
By:Signature	Title:	
Name Printed		
The bidder acknowledges receipt of the following therein, by initializing the appropriate place:	addenda, and agrees to the condit	ions set forth

Addendum No. 1 ____ Addendum No. 2 ____ Addendum No. 3 ____ Addendum No. 4 ____

BID BOND

Deposit Statement

Herewith find a deposit in the form of certified check, or cashier's check, in the amount of Five percent (5%) of maximum amount bid (Total for Bid items 1-4 + sales tax) in the attached Proposal.

Bid Bond

KNOW ALL MEN BY THESE PRESENTS:

That we _______, as Principal and ______, as Principal and ______, as Surety, are held firmly bound unto the City of Ferndale, Washington, as Obligee, in the penal sum of Five percent (5%) of maximum amount bid (Total for Bid items 1-4 + sales tax) in the attached Proposal, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

The conditions of this obligation are such that if the Obligee shall make any award to the Principal for Reservoir No.1 Overflow Modification, Ferndale, Washington, according to the terms of the Proposal or Bid made by the Principal therefore, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said Proposal or Bid and award and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee, or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this Bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 2016.

By:

Principal

Surety

NON-COLLUSION AFFIDAVIT

STATE OF WASHINGTON)) ss. COUNTY OF WHATCOM)

The undersigned, being duly sworn, deposes and says that the person, firm, association, co-partnership or corporation herein named, has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in the restraining of free competitive bidding in the preparation and submission of a proposal to the City of Ferndale for consideration in the award of a contract on the improvement named above.

Contractor

Subscribed and sworn to before me this _____ day of _____, 2016.

Notary Public in and for the State of Washington, residing at

CONTRACTORS QUALIFICATIONS

The below listed reference information shall be submitted with the Bid.

Bidder to list three previous Public Works water facility projects with similar value (\$50,000+) completed by Bidder as prime contractor. Bidder shall have successfully completed with their own equipment and personnel a minimum of three similar projects in the last six years to be considered qualified.

Contract Amount: ______

1. Project: _____________________________(Name and Location)

Reference:

(Company Name, Contact & Telephone)

2. Project:

(Name and Location)

Reference:

(Company Name, Contact & Telephone)

3. Project: _____

(Name and Location)

Contract Amount:

Reference:

(Company Name, Contact & Telephone)

Bidder shall provide the following information.

- 1. Resume of superintendent proposed for project.
- 2. List and provide references (Owner and Engineer) for any project within the last three years which have involved disputes for which the Contractor filed a claim resulting in formal dispute resolution, third-party mediation or arbitration, or a lawsuit.
- 3. List and provide references (Owner and Engineer) for all public works contracts in which the Contractor was sued by the Owner.

BID SUBMITTAL CHECKLIST

The bidder is advised to use the following list to assemble all forms required to be submitted with their bids. In accordance with RCW 39.30.060, bidders may submit the required documentation in two sealed packages.

PART 1 - Must be received with bid prior to the Bid Date and Time and include:

- 1. ____Bid Proposal
- 2. ____Bid Bond
- 3. _____Non-collusion Affidavit
- 4. _____Contractor Qualifications

PART 2 - Must be received prior to 1 hour after the Bid Date and Time and include:

- 1. _____List of Subcontractors
- 2. _____Subcontractor Qualifications

BIDS ON PUBLIC WORKS – IDENTIFICATION, SUBSTITUTION OF SUBCONTRACTORS (RCW 39.30.060)

The prime contractor shall submit as part of the bid, or within one hour after the published bid submittal time, the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of any work, or to name itself for the work. The prime contract bidder shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the prime contract bidder must indicate which subcontractor will be used for which alternate. Failure of the prime contract bidder to submit as part of the bid the names of such subcontractors or to name itself to perform such work or the naming of two or more subcontractors to perform the same work shall render the prime contract bidder's bid nonresponsive and, therefore, void.

Subcontractor:	
Address:	Phone:
Subcontractor:	
Address:	Phone:

SUBCONTRACTORS QUALIFICATIONS

The below listed reference information will be required 1 hour after the bid opening for all listed subcontractors of the apparent low bidder. The information may also be asked of the subcontractors of the next two low bidders at that time.

Bidder to list the following information for **three** projects for **each** of the subcontractors accounting for more than 10 percent of total bid amount. The selected projects must be of equivalent size and scope to the portion of work the subcontractor will complete on this project, and the subcontractor must have completed the work using his/her own personnel and equipment.

(This sheet shall be duplicated for each Subcontractor)
CONTRACT FORMS

NOTICE OF AWARD

To:	
	 ·
	 ·
	 <u> </u> .

For: City of Ferndale Reservoir No.1 Overflow Modification

The Owner has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids and Information for Bidders.

You are hereby notified that your BID has been ACCEPTED in accordance with your proposal for the amount of \$_____.

You are required by the Information for Bidders to execute the Contract and furnish the required Bond(s) and certificates of insurance within ten (10) calendar days from the date of this Notice of Award.

If you fail to execute said Contract and furnish said Bond(s) within ten (10) days from the date of this Notice, the City will be entitled to consider all your rights arising out of the City's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the City within 3 days of its receipt.

Dated this _____ day of _____, 2016

City of Ferndale Owner

By_____

Title

ACCEPTANCE OF NOTICE:

Receipt of this NOTICE OF AWARD is hereby acknowledged:

By . Dated this <u>day of</u> <u>, 2016</u> By <u>Printed Name</u> Title .

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WA

CONTRACT FOR: RESERVOIR No.1 OVERFLOW MODIFICATION FERNDALE, WASHINGTON

This Contract, made and entered into this _____ day of _____, 2016 by and between the City of Ferndale, hereinafter called the "Owner" and ______, hereinafter called the "Contractor".

WITNESSETH:

That in consideration of the terms and conditions contained herein and attached and made a part of this Contract, the parties hereto covenant and agree as follows:

1. The Contractor shall do all of the work and furnish all of the labor, materials, tools and equipment for the construction of the improvements and shall perform any changes in the work, all in full compliance with the contract documents entitled "Reservoir No.1 Overflow Modification, Ferndale, Washington".

The "Bid Proposal", "Specifications and Conditions", "Contract Forms", and the "Plans" sections contained in said contract documents are hereby referred to and by reference made a part hereof.

- 2. The Owner hereby promises and agrees with the Contractor to employ, and does employ the Contractor to furnish the labor, materials, tools and equipment, and to and cause to be done the above-described work, and to complete and finish the same in accordance with the said contract documents and the terms and conditions herein contained, and hereby contracts to pay for the same, according to the said contract documents, including the schedule of estimated quantities, and unit and lump sum prices in the Bid Proposal, the approximate sum of \$, the total amount of bid, subject to the actual quantity of work performed, at the time and in the manner and upon the conditions provided for in this contract.
- 3. The Contractor for himself, and for his agents, successors, assigns, subcontractors and/or employees, does hereby agree to the full performance of all the covenants herein contained upon the part of the Contractor.
- 4. The Owner hereby appoints and the Contractor hereby accepts Wilson Engineering, Inc., hereinafter referred to as the Engineer, as the City's representative for the purpose of administering the provisions of this Contract, including the Owner's right to receive and act on all reports and documents related to this Contract, to request and receive additional information from the Contractor, to assess the general performance of the Contractor under this Contract, to determine if the contracted services are being performed in accordance with Federal, State or local laws, and to administer any other right granted to the Owner under this Contract. The Owner expressly reserves the right to terminate this Contract as provided in the contract documents, and also expressly the reserves the right to commence civil action for the enforcement of this contract.

- 5. This Contract contains terms and conditions agreed upon by the parties. The parties agree that there are no other understandings, oral or otherwise, regarding the subject matter of this Contract.
- 6. The Contractor agrees to comply with all applicable Federal, State, City or municipal standards for the licensing, certification, operation of facilities and programs, and accreditation and licensing of individuals.
- 7. The Contractor shall not assign or subcontract any portion of the work provided for under the terms of this Contract without obtaining prior written approval of the Engineer. All terms and conditions of this Contract shall apply to any approved subcontract or assignment related to this Contract.
- 8. The parties intend that an independent Contractor-Owner relationship will be created by this Contract. The Owner is interested only in the results to be achieved, the implementation of the work will lie solely with the Contractor. The Contractor will be solely and entirely responsible for its acts and for the acts of its agents, employees, servants, subcontractors, or otherwise during the performance of this Contract. In the performance of the work herein contemplated, the Contractor is an independent Contractor with regard to the performance of the details of the work; however, the components of and the results of the work contemplated herein must meet the approval of the Engineer and shall be subject to the Engineer's general rights of inspection and review to secure the satisfactory completion thereof.
- 9. The Contractor agrees and covenants to indemnify, defend, and save harmless, the Owner and the City of Ferndale and those persons who were, now are, or shall be duly elected or appointed officials or members of employees thereof, hereinafter referred to as the "Owner" or "City" against and from any loss, damage, costs, charge, expense, liability, claims, demands or judgments, of whatsoever kind or nature, whether to persons or to property, arising wholly or partially out of any act, action, neglect, omission, or default on the part of the Contractor, his agents, successors, assignees, subcontractors and/or employees, except only such injury or damage as shall have been caused by or resulted from the sole negligence of the City. In case any suit or cause of action shall be brought against the Owner or the City on account of any act, action, neglect, omission, or default on the part of the Contractor, his agents, subcontractors and/or employees the Contractor, his agents, successors, assignees, and covenants to assume the defense thereof and to pay any and all costs, charges, attorney's fees and other expenses and any and all judgments that may be incurred or obtained against the City.

In the event the Owner is required to institute legal action and/or participate in the legal action to enforce this Indemnification and Hold Harmless Clause, the Contractor agrees to pay the Owner or City's legal fees, costs and disbursements incurred in establishing the right to indemnification.

If the claim, suit, or action for injuries, death, or damages as provided for in the preceding paragraphs of this specification is caused by or results from the concurrent negligence of (a) the indemnitee or the indemnitee's agents or employees and (b) the indemnitor or the indemnitor's agents for employees the indemnity provisions provided for in the preceding paragraphs of this specification shall be valid and enforceable only to the extent of the indemnitor's negligence.

Contractor hereby specifically and expressly waives any immunity under Industrial Insurance, Title 51 RCW and acknowledges that this waiver was mutually negotiated by the parties herein. In the event of litigation between the parties to enforce the rights under this paragraph, reasonable attorney's fees shall be allowed to the prevailing party.

- 10. This Contract has been and shall be construed as having been made and delivered within the State of Washington, and it is mutually understood and agreed by each party hereto that this Contract shall be governed by the laws of the State of Washington, both as to interpretation and performance. Any action in law, suit and equity or judicial proceedings for the enforcement of this contract, or any provisions thereof, shall be instituted and maintained in the courts of competent jurisdiction located in City of Ferndale, Washington.
- 11. The failure of the Owner to insist upon strict performance of any of the covenants and agreements of this Contract or to exercise any option herein conferred in any one or more instances shall not be construed to be a waiver or relinquishment of any such, or any other covenants or agreements, but the same shall be and remain in full force and effect.
- 12. It is understood and agreed by the parties hereto that if any part of this agreement is determined to be illegal, the validity of the remaining portions shall be construed as if the agreement did not contain the particular illegal part.
- 13. No change or addition to this Contract shall be valid or binding upon either party unless such change or addition shall be in writing, executed by both parties.
- 14. In the event that funding from State, Federal, or other sources is withdrawn, reduced, or limited in any way after the effective date of this Agreement, and prior to its normal completion, the Owner may summarily terminate this Agreement as to the funds withdrawn, reduced, or limited notwithstanding any other termination provisions of this Agreement. If the level of funding withdrawn, reduced or limited is so great that the Owner deems that the continuation of the programs covered by this Agreement is no longer in the best interest of the City, the Owner may summarily terminate this Agreement in whole notwithstanding any other termination of this Agreement. Termination under this section shall be effective upon receipt of written notice as specified herein.

IN WITNESS WHEREOF, the Contractor has executed this instrument, on the day and year first below written and the Owner has caused this instrument to be executed by and in the name of the said County, the day and year first above written.

Executed by the Contractor this ______ day of ______, 2016.

CITY OF FERNDALE:

By:		
·	City Administrator / Mayor	
STATE OI	FWASHINGTON)	
) ss.	
COUNTY	OF WHATCOM)	
On this	day of	, 2016, before me personally appeared to me personally known to be the person
described signing the	in and who executed the above inspreof.	trument and who acknowledged to me the act of
		NOTARY PUBLIC, in and for the

State of Washington, residing at:

My Commission Expires:_____

CONTRACTOR:

Ву:			
Title:			
STATE OF WASHIN	GTON)		
COUNTY OF WHAT) ss. COM)		
On this	day of	, 2016, before me perso	onally
appeared		to me personally known to b	be the
person described in a of signing thereof.	nd who executed the above	instrument and who acknowledged to me th	ie act

NOTARY PUBLIC, in and for the State of Washington, residing at:

My Commission Expires:_____

PERFORMANCE BOND to the City of Ferndale

KNOW ALL MEN BY THESE PRESENTS, That we____

the Contractor named in the Contract hereinafter referred to as PRINCIPAL, and _______as SURETY, are jointly and severally held and firmly bound to the City of Ferndale, hereinafter referred to as OWNER named in said Contract Reservoir No.1 Overflow Modification, Ferndale, Washington, for the penal sum of,

DOLLARS

(\$_____),

lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, assigns, administrators and successors jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that Whereas, the Principal entered into a contract with the Owner, dated the _____day of _____, 2016, for such construction work with the City of Ferndale, Washington.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform all of the provisions and fulfill all of the undertakings, covenants, terms, conditions and agreements of said contract during the period of the original contract and any extensions thereof that may be granted by the Owner, with or without notices to the surety; and during the life of any guaranty required under the contract; and shall also well and truly perform and fulfill all of the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made; notice of which modifications to the surety being hereby waived, shall indemnify and save harmless owner from all cost and damage by reason of the principal's default of failure to do so, and shall pay the State of Washington sales and use taxes, and amounts due said state pursuant to Titles 50 and 51 of the Revised Code of Washington then this obligation to be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their separate seals this _____ day of _____, 2016, the name and corporate seal of each corporate party hereto affixed, and these presents duly signed by its undersigned representatives pursuant to authority of its governing body.

Corporate Seal:

PRINCIPAL

ATTEST: (If Corporation)

By:_____

Title:_____

Corporate Seal:

SURETY

By:_____

Title:_____

PAYMENT BOND to the City of Ferndale

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)		-
(Address of Contractor)		-
a	, hereinafter called Principal,	
(Corporation, Partnership or Individual)		
and(Name of Surety)		-
(Address of surety)		-
hereinafter called SURETY , are held and firmly bound unto		
(Name of Owner)		-
(Address of Owner)		-
hereinafter called OWNER , in the penal sum of	Dollars, \$()
in lawful money of the United States, for the payment of which sum we successors, and assigns, jointly and severally, firmly by these presents.	ll and truly to be made, we bind o	urselves,
THE CONDITION OF THIS OBLIGATION is such that whereas, the OWNER, dated the day of day of a copy of which is hereto attached and made a part hereof for the	e Principal entered into a certain o	contract with
, a copy of which is hereto attached and hade a part hereof for the		

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, **SUBCONTRACTORS**, and corporations furnishing materials for or performing labor in the prosecution of the **WORK** provided for in such contract, and any authorized extension or modification thereof including all amounts due for materials, lubricants, oil, gasoline, coal, and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such **WORK**, and all Insurance premiums on said **WORK**, and for all labor, performed in such **WORK** whether by **SUBCONTRACTOR** or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WA

PAYMENT BOND PAGE 1

PROVIDED, FURTHER, that the said **SURETY** for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the **WORK** to be performed thereunder or the **SPECIFICATIONS** accompanying the same shall in any wise affect its obligation on this **BOND**, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the **WORK** or to the **SPECIFICATIONS**.

PROVIDED, FURTHER, that no final settlement between the **OWNER** and the **CONTRACTOR** shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this ins	trument	is executed in c	counterparts, each one of which
		(number)	
shall be deemed an original, this the		day of	
ATTEST:			
		Principal	
(Principal) Secretary			
(SEAL)	By		(s)
		(Address)	
Witness as to Principal			
(Address)			
		(Surety)	
ATTEST:	By		
		(Attorney –1n-Fac	t)
Witness as to Surety		(Address)	
(Address)			

NOTE: Date of **BOND** must not be prior to date of Contract. If **CONTRACTOR** is Partnership, all partners should execute **BOND**.

IMPORTANT: Surety companies executing **BONDS** must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the **PROJECT** is located.

CITY OF FERNDALE

RETAINAGE INVESTMENT OPTION

CONTRACTOR:	
PROJECT NAME:	
DATE:	

Pursuant to Chapter 60.28 RCW, you may choose how your retainage under this contract will be held and invested. Please complete and sign this form indicating your preference. If you fail to do so, the City of Ferndale (City) will hold your retainage as described in "Current Expense", option 1 below.

- 1. <u>Current Expense</u>: The City will retain your money in its Current Expense Fund Account until thirty days following final acceptance of the improvement or work as completed. You will not receive interest earned on this money.
- 2. <u>Interest Bearing Account</u>: The City will deposit retainage checks in an interestbearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until after the final acceptance of the improvement or work as completed or until agreed to by both parties. Interest on the account will be paid to you.

BONDS AND SECURITIES ACCEPTABLE BY THE CITY OF FERNDALE:

- 1. Bills, certificates, notes or bonds of the United States.
- 2. Other obligations of the United States or its agencies.
- 3. Indebtedness of the Federal national Mortgage Association.
- 4. Time Deposits in commercial banks.

Designate below the type of investment selected:

3. <u>Bond-in-Lieu</u>: With the consent of the City, the contractor may submit a bond for all or any portion of the amount of funds retained by the City in a form acceptable to the City and from a bonding company meeting standards established by the City, if any. Unless otherwise indicated, the contractor elects to submit a bond for the entire 5% retainage amount. Such bond and any proceeds there from shall be made subject to all claims and liens and in the same manner and priority as set forth for retained percentages in Chapter 60.28 RCW. Whenever the City accepts a bond-in-lieu of retained funds from a contractor, the contractor shall accept like bonds from any subcontractors or suppliers from which the contractor has retained funds. The contractor shall then release the funds retained from the subcontractor or supplier, to the subcontractor or supplier, within thirty days of the contractor's receipt of the retained funds from the City.

Retainage is normally released 30 - 45 days after final acceptance of work by the City, or following receipt Employment Security / Department of Revenue clearance, whichever takes longer.

(Contractor's Signature)

Date

Title: _____



PUBLIC WORKS DEPARTMENT

2095 MAIN STREET / P.O. BOX 936 Ferndale, WA 98248 (360) 384-4006

NOTICE TO PROCEED

DATE
CONTACT
CONTRACTOR
ADDRESS
ADDRESS

RE: Notice to Proceed Reservoir No.1 Overflow Modification City Project No. <u>WA2015-05</u> Correspondence No. _____

Dear CONTACT:

The City of Ferndale has reviewed and approved the contract bond and evidence of insurance for the aforementioned Project. Therefore, the contract has been executed.

This notice shall constitute the Notice to Proceed on the above referenced project. Contract time (<u>40</u> working days) will begin on ______. The date of completion of all work is ______.

If you have comments, questions, or require further information, please do not hesitate to contact me at (360) 685-2377.

Sincerely,

CITY OF FERNDALE

Mike Olinger Project Manager

CC. file

SUPPLEMENTAL CONDITIONS

The following supplementary conditions modify WSDOT Standard Specifications. If there are any conflicts between these Supplemental Conditions and the aforementioned Standard Specifications, these Supplemental Conditions shall take precedence.

1. DOCUMENTS INCORPORATED BY REFERENCE

The following documents are incorporated by reference, to include, but not be limited to:

- Technical Specifications
- Proposal
- Drawings
- Contract
- WSDOT Standard Specifications for Road, Bridge and Municipal Construction, 2016 Edition and Standard Plans for Road, Bridge and Municipal Construction, 2016 Edition

2. CONFLICT AND PRECEDENCE

In the event of any conflicting provisions or requirements between the component parts of the Contract Documents, the component parts shall take precedence in the following order:

- 1. Change Orders
- 2. Contract Form
- 3. Addenda
- 4. Permits and requirements from governmental agencies
- 5. Drawings
- 6. Supplemental Conditions
- 7. Technical Specifications
- 8. Ferndale City Standards
- 9. WSDOT Standard Drawings & Details
- 10. WSDOT Standard Specifications

3 CONTRACT PLANS AND SPECIFICATIONS

Five (5) sets of Contract Documents, Three (3) sets of 11"x 17"plans, Two (2) sets of 24"x 36"plans, and a CD with Contract Documents and plans in PDF will be furnished to the Contractor free of charge. Additional sets may be purchased at the advertised price per set.

4. EXAMINATION OF PLANS, SPECIFICATIONS AND SITE OF WORK

The bidder shall carefully examine the proposed work site (including material sites), and the contract documents. Submittal of a bid shall be conclusive evidence that the bidder has made these examinations and understands all requirements for the performance of the completed work.

The Contractor shall make deductions and conclusions as to the nature of the materials to be excavated, the difficulties which may arise from subsurface conditions, and of doing any other work affected by the subsurface conditions and shall accept full responsibility. The accuracy of information furnished by the Owner and/or Engineer and/or the plans and specifications as to underground structures, foundation conditions, character of soil, position and quantity of surface and ground water, etc., is not guaranteed. Bidders must satisfy themselves by personal examination and by such other means as they desire with respect to

actual conditions in regard to existing groundwater or surface structures. Unforeseen conditions shall not constitute a claim for additional payment under the terms of the contract or constitute a basis for cancellation thereof.

The Specifications do not necessarily discuss complete details of construction, work or materials, performance or installation, and do not necessarily cover construction details or other items of work or fixtures of equipment may affect any particular installation. These details must be ascertained by the Contractor and correlated to bring the parts together to a completed whole.

Where alternate methods have not been brought to the Owner's attention, it is assumed that the Contractor has figured the more costly method or methods.

5. WORK AND MATERIALS

In addition to the requirements stated in this contract document, the following shall apply:

All work and materials under this contract shall conform to the 2016 Edition of *Standard Specifications for Road, Bridge and Municipal Construction* as prepared by Washington State Department of Transportation (WSDOT) and Washington State Chapter of American Public Works Association (APWA), and according to the instructions and recommendations of the manufacturer of the material concerned. In case of a conflict between any of the above referenced Standards, the more stringent shall apply.

References throughout the above mentioned Standard Specifications to "State" or "Owner" shall refer to the City of Ferndale.

6. OMISSIONS AND DISCREPANCIES

Upon receipt of Award of Contract, the Contractor shall carefully study and compare all drawings, specifications and other instructions and shall, prior to ordering material or performing work, report in writing to the Owner any error, inconsistency or omission not discovered at the pre-bid meeting. If during the accomplishment of the work, a discrepancy is found between the drawings and the physical condition of the locality, it shall be the Contractor's duty to inform the Owner in writing, and the Owner shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the Contractor's risk.

Minor items of work or material omitted from the original plans or specifications, but clearly inferable from the information presented and which are called for by accepted good practice, shall be provided and/or performed by the Contractor as part of the original bid.

7. SURVEYS, PERMITS, REGULATIONS

The Engineer shall provide construction staking for the project. The Contractor shall provide a minimum of 3 day notice for required construction staking. The Engineer has established horizontal references and vertical grade datum for the Contractor's use. The Contractor shall be responsible for protection and preservation of the established reference

points. Re-establishing the horizontal and vertical control will be done at the expense of the Contractor by Owner's surveyors.

The bidder shall be familiar with all Federal, State, and local requirements that affect the completion of work in any way (such as laws, ordinances, or rules affecting employees, subcontractors, materials, equipment or procedures). In addition, the Contractor must comply with the following Washington State Laws, including without limitation: Chapter 60.28 RCW (retainage); 39.08 RCW (bond requirements); 18.27 RCW (contractor registration); 35.22.650 RCW (equal opportunity); and 70.92 RCW (handicapped). The Owner will not consider any plea of misunderstanding or ignorance of such requirements.

The Owner will assist with coordinating City permit applications, if needed. The Contractor is to pick up the Land Disturbance permit from the City and fill-out remaining information required, prior to mobilization. However, the Contractor will be responsible for providing submittal information, as needed (including shop drawing, mechanical, and plumbing information) to the Engineer/City (if requested). Temporary permits, easements, and other Non-City permits shall be acquired by the Contractor (if needed).

8. EXISTING UTILITIES

The location of all existing utilities shown on the plans is per the best available information, and is therefore approximate only. The Owner/Engineer does not guarantee the accuracy of this information. The contractor shall take whatever measures deemed necessary to verify the accuracy of this information and the cost of such shall be incidental to the bid.

Forty-eight (48) hours prior to starting construction, the Contractor shall contact the City of Ferndale and Underground Utility Locate (if needed). All costs incurred by the Contractor in complying with the requirements of this Section shall be incidental to the entire project and shall be included in the contract price.

9. CONNECTIONS TO EXISTING PIPING

Connection to existing piping is the full responsibility of the Contractor. Temporary routing of existing pipelines or services, shoring, temporary thrust blocks, extra fittings and all other work and materials required for making complete, permanent and workable connections are incidental to other items of work.

The Contractor shall locate and verify the type of pipe, size and depth prior to making the connection. Detailed sketches and plans of the connection proposed by the Contractor shall be given to the Engineer not less than one week prior to the expected construction. The City of Ferndale shall be notified not less than two (2) working days prior to connection to existing piping.

10. SUBSURFACE CONDITIONS

The CONTRACTOR shall make deductions and conclusions as to the nature of the materials to be excavated, the difficulties which may arise from subsurface conditions, and of doing any other work affected by the subsurface conditions and shall accept full responsibility. The accuracy of information furnished by the OWNER and/or ENGINEER and/or the plans and specifications as to underground structures, foundation

conditions, character of soil, position and quantity of surface and ground water, etc., is not guaranteed. Bidders must satisfy themselves by personal examination and by such other means as they desire with respect to actual conditions in regard to existing groundwater or subsurface structures. Unforeseen conditions shall not constitute a claim for additional payment under the terms of the contract or constitute a basis for cancellation thereof.

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS - The following **Inadvertent Discovery Plan (IDP)** outlines procedures to follow, in accordance with state and federal laws, if archaeological materials or human remains are discovered.

Recognizing Cultural Resources: A cultural resource discovery could be prehistoric or historic. Examples include:

- An accumulation of shell, burned rocks, or other food related materials,
- Bones or small pieces of bone,
- An area of charcoal or very dark stained soil with artifacts,
- Stone tools or waste flakes (i.e. an arrowhead, or stone chips),
- Clusters of tin cans or bottles, logging or agricultural equipment that appears to be older than 50 years,
- Buried railroad tracks, decking, or other industrial materials.

When in doubt, assume the material is a cultural resource.

On-Site Responsibilities:

<u>STEP 1: STOP WORK.</u> If any City employee, Contractor or Subcontractor believes that he or she has uncovered a cultural resource at any point in the project, all work adjacent to the discovery must stop. The discovery location should be secured at all times.

STEP 2: NOTIFY CITY PROJECT MANAGEMENT TEAM AND CR/ENV/NR CONTACTS. Contact the City Project Manager, Wilson Engineering LLC, and Drayton Archaeological Research.

Contacts:

<u>City Project Manager:</u> Name: Mike Olinger Phone: (360) 815-1508 Email: MikeOlinger@cityofferndale.org

<u>Wilson Engineering LLC</u> Name: Curt Schoenfelder, P.E. Phone: (360) 733-6100 ex 233 Email: cschoenfelder@wilsonengineering.com <u>Cultural/Environmental/Natural</u> (<u>CR/ENV/NR</u>) Program Manager: Name: Garth Baldwin, Drayton Archaeological Research Phone: (360) 739-3921 Email: garth@draytonarchaeology.com The Project Manager or the CR/ENV/NR will make all other calls and notifications. **If human remains are encountered**, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. **Call the Ferndale Police Department at 360-384-3390** (Do not call 911 or speak with the media).

11. TRAFFIC CONTROL

Traffic shall be maintained in accordance with WSDOT Section 1-07.23 of the WSDOT Standard Specifications and Manual of Uniform Traffic Control Devices. The Contractor shall not close any roadway without first obtaining authorization from the city. The cost for all necessary traffic control by the Contractor shall be incidental to the entire project and shall be included in the contract price.

12. SUBCONTRACTING

The Contractor shall perform work amounting to a minimum of 50% percent of the Awarded Contract Price using his own personnel and equipment. All subcontracting shall be in conformance with WSDOT Section 1-08.1 of the WSDOT Standard Specifications.

13. PRE-CONSTRUCTION CONFERENCE

A Pre-Construction conference shall be held at a time and place fixed by the Owner which will be within two weeks from the date of notification of award of contract. At a minimum the Contractor's project manager and field superintendent are required to attend. Sub-contractors, suppliers and others interested are encouraged to attend.

14. HOURS OF WORK

The Contractor shall schedule operations so that the work will be performed during the hours of 7AM to 5PM Monday through Friday, excluding holidays. A normal 40 hour Monday through Friday work week (4 - 10hr or 5 - 8hr days) is intended. The Contractor shall compensate the City \$80 per hour for each hour over 40 hours per week worked to pay for additional inspection time. The Contractor shall obtain prior approval from the City for overtime hours and schedules.

15. COMPLETION DATE

The Contractor will be limited to 40 working days (8 weeks) on-site work.

16. SCHEDULE OF CONSTRUCTION & VALUES

Within 10 working days of receiving the notice to proceed, the contractor shall furnish to the City a Schedule of Values. In addition, the Contractor shall furnish a Schedule of Construction at the Pre-Construction Meeting. The Schedule shall identify the project start and finish dates with a detailed breakdown of the proposed order of work and completion dates for major phases of the work. The schedule shall be developed by a critical path method. Time required for testing, backfilling, inspections, ordering, punch lists, etc. shall be incorporated into the schedule (although they do not necessarily need to be specifically identified).

17. RETAINAGE

The owner will deduct from the partial pay estimate a retainage of five percent (5%). Upon completion of all work, specified training, final inspection, and acceptance by Owner, the amount retained under the Contract will be paid within thirty (30) days following final acceptance by Owner and receipt by the Owner of the following:

- State Department of Labor and Industries Release
- Washington State Department of Revenue Release
- Washington State Employment Security Department Release
- Contractor and Subcontractors Affidavit of Wages Paid

The retainage will not be released if any claim has been filed on the project.

18. LIQUIDATED DAMAGES

Liquidated damages will be assessed in accordance with WSDOT 1-08.9 for each working day beyond the Contracted completion date listed above.

19. SUBSTANTIAL COMPLETION FOR THE RESERVOIR OVERFLOW MODIFICATION Substantial completion of the Reservoir No.1 Overflow Modification shall be defined as follows, with no exceptions:

The Modified Reservoir No.1 Overflow shall be able to be put to beneficial use. This shall include installation of the new 4' diameter manhole, piping, air gap, misc. work items, and most of the clean-up complete. In essence, the entire reservoir facility will be operable and complete per WSDOT 1-01.3 Completion Dates.

20. PAYMENT TO CONTRACTOR

At least five (5) working days before the end of the month, the Contractor shall submit to the Engineer an itemized application for payment, supported by receipt or other vouchers, showing payments for materials and labor, payments to sub-contractors, and such other evidence of the Contractor's right to payment as the Engineer may direct. The Owner's progress payment shall be made approximately 30 days after the date of submittal.

The owner will deduct from the partial pay estimate a retainage as defined above. Upon completion of all work, final inspection, and acceptance by Owner, the amount retained under the Contract will be paid at the expiration of the thirty (30) day period following final acceptance by owner provided the following conditions are met:

- A. Releases have been obtained from the State Department of Labor and Industries, the State of Washington Employment Security Department, the Washington State Department of Revenue, and all other departments and agencies having jurisdiction over the activities of the Contractor.
- B. No claims, as provided by law, have been filed against the retained percentage.
- C. Affidavit of Wages Paid is on file with the Owner for the Contractor and all Subcontractors.
- D. All contract work is complete in every respect, including operations and maintenance manuals, as-built drawings, etc.

21. INDEMNIFICATION

The Contractor agrees to protect, indemnify, and hold harmless the Owner, Engineer and their employees, agents, and staff, from any and all claims, liabilities, damages, expenses, or rights of action, directly or indirectly attributable to the Contractor's activities in connection with this contract, except for the sole negligence of the Owner or Engineer as outlined in Section WSDOT 1-07.14.

22. RECORD DRAWINGS

Before receiving payment for more than 90% of the work or declaring physical completion of the work, the Contractor will provide the Owner with accurate record information of all construction activity for the entire project (red line drawing on a full size print). This red line drawing shall include, but not be limited to, any changes to the project and the exact location of all constructed utilities and any other existing utilities discovered during construction that are not identified on existing record information. The red line drawing shall be based on accurate field measurements tied to project benchmarks. The Owner will use this information to prepare Record Drawings. The cost for furnishing this record information shall be considered incidental to the entire project and shall be included in the contract price.

23. BARRIER REQUIREMENTS

During construction, the Contractor shall at all times maintain satisfactory and substantial temporary fencing, railing, barricades or steel plates at all openings, obstructions or other hazards. All such barriers shall have warning signs or lights as necessary for safety. Safe access to and protection of the construction site and the Contractor's records shall be maintained at all times.

24. CONTROL OF WORK

The presence or absence of an Inspector at the job site will be at the sole discretion of the Owner and such presence, or absence, of an Inspector will not relieve the Contractor of his responsibility to obtain the construction results specified in the Contract Documents. The Owner, inspector and engineer do not purport to be Safety Engineers and are not engaged in that capacity and shall have neither authority nor responsibility to enforce construction safety laws, rules, regulations, procedures or the safety of persons on and about the construction site. Any personal assistance which an Inspector may give the Contractor will not be construed as the basis of any assumption of responsibility in any manner, financial or otherwise, by the Owner, Inspector, or the Engineer. The Inspector is on site to insure

the project is completed in accordance with all plans and specification, to insure the Owner is getting what is required. He is not there to do the Contractor's scheduling or contact his subs or deliver messages.

25. BLASTING

Blasting is not anticipated and will not be permitted without expressed written consent of the Owner. If blasting is permitted, contractor is responsible for obtaining all necessary permits and insurance.

26. INSURANCE

The Contractor shall take out and maintain during the life of this contract Public Liability Insurance for bodily injury and property damage liability including without limitation, coverage for explosion, blasting, collapse and destruction of underground utilities (X.C.U.) and contingent liability, including products and completed operations and blanket contractual liability, as shall protect the Contractor, the Owner and the Engineer. The Contractor shall have the Owner and the Engineer specifically added as additional named insured in said policies (on Form B), all at no cost to the Owner or the Engineer. The above insurance shall cover the Owner, the Engineer, Contractor and Subcontractors for claims or damages for bodily injury, including wrongful death, as well as other claims for property damage which may arise from operations under this contract whether such operations be by themselves or by any subcontractor or anyone directly or indirectly employed by either of them. The Contractor agrees, in addition, to indemnify and save harmless the Owner and Engineer, either or both, from all suits, claims, demands, judgements, and attorneys fees, expenses or losses occasioned by the performance of this Contract by the Contractor or Subcontractor or persons working directly or indirectly for the Contractor or Subcontractor, or on account of or in consequence of any act or omission of any such person, including but not limited to neglect in safeguarding the work, or failure to conform with the safety standards for construction work adopted by the Safety Division of the Department of Labor and Industry of the State of Washington.

The amount of such insurance shall be as follows:

Bodily injury liability insurance in an amount not less than \$1,000,000.00 for injuries, including wrongful death, to any one person and subject to the same limit for each person, in an amount not less than \$2,000,000.00 on account of any one occurrence, and property damage liability insurance in an amount not less than \$1,000,000.00 for each occurrence. Builders Risk (All Risk Insurance) coverage equal to project bid amount.

The Contractor shall not cause any policy to be canceled or permit it to lapse, and all policies shall include a clause to the effect that the policy or certificate shall not be subject to cancellation or to a reduction in the required limits of liability or amounts of insurance or any other material change until notice has been mailed to the Engineer and Owner stating when, not less than thirty (30) days thereafter, such cancellation or reduction or change shall be effective. In the event notice of cancellation is received by the Owner, the Contractor shall immediately obtain other comparable insurance acceptable to the Owner and provide proof thereof to the Owner. In the event the Contractor is unable to obtain and
SUPPLEMENTAL CONDITIONS

provide such insurance, the Contractor shall immediately cease all work on the project, save and except that which is necessary to secure the site and prevent injury.

All certificates of insurance, authenticated by the proper officer of the insurer, shall state in particular those insured, the extent of the insurance, the location and operations to which the insurance applies, the expiration date, and the above-mentioned notice of cancellation clause.

Provided, however, the Owner may accept insurance covering a Subcontractor in character and amounts less than the standard requirements set forth under this subsection where such standard requirements appear excessive because of the character or extent of the work to be performed by such subcontractor.

A Certificate of Insurance evidencing coverage and a copy of the endorsement naming the Owner and Engineer as additional insured must be submitted to the Engineer prior to the commencement of the Contract in accordance with WSDOT Section 1-03.3.

The following endorsement for additional insured shall be included in all applicable policies and on the Certificate of Insurance:

The Owner and Engineer are additional named insured for all coverages provided by the policy of insurance and shall be fully and completely protected from all claims and risks by this policy and for any and every injury, death, damage, and/or loss of any sort whatsoever, including consequential damages, sustained by any person, organization or corporation in connection with any activity performed by the Contractor or any subcontractors or by anyone directly or indirectly by virtue of the provisions of that contract between the (Owner name), as Owner and (Contractor's name), entitled (Project Title), dated (date).

The coverages provided by this policy to the Owner or any other named insured shall not be terminated, reduced, or otherwise modified in any respect without providing at least 30 days prior written notice by certified mail to the Owner and other additional named insured. The coverages provided by this policy are primary to any insurance maintained by the Owner.

27. CHANGES

The Owner reserves the right to make changes in the work within the general scope of the Contract Documents at any time during the progress of the work. The Contractor shall perform all work in accordance with the changes specified by the Owner.

Changes required by the Owner may include but are not limited to:

- (a) Deletion of any portion of the work.
- (b) Increases or decreases in quantities.
- (c) Changes in specifications and/or designs.
- (d) Method or manner of performance of the work.
- (e) Addition of any new work.
- (f) Acceleration or delay in the performance of the work.

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The Owner shall have the option of paying for such changes by one or more of the following methods:

- (1) by the lump sum or unit contract prices set forth in the Proposal;
- (2) by equitable adjustment mutually agreed upon by the Contractor and the Owner; or
- (3) by Force Account in accordance with WSDOT Section 1-09.6

In the case that the Contractor and the Owner are unable to agree on the amount of equitable adjustment, the Owner will unilaterally determine the amount to be paid for the change in accordance with WSDOT Section 1-09.4. The Owner's decision concerning such amount to be paid shall be final as provided in WSDOT Section 1-05.1.

Any and all administrative costs associated with change orders shall be considered to be part of the Contractor's overhead for the work as bid and not a direct cost of the change. Such administrative costs shall include, but not be limited to, costs of defining changed work, determining estimated cost of changed work, preparing proposals for change orders and negotiation of the method and amount of compensation for changed work.

The compensation for each change shall include all direct and indirect costs including, but not limited to, costs of impacts on related and indirect operations and of delay or acceleration of other work resulting from the change. Failure of the Contractor to identify all direct and indirect costs at the time of negotiation of compensation for each changed shall preclude subsequent claim, after formal execution of a change order, by the Contractor for any additional costs associated with the change.

No payment for extra work or any other change in the contract will be made unless the extra work or change has been authorized by the Owner prior to start of the extra work by the Contractor.

For (a) Deletion of any portion of the work, above, the following requirements shall apply:

No payment will be made for items which are deleted from the contract and not performed. No payment will be made for any anticipated profits which would have been earned on work deleted. Payment for costs incurred by the Contractor prior to the deletion of the work shall include and be limited to actual documented costs of field labor, equipment and materials and shall not cover and include overhead as defined in WSDOT Section 1-09.6.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of cancellation of the work will be either purchased from the Contractor by the Owner at the actual cost and shall become property of the Owner or the Owner will reimburse the Contractor for his actual costs connected with returning these materials to the suppliers.

For (b) Increases or decreases in quantities, above, the following requirements apply:

Payment for all bid items shall be at the unit prices bid, regardless of the actual final quantities of the bid items incorporated into the work and regardless of any increase or decrease from the quantities designated in the Schedule of Contract Prices.

No extra or additional payment will be made for any increase in quantity of any bid item. No extra or additional payment will be made for any decrease in quantity of any bid item. No payment will be made for any anticipated profits which would have been earned on deleted quantities.

For (c) Changes in specifications and/or designs; (d) Addition of any new work; and (e) Acceleration or delay in the performance of the work above, the following requirements shall apply:

If the Engineer determines that the above changes cause an increase or decrease in the Contractor's cost of performance of that portion of the work associated with the change and/or an increase or decrease in the contract time required for performance of the work, the increase or decrease in compensation and/or contract time will be determined by agreement of the parties.

28. INCREASED OR DECREASED QUANTITIES

The Contractor shall not purchase or place orders for full quantities of materials until the work has advanced to a state permitting the determination of the exact quantities required. The original bid item quantities designated on the Proposal and other estimates of quantities of materials furnished by the Engineer shall be considered as approximate and not indicative of the actual quantities required. The Owner will not be responsible for any materials purchased in excess of actual requirements and will not be responsible for any increased costs or extra expense that the Contractor may have on account or materials or work not being ordered at some earlier date.

29. SALES TAX

The work is within the City of Ferndale. The Contractor shall correctly reference on payments of sales tax to the Washington Department of Revenue Ferndale's tax code.

30. GUARANTEES

Except where special longer warranties are required, the Contractor shall guarantee all materials and workmanship for a period of one year from the date of Substantial Completion of the project.

Neither final acceptance by the Owner nor partial and final payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for faulty materials or workmanship.

If, prior to the expiration of one year after the date of the City's acceptance of all work or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective or not in compliance with the Contract Documents, the Contractor shall promptly,

SUPPLEMENTAL CONDITIONS

without cost to Owner, either correct such work, or, if it has been rejected by Owner, remove and replace it with acceptable work. If the Contractor does not promptly comply with the notification issued by the Owner for correction of defective and/or non-complying work and have the defect completely repaired within 30 calendar days, the Owner may have the work corrected or removed and replaced and all direct and indirect costs of such removal and replacement, including costs of all professional services, shall be paid by Contractor.

The guarantee shall apply to all elements and parts of the work, regardless of knowledge by the Owner, engineer and inspector(s) of defects or deficiencies and regardless of failure of the Owner, Engineer and/or inspector(s) to inform the Contractor of known or suspected defects or deficiencies prior to Substantial Completion of the work by the Owner.

All subcontractor's, manufacturers', and suppliers' warranties and guarantees, express or implied, for any part of the work, materials and equipment shall be deemed obtained and shall be enforced by the Contractor for the benefit of the Owner without the necessity of formal transfer or assignment thereof. Warranties and guarantees by subcontractors, manufacturers, and suppliers shall begin on and extend for one year after the date of Substantial Completion of all work.

All work (including materials and equipment) repaired or replaced in accordance with this Section shall be guaranteed for a period of one year after the date of City's acceptance of the repair/replacement work.

TECHNICAL SPECIFICATIONS

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The work covered by the Contract Documents consists of furnishing all labor, equipment and materials necessary for the construction of the Reservoir Overflow Modification as shown on the plans and specified herein.
- B. Contractor shall furnish all labor, tools, equipment and materials needed. In addition, the Contractor shall provide shoring, bracing, sheeting, cribbing, falsework, pumping, dewatering, drainage, forms, and all material as required or necessary to excavate, backfill, grade, construct, lay, erect, install, test, and clean up the site. The work shall consist of, in general, the following:
 - 1. Installation of new 4' diameter manhole, concrete top slab, and grating.
 - 2. Construction of new 8" waterline.
 - 3. Construction of new air-gap in reservoir overflow line.
 - 4. Connecting new pipe and structure to existing.

1.02 WORK AND RESPONSIBILITIES

- A. Unless otherwise indicated, work and responsibilities include, but are not limited to the following:
 - 1. Providing and paying for labor, materials, equipment, tools, machines, facilities, and services necessary for execution and completion of work.
 - 2. Paying required taxes.
 - 3. Giving required notices.
 - 4. Enforcing strict discipline and good order among employees.
 - 5. Using new materials, except as noted.
 - 6. Maintaining required egress and other requirements in accordance with governing Codes and Ordinances throughout the work.
 - Obtaining and paying for required permits, fees and notices, see General Conditions.

1.03 SEQUENCE/PHASING

- A. Contractor shall comply with the sequence of operation shown on the plans or discussed in the specifications.
- B. These documents are not to be interpreted implicitly or explicitly as definition of procedure and sequence of operations. Order as to procedure and sequence of operations are Contractor options, consistent with contract documents and as approved by Owner.
- C. Site Work: Proposed stockpiling areas must be approved by the Owner.

D. Summary: The foregoing outline of the primary elements of construction within the project is intended as a summary of that work only. The work outlined is <u>not</u> to be regarded by the Contractor as an exhaustive definition of the scope of work.

1.04 COOPERATION AND COORDINATION

- A. Contractor is responsible for coordinating and scheduling work of subcontractors to expedite progress of the Project.
- B. Subcontractor Instructions: Subcontractors to become familiar with Conditions of the Contract and the work of other Sections related to their own work.
- C. Project Coordination and Scheduling Control: Responsibility for coordination and close adherence to time schedules rests solely with the General Contractor who shall maintain coordination and scheduling control at all times.
- D. Each separate contractor and each subcontractor responsible to the General Contractor shall cooperate diligently with the General Contractor in the execution of their work so as to cause no delay in the completion of the Project. This responsibility includes the completion of all work in a timely manner and all items of equipment connected and fully operating at the time of Substantial Completion. Each separate contractor and each subcontractor shall diligently comply with the following requirements:
 - 1. Inform other trades of requirements at proper time to prevent delay or revisions.
 - 2. Be informed on the requirements of other trades and check own work for conflicts with the work of other trades.
 - 3. Insure delivery of materials and performance of work on coordinated schedule with other trades.
 - 4. Contractor is to ensure the subcontractors and equipment suppliers are responsible for compatibility and completeness of the installation and operation of the equipment in their respective Specification Sections including conformance with code requirements. If power, piping, conduit, or other work required for complete installation is not provided by others to equipment location or is not adequate for complete installation, the Contractor shall be responsible for providing the necessary connections.
- E. Notification and Correction of Defective Work: Before starting a section of work, each contractor and subcontractor shall carefully examine all preparatory work that has been executed to receive his work. Check carefully, by whatever means required, to ensure that the work and adjacent, related work will finish to proper contours, planes, and levels. Promptly notify the Contractor of any defects or imperfections in preparatory work which will in any way affect satisfactory

completion of the work. Under no condition shall a section of work proceed prior to preparatory work having been completed, cured, dried, or otherwise made satisfactory to receive such related work. Correction of defective work or underlying defects shall be the responsibility of the Contractor.

- F. Intent of Drawings: The work of each contractor and subcontractor shall conform to the intent of the contract drawings. Drawings showing work of other trades are partly diagrammatic and do not intend to show in detail all features of work. Each contractor shall carefully review and compare related drawings and shall thoroughly understand the building conditions affecting their work. All changes required in the work caused by failure to do so shall be at no expense to the Owner.
- G. Interferences and Right-Of-Way: Make proper provisions to minimize interferences. Where conflicts occur, gravity drainage improvements have right-of-way over mechanical and electrical work; electrical work has right-of-way over landscaping work. Submit conflicts which cannot be resolved by right-of-way to Engineer for instructions.
- H. Cooperate and coordinate with any other separate Contractors under Contract with the Owner.

1.05 CONSTRUCTION STAGING AREA

A. Coordinate staging areas with the City.

1.06 EXISTING UTILITIES

A. Utilities of record are shown on the Drawings insofar as possible to do so. These, however are shown for convenience only and the Owner and his representatives assume no responsibility for improper locations or failure to show utility locations on the Drawings. At Contractor's expense, immediately repair utilities damaged during construction.

1.07 MISCELLANEOUS

- A. Items include, but are not limited to:
 - 1. Contractor to provide on-site access to City crews at all times, in particular for City maintenance activities.
 - 2. Maintaining a pedestrian and vehicular access to and around existing projects.
 - 3. Not unreasonably encumbering site with materials or equipment.
 - 4. Assuming full responsibility for protection and safekeeping of products stored on premises.
 - 5. Moving any stored products interfering with any other Contractors.

- 6. Obtaining and paying for use of additional storage or work areas needed for operations.
- 7. Restoration of any damage to existing improvements adjacent to work site.
- 8. Moving and replacing items incidental to completion of the work including mailboxes, fences, small shrubs and trees, street signs, yard decorations, etc.

END OF SECTION

SECTION 01060 - REGULATORY REQUIREMENTS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. As required by General Conditions: "Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work." Except where otherwise expressly required by applicable Laws and regulations, neither OWNER nor ENGINEER will be responsible for monitoring CONTRACTOR'S compliance with any Laws and Regulations. Contractor is responsible for keeping the Owner, Labor & Industries and other authorities completely informed of any changes in the work in a timely manner, and is responsible for informing them of any changes in the work which may affect codes and laws. This includes contract modifications, amendments, additions, shop drawings, and the like, current as of Project Manual date.
- B. Make any and all adjustments and modifications as required to conform to ordinances, and regulations.
- C. Referenced codes establish minimum requirement levels. Where provisions of various codes or standards conflict, the more stringent provisions govern. Promptly submit to Engineer written notice of observed contract document variations from legal requirements.
- D. Compliance requirements include, but are not limited to following:
 - 1. Uniform Building Code and Related Standards, most recent edition, published by the International Conference of Building Officials.
 - 2. State Rules and Regulations for Barrier Free Design/WAC 51-10.
 - 3. The Americans with Disabilities Act (ADA) "Accessibility Guidelines for Buildings and Facilities."
 - 4. Department of Labor and Industries Regulations.
 - 5. Electrical Work:
 - a. Underwriters' Laboratories (UL).
 - b. National Electrical Manufacturers' Association (NEMA).
 - c. NFPA, National Electric Code (NEC), National Electric Safety Code, and above electrical listings, as applicable.
 - d. State Electrical Construction Code.
 - 6. Environmental Requirements: All work to be performed in compliance with relevant statutes and regulations dealing with prevention of environmental pollution and preservation of public natural resources.
 - 7. 2016 Standard Specifications for Road and Bridge Construction, Washington State Department of Transportation, (WSDOT).

SECTION 01060 - REGULATORY REQUIREMENTS

8. Standard Specifications for Municipal Public Works Construction, Washington State Chapter, American Public Works Association.

1.02 MISCELLANEOUS EXPLANATIONS/INTENT

- A. A number of Specified Items Required: Wherever in these Specifications an article, device, or piece of equipment is referred to in the singular number, the reference applies to as many such articles as are shown on the Drawings or required to complete the installation.
- B. Drawings/Diagrammatic:
 - 1. Drawings are in part diagrammatic and do not necessarily show complete details of construction, work or materials, performance or installation. And they do not necessarily show how construction details, other items or work, fixtures, and equipment may affect any particular installation. Contractor is required to ascertain and correlate the work to bring the parts together into a satisfactory and completed whole.
 - 2. Furnish and install work not covered under any heading, Section, branch, class or trade of the Project Manual, but shown on or reasonably inferable from the Drawings. This includes all work necessary to produce the intended results.
- C. Wording of these Specifications: These Specifications are of the abbreviated or streamlined type and may include incomplete sentences.
 - 1. Words such as "shall", "the Contractor shall", "shall be", and similar mandatory phrases, are required to be supplied by inference in the same manner as they are in a note on the Drawings.
 - 2. Provide all items, articles, materials, and operations listed, including all labor, materials, equipment and incidentals, required for their completion.
- D. Tense, Gender, Singular, Plural: Present tense words include future tense. Words in masculine gender include feminine and neuter genders. Words in the singular include plural. Plural words include singular.
- E. All, Entire, and the Like: For brevity throughout the documents, these words may be omitted. Read their implications into all work.
- F. Specifications by Reference: Any material specified by reference or number, symbol or title of a specified standard, such as commercial standard, ANSI and ASTM documents, Federal Specifications, trade association standard, or the like, shall comply with the following:
 - 1. The latest revision requirements thereof, and any amendment or supplement thereto, in effect on Bid date or date of Owner-Contractor Agreement when there are no bids.

SECTION 01060 - REGULATORY REQUIREMENTS

- G. Dimensions and Measurements on Drawings: Dimensions govern. Do not scale. Contractor is to check all dimensions in the field and verify them with respect to adjacent or incorporated work. Large scale drawings take precedence over plans, elevations, and cross sections.
- H. First Class Workmanship: First Class Workmanship is expected.
 - 1. Prior to installing any item or material, verify that receiving surfaces are plumb, level, true to line, and straight to the degree necessary to achieve tolerances specified or required. Perform without extra cost all shimmering, blocking, grinding, or patching required to make such surfaces plumb, level, true to line, and straight.
 - 2. Take care in attention to details and fitting at intersections and junctures of materials. All joints are to be tight, straight, even, and smooth.
- I. Presence of Engineer/Owner: Do not misconstrue presence of this person or any of his representatives at the site as assuring compliance with Contract Documents.

END OF SECTION

SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Project meetings will be held to accomplish the following:
 - 1. Coordinate the work of the project and resolve any conflicts or construction problems.
 - 2. Establish a sound working relationship between the Contractor, Owner, and Engineer.
 - 3. Establish sound working procedures.
 - 4. Review job progress and quality of work.
 - 5. Expedite the work to completion within the scheduled time limit.

B. Representatives of Contractors, subcontractors, and suppliers attending the meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.02 RELATED SECTIONS:

- A. Related work specified elsewhere:
 - 1. Pre-Bid Conference: Bid Procedures
 - 2. Summary of Work: Instructions to Bidders
 - 3. Submittals: Section 01300

1.03 PRECONSTRUCTION MEETING

- A. The pre-construction meeting will be scheduled within the time frame identified in the General Conditions. The Owner will notify the Contractor as to the time and place of the meeting.
- B. Present at the meeting shall be a representative of the Owner, the Engineer, the Contractor, Project Superintendent, and major subcontractors.
- C. The Contractor must be prepared for a thorough discussion and review, as well as revisions which may be deemed necessary in the opinion of the Owner, of the following:
 - 1. General project information
 - 2. Responsibilities of all involved parties
 - 3. Content of the contract
 - 4. Contractor's schedule
 - 5. Schedule of construction
 - 6. Penalties and Liquidated Damages

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SECTION 01200 - PROJECT MEETINGS

- 7. Subcontracts
- 8. Status of Owner furnished materials
- 9. Change order procedures
- 10. Staking of work
- 11. Project inspection
- 12. Acceptance of work
- 13. Labor standards requirements
- 14. Rights-of-way and easements
- 15. Placement of project signs and posters
- 16. Handling of disputes
- 17. Schedule of Values
- 18. Additional issues as required.

1.04 PROGRESS MEETINGS

- A. Unless otherwise required, progress meetings will be held by the Owner on a weekly basis at a location near the site. Present at these meetings shall be the Contractor, subcontractors and suppliers as required, the Owner and other interested parties, i.e., material suppliers, public utility, etc.
- B. The Contractor must be prepared for a thorough discussion and review, as well as revisions which may be deemed necessary in the opinion of the Owner, of the following:
 - 1. Review work since previous meeting.
 - 2. Make field observations and address any conflicts or problems.
 - 3. Review material delivery schedules
 - 4. Review work progress including any issues that may impact project schedule.
 - 5. Review submittal schedule.
 - 6. Maintenance, testing and quality standards.
 - 7. Review any proposed changes.
 - 8. Review pay requests and procedures.
- C. The Owner shall preside over progress meetings and shall be responsible for taking minutes, recording all significant proceedings and decisions. Copies of minutes shall be distributed within one week after the meeting.

1.05 SCHEDULE

A. The Contractor shall develop and submit an estimated construction progress schedule for the contracted work. The schedule shall be submitted to the Owner at the Pre-Construction Meeting.

SECTION 01200 - PROJECT MEETINGS

- B. Schedule shall be a horizontal bar chart or critical path diagram depicting the first day of each week and sized to be legible and permit notations and future revisions.
- C. Schedule shall be arranged chronologically by the start date of each item, and consider the following:
 - 1. The estimated construction progress schedule shall:
 - a. Show complete sequence of construction by activity.
 - b. Show start and stop dates of each major construction element.
 - c. Show projected percent completion for each major construction element at the first of each month.
 - 2. Through construction, the Contractor shall record progress of each major construction element.
 - 3. Revisions shall show changes relative to previously submitted schedules and updated projections of progress and completion.
- D. The schedule and all subsequent revisions shall be kept at the Contractor's field office with copies provided to the Engineer and Owner.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL

- A. Related Requirements Specified Elsewhere:
 - 1. General Conditions: Section 00700
 - 2. Contract Closeout: Section 01700
- B. Description of Section:
 - 1. Summarize, but not necessarily a complete listing, submittals required of the Conditions of the Contract and the General Requirements.
 - 2. General procedures for specification submittals. Specific requirements for submittals are included in the individual sections.

1.2 GENERAL SUBMITTAL REQUIREMENTS

- A. Identification of Submittals
 - 1. Identify each submittal with Project title and number; clearly define location of submittal in the project and/or its location in the Contract Documents.
 - 2. It is the responsibility of the Contractor to coordinate the work of the various trades involved with the work under this agreement. Contractor shall check all submittals by his subcontractors and mark them with his approval prior to submittal.

1.3 SUBMITTALS - GENERAL

A. General

The listing of submittals is given generally as a checklist for the Contractor's convenience. The Engineer reserves the right to add to this list. This list is not an exhaustive listing of applicable laws, provisions of any law, or requirements of these Contract Documents.

- B. With Bid
 - 1. Qualifications of Contractor and subcontractors
 - 2. Bid Bond
 - 3. Completed Bid Form with all unit costs, signed
 - 4. Proposal
- C. With Award
 - 1. As required by financing agency
 - 2. Performance & Payment Bonds
 - 3. Liability Insurance
 - 4. Agreement
- D. 10 Days after Agreement (or earlier)
 - 1. Construction Schedule (to be available at Pre-Construction Meeting also)
 - 2. Excavation Plan for City/Engineer approval.
 - 3. Schedule of Shop Drawing/Product Literature Submission

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- E. Prior to Commencing Work
 - 1. Statement of Intent to Pay Prevailing Wages
 - 2. Final Project Schedule
- F. If required, 2 Weeks Prior to Dewatering Activities
 - 1. Dewatering Plan
- G. Monthly, After Commencing Construction
 - 1. Application for Payment
- H. Applications for Payment
 - 1. Contractor affidavit stating payment of subcontractors
 - 2. Subcontractor statements of being paid
 - 3. Paid receipts and inventories of materials stored
 - 4. Updated Construction Schedule
- I. Final Application for Payment
 - 1. Record Drawings information
- J. Release of Retained Funds
 - 1. Record and related contract closeout documents
 - 2. Affidavit of Payment (wages, subcontractors, taxes, etc.)

1.4 SUBMITTAL OF SHOP DRAWINGS & SAMPLES

- A. General
 - 1. Refer to the General Provisions. Provide one (1) PDF copy of each submittal.
 - 2. Submission of shop drawings and samples shall be accompanied by one original and one copy of a transmittal letter containing project name, Contractor's name, number of drawings and samples, titles and other pertinent data.
 - 3. Contractor shall maintain a complete material list and file of Engineer reviewed submittals at the project site for use as reference by subcontractors, Owner, Engineer and other interested parties.
- B. Shop Drawings
 - 1. General:
 - a. Shop drawings shall be the same size as the Contract Drawings. A 5" x 5" space shall be provided in the lower right-hand corner of the shop drawings for the review stamp.
 - b. Drawings shall clearly indicated the correct configurations and relative sizes, materials, metal gages, etc. of the various components and the proposed methods of fabrication, required clearances, supports and any other pertinent data.

- 2. Submittals:
 - a. Submit PDF copies of each shop drawing for General, Mechanical and Electrical work, including fabrication, erection, layout and setting drawings and other drawings.
 - b. Engineer will review for conformance to design.
 - c. Contractor is responsible for obtaining and distributing required prints of shop drawings to his subcontractors and material suppliers before and after final review by the Engineer.
 - d. Submittals shall be for equipment and materials which meet or exceed the specifications. Submittals shall be, in the sole judgement of the Engineer, acceptable by the second submittal. The Contractor will be responsible for the cost of review, as solely determined by the Engineer, for all reviews after the second review. Such costs will be deducted from the Contract Amount.
- C. Samples
 - 1. Form of Submittal:

When samples are specified to be submitted, furnish two samples, except as noted herein, of sufficient size to indicate general visual effect or as otherwise specified in the specifications, and in as nearly the form in which the material will appear on the project as practicable; i.e., submit paint on samples of actual material for which they are specified as a finish; one set of reviewed and selected samples will be retained at the Engineer's office.

- 2. Review:
 - a. The Owner will check submitted samples against file samples and project requirements, will make final selection of colors and finishes from samples, and will approve sample for application on the project in conformance with the Specifications.
 - b. Should a submitted sample not be in conformance with the specifications, resubmit sample which conforms with the requirements of Contract Documents.
- D. Catalog Cuts, Data & Brochures
 - 1. Where indicated in the Specifications, catalog cuts and similar data will be accepted in lieu of shop drawings, provided they contain required information and are clearly printed. Submit manufacturer's descriptive data including catalog sheets for materials, equipment and fixtures, showing dimension, performance characteristics and capacities, wiring diagrams and controls, schedules, and other pertinent information as required.
- E. Submittal of Product Certificates
 - 1. Where manufacturer certificates are specified to be furnished attesting to conformance with specification requirements, submit certificates in triplicate prior to acceptance of the Work.

- F. Test Reports
 - 1. Submittal is classified either as "shop drawing" or "product data", depending upon whether the report is uniquely prepared for the project or a standard publication of regular product or workmanship control testing at the point of production (respectively).
 - 2. Refer to individual sections of the Specifications for specific requirements; furnish 3 copies when required.
- G. Warranties
 - 1. Provide warranties, guarantees and/or maintenance agreements where the Specifications require a period longer than the Contractor warranty period.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Inspection and testing laboratory qualifications, duties and responsibilities.
- B. Contractor's quality control requirements.

1.02 RELATED SECTIONS

- A. Related Requirements Specified Elsewhere:
 - 1. Section 01300 Submittals
 - 2. Section 01600 Materials and Equipment
 - 3. Section 01700 Contract Closeout

1.03 APPLICABLE PUBLICATIONS

- A. ASTM E329: Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as used in Construction.
- B. WSDOT and AASHTO: Applicable sections that pertain to compaction testing for subgrade, base and top course, and asphalt testing.
- C. Washington State Building Code and Uniform Building Code Standards.

1.04 DEFINITIONS

- A. Factory Tests: Tests made on various products and component parts prior to shipment to the job site, including but not limited to such items as transformers, boilers, air conditioning equipment, electrical equipment, and precast concrete.
- B. Field Tests: Tests or analyses made at, or in the vicinity of the job site in connection with the actual construction.
- C. Product: The term "product" includes the plural thereof, and means a type or a category of manufactured goods, constructions, installations and natural and processed materials or those associated services whose characterizations, classification or functional performances determination is specified by standards.
- D. Person: The term "person" means associations, companies, corporations, educational institutions, firms, government agencies, at the Federal, State and Local level, partnerships, and societies, as well as divisions thereof, and individuals.
- E. Testing Laboratory: The term "testing laboratory" means and "person", as defined above, whose functions include testing, analyzing, or inspecting "products" as defined above, and/or evaluating the designs or specifications of such "products" according to the requirements of applicable standards.

- F. Certified Test Reports: Certified test reports are reports of tests signed by a qualified professional attesting that tests were performed in accordance with the test method specified, that the test results reported are accurate, and that items tested either meet or fail to meet the stated minimum requirements. These test reports include those performed by Factory Mutual, Underwriter's Laboratories, Inc., and others.
- G. Certified Inspection Reports: Certified inspection reports are those signed by approved inspectors attesting that the items inspected meet the specification requirements other than any exceptions included in the report.
- H. Manufacturer's Certificate of Conformance or Compliance: A certificate signed by an authorized manufacturer's official attesting that the material or equipment delivered meets the specification requirements.

1.05 QUALITY CONTROL REQUIREMENTS

- A. All work under the contract shall be inspected and tested as specified herein. The Contractor shall maintain records of all inspections and tests. Approvals shall be obtained before delivery of materials to the project site.
- B. The Contractor is responsible for scheduling and coordinating all field testing (castin-place concrete, earthwork/trench compaction, pipe pressure testing, potable pipe disinfection, etc.). The contractor is responsible for notifying Owner and coordinating test requests as discussed elsewhere in these documents. The contractor is responsible for the costs of any repeat tests required where failed test results were obtained.
- C. If required, contractor responsibility for quality control testing shall be as follows:
 - 1. Factory Tests: Unless otherwise specified, the Contractor will arrange and pay for factory tests when required by the contract documents.
 - 2. Factory Inspection: Unless otherwise specified, the Contractor will arrange and pay for factory inspection when required by the contract documents.
 - 3. Field Inspection and Tests by the Contractor: Unless otherwise specified, the Contractor shall furnish all equipment, instruments, qualified personnel, and facilities necessary to inspect all work and perform all tests when required by the contract documents. All inspections and tests performed and test results shall be promptly submitted to the Owner.
 - 4. Approval of Testing Laboratories: All laboratory work under this contract shall be performed by a laboratory approved by the Owner.
- D. Laboratory Reports: Reports shall cite the contract requirements, the test or analysis procedures used, the actual test results, and include a statement that the item tested or analyzed conforms or fails to conform to the specifications requirements. All test reports shall be signed by a representative of the testing laboratory authorized to sign certified test reports. The Contractor shall arrange for immediate and direct delivery

of the signed original of all reports, certifications, and other documentation to the Owner.

E. Repeated Tests and Inspections: The Contractor shall repeat tests and inspections after each failed test until passing test results are obtained. The retesting and reinspections shall be performed at no additional cost to the Owner and the Contractor shall reimburse the Owner for their or their representative's, time and expenses due to the failed test results.

1.06 CONTRACTOR'S RESPONSIBILITY

- A. Access. Furnish free access to various parts of the work and assist testing inspection personnel in performance of their duties at no additional cost to the Owner.
- B. Concealed Work. When directed by the Owner, the Contractor shall open for inspection any part of the work which has been concealed. Should the Contractor refuse or neglect such a request, the Owner may employ any other person to open up the same or do so himself. If any part of the work has been concealed in violation of the Owner's instruction or, if on being opened, it is found not to be in accordance with the terms of the Contract Documents the expense of opening and recovering, whether done by the Contractor or not, shall be charged to the Contractor. If the work has been concealed but not in violation of the Owner's instructions and is found to be in accordance with the terms of the terms of the Contract Documents the actual necessary expense of opening and recovering is done by the Contractor it shall be considered as extra work and paid for accordingly.
- C. Notices. The Contractor shall notify the Owner not less than 48 hours, unless otherwise noted, before work requiring inspection is started. The Contractor shall schedule portions of the work requiring inspection and testing, so that the agency's time on the project is continuous and as brief as possible.

1.07 CONSTRUCTION SURVEILLANCE BY OWNER

- A. Appointment. The Owner may appoint an on-site representative for surveillance of any and all portions of the work. Such surveillance may extend to any or all parts of the work, and to the preparation or manufacture of materials to be used.
- B. Authority of On-Site Representative. On-site representative is not authorized to revoke, alter, enlarge or relax the provisions of the Contract Documents, and is placed on the work site to keep the Owner informed as to the progress of the work and the manner in which it is being done. He may also call the attention of the Contractor to any deviations from the plans or specifications. Failure of the Owner or his representative to call the attention of the Contractor to faulty work or deviation from the Contract Documents shall not constitute acceptance of said work. The representative is not authorized to approve or accept any portions of the work or to

issue instructions contrary to the Contract Documents. The representative will exercise only such additional authority as may be specially delegated to him by the Owner, notice of which will be given in writing to the Contractor.

1.08 DEFECTIVE WORK

A. Remove and replace any work found defective or not complying with requirements of Contract Documents, at no additional cost to Owner. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejection when such defect is discovered, nor shall it obligate the Owner for final acceptance.

END OF SECTION

SECTION 01500 - TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 DESCRIPTION OF SECTION

- A. Temporary utilities and miscellaneous temporary facilities required during construction.
- B. Providing Temporary Facilities:
 - 1. Provide temporary construction, devices, equipment, power and convenience utilities for use, convenience and safety of personnel engaged in the work of the contract.
 - 2. Provide temporary utilities and access during construction to existing home owners at all times.

1.02 RELATED SECTIONS

- A. Related Requirements Specified Elsewhere:
 - 1. Section 01700 Contract Closeout:
 - 2. Section 02370 Erosion Control

1.03 REGULATIONS

- A. Health and safety: Conform with "Safety Standards for Construction Work, Chapter 296-155 WAC" by State of Washington Department of Labor and Industries.
- B. Construction codes: Comply with regulatory construction codes as applicable.
- C. Washington State Department of Health: Comply with all applicable codes for temporary sewer and water service.

1.04 TEMPORARY FACILITIES

- A. Temporary Electrical Light & Power:
 - 1. Provide all temporary lighting and power, including pole or poles, transformer if required, for construction purposes.
 - 2. Provide temporary connections to closest utility source.
 - 3. Provide all required extension cords, lighting outlets and power outlets (grounding type), lamps, and other required equipment and accessories necessary only for adequate temporary lighting and power for construction purposes.
 - 4. Remove temporary lighting and power equipment and their connections at completion of the work or sooner if approved or directed.

SECTION 01500 - TEMPORARY FACILITIES

- B. Water for Construction Purposes (if needed):
 - 1. The Contractor is responsible for obtaining and providing water as required for the work.
 - 2. If agreed, Contractor to make temporary connections with metered connection with backflow preventers to utility piping as required for the work and provide meter, piping, hoses, nozzles and other accessories required.
 - 3. At completion, or before as directed, disconnect temporary connections and piping and remove from site.
 - 4. Provide secure system to prevent unauthorized use during Contractor's absence.
- C. Sanitary Facilities
 - 1. Contractor shall provide sanitary facilities in accordance with WISHA and Health Department requirements.
- D. Drinking water:
 - 1. Provide from proven safe source, for all those connected with the work in accordance with WISHA and Health Department requirements.
 - 2. Pipe and transport in such manner as to keep it clean and fresh; serve in single containers or provide sanitary drinking fountains.
- E. Residential Access
 - 1. Provide access to residential homes at all times.
 - 2. Provide access to the area at all times for emergency and service vehicles.
- F. City Access
 - 1. Provide access to City Operations Staff at all times, in particular if repairs are needed.

1.05 MISCELLANEOUS PROVISIONS

- A. Cleaning Up:
 - 1. General: The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. Clean up work areas as required at the end of each day's work.
 - 2. Trash removal: Remove all trash and debris from site and dispose of at Contractor's expense. Allow no debris, broken or open cartons, or other refuse to collect in the project or around it; allow no inflammable or hazardous materials to be stored on the site without approved protection precautions and procedures.
 - 3. Street and parking area cleaning: Immediately clean all spilled material which results from the work of this contract and waste hauling operations; use

SECTION 01500 - TEMPORARY FACILITIES

motorized equipment and hand labor as required. Remove from streets, driveways or parking areas in time to prevent such materials from affecting traffic or clogging street drainage system; clean any drains contaminated.

- B. Noise Control: During the period of construction, provide satisfactory means, as approved by the Owner, of controlling noise originating from construction work and equipment.
- C. Dust Control: During the period of construction, provide satisfactory means of controlling dust and dirt, including application of water to control dust but not cause erosion.
- D. Temporary Erosion and Sedimentation Control: The Contractor shall provide sedimentation and erosion control.

1.06 DEBRIS CONTROL

- A. Cleaning during construction: Maintain all areas free of extraneous debris.
- B. Prevent accumulation of debris at construction site, storage and parking areas, and along access roads and haul routes.
- C. Keep storm sewers free of debris or extraneous materials.
- D. Offsite Cleanup: Prevent any leaking of materials from the vehicle used to haul offsite and clean haul routes *daily*.

1.07 POLLUTION CONTROL

- A. Provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere. Allow no discharge of noxious substances from construction operations.
- B. Provide equipment and personnel; perform emergency measures required to contain any spillages. Remove contaminated soils and liquids.
- C. Take special measures to prevent harmful substances from entering public waters.
- D. Provide systems for control of atmospheric pollutants in accordance with Federal/State/Local published rules and regulations.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF SECTION

- A. General requirements for providing transportation, handling, storage, and protection of materials and equipment.
- B. Contractor's options in selection of products and manufacturers, and procedures for consideration of proposed substitutions.
- C. All material and equipment incorporated into the work:
 - 1. Shall be new, free from defects and of equal or superior quality as specified herein and on the drawings.
 - 2. Shall be the products of established manufacturers regularly engaged in the fabrication of such equipment.
 - 3. Shall comply with the size, type and quality specified and shall be designed for use in the particular application.
 - 4. Shall be designed, fabricated and assembled in accordance with standard engineering and shop practice.
 - 5. Shall be complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and for intended use and effect.

1.02 RELATED SECTIONS

- A. Related Requirements Specified Elsewhere:
 - 3. Section 01300 Submittals:
 - 4. Section 01400 Quality Control:

1.03 MANUFACTURER'S INSTRUCTIONS

- A. Installation of all materials and equipment shall comply with manufacturer's printed instructions. The Contractor shall have the responsibility to distribute copies of such instructions to all parties involved in the installation, including the Owner. One complete set of instructions shall be maintained on the job site during installation and until completion.
- B. All materials and equipment shall be handled, installed, connected, cleaned, conditioned and adjusted in strict accordance with such instructions and in conformance with the specified requirements. The Owner should be immediately notified should job conditions or specified requirements conflict with the manufacturer's instructions.

1.04 TRANSPORTATION AND HANDLING

- A. All materials and equipment shall be transported and handled in such a manner as to prevent any damage.
- B. Deliveries of products shall be in accordance with construction schedules as to cause no delay in the work or to conflict with work and conditions at the site.
- C. Products shall be delivered in the manufacturer's original containers with identifying labels intact and legible. Where materials are specified to conform to ASTM, Federal or other reference specifications, the materials shall be delivered to the site bearing the manufacturer's label stating that the materials meet the requirement of such referenced specifications.
- D. Products shall be inspected immediately upon delivery to assure compliance with specified requirements and approved submittals and that products are properly protected and undamaged.
- E. The Contractor shall provide personnel and equipment to receive and unload products delivered to the site. No products shall be delivered to the site unless such forces are available.

1.05 STORAGE AND PROTECTION

- A. All products shall be stored in strict accordance with the manufacturer's instructions, with seals and labels intact and legible.
- B. All products shall be arranged in a neat order and protected from damage from the weather, traffic and construction operations. Easy access for periodic inspection shall be provided.

1.06 PRODUCTS AND SUBSTITUTIONS

- A. Products:
 - 1. Where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar application.
 - 2. Where additional amounts of a product, by nature of its application, are likely to be needed by Owner at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to Owner at such later date.
 - 3. For Products specified only by a reference standard, the Contractor may select any product meeting that standard.

- 4. Where the make or name of a material or equipment is specified in the written documents or on the drawings, it is to establish a quality standard in that particular field of manufacture. Requests for substitutions may be submitted only if the specification states "or equal", otherwise the named material or equipment must be supplied. Requests for substitutions of materials of other makes or names must be submitted to the Owner and must receive favorable written response from the Owner prior to ordering, furnishing or installing the proposed substitution item.
- B. Requests for Substitutions:
 - 1. For a period of thirty (30) days after the Contract Date, the Owner will consider written requests from the Contractor for substitution of Products.
 - 2. Requests for each Product substitution shall be submitted separately. Requests for substitutions will be received and considered when revisions to contract documents are not required, and the product or material is in keeping with the general intent of the Contract Documents.
 - 3. A request for substitution by the Contractor constitutes a representation that the Contractor:
 - a. Will provide the same warranties or bonds for the substituted item as for the Product specified.
 - b. Will coordinate the installation of an accepted substitution into the work and make all other changes as required to make the work complete in all respects with no increase to the contract price.
 - 4. Submit six (6) copies of requests for substitutions, fully identified for Product or method being replaced by substitution, including related specification section and drawing number(s), and fully documented to show compliance with requirements for substitutions.
 - 5. Include product data/drawings, description of methods, samples where applicable, Contractor's detailed comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected work, cost information or proposal, and Contractor's statement to the effect that proposed substitution will result in overall work equal-to-or-better-than work originally indicated.
 - 6. The contractor agrees to pay all Engineering costs accruing as a result of checking and/or redesign due to substitutions. These costs will be charged to the Contractor and will be considered incidental to the contract price.
- C. Owner's Review
 - 1. Within two weeks of receipt of request, or within one week of receipt of requested additional information or documentation (whichever is later), the Owner will notify the Contractor of either his acceptance or his rejection of the proposed substitution. Rejection will include statement of the reasons for rejection (non-compliance with the requirements for requested substitutions, or other reasons as detailed.)

END OF SECTION

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WASHINGTON

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 GENERAL

- A. Related Requirements Specified Elsewhere:
 - 1. Section 01300 Submittals
- B. Description of Section:
 - 1. Specific administrative procedures, and closeout submittals at substantial completion and at final acceptance of the work.
 - 2. Requirements for record documents.
 - 3. The listing of procedures and submittals is given generally as a checklist for the Contractor's convenience. The Owner reserves the right to add to this list. This list is not an exhaustive listing of either all applicable laws or of the provisions of any law.
 - 4. The Contractor shall comply with all contract requirements prior to contract closeout. Specific administrative procedures and closeout submittals at substantial completion and at final acceptance of the work.

1.02 SUBSTANTIAL COMPLETION

- A. Prior to submitting for substantial completion, the Contractor shall have:
 - 1. Delivered tools, spare parts, extra stocks of materials, and similar physical items to Owner.
 - 2. Made final changeover of locks and transmit keys to Owner, if applicable.
 - 3. Completed testing of systems, and performed instructions for Owner's operating/maintenance personnel. Discontinued (or change over) and removed from project site temporary facilities and services.
 - 4. Provide record information to the owner of the as-constructed facilities.
 - 5. Completed final cleaning up requirements, including but not limited to, touch-up of marred surfaces, grading, installation of handrails, etc.
- B. When the Contractor considers the work to be substantially complete, he shall submit to the Owner:
 - 1. Written notice that the work, or designated portion thereof, is substantially complete. (The term "substantially complete" shall be defined as in accordance with the WSDOT General Specifications and also as defined herein).
 - 2. List of items to be completed or corrected and reasons for being incomplete. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents.
 - 3. Progress payment request coincident with or first following date claimed, show either 100% completion for portion of work claimed as "substantially complete", or list incomplete items and the value of the incomplete work.

SECTION 01700 - CONTRACT CLOSEOUT

- 4. Submit statement showing accounting of changes to the Contract Sum.
- 5. Specific warranties, workmanship/maintenance bonds, maintenance agreements, final certification and similar documents.
- 6. Obtain and submit releases enabling Owner's full and unrestricted use of the work and access to services and utilities, including (where required) certificate of occupancy permits, operating certificates, and similar releases.
- 7. Record (as-built) drawings, project manual, and similar final record information.
- C. Upon receipt of Contractor's request, the Owner will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, Owner will either prepare letter of substantial completion, or advise Contractor of work which must be performed prior to issuance of letter; and repeat inspection when requested and assured that work has been substantially completed. Results of completed inspection will form the initial "punch list" for final acceptance.
- D. When the Engineer, on the basis of an inspection, concurs that the work is substantially complete, he will:
 - 1. Prepare and deliver to the Contractor a letter of Substantial Completion accompanied by the Contractor's list of items to be completed or corrected. The letter of Substantial Completion shall state the responsibilities of the Contractor for security, maintenance, damages to the work and insurance and shall fix the time within which the Contractor shall complete the items listed therein. Warranties and guarantees required by the Contract Documents shall commence on the Date of final acceptance by the City.
 - 2. The letter of Substantial Completion is submitted to the Contractor for their written acceptance of their responsibilities as stated therein.

1.03 FINAL INSPECTION

- A. When the Contractor considers the work to be complete, he shall submit written notice to the Owner that the work has been completed and inspected in compliance with the Contract Documents including punchlist items, and equipment and systems have been tested and are operational; and requesting a contract completion inspection.
- B. When the Engineer, on the basis of an inspection, concurs that the work is acceptable under the Contract Documents, he will notify the Contractor in writing and request the Contractor to provide remaining submittals.
- C. Should the Engineer determine that the work is not acceptable under the Contract Documents:
 - 1. The Engineer will promptly notify the Contractor in writing giving the reasons therefor.
SECTION 01700 - CONTRACT CLOSEOUT

2. The Contractor shall remedy the deficiencies in the work and submit a new written notice for final inspection to the Owner.

1.04 FINAL PAYMENT

- A. When the Contractor has satisfied all requirements of this section and all other conditions of the Contract Documents, the Contractor may submit a final Application for Payment. Should the Owner determine the Work acceptable under the Contract Documents and the Agreement fully performed, he will promptly issue a final Certificate for Payment stating that to the best of his knowledge, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance due the Contractor, and as noted in the final certificate, is due and payable.
- B. The accumulated retainage shall not be paid until the Contractor submits to the Owner:
 - 1. Affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the Owner might in any way be responsible, have been paid or otherwise settled.
 - 2. Release of Lien. One will be required from each lien holder who has duly filed a notice of claim with the Owner. If any liens remain unsatisfied after the expiration of the statutory lien period, the Contractor shall refund the Owner all amounts that the Owner may be compelled to pay in discharging such lien including all costs and reasonable attorney's fees.
 - 3. State Department of Revenue form that all taxes have been paid.
 - 4. State Department of Labor and Industry affidavit of wages paid.
 - 5. State Department of Employment Security Contractor release.
- C. The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:
 - 1. Unsettled liens or disputes.
 - 2. Faulty or defective work appearing after Substantial Completion under the project guarantee and equipment warranty period.
 - 3. Failure of the work to comply with the requirements of the Contract Documents.
 - 4. Terms of any special warranties required by the Contract Documents.

The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

1.05 FIELD TESTS AND ADJUSTMENTS

A. All installations and equipment, as required under the separate section headings, as applicable, shall be tested by the Contractor to the satisfaction of the Engineer before

SECTION 01700 - CONTRACT CLOSEOUT

any facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned and connected. Any changes, adjustments or replacements required to make the equipment operate as specified shall be performed by the Contractor as part of the Work.

1.06 RECORD (AS-BUILT) DRAWING INFORMATION

- A. During the construction period, the Contractor shall maintain a complete set of prints for the sole purpose of maintaining a day-by-day record of installed information. This information shall include, but not limited to: the size and location of all concealed or underground piping, conduit, and ductwork; all approved deviations from the specifications and drawings; the location of any visible objects relocated due to interference's or requested relocations submitted and approved on shop drawings. Such relocations shall be dimensioned.
- B. Addenda, bulletins, field orders, and change orders shall be posted and referenced in the record set of prints.

1.07 RECORD PROJECT MANUALS

- A. Maintain one copy of the Contract Documents, including addenda, change orders and similar modifications issued in printed form during construction, and mark-up variations (of substance) in actual work in comparison with text of the Project Manual and modifications as issued.
- B. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Not related record drawing information and product data, where applicable.

1.09 MISCELLANEOUS RECORD SUBMITTALS

Refer to other sections of these specifications for requirements of miscellaneous recordkeeping and submittals in connection with actual performance of the work. Immediately prior to date(s) of substantial completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to Engineer for Owner's records.

1.10 FINAL CLEAN-UP

A. At the completion of the work, the Contractor shall leave the premises in a neat and unobstructed condition, ready for Owner occupancy. The buildings shall be left in a dust-free condition and all equipment and materials in perfect repair and adjustment.

SECTION 01700 - CONTRACT CLOSEOUT

B. After all trades have completed their work and just before final acceptance and occupancy by owner, thoroughly clean all surfaces of project. Clean lighting fixtures and electrical equipment, including washing and polishing lenses inside and out. Wash and polish all exposed metal surfaces. Broom clean exterior paved areas and rake clear other surfaces of the grounds. All waste building materials, pipe, etc. shall be removed from the site and disposed of.

END OF SECTION

SECTION 02050 - DEMOLITION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Related Work Specified Elsewhere
 - 1. Summary of Work: Section 01010
- B. Description of System: The work covered by this section includes the furnishing of all labor, equipment, and materials necessary for the demolition, removal, rehabilitation and equipment salvage of all construction as specified herein and as shown on the drawings.

1.02 JOB CONDITIONS

- A. The major items of demolition work are at the existing Reservoir No.1, as described herein.
- B. All removed equipment, materials, and debris, unless otherwise noted or requested by the Owner, shall become the property of the Contractor.
- C. Protection: Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities, and people and livestock.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.01 DEMOLITION

- A. Pollution Controls:
 - 1. Use water sprinkling, temporary enclosures, and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level.
 - 2. Comply with governing regulations pertaining to environmental protection.

B. Removal Requirements:

Provide complete removal and disposal of all structures identified for demolition. All pipes connected to abandoned structures are to be plugged/grouted in an approved manner, preventing any potential water and/or sewer leaks. Salvage items as directed by City officials.

C. Sequence of Demolition:

SECTION 02050 - DEMOLITION

Proposed materials and equipment is to be purchased and on-hand, prior to removal of specified work. Contractor is to coordinate removal/demolition with City operations (a minimum of 1 week) prior to all removal/demolition work.

- D. Structures or Items to be Removed (demolished):
 - 1. Existing piping, fittings, or accessories for the modified overflow piping riser and new discharge manhole structure. Salvage or dispose of items as directed by City.
 - 2. Existing gravel surfacing, and any adjacent asphalt pavement or concrete curb as required.
 - 3. Existing valve box for the reservoir drain line within the anticipated excavation limits for the new work.

3.02 DISPOSAL OF DEMOLISHED MATERIALS

- A. General. Remove from the site debris, rubbish, and other materials resulting from demolition operations. Burning of removed materials from demolished structures will not be permitted on the site. Comply with all federal, state and local regulations regarding hauling and disposal.
- B. Removal. Transport materials removed from demolished structures and dispose of at a legal disposal site.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Description of Work: The work covered by this section consists of excavating, hauling and disposal of excavated material, backfilling, placing, compacting and final site grading as specified herein and as shown on the drawings.

1.02 QUALITY ASSURANCE

All field inspections and tests shall be coordinated and called in by the Contractor; however, compaction tests and concrete strength tests will be performed by the City's independent testing laboratory and paid for by the City. Testing lab is to be instructed to forward invoices to the City. In addition, the Contractor shall allow the Owner/Engineer's representative to perform additional QA/QC testing and shall make right to the satisfaction of the Engineer all work found to be deficient in meeting the specifications. If the subgrade or fills which have been placed are below the specified density, additional compaction and testing will be required until satisfactory results are obtained. QA/QC testing and inspection by the Owner/Engineer does not relieve the Contractor from the responsibility to provide all adequate quality control measures and all testing to ensure the quality of his own work.

For non-structural fill in landscape areas, the Contractor may re-use suitable on site material. Compaction of non-structural (and non-vehicle) landscape areas to be compacted to 85% density (minimum). If Contractor desires to use on-site material for structural fill, the Contractor must first use an independent soils testing lab to measure ASTM D-1557 Methods A through D dry density. The Contractor will perform compaction tests (ASTM 1557) to determine material moisture/density curves. All material samples will be taken at the time and location as agreed by the Engineer and Contractor. The Contractor shall give the Owner/Engineer ample time to perform additional QA/QC testing (if desired) of Contractor stockpiled onsite soil tested – at least 5 working days prior to installation of any embankment or backfill using onsite soils.

The Contractor will coordinate and schedule one in place density measurement per every 100 LF of roadway and per every 1,000 square feet of native subgrade prepared and compacted prior to placement of Structural Fill. The Contractor will perform one in place density measurement per every 500 cubic yards of Structural Fill placed. The Engineer may increase the frequency if the properties of the soils being placed change or the equipment or procedures used by the Contractor for compacting the soil change. In place density will be measured using ASTM D-1556 or ASTM D2922 and D3017 (nuclear density) test methods. The Contractor shall give the Owner/Engineer ample time to perform additional QA/QC testing (if desired) of the subgrade – at least 24 hours advance notice and a minimum of 4 hours for completion of testing after compaction is completed on 100 LF of roadway or 1,000 square feet of native subgrade. The Contractor shall give the Owner/Engineer ample time to perform additional QA/QC structural fill testing (if desired) – at least 24 hours

advance notice and a minimum of 4 hours for completion of testing after compaction is completed on a lift.

The Contractor shall pay for any additional testing that he deems necessary to provide quality assurance for his work or to corroborate or protest the Owner's test results.

1.03 JOB CONDITIONS

- A. Existing Conditions:
 - 1. The Contractor shall examine the site before commencing work and shall make his own deductions and conclusions as to the nature of materials to be encountered and difficulties anticipated.
 - 2. Contractors shall make whatever investigations as are necessary to determine what measures are necessary to successfully complete the work in accordance with the Contract. The Contractor shall include in the Contract price all work necessary to perform the tasks required to complete the Work as indicated on the Plans and specified herein: including, but not limited to, sheeting, shoring, dewatering, stabilizing slopes, and any other work of temporary nature not a part of the permanent finished structure, lines, and grade.
- B. Subsurface Conditions
 - 1. Groundwater may be encountered, and dewatering measures will be required for construction activities if the presence of groundwater is discovered. Contractor to plan accordingly.
 - 2. Boulders, buried or otherwise, may be found in the project area, and boulder excavation is considered incidental, if needed.

PART 2 - PRODUCTS

2.01 UNSUITABLE FILL MATERIAL

A. Unsuitable materials shall be those defined as containing volcanic ash, topsoil, vegetation matter, sludge, peat, organic clays and silts, sod, mulch, rubbish, and materials which are excessively fine or moist not allowing adequate compaction. The on-site soils shall be evaluated for suitability for reuse as structural fill material. However, the native soils may be used in non-structural areas when placed at or near optimum moisture contents as determined by ASTM D1557. The Contractor is to be prepared to address over-optimum moisture content soils.

2.02 STRUCTURAL FILL MATERIAL

A. See section 2.03 PROCESSED MATERIAL. All structural fill is to be imported material per WSDOT specifications.

2.03 PROCESSED MATERIAL.

- A. CRUSHED SURFACING TOP OR BASE COURSE. Per WSDOT 9-03.9(3).
- B. GRAVEL BASE. Per WSDOT 9-03.10.
- C. BANK RUN GRAVEL. Per WSDOT 9-03.19.
- D. GRAVEL BACKFILL FOR FOUNDATIONS. Per WSDOT 9-03.12(1)A Class A.
- E. GRAVEL BACKFILL FOR PIPE ZONE BEDDING. Per WSDOT 9-03.12(3).

PART 3 - EXECUTION

- 3.01 GENERAL
 - A. Weather Limitations. Construction shall progress only when weather conditions will not adversely affect the quality of the finished work. Soils that are not compactable due to saturation, shall be aerated or removed and replaced with a compactable material. Contractor shall bear all costs for rework caused by weather conditions.
 - B. Control of Water. The Contractor shall furnish, install and operate all necessary machinery and equipment necessary to keep excavations and earth embankments reasonably free from water during construction. Excavation shall be kept dry and water shall be disposed of so as not to cause injury to public, damages to adjacent property or to cause a nuisance or menace to the public. Water shall be removed to prevent softening of foundation bottoms, undercutting of foundations causing changes in soil conditions that will be detrimental to stability of subgrades and foundations. The Contractor shall establish and maintain positive drainage away from excavations via temporary drainage ditches and other diversions outside of excavation's limits to convey water from excavations to natural drainage courses. In addition, Contractor is to provide a dewatering plan, if determined that dewatering is necessary, with provisions to prevent contaminants (silt, construction debris, etc.) from entering local waterways. Dewatering work may be needed during the 4' diameter manhole excavation work. Contractor to Plan accordingly.
 - C. Water for Compaction. Contractor shall provide all water as necessary to moisturecondition Structural Fill material to achieve required compaction densities.

- D. Excavation for Structures.
 - 1. Conform to elevations and dimensions shown with a tolerance of plus or minus 0.10 feet and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services and other construction.
 - 2. In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade prior to placement of concrete reinforcement. Trim bottoms to required lines and grade to provide solid base for structure.
 - 3. Gravel Backfill for Foundations shall be placed under all concrete slabs, footings, and foundations to a minimum depth of six (6) inches, unless otherwise indicated, on exposed, undisturbed subgrade immediately upon completion of excavation.
- E. Disposal of Excavated Materials. The Contractor is responsible for ultimate disposal of all excavated material and such disposal shall be incidental to other work. See grading and erosion control plans.
- F. Over Excavation. Excavation of materials beyond the indicated subgrade elevations shall be backfilled with Structural Fill and compacted to provide a firm and stable base at the desired elevation. Work required to remedy over excavation not authorized by the Owner or the Engineer shall be at the Contractor's expense.
- G. Stability of Excavations. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace, as required, to prevent cave-ins. Remove prior to backfilling unless otherwise specified.
- H. Stockpile excavated materials classified as suitable material where directed, until required for fill. Place, grade, and shape stockpiles for proper drainage and erosion control as approved by the Owner.

3.02 SITE PREPARATION

- A. Clear, strip, and grub surface and subsurface deleterious matter and all roots greater than 1/2-inch in diameter. Vegetation and trees shall be disposed of offsite at a dump site secured by the Contractor. Remove all topsoil within the limits of proposed improvements and structures. Topsoil may be stockpiled on site at the designated stockpile sites shown on the plans or coordinated with the Owner. When finished with stockpile areas, restore to final grade and restore ground surface to preconstruction conditions per the plans and specifications.
- B. Cleared surface crushed gravel material that is suitable for re-use may be stockpiled on site at the designated stockpile sites shown on the plans or coordinated with the Owner. When finished with stockpile areas, restore to final grade and restore ground surface to pre-construction conditions per the plans and specifications.

- C. Prior to placement of Structural Fill under buildings, structures, and roadways embankments, scarify, moisture-condition, and compact subgrade soils to at least 95% of the maximum dry density (MDD) based on ASTM D-1557 if not already at 95% of the MDD. Subgrade preparation per WSDOT Standard Specification section 2-06.
- D. Benching subgrade. Slopes to be filled, which are 5:1 or steeper, shall be benched before receiving structural fill. Each bench shall be level in all horizontal directions and shall be at least 8 feet wide (perpendicular to slope contours).

3.03 STRUCTURAL FILL

- A. Structural Fill shall be placed in lifts not exceeding 6-inches in loose thickness before compaction. Structural Fill shall be compacted to 95% maximum dry density (MDD) based on ASTM D-1557.
- B. Where material must be moisture-conditioned before compaction, uniformly apply water to surface of subgrade or to layer of material, to prevent free water appearing on surface during or subsequent to compaction operations. Remove and replace, or scarify and air dry soil that is too wet to permit compaction to required density. Material that has been removed due to excessive moisture may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to satisfactory value.
- C. Maintain Structural Fill areas as a continuous working surface throughout the project. Fill surfaces are to be graded smooth and sealed or covered as appropriate at the end of each work day to prevent unacceptable wetting. After periods of rain, remove any soft material prior to placement of additional fill.
- D. Provide cut and fill slopes reasonably true to line and grade with a tolerance of plus or minus 3 inches.

3.04 BACKFILL OF STRUCTURES

A. Structure backfilling shall comply with the most recent version of WSDOT Standard Specifications, Section 2-09.3(1)E *Backfilling* and per the Plans.

3.05 GRADING

A. General. Uniformly grade areas within limits of project site including adjacent transition areas. Smooth finished surfaces within specified tolerances, compact with uniform levels or slopes between points where finish elevations are shown or between points where finish elevations are shown or between such points and existing grades.

3.06 DISPOSAL OF UNSUITABLE FILL MATERIAL

- A. Excavated unsuitable material shall be disposed of off site.
- B. All material which is hauled off of job site shall be documented with receipts, documenting weight (or volume agreed upon with Engineer for truck counts) and certification that it was transferred to a legal fill site. Receipts to be provided to Owner.

END OF SECTION

SECTION 02260 - EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF SECTION

- A. This section includes all work related to providing temporary support and protection for excavations to safeguard public health, protect workers, protect existing improvements and insure the safe prosecution of the work. The Contractor may elect to employ any combination of shoring, tunneling, boring, sliding trench shield, or other means to complete the work.
- B. The Contractor shall submit an Excavation Plan to the City/Engineer for review and approval prior to beginning work.
- C. The Contractor shall provide all equipment, material, labor and design services necessary to develop and maintain adequate excavation support and protection. The Contractor shall determine the need for and adequacy of excavation support and protection requirements.
- D. The Contractor shall be solely responsible for any excavation support and protection or trench safety systems employed on the project. In no way shall the Owner assume any responsibility for the protection of life or property implied by the use of such systems.

1.02 RELATED SECTIONS:

- A. Related work specified elsewhere:
 - 1. Section 02200 Earthwork
 - 2. Section 02315 Trench Excavation and Backfill

1.03 REFERENCE STANDARDS

A. 29 CFR 1926 Subpart P - Excavations

1.04 LAWS AND REGULATIONS

- A. The Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither the Owner nor Engineer or their staff will be responsible for monitoring Contractor's compliance with Laws and Regulations.
- B. All structure excavation, trenching, and shoring shall be performed in strict compliance with 29 CFR 1926 Subpart P Excavations as well as all other applicable local, State, Contracting Agency, and Federal laws and regulations."

SECTION 02260 - EXCAVATION SUPPORT AND PROTECTION

C. The Contractor is to provide a stamped shoring plan prior to beginning excavation work in areas where required. OSHA standards are to be followed at all times, and minimizing risk is a priority.

1.05 MEASUREMENT AND PAYMENT

A. The costs for Excavation Support and Protection shall be included in the lump sum price for Trench Safety and Shoring. No extra payment will be made unless the quantity of trenching changes as direct result of a change in the scope of work by an approved change order.

PART 2 - PRODUCT

This Section Not Applicable.

PART 3 - EXECUTION

3.01 METHODS

- A. The Contractor shall make the determination as to the most effective means for ensuring excavation support and protection. This may include, but is not limited to, the following:
 - 1. The Contractor may dig open pits or perform extra excavation (at no expense to the Owner) without shoring or cofferdams. Given site conditions and proximity to other critical facilities, this is not expected to be a reasonable approach.
 - 2. Use of shoring or cofferdams if in compliance.
 - 3. Specific requirements related to working in trenches shall conform with WSDOT *Standard Specifications*
- B. Any damage to existing or proposed improvements resulting from the Contractor's excavation support and protection system shall be repaired and included as a part of this pay item.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Work within this section includes trenching, bedding, backfilling, compacting and disposal of excess materials as required for installation of all underground utilities, conduit and other miscellaneous structures.
- B. The Contractor shall supply all material, equipment and labor necessary to complete the excavation and backfill operations necessary to install the underground utilities depicted on the plans.

1.02 RELATED SECTIONS

- A. Related work specified elsewhere:
 - 1. Section 02200 Earthwork
 - 2. Section 02260 Excavation Support and Protection
 - 3. Section 02500 Piping and Fittings

1.03 REFERENCE SPECIFICATIONS

A. The most recent version of the WSDOT *Standard Specifications*.

1.04 QUALITY ASSURANCE

- A. The Contractor shall comply with the requirements of all applicable regulatory agencies having jurisdiction over this work including 29 CFR PART 1926 -- SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.
- B. There shall be a minimum of one in place density measurement per every 100 LF of trench. The Engineer may increase or decrease the frequency if the properties of the soils being placed change or the equipment or procedures used by the Contractor for compacting the soil change. In place density shall be measured using ASTM D-1556 or ASTM D2922 and D3017 (nuclear density) test methods. The Owner will subcontract testing work through a certified testing lab, and Contractor is required to coordinate with testing lab as work progresses.
- C. Material sample and proctor test results shall be provided in advance for any proposed fill material not certified to be compliant with WSDOT Standard Specs.

1.05 JOB CONDITIONS

A. The Contractor shall provide protection of existing utilities affected by the work and make every effort to minimize disruptions to all utility services.

- B. If, during the course of construction, it is anticipated that excavation will interrupt traffic or parking areas for longer than 10 to 15 minutes the Contractor must provide advance notice to the Owner. For longer intervals or complete shut-downs, the Owner requires 48 hour advance notice. This advance notice allows time to provide the city notification, obtain approval and deliver community notices in advance of the route delays or re-routes. In the event of such road closures, the Contractor shall be solely responsible for all traffic control measures including but not limited to flagging, barricades and cones.
- C. If applicable, the Contractor shall provide a traffic control plan per WSDOT requirements. Traffic control plan to be submitted for review and acceptance prior to commencing work. See Section 01300 Submittals.
- D. Trenches shall be closed or covered with steel plates at the end of each work day.

1.06 SUBMITTALS

- A. The Contractor shall furnish the following submittals as part of completing the work associated with this section:
 - 1. Location of disposal sites for excess excavated material.
 - 2. Gradation test results for imported foundation, bedding and backfill material.
 - 3. Proctor tests for proposed imported materials which are not identified as approved for use by WSDOT.

PART 2 - PRODUCTS

2.01 FOUNDATION SUPPORT

A. Where the base of the trench or excavation lacks the stability to support the structure, unsuitable material shall be replaced with aggregate complying with the most recent version of the WSDOT Standard Specifications, Section 9-03.12(1) — *Gravel Backfill for Foundations, Class A.*

2.02 PIPE ZONE BEDDING

A. Pipe zone bedding material for all pipe shall comply with the most recent version of the WSDOT Standard Specifications, Section 9-03.12(3) — *Gravel Backfill for Pipe Zone Bedding*.

2.03 PIPE ZONE BACKFILL

A. Pipe zone backfill material for all pipe shall comply with the most recent version of the WSDOT Standard Specifications, Section 9-03.12(3) — *Gravel Backfill for Pipe Zone Bedding*, except where otherwise specified in the plans.

2.04 TRENCH BACKFILL

- A. All on-site backfill for trenches outside of vehicular traveled areas (paved or not) may be select (approved by the Inspector) native coarse sandy gravels free of debris, vegetation, trash, wood and rocks larger than 3-inches in the largest dimension.
- B. All backfill for trenches within vehicular traveled areas (paved or not) shall be Bank Run Gravel per WSDOT Standard Specifications, Section 9-03.19.

2.05 STRUCTURE BACKFILL

- A. All on-site backfill for structures outside of vehicular traveled areas (paved or not) may be select (approved by the Inspector) native coarse sandy gravels free of debris, vegetation, trash, wood and rocks larger than 3-inches in the largest dimension.
- B. All backfill for structures within vehicular traveled areas (paved or not) areas shall be Gravel Base per WSDOT Standard Specifications, Section 9-03.10.

PART 3 - EXECUTION

3.01 UTILITY LOCATION

- A. The Contractor shall make every effort to identify the location of all existing underground utilities. <u>The Reservoir No. 1 Assessor Parcel Number (APN) is</u> <u>3902184230100000</u>. The Contractor shall provide 48-hours in advance of any excavation within road rights-of-way, the Contractor shall contact the appropriate utility locate service(s) as follows:
 - The utility locates for water, sewer, and "customer owned" utilities are to be performed by a private locate service (such as Applied Professional Services at 425-888-2590 or Central Locating Services at 425-489-4254).
 - The PSE electrical main lines, CNG gas lines, and Phone line utility locates are through Call Before You Dig at 1-800-424-5555.

3.02 TRENCH EXCAVATION

- A. Trench excavation shall conform with the most recent version of the WSDOT Standard Specifications. Special attention shall be paid to the requirements for trench safety noting that all work shall be performed in strict compliance with 29 CFR 1926.
- B. The Contractor shall be solely responsible for any shoring, cofferdams or trench safety systems employed on the project. In no way shall the Owner or Engineer assume any responsibility for trench safety or the protection of life or property implied by the use of trench safety systems.
- C. The width of excavation for utility trenches shall be in accordance with WSDOT Standard Specification. No additional payment will be made for extra excavation required due to poor soil conditions.
- D. See Section 02200 Earthwork for excess material disposal requirements.
- E. The Contractor shall provide and operate all material, equipment and labor necessary to keep excavations and earth embankments free from water during construction. Dewatering shall prevent weakening foundations, undercutting trench walls, or otherwise affecting the stability of sub-grades and foundations. The Contractor shall establish and maintain positive drainage away from excavations to prevent surface water from entering excavations. Water shall be disposed of in a manner which prevents injury to public or damage to property.
- F. The Contractor shall backfill or otherwise cover all trenches at the end of each working day to protect public safety. The length of open trench excavation in advance of pipe laying operations shall not exceed 200 feet unless approved by the Owner. In no case shall the length of an open trench or size of an excavation exceed the Contractor's ability to safeguard the public welfare.

3.03 BEDDING

- A. Pipe bedding and pipe zone backfill installation shall comply with the WSDOT Standard Specifications, Section 7-08 *General Pipe Installation Requirements* and per the Plans.
- B. Pipe bedding and pipe zone backfill shall be compacted to 95% of the maximum dry density described in ASTM D1557. Pipe bedding and pipe zone backfill shall be compacted in 6-inch maximum lifts.

3.04 BACKFILL

- A. Trench and structure backfilling shall comply with the most recent version of WSDOT Standard Specifications, Section 7-08 *General Pipe Installation Requirements* and per the Plans.
- B. Structure backfilling shall comply with the most recent version of WSDOT Standard Specifications, Section 2-09.3(1)E *Backfilling* and per the Plans.
- C. In areas beneath driveways, sidewalks, or within 5-feet of the roadway template (including shoulder or structures), backfill shall be compacted to 95% of the maximum dry density described in ASTM D1557. Backfill within the roadway template shall be compacted in 6-inch maximum lifts.
- D. In landscaped or native areas outside roadway templates and not beneath pavement, gravel paving, drives or sidewalks, backfill shall be compacted to 90% of the maximum density described above.
- E. Construction shall progress only when weather conditions will not adversely affect the quality of the finished work. At the same time, the Contractor must be prepared to take such measures as are necessary to complete the construction within the specified contract period. Where soils cannot be compacted due to moisture content, material shall be aerated or removed and replaced with a suitable granular backfill material. Contractor shall bear all costs for necessary extra measures and/or rework if excavated material is made unsuitable by adverse weather conditions and not protected by contractor in accordance with WSDOT Standard Specifications covering contractor requirements for protection of excavated materials.

3.05 UNSUITABLE TRENCH OVEREXCAVATION

- A. In the event that during trenching unsuitable material is encountered at the trench bottom, the Owner shall be notified of such areas prior to placing pipe or structures. The specific areas of unsuitable material shall be addressed as described herein. Work under this item shall be allowed ONLY upon written authorization of the Owner.
- B. Unsuitable material shall be overexcavated 18-inches below the trench neat line and filled with crushed surfacing conforming to WSDOT 9-03.9(3) and compacted to 95 percent of maximum dry density described in ASTM D1557. Fill up to the trench neat line to allow room for the bedding material.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Work in this section consists of temporary measures for the prevention of accelerated soil erosion and sedimentation of streams or other bodies of water.
 - The erosion and sediment control measures shown in the plans and specifications are the minimum requirements for the anticipated site conditions. The Contractor shall maintain and upgrade these measures as necessary to prevent sediment-laden water or turbid water from either flowing off the site, or into new/existing storm drainage facilities such as catch basins, culverts, or storm sewers. In addition, the Contractor shall note all BMPs or Erosion/Sediment control measures implemented on the TESC Plan Sheets in red, for the life of the Contract. Updated plan sheets will be available for review at all times at the project site.
 - Implementation of the TESC Plan shall include, but is not limited to, installing, maintaining, inspecting and repairing all temporary erosion and sediment control and spill control Best Management Practices (BMPs) included in the plans and as defined in the current edition of the Washington State Department of Ecology Stormwater Management Manual for Western Washington and as defined by the EPA. All BMPs shall be inspected, maintained, and repaired by the Contractor as needed to assure continued performance of their intended function. All on-site erosion and sediment control measures shall be inspected at least once every seven days and within 24 hours after any storm event of greater than 0.5 inches within a 24-hour period. Damaged or inadequate erosion control measures shall be corrected within 24 hours of the inspection. The Contractor shall ensure that erosion and sediment control measures are in place and functional at the end of each work day.
 - If erosion and sediment control measures are observed to be not functional, the Owner/Engineer will notify the Contractor of the deficiency. The Contractor shall have four hours to correct the deficiency if it is raining and runoff is present. Otherwise, the Contractor shall have eight hours or until the end of the day to correct the deficiency. The rigorous enforcement of erosion and sediment control measures is necessary to prevent turbid runoff from the project site.
 - The Contractor shall respond immediately to any urgent request by any governmental agency. If there is no response within two (2) hours, the Owner may elect to either take action themselves or hire another Contractor to perform needed repairs/installations. All costs incurred to accomplish this,

including labor, overhead, materials, management, etc., will be deducted from the next pay request.

• Permanent Stabilization

Existing vegetation shall be preserved where possible within the project limits. The primary objectives shall be the prompt restoration and reseeding of disturbed areas, and to provide immediate slope stability and erosion control. The latter may be accomplished using a combination of hand seeding and mulching. All temporary erosion and sedimentation control BMPs shall be removed within 30 days after final site stabilization or after the facilities are no longer needed.

1.02 RELATED SECTIONS

- A. Related work specified elsewhere:
 - 1. Section 02200 Earthwork
 - 2. Section 02315 Trench Excavation and Backfill

1.03 SUBMITTALS

A. The Contractor shall submit product specifications and installation recommendations for all materials to be provided under this section.

PART 2 - PRODUCTS

- 2.01 Any product, that is required for adequate erosion control, including, but not limited to: construction access ramps, check dams, silt fence, hydroseeding, plastic ground cover, jute matting, etc. Products shall be in accordance with the Standard Specifications Section 9-14.
 - A. Compost Filter Berm
 - 1. Compost filter berm shall meet the requirements of Standard Specifications Section 8-01.3 and 9-14.4, and as shown on the Plans.

PART 3 - EXECUTION

- 3.01 GENERAL
 - A. The Contractor shall carry out the provisions of the TESC Plan.
- 3.02 PLANNING OF CONSTRUCTION
 - A. Plan and coordinate the construction to reduce sediment pollution. Minimize the area of disturbance. Keep the area of clearing and grubbing to the minimum necessary to facilitate construction.

3.03 MAINTENANCE

- A. Maintain the erosion control measures and facilities in proper condition so that they will individually and collectively perform the functions for which they were designed and per the TESC Plan. In order to insure the effectiveness and proper maintenance of the measures and facilities, the Contractor and Owner shall make periodic inspections at sufficiently frequent intervals to detect any impairment of the structural stability, adequate capacity, or other requisites of the herein approved measures and facilities which might impair their effectiveness. The Contractor shall take immediate steps to correct any such impairment found to exist at no additional cost to the Owner.
- B. Inspection, or lack thereof, shall not relieve the contractor of the responsibility of maintaining erosion control at all times. The contractor should, therefore, check all erosion control periodically on their own to ensure adequacy.

3.03 PUMP WATER

A. Practice sound pump water management to reduce sediment production. Discharge pump water onto stabilized surfaces and allow to soak into vegetated ground and filter through existing vegetation. Provide BMPs, as needed, to remove all sediment from pumped groundwater which may flow off-site. Repair discharge areas, upon completion of construction, to pre-existing conditions or better.

3.04 STABILIZATION

A. Stabilize all slopes, channels, ditches or any disturbed area as soon as possible after the final grade or final earthmoving has been completed. Upon completion of the project, stabilize all areas which were disturbed by the project to prevent accelerated erosion. Maintain any erosion and sedimentation control facility required or necessary to protect areas from erosion during the stabilization period, regardless of the length of time required - even if it extends beyond the date of substantial completion.

3.05 EARTHWORK

- A. Control excavation for site work operations. Stockpile the material removed from the excavation in areas where a minimum of sediment will be generated and where other damage will not result from the piled earth. Stockpile topsoil separately and redistribute uniformly after grading.
- B. Protect all stockpiled soil materials from erosion through the use of plastic sheeting or similar temporary measures.

END OF SECTION

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WASHINGTON

PART 1. GENERAL

1.01 SECTION INCLUDES

A. This section covers information supplementary to the Drawings and the WSDOT Standard Specifications. The Contractor shall furnish and install pipe and fittings as shown on the Drawings, as specified in these Specifications, and as required for a complete and functional installation. All pipe and fittings shall be new.

Piping systems, including pipe, fittings, anchors, and all other elements, shall be detailed, fabricated, and installed to resist all internal and external loads which will be imposed upon them. Pressure ratings and materials stated in these Piping Specification sections are minimum acceptable standards. Systems shall be suitable for the service intended.

The pipe diameters shown on the Drawings and used in these Specifications are inside diameters unless specific reference is made to outside diameter of the pipe or the pipe is a standardized product normally designated by a nominal size, e.g., ductile iron pipe.

The Contractor shall furnish and install pipe and fittings as shown on the Drawings, as specified in these Specifications, and as required for a complete and functional installation. The pipe shall be new, manufactured in accordance with these Specifications and Drawings.

- B. Work includes but is not limited to following:
 - 1. Trenching, unsuitable trench bottom overexcavation, bedding, backfilling, compacting and disposal of excess materials as required for installation of all underground utilities and structures.
 - 2. Providing all material, equipment and labor necessary to complete the excavation and backfill operations necessary to install the underground utilities depicted on the Plans.
 - 3. Trench dewatering and pumping.

1.02 RELATED SECTIONS

- A. Coordinate related work specified in other parts of the Contract Documents, including but not limited to following:
 - 1. Section 02200 Earthwork
 - 2. Section 02315 Trench Excavation and Backfill

1.03 REFERENCES

A. WSDOT Standard Specifications for Road, Bridge and Municipal Construction, 2016 Edition; Sections 2-09 - Structure Excavation, and 7-08 - General Pipe

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WASHINGTON

Installation Requirements.

- B. WSDOT Standard Plans for Road Bridge and Municipal Construction, most recent edition.
- C. Washington State Department of Ecology's August 2012 Edition of the Stormwater Management Manual for Western Washington.

1.04 SUBMITTALS PRIOR TO CONSTRUCTION

- A. Submittals during construction shall be made in accordance with Section 01300. In addition, the following specific information shall be provided.
 - 1. Field Fabrication For pipe lines which are assembled in the field from standard fittings, submit complete data on pipe and fittings, including any manufacturer's installation instructions.
 - 2. Material Certification Certification of all materials, and manufacturing properly executed by the manufacturer, shall be available to show compliance with the Specification of materials being furnished. Test data on tests performed shall be provided as requested by the Engineer.
 - 3. Existing Pipe Verification Expose all existing pipes which are to be connected to new pipelines or structures. Verify the size, material, elevation, horizontal location, and pipe service of these existing pipes with sufficient lead time to make accommodations as necessary.

1.05 SYSTEM DESCRIPTION

- A. Provide protection of existing utilities affected by the work and make every effort to minimize disruptions to all utility services.
- B. If, during the course of construction, excavation interrupts traffic for longer than 15 minutes, inform the Owner and make all necessary arrangements for ingress and egress. In the event of such road closures, the Contractor shall be solely responsible for all traffic control measures including but not limited to flagging, barricades and cones.
- C. Trenches shall be closed or covered with steel plates at the end of each work day.

1.06 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. See referenced Codes, ordinances and the like/Section 01060.
 - 2. Comply with the requirements of all applicable regulatory agencies having jurisdiction over this work including the Washington Industrial Safety and Health Act.
- B. Testing and Inspection. The Owner will use an independent testing lab/agency to perform field testing related to trenching and backfill. The Contractor is responsible

for notifying Owner and coordinating test requests. The Contractor is responsible for the costs of any repeat tests required where failed test results were obtained. The Owner's testing lab/agency will perform the following tasks, as it relates to utility trenching and backfill (not an exhaustive list of all testing required for the Project):

- 1. Gradation analysis for bedding and backfill material.
- 2. Compaction and Moisture Control Tests per WSDOT 2-03.3(14)D.
- 3. A minimum of one in place density measurement per every 100 LF of trench. The Engineer may increase or decrease the frequency if the properties of the materials being placed, or placed upon, change or the equipment or procedures used by the Contractor for compacting the soil or materials change. In place density shall be measured using ASTM D-1556 or ASTM D2922 and D3017 (nuclear density) test methods.

PART 2. PRODUCTS

2.01 PIPE

- A. Ductile iron pipe shall be in accordance with WSDOT 9-30.1(1).
- B. Buried ductile iron pipe shall be installed with polyethylene encasement in accordance with WSDOT 9-30.1(2).
- C. Exposed ductile iron pipe shall be painted in accordance with these specifications.

2.02 FITTINGS

- A. Ductile iron fittings shall be in accordance with WSDOT 9-30.2(1).
- 2.03 VALVE BOX
 - A. Valve boxes shall be two-piece screw type, cast iron, with 5-1/4-inch shaft and shall be of appropriate length for the installation. Extension pieces shall be the manufacturer's standard type. All units shall be complete with all necessary bases and accessories
- 2.04 PAINTING
 - A. All exposed piping, except copper, stainless steel, and galvanized, shall be painted as specified in Section 09900 Painting.

2.05 SLAB, FLOOR, WALL, AND ROOF PENETRATIONS

A. All penetrations of new poured-in- place concrete slabs, floors, walls, and roofs shall be poured in place ductile iron wall pipe. It shall be the Contractor's responsibility to verify the size and location of all structure penetrations prior to pouring concrete. All sleeves shall be supported by form work to prevent contact with the reinforcing steel.

2.06 PIPE WALL PENETRATION SEALS (Through Pre-Cast Concrete)

- A. Penetrations of existing walls, slabs, or roofs shall be constructed by coring and a seal installed in the annular space between the pipe and wall opening. All penetrations must be leak-free to prevent groundwater infiltration or discharge exfiltration.
- B. Penetrations of pre-cast below grade structure walls, slabs, or roofs shall be constructed by coring and a seal installed in the annular space between the pipe and wall opening. All penetrations must be leak-free to prevent groundwater infiltration or discharge exfiltration.
- C. Penetrations of pre-cast vault walls, slabs, or roofs which are constructed by breaking out knock-outs will not be accepted. All penetrations must be cored.
- D. Penetration seals shall be Kor-N-Seal I Wedge Korband flexible pipe-tomanhole connector, or approved equal, as manufactured by NPC, Inc. Connectors shall be grouted flush with the surrounding concrete with a non-shrink cementitious grout such as SikaGrout 212, or equal.

2.07 FLEXIBLE COUPLINGS

A. Flexible couplings for use with ductile iron pipe shall be Dresser, Style 53 or 153; Rockwell, Style 431; or equal. Ductile iron sleeves with mechanical joints at each end may be substituted for flexible couplings on ductile iron pipe.

2.08 BOLTS AND NUTS

A. Bolts and nuts for buried or exposed conditions shall be Type 304 stainless steel. Bolts and nuts for submerged conditions shall be Type 316 stainless steel.

2.09 RUBBER GASKETS

A. Store all rubber gaskets in a cool, well-ventilated place, and do not expose to the direct rays of the sun. Do not allow contact with oils, fuels, or petroleum solvents.

2.010 JOINT LUBRICANT

A. Furnish joint lubricant with the pipe. Furnish the amount and type recommended by the pipe manufacturer. The lubricant shall be a water-soluble, nontoxic, vegetable soap compound conforming to United States Pharmacopoeia No. P39.

2.011 HYDROSTATIC TESTING

A. Provide all hoses, plugs, and other necessary equipment to complete the tests.

2.012 CONCRETE FOR THRUST BLOCKING, THRUST TIES AND ENCASEMENT

A. The concrete for all thrust blocking and thrust ties shall develop a minimum

compressive strength of 3,000 psi at 28 days.

PART 3. EXECUTION

3.01 EXAMINATION

A. Verify installation conditions as satisfactory to receive work of this Section. Do not install until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Utility Location. Make every effort to identify the location of all existing underground utilities. Contact Utility Locate Service 48-hours in advance of any excavation.

3.03 TRENCH EXCAVATION AND BACKFILL

- A. Trench Excavation and Backfill.
 - 1. All trench excavation and backfill shall be performed in accordance with Section 02315 Trench Excavation and Backfill.

3.04 SHIPPING AND HANDLING MATERIALS

A. During transportation, unloading, and storage, pipe and materials shall be protected, supported, and handled in a manner to prevent damage to the materials, especially linings and coatings. Only implements and equipment suitable for proper and safe handling of the materials shall be used. Fabric slings shall be used to lift pipe and fittings, not chains or cables.

3.05 PIPE PREPARATION AND HANDLING

- A. Each pipe and fitting shall be carefully inspected before the exposed pipe or fitting is installed or the buried pipe or fitting is lowered into the trench. The interior and exterior protective coating shall be inspected, and all damaged areas parched in the field with material similar to the original, except damaged glass-lined pipe. Any damaged glass-lined pipe shall not be used and shall be promptly removed from the project site. Any pipe which, in the opinion of the Engineer, is damaged beyond repair shall be removed from the site and replaced with another unit. Clean ends of pipe thoroughly. Remove foreign matter and dirt from inside of pipe and keep clean during and after installation.
- B. Use proper implements, tools, and facilities for the safe and proper protection of the pipe. Carefully handle pipe in such a manner as to avoid any physical damage to the pipe. Do not drop or dump pipe from trucks or into trenches under any circumstances.
- C. All pipe fittings and appurtenances shall be installed in accordance with the

manufacturer's instructions and these Specifications.

3.06 CUTTING AND FABRICATING

A. Cut pipe with approved cutters, do not flame cut except for mild steel pipe. Cut perpendicular to axis of pipe. Dress ends to suit type of joint being made, removing burrs, mill scale, and debris before making up. Repair damaged linings and coatings.

3.07 BELL HOLES

A. Excavate bell holes at each joint to permit proper assembly and visual and feeler gauge inspection of the entire joint.

3.08 EXPANSION PROVISIONS

A. Provisions shall be made for the expansion and contraction which may occur in pipe due to temperature change. Pipe expansion provisions may not be detailed on the Drawings. The absence of these details on any Drawing shall not relieve the Contractor of the responsibility for providing them where required, and at his sole expense.

3.09 PIPE IN CONCRETE ENCASEMENTS OR CONCRETE BEDDING

A. Except for welded joints, pipe joints shall not be encased in concrete unless specifically required on the Drawings. Pipe coatings shall be continuous through concrete encasements, thrust blocks, anchors, collars, etc., unless otherwise shown on the Drawings.

3.010 FLEXIBLE JOINTS AT CONCRETE BACKFILL OR ENCASEMENT

A. Except for welded joint pipe, a flexible joint shall be provided within 18 inches or one-half the pipe diameter, whichever is less, from the terminations of any concrete backfill, or concrete encasement.

3.011 FLEXIBLE JOINTS AT CONCRETE STRUCTURES

A. A flexible joint shall be provided near the exterior face of all structures. The joint shall be provided within 18 inches or one-half the pipe diameter, whichever is less, from the face.

3.012 LINE AND GRADE

- A. Grade the bottom of the trench by hand, if necessary, to the line and grade to which the pipe is to be laid, with proper allowance for pipe thickness and for base. Remove hard spots that would prevent a uniform thickness of bedding or cause non-uniform pressure on the pipe barrel.
- B. Lay pipe to a uniform grade between indicated elevations. Do not deviate more

than 1 inch from line or 1/4 inch from established grade. Measure for grade at the pipe invert.

C. Before laying each section of pipe, check the grade with a straightedge and correct any irregularities found. The trench bottom with bedding shall form a continuous and uniform bearing and support for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle.

3.013 PERMISSIBLE DEFLECTION AT JOINTS

A. Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, do not exceed the amount of deflection recommended by the pipe or coupling manufacturer.

3.014 LAYING AND JOINTING PIPE AND FITTINGS

- A. After a section of pipe has been lowered into the prepared trench with bedding, clean the end of the pipe to be joined, the inside of the joint, and the rubber ring immediately before joining the pipe. Make assembly of the joint in accordance with the recommendations of the manufacturer. Provide all special tools and appliances required for the jointing assembly.
- B. The gasket position shall be checked with a feeler gauge, furnished by the pipe manufacturer, to assure proper seating. After the joint has been made, check pipe for alignment and grade. Provide sufficient pressure in making the joint to assure that the joint is "home", as defined in the standard installation instructions provided by the pipe manufacturer. To assure proper pipe alignment and joint makeup, place sufficient pipe zone material to secure the pipe from movement before the next joint is installed.
- C. Take the necessary precautions required to prevent excavated or other foreign material from entering the pipe during the laying operation. At all times, when laying operations are not in progress, at the close of the day's work, or whenever the workmen are absent from the job, close and block the open end of the last laid section of pipe to prevent entry of foreign material or creep of the gasketed joints.
- D. Take all precautions necessary to prevent the "uplift" or floating of the line prior to the completion of the backfilling operation.
- E. When cutting and/or machining the pipe is necessary, use only tools and methods recommended by the pipe manufacturer.

3.015 JOINTING FLANGED PIPE

A. Prior to connecting flanged pipe, the faces of the flanges shall be thoroughly cleaned of all oil, grease, and foreign material. The rubber gaskets shall be checked for proper fit and thoroughly cleaned. Care shall be taken to assure proper seating of the flange gasket. Bolts shall be tightened so that the pressure on the gasket is uniform. Torque-limiting wrenches shall be used to ensure uniform

bearing insofar as possible. If joints leak when the hydrostatic test is applied, the gaskets shall be removed and reset and bolts retightened.

3.016 UNSUITABLE CONDITIONS FOR LAYING PIPE

A. Do not lay pipe in water, or when in the opinion of the Engineer, trench conditions are unsuitable.

3.017 PREVENTING TRENCH WATER FROM ENTERING PIPE

A. When the pipe laying is not in progress, close the open ends of pipe by approved means, and do not permit trench water or other foreign material to enter the pipe. Keep water out of the trench.

3.018 LOCATION OF THRUST RESTRAINT

A. All pipeline tees, plugs, caps, bends, and other locations where unbalanced forces exist shall be thrust restrained. Thrust blocks and ties may not shown on the Drawings. The Contractor is responsible for providing thrust restraint as incidental items in the Contract Price.

3.019 THRUST TIES

A. The Contractor shall install thrust ties at all locations necessary to restrain thrust forces. Such thrust ties are subject to the review and approval of the Engineer.

3.020 THRUST BLOCKING

- A. Thrust blocking shall be adequate to withstand hydrostatic test pressures as well as normal operating pressures. Place thrust blocking between undisturbed ground and the fitting to be anchored. Place the blocking so that the pipe and fitting joints will be accessible for repairs.
- B. For gravity or low pressure pipeline, when the bearing surface of the fitting against the soil provides an area equal to or greater than the area required for thrust restraint, concrete thrust blocks will no longer be required. The bearing area for fittings without thrust blocks will be determined by the projected area of 70 percent of the internal diameter multiplied by the chord length for the curve along the centerline of the fitting.

3.021 INSTALLATION OF EXPOSED PIPING

- A. Unless shown otherwise, piping shall be parallel to building lines. Hangers on adjacent piping shall be aligned where possible on common size ranges.
- B. All pipe flanges shall be set level, plumb, and aligned. All flanged fittings shall be true and perpendicular to the axis of the pipe. All bolt holes in flanges shall straddle vertical centerline of pipes.
- C. Unions shall be installed where required for piping or equipment installation, even

though they are not shown on the Drawings.

D. Piping shall be installed without springing or forcing the pipe in a manner which would set up stresses in the pipe, valves, or connected equipment.

3.022 ANCHORAGE AND EXPANSION PROVISIONS

A. All piping shall be anchored against thrust developed by internal pressures. In addition, provisions shall be made for the expansion and contraction which may occur in pipe due to temperature change. Pipe anchorage and expansion provisions are not completely detailed on the Drawings. The absence of these details on any Drawings shall not relieve the Contractor of the responsibility for providing them where required.

3.023 INSTALLATION OF FLEXIBLE COUPLINGS, FLANGED COUPLING ADAPTERS, GROOVED JOINT COUPLINGS, AND SERVICE SADDLES

- A. Prior to installation, thoroughly clean oil, scale, rust, and dirt from the pipe to provide a clean seat for the gasket. Care shall be taken that the gaskets are wiped clean before they are installed. If necessary, flexible couplings and flanged coupling adapter gaskets may be lubricated with soapy water or manufacturer's standard lubricant before installation on the pipe ends. Install in accordance with the manufacturer's recommendations. Bolts shall be tightened progressively, drawing up bolts on opposite sides a little at a time until all bolts have a uniform tightness. Workmen tightening bolts shall use torque-limiting wrenches.
- B. Flexible couplings with tie rods may be used to tie pipes against thrust. They shall not be used, with or without tie rods, as expansion joints on pipelines with cyclic temperature changes. Readjust tie rod tension after initial filling before pressure testing.

3.024 CORROSION PROTECTION OF PIPE AND ACCESSORIES

A. Not all corrosion protection details are included, either on the Drawings or in the Specifications. The absence of specific details on corrosion and environmental protection measures shall not relieve the Contractor of the responsibility of providing them, all as part of the Contract price.

3.025 CORROSION PROTECTION FOR BURIED PIPE ACCESSORIES

- A. All buried pipe appurtenances made of steel shall have corrosion protection. Tie rods and similar items shall be heat shrink tube wrapped. Flange bolts, nuts, and similar items shall be coated with a bituminous paint or equal. Flexible couplings, grooved couplings, and similar items shall be heat shrink wrapped or cement coated.
- B. Buried valves and similar elements on wrapped pipelines shall be bituminous paint-coated. On ductile iron or nonmetallic pipelines they shall have exposed

nuts and bolts bituminous paint-coated and the entire valve wrapped in 8-mil polyethylene as specified for ductile iron pipe. On cement-coated pipelines they shall be cement-coated similar to detail shown for couplings.

3.026 TESTING

A. Hydrostatic testing of the new piping shall be performed at 30 psi (150% of maximum anticipated operating pressure) when measured at the lowest elevation section of the pipe. All leaks shall be repaired and re-testing shall occur until piping is leak-free prior to final connection to existing piping.

END OF SECTION

SECTION 02920 - LANDSCAPING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Work in this section shall include all labor, equipment and materials necessary for re-establishing grass vegetation in areas disturbed during construction, if any. Work shall include stripping, excavation, hauling, stockpiling, placing topsoil, placing compost, and hydro-seeding.

1.2 RELATED SPECIFICATIONS

- A. Section 02200 Earthwork
- B. Section 02315 Trench Excavation and Backfill
- C. Section 02370 Erosion and Sedimentation Control

1.3 SEEDING GUARANTEE

- A. During the one (1) year guarantee period should any seeded area show signs of failure such as dead or dying areas of grass, bare spots, dead or dying plants, etc., the Contractor shall repair or replace all deficient items to the satisfaction of the Engineer.
- B. All graded areas not seeded or paved by October 15 shall be covered with two (2) inch depth straw to prevent erosion. Straw to be provided and installed by the Contractor. Do not perform planting or seeding when ground is frozen, snow covered, muddy or in an otherwise unsatisfactory condition. When unforeseen conditions detrimental to plant growth are encountered, such as adverse drainage conditions, obstructions, compaction, or toxified soils, notify the Engineer before proceeding.

1.03 SUBMITTALS

- A. The Contractor shall submit product specifications and installation recommendations for all materials to be provided under this section.
- B. Submit seed vendor's blue tag certification for required grass seed mixture, indicating percentage by weight, and percentages of purity, germination, and weed seed for each grass species.
- C. Upon seeded areas acceptance, submit written maintenance instructions recommending procedures for maintenance of seeded areas.

SECTION 02920 - LANDSCAPING

PART 2 - PRODUCTS

2.1 TOPSOIL MATERIAL

A. Topsoil shall conform to Section 9.14.1(2) of the Standard Specifications.

2.2 GRASS SEED

A. Seed shall conform to Table 1 below. Seed of the following composition, proportion, and quality shall be applied at a rate of 8 pounds per 1000 square feet:

Table 1	
Common Name	% by Weight
Nobility Perennial Ryegrass	30
Amazing GS Perennial Ryegrass	30
Longfellow II Chewings Fescue	20
Gibilbralter Creeping Red Fescue	20

This mixture is provided by Sunmark Seeds under the name DOT Multipurpose Mixture. Seeds shall be certified "Weed Free" indicating there are no noxious or nuisance weeds in the seed.

2.3 FERTILIZER

A. Fertilizer shall be a granular, non-burning product composed of not less than 50% organic, slow acting, guaranteed analysis professional fertilizer. Seeded area starter fertilizer containing 20% nitrogen, 26% phosphoric acid, and 6% potash by weight, or similar approved composition applied at a rate of 6.5 lbs/1000 SF.

2.4 WOOD FIBER MULCH FOR HYDRO-SEEDING

- A. Hydro-seeding to be applied to all areas disturbed and/or regraded (which will not be protected with quarry spalls, gravel, and/or pavement) during construction. Commercially prepared wood fiber mulch specifically manufactured for hydroseeding application shall be used.
- B. Dispersing agents may be added at Contractor's option provided that the additive is not harmful to the mixture.

2.5 WATER

A. The Contractor shall furnish water as required for planting and establishing vegetation in seeded areas. Provide all necessary hoses, equipment, attachments, and accessories for adequate watering of seeded areas.
SECTION 02920 - LANDSCAPING

PART 3 - EXECUTION

3.1 SEEDING

- A. Inspect all subgrades for debris and adverse drainage conditions. Remove all debris including rocks 1-inch in diameter and larger, sticks, roots, sod and other deleterious material. Notify the Owner of any grades or conditions which might create adverse or undesirable drainage patterns.
- B. Smoothly blend and feather topsoil into existing surrounding grades. Rake or lightly harrow topsoil until the soil is friable and of uniform texture and satisfactory for seed placement.
- C. After seeding, topsoil shall be rolled for compaction and shall be minus ¹/₂-inch below all adjacent paved or graveled surfaces. Irrigate immediately until soil is damp to about 6".
- D. The hydro-seeding operation shall include the installation of seed, fertilizer, mulch, and tackifier with a tracer to verify uniform application.
- E. Hydro-seeding shall be done in accordance with WSDOT Spec. 8-01.3(2)B.
- F. Seed immediately after preparation of seed bed. Seeding may occur August 15 to October 15.
- G. Seed shall be applied at a rate listed above.
- H. Mulch shall be applied at a rate of 2,000 pounds per acre.

3.2 MAINTENANCE AND WATERING

- A. Patch, repair and re-seed any and all damaged or barren areas observed prior to final project acceptance at no additional cost to the Owner.
- B. The Contractor shall protect and care for all seeded areas until fully established and hearty. Care shall include equipment and labor necessary to provide sufficient and continuous watering of all seeded areas until final acceptance.

END OF SECTION

PART 1. GENERAL

1.01 SECTION INCLUDES

- A. Work includes but is not limited to the following:
 - 1. All material, labor, and equipment to prepare subgrade, build forms, install rebar, and place concrete for cast-in-place concrete shown on the Plans. Compensation for all costs associated with cast-in-place concrete shall be incidental to the lump sum bid item for the particular portion of the project, in which the work is identified.
 - 2. All material, labor, and equipment required to furnish and install all castin-place and precast concrete manholes, top slabs, risers, collars, curb repairs and other structures as shown on the Plans.

1.02 RELATED SECTIONS

- A. Coordinate related work specified in other parts of the Contract Documents, including but not limited to following:
 - 1. Section 02300 Earthwork
 - 2. Section 02315 Trench Excavation and Backfill
 - 3. Section 05500 Metal Fabrications

1.03 REFERENCES

- A. Comply with the requirements of Section 01060 REGULATORY REQUIREMENTS, and as listed herein.
- B. Comply with the following references (C G). Where conflicts may arise, comply with the more stringent requirements.
- C. WSDOT Standard Specifications for Road, Bridge and Municipal Construction, latest edition.
- D. Washington State Department of Ecology August 2012 Stormwater Management Manual for Western Washington.
- E. American Concrete Institute (ACI) ACI-318-11, Building Code Requirements for Structural Concrete.
- F. ACI 117-10 Specification for Tolerances for Concrete Construction.
- G. Concrete Reinforcing Steel Institute (CRSI), Manual of Standard Practice, 28th Edition.

1.04 SUBMITTALS

A. Product Data: Required for each material and product to be incorporated into the

Work.

- B. Samples: Submit samples of materials as specified and as otherwise requested by Engineer, including names, sources and descriptions.
- C. Shop Drawings: Required for all precast concrete structures.
- D. Laboratory Test Reports: Required for concrete materials and mix design.
- E. Material Certificates: Signed by manufacturer and Contractor; Submit in lieu of laboratory test reports as acceptable to Engineer, demonstrate compliance with requirements.
 - 1. Certification of admixtures compatibility by Contractor's approved technician.
- F. Mix Design: Written proposal for each concrete mix and strength required submit 15 days prior to start of Work. The mix design shall list the following
 - 1. All materials and admixtures and their proportions.
 - 2. Water-cement ratio, slump, and aggregate grading.
 - 3. Evidence that mix design meets the strength requirements: Compression test data (field experience method) or results of testing (trial batch method) used to establish mix proportions.
 - 4. Indicate materials sources for principal constituents.
 - 5. Whether the mix is appropriate for pumping.
 - 6. Evidence of ability of mix to meet requirements for limited shrinkage.
- G. Submit schedule of concrete placement operations before commencing Work, show on one or more plans or elevations, locations of construction, contraction and expansion joints.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: See referenced Codes, ordinances and the like as well as Section 01400 QUALITY CONTROL.
- B. Testing and Inspection. The Owner will provide testing and inspection by independent testing and inspection agency which will perform the following tasks, Contractor is responsible for coordinating with the Owner's lab/agency as required for these tests:
 - 1. Compaction and Moisture Control Tests on foundation subgrade prior to placement reinforcing.
 - 2. Reinforcing placement, lap length, and bar sizes. Concrete placement.

1.06 PROJECT SITE CONDITIONS

- A. Coordination: Notify the Engineer upon completion of subgrade preparation work, completion of base course, and also of intended schedule for placement.
- B. Establish and maintain required lines and elevations.
- C. Follow ACI 318 requirements for hot and cold weather work. Protect concrete with curing blankets for a minimum of 72 hours when temperatures are expected to be below 38 degrees F for more than 3 hours. When temperatures are expected to be above 85 degrees F for more than 12 hours, use curing compound or continuous wetting techniques to reduce cracking. The Owner shall have authority to require such protections based on National Weather Service hourly forecasts.

PART 2. PRODUCTS

2.01 GENERAL

A. Comply with "Quality Assurance" provisions, "References," and Specifications. Where these may be in conflict, the more stringent requirements govern.

2.02 CAST-IN-PLACE CONCRETE MATERIALS

- A. Concrete: Mix design shall be as shown on the Plans.
- B. Concrete for Curb repairs (if required): in accordance with WSDOT Standard Specifications 8-04.3(1).
- C. Reinforcing steel shall be as shown on the Plans
- D. Joint Sealant. Joint Sealant shall be GREY IN COLOR approximating matching color of concrete and meet WSDOT Standard Specification 9-04.2.

2.03 PRECAST CONCRETE STRUCTURES

- A. Pre-cast Manhole and Top Slab Components:
 - 1. Pre-cast manhole components shall be in accordance with WSDOT 9-05.50(2), Standard Plan B-15,20-01, and as shown on the Plans.
 - 2. Pre-cast top slab concrete shall have compressive strength of 4,000 psi at 28 days. Reinforcing steel: welded wire fabric per ASTM A497, rebar per ASTM A615 Grade 60, 0.40 sq.in./ft each way minmum.
 - a. Top slab shall be 48-in diameter top slab, Granite Precast, or equal, as shown on the Plans.
- B. Cement Grouts:
 - 1. Anchor Bolt and Plate Grout for Non-Mechanical Equipment:

- a. Cement grout to fill anchor bolt pockets, handrail pockets, and under non-mechanical equipment base plates shall be nonshrinking, non-staining, non-metallic grout with a minimum 6,000 psi compressive strength in seven days. Allow for ³/₄" grout where not shown otherwise. Clean all contact surfaces and place grout completely under plate, without voids.
- b. Portland Cement Grout shall be used to provide slopes between wall and slabs shall be one part Portland Cement to two parts sand with an expansive agent to limit shrinkage. Sufficient water shall be added for placement while maintaining a minimum 4,000 psi 28 day compressive strength.
- C. Waterstops:
 - 1. Hydrophilic bentonite or modified chloroprene rubber; Cetco Waterstop RX101T Greenstreak Hydrotite CJ0725, or equal. Maintain 3" minimum cover from face of waterstop to face of concrete. Remove all dirt, coatings, and debris from concrete surface. Install waterstop per manufacturer's instructions.
- D. Sealant Gaskets:
 - 1. The sealant gaskets shall be preformed, continuous rope form plastic material, protected by a removable two-piece wrapper.
 - 2. Sealing compound shall be reinforced hydrocarbon resins blended with plasticizing compounds and reinforced with inert mineral filler. The sealing compound shall have no solvents, irritating fumes or obnoxious odors.
 - 3. The adhesive and cohesive strength of the sealant gaskets shall not be dependent upon oxidizing, evaporating or chemical action.
 - 4. Sealant Gasket shall conform to Federal Specification SS-S-210.
 - 5. Sealant gaskets shall be RAM-NEK as manufactured by K.T. Snyder Company, Inc. of Houston, TX; QUIKSEAL as supplied by Associated Concrete Products, Santa Ana, CA; or approved equal.
- E. External Precast Structure Joint Sleeves
 - 1. Joint sleeves shall be heat-shrinkable sleeves constructed of irradiated and cross-linked polyethylene impermeable backing coated with protective heat-activated adhesive.
 - 2. Joint sleeves shall be capable of bonding to primed concrete, metal, and fiberglass surfaces.
 - 3. Joint sleeve material shall be compatible with concrete, steel, iron, and fiberglass.

- 4. Joint sleeves shall be supplied with a separate closure seal to secure sleeve in place during installation and seal overlap area.
- 5. Joint sleeve primer of the same manufacturer as the joint sleeve material shall be provided to prime concrete and steel surfaces prior to joint sleeve installation.
- 6. Joint sleeves shall be WrapidSeal Manhole Encapsulation System as manufactured by Canusa, Division of Shaw Resource Services, Inc. of The Woodlands, TX.; or approved equal.
- F. Adhesive Doweling Accessories (if required)
 - 1. Accepted products include:
 - a. ITW-Ramset Company: Epcon G5 System
 - b. Hilti Inc: RE-500 SD System
 - c. Simpson Stong-Tie Company: SET-XP Epoxy
 - d. Other Systems with written approval of the Engineer of record.
 - 2. Adhesive dowels shall have minimum embedment of 12 bolt diameters, unless noted otherwise on drawings. The hole diameter and roughness shall be per manufacturer's instructions; thoroughly clean hole before installation.

PART 3. EXECUTION

3.01 EXAMINATION

A. Verify installation conditions as satisfactory to receive work of this Section. Do not install until unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions as satisfactory.

3.02 CAST-IN-PLACE CONCRETE - INSTALLATION

- A. Install in accordance with "Quality Assurance" provisions, "References," Specifications, and Manufacturer's directions. Where these may be in conflict, the more stringent requirements govern.
- B. Bar detailing not shown otherwise on drawings shall comply with the CRSI Manual of Standard Practice.
- C. Forms shall be constructed of well fitted and leak-proof materials so that fins or voids are not created in the finished work.
- D. Lap all bars 40 diameters unless shown otherwise on the drawings. Bars parallel to the line of the wall shall be continuous, i.e. lapped or with corner "L" bar laps, or otherwise terminated at the ends of the wall with 6" x 90 degree hooks.

- E. Support reinforcing bars on chairs or other purpose-made devices so that they are securely held in place and maintain tolerances during placement and consolidation of concrete.
- F. All work associated with the manufacture, transport, and placement of concrete shall comply with References listed in Section 1.03 of this specification section.
- G. Cast-in-Place Appurtenances and Pipe Connections
 - 1. Contractor to plan for and accommodate any embedded items such as wall pipe, railings, ladders, hatches etc. which are not or may not be suitable for subsequent installation into cured concrete.
- H. Finishing Concrete:
 - 1. General: Vibrate to compact, screed, level, and tamp with a grid tamper to raise a thin mortar bed to the surface. Trowel after concrete has hardened sufficiently to prevent drawing moisture to the surface. Do not dust with dry materials.
 - 2. Sidewalks, Exterior Slabs on Grade and Curbs: Steel trowel and medium broom finish.
 - 3. Exterior and Interior Exposed walls: Defective work repaired, fins removed, and all offsets and projection ground smooth, and shall have all depressions 1/16-inch or larger in depth or width filled with mortar, and tie holes filled. The mortar shall consist of 1 part cement and 1-1/2 parts fine (passing No. 100 screen) mixed with enough water and an emulsified bonding agent to have the consistency of a thick cream. The surfaces shall be brush sandblasted prior to filling holes to expose all holes near the surface. Thoroughly wet surfaces and rub mortar on with burlap, sponge rubber floats, or trowels while surface is damp. Wipe surface clean and moist cure.
- I. Curing Concrete:
 - 1. All structural concrete shall be moist cured for a minimum of 7 days, unless otherwise instructed by Engineer.
- J. Tolerances: Interior and exterior Slabs, 1/4 inch in 10 feet.

3.03 PRECAST CONCRETE STRUCTURES - INSTALLATION

- A. Set precast vault sections in a concrete base joint groove, formed in the cast-inplace concrete base slab.
- B. Apply primer to joint surfaces in accordance with manufacturer's instructions. Make all joints watertight with sealant gaskets.
- C. Apply primer and heat-shrinkable joint sleeves in accordance with manufacturer's instructions. Ensure surfaces are clean, dry, and free of frost, surface rust, foreign

objects, sharp edges, and projections that could damage manhole encapsulation system. The Contractor shall provide a minimum of 3-days notice prior to the beginning application of the joint sleeves. Joint sleeve installer shall be experienced with the required installation techniques and have attended a minimum of 1 day of training at the manufacturer's facility or on-site with manufacturer's representative.

- D. Backfill around the structure with gravel backfill material. Compact the backfill material to 95% of relative density from the pipe bedding and base slab up to final finish grade, over an area defined as being within a distance of 4 feet from the exterior walls of the structure.
- E. Accurately locate structure frames to within 1/8-inch vertical elevation in paved areas and to ¹/₂-inch in other areas. Coordinate the activities of all trades so that this tolerance is achieved.
- F. Install the structure frame, hatch, grating, or other. Machine the frame, hatch, grating, or other as necessary to obtain a solid fit, without rattling under load.

END OF SECTION

SECTION 05500 – METAL FABRICATIONS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Work consists of furnishing labor, materials and equipment for the fabrication and installation of any miscellaneous metal related work shown in the Contract Documents.

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM).
 - 1. A 36 "Specification for Structural Steel."
 - 2. A 153 "Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware."
 - 3. A 307 "Specification for Carbon Steel Bolts and Studs, 6,000 psi Tensile."
 - 4. B 6 "Specification for Zinc (Slab Zinc)."
- B. American Welding Society (AWS).
 - 1. D1.1 "Structural Welding Code."
- C. Federal Specifications (FS).
- D. Steel Structures Painting Council (SSPC).
 - 1. "Painting Manual."
- 1.03 SUBMITTALS
 - A. A. Shop Drawings: Show materials, methods of fabrication, and details of installation.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Metal Fabrications: Meet applicable requirements of UBC Chapter 27.
- B. Fabricate, erect, design, and detail all structural steel in accordance with AISC Standard Practice, except as noted.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Standard Structural Steel Shapes, Bars, and Plates: ASTM A 36.

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WASHINGTON

SECTION 05500 – METAL FABRICATIONS

- B. Typical Unfinished Bolts, Nuts, and Washers: Low carbon steel standard fasteners, externally and internally threaded, ASTM A 307; malleable washers.
- C. Expansion Bolts in Concrete: Phillips wedge rod anchors, Wej It, Kwik bolt. Reverse cone, self wedging, expansion type. Tightening of nut or increased tension on bolt shank shall act to force wedges outward to create positive increased resistance to withdrawal.
- D. Anchor Bolts in Concrete Masonry Units: Hilti, HIT C-20 System, or approved, drilled and injected type. Install in accordance with manufacturer's instructions.
- E. Powder actuated Devices: Tempered steel pins with special corrosion resistant finish. Provide guide washers to accurately control penetration. Accomplish fastening by low velocity piston driven powder actuated tool. Pins and tool: Hilti Fastening Systems, Impex Tool Corporation.
- F. Welding Electrodes: In accordance with AWS D1.1-98, Table 3.1, E70xx series, Low Hydrogen.
- G. Galvanizing: shall be hot-dip applied only. Electroplated zinc or cadmium plating is unacceptable.
 - 1. Shapes and Weldments ASTM A123
 - 2. Bolts and Hardware ASTM A153.

2.02 FABRICATION

- A. Fabricate by firms or shops experienced and skilled in custom fabrication and construction of metal fabrications and miscellaneous metal.
 - 1. Bolt holes shall not be more than 1/16th inch over-sized. Drill or punch holes, do not use cutting torch. If holes are punched, it shall be without distortion. Miter corners and angles of frames unless otherwise noted.
 - 2. Welding: Welding shall be by WABO Certified welders and shall be as detailed or specified by the American Welding Society Standards D1.1-90.
 - 3. Minimum welds:
 - a. Welds not specified shall be 3/16" continuous fillet welds, or minimum size per AISC, whichever is greater. All weld sizes are effective sizes; increase as required as gaps exists at meeting surfaces.
 - b. All welded connections exposed to the exterior environment shall have continuous fillet filler weld (minimum 1/8") all around, except for members to be hot-dipped or as specified by American Welding Society Standards D1.1-90.
- B. Fabricated Items:

SECTION 05500 – METAL FABRICATIONS

- 1. Miscellaneous metal fabricated items are not necessarily individually described. Provide all miscellaneous items not described as required to complete metal fabrications Work.
- 2. Miscellaneous Metal: Provide all miscellaneous steel angles, channels, plates and shapes, threaded rods, pipe, bolts, nuts, washers, spacers, and fastenings shown or required to complete the Work.
- 3. Galvanize items which will be exposed to weather in the completed Work or as shown.
- 4. Bolts and screws for attachment of galvanized items shall be galvanized in accordance with ASTM A 153, or of non-corrodible material.
- 5. Cleaning and Painting: Conform with SSPC for cleaning steel and for application.
- 6. Prior to application of shop prime coat clean and treat ferrous metal surfaces in accordance with FS TT C 490 to assure maximum paint adherence.
- 7. Hinges shall be stainless steel or otherwise treated for application in corrosive environment.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Metal fabrications and miscellaneous metalwork shall be installed plumb, true, rigid, and neatly trimmed out, in accordance with Drawings and reviewed shop drawings, by mechanics and workers skilled and experienced in the installation of the type of Work involved.
- B. Install metal fabrications and miscellaneous metalwork with all accessories furnished by the fabricator as required for complete and finished installations.
- C. Field Painting: After installation, damaged surfaces, field bolts and fasteners, and all welds shall be touched up and spot painted with the same corrosion inhibiting primer used for shop painting.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Description of System: The work covered by this section consists of furnishing all labor, equipment and materials necessary for the preparation and application of the paint coatings on all exposed piping.
- 1.02 QUALITY ASSURANCE
- A. Requirements of Regulatory Agencies: Comply with the requirements of agencies having jurisdiction over this section of work, including, but not limited to:
 1. WISHA, Washington Industrial Safety and Health Act.
- B. Reference Standards: All surface preparation, coating and painting shall conform to the applicable requirements of the:
 - 1. National Association of Corrosion Engineers
 - 2. Steel and Structures Painting Manual, Volume 2, Systems and Specifications (latest revision) published by the Steel Structures Painting Council (SSPC).
 - 3. American Water Works Association (AWWA) Standard D102 "Painting Steel Water Storage Tanks."
- C. Manufacturer: Manufacturer shall be of established good reputation and shall have regularly engaged in the manufacture of such coatings for a minimum of 5 years. This experience shall include a minimum of 20 similar applications in which such coatings have proven satisfactory service for a minimum of 3 years.
- D. Contractor: Contractor shall have 5 years of practical experience and successful history in the application of paint coatings to surfaces of municipal or industrial type equipment.
- E. Paint Film Thickness: All painted surfaces will be inspected by the Contractor with approved wet-film thickness gages. Inspection will include the thickness measurement of each prime and finish coat.
- F. Manufacturer's Representative: The manufacturer shall provide a qualified representative to visit the site from time to time during the paint operations as requested by the Engineer. The manufacturer's representative shall assist the Engineer in monitoring surface preparation and paint application.
- 1.03 SUBMITTALS
- A. Submittals detailing product data and application procedures shall be submitted in accordance with Section 01300 for each paint service condition.

- B. Color charts for each of the finish coats listed in Part II of this section shall be submitted at least thirty (30) days prior to the starting of painting.
- C. A Schedule of the Painting Work shall be submitted to the Engineer at least fourteen (14) days prior to commencing of any work under this section. A revised schedule shall be submitted as requested by the Engineer to reflect changes or delays in the work.

1.04 JOB CONDITIONS

- A. Environmental:
 - 1. Protective coatings shall not be applied in areas where dust is being generated or in any other areas where disturbances will affect the quality of the work.
 - 2. The Contractor shall comply with the manufacturer's recommendations as to environmental conditions (i.e. temperature, moisture, exposure to sunlight etc.) under which coatings and coating systems must be applied and cured.
- B. Protection: The Contractor shall be responsible for protecting coatings or coating systems from any disturbances during or after application which will affect the quality of the work.
- 1.05 DELIVERY AND STORAGE
- A. Delivery: All products shall be delivered in sealed containers with labels legible and intact. Labels shall include the following information: Manufacturer's name and stock number, type of paint or protective coating, color, instructions for reducing, label analysis, and federal specification number.
- B. Storage: Products shall be stored in a single location and in a manner complying with all applicable safety, health and fire regulations.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Surfaces to receive insulation or other protective materials shall be coated or painted in conformance with the applicable Service Conditions as specified herein.
 The intent has not been to identify each and every item to be coated, but only to list the major items. In no case shall any wood, ferrous metal or other surface, requiring protection, be left uncoated or unpainted.
- B. The products specified are those which have been evaluated for the specific service and are given to establish a quality standard for that service. Products of other manufacturers comparable in quality and type to those specified will be acceptable if said paints are offered by the Contractor with satisfactory data on past performance in similar applications. Requests for substitutions shall be in accordance with Section 01600.

- C. The Contractor shall use products of the same manufacturer for all prime and finish coats listed in each separate Service Condition.
- D. Colors to be used shall be as designated by the Owner based upon the color charts provided by the Contractor.
- E. For the paint thickness listed under each Service Condition:
 - 1. WT = wet-film thickness in mils
 - 2. DF = dry-film thickness in mils
 - 3. The number following equals the minimum film thickness required, per coat.
 - 4. Putty: Conform to FS TT-P-791A(3), colored to match paint and stain finishes, as applicable.
- G. Cementitious Filler: Nonshrink formulation, white Portland cement with fine silicate aggregate, zinc-oxide pigment, and reinforcing chemical binder as approved.
- I. Unspecified materials such as turpentine, linseed oil, or mineral spirits shall be products of reputable manufacturers and as recommended by paint manufacturers.
- J. Materials for Undercoats and Finish Coats: Ready mixed, and shall not be changed, except thinning of undercoats (when required), reinforcing, or coloring, all of which shall be performed in accordance with manufacturers' recommendations.

SERVICE CONDITION A

Generic Type: Epoxy

A. Applications:

- 1. All exposed metal piping (including exposed ductile iron piping), joints, fittings, valves, supports, fasteners, and misc. ferrous metal items for this project shall be painted. Copper, galvanized, aluminum, and stainless steel metal surfaces shall not be painted unless specifically specified. Exposed piping shall be defined as all piping that is not backfilled, permanently or intermittently submerged. Exposed piping in vaults is considered to be exposed and shall be painted.
- B. Primer:
 - 1. One coat Tnemec Series 161- "High Solids Epoxy".
 - DF = 4.0 to 6.0
- C. Finish:
 - 1. One coat Themec Series 161- "High Solids Epoxy". DF = 4.0 to 6.0

PART 3 - EXECUTION

3.01 GENERAL

- A. All work shall be performed by skilled craftsmen qualified to perform the required work in a manner comparable with the best standards of practice. The intent of the coating systems is to obtain smooth, clean, dry and well protected surfaces.
- B. All coating and painting shall conform to applicable standards of the National Association of Corrosion Engineers and the Steel Structures Painting Council Manual. Material applied prior to approval of surface by the Engineer shall be removed and reapplied at the expense of the Contractor to the satisfactions of the Engineer.
- C. Dust, dirt, oil, grease or any foreign matter that will affect the adhesion or durability of the finish must be removed by washing with clean rags dipped in a grease solvent and wiped with clean dry rags. Slag and weld metal accumulation and spatters shall be removed by chipping and grinding. All sharp edges shall be peened, ground or otherwise blunted as required by the Engineer.
- D. Painting systems include surface preparations, prime coatings and finish coatings. Unless otherwise specified, prime coat-coatings shall be field applied. Where prime coatings are shop applied, they shall be thoroughly cleaned and touched up in the field as specified. Any off site work which does not conform to this specification is subject to rejection by the Engineer.
- E. The Contractor's coating and painting equipment shall be designed for the application of the materials specified and shall be maintained in first class working order. The Contractor's equipment shall be subject to approval of the Engineer.
- F. Application of the first coat shall follow immediately after surface preparation and cleaning and within an eight-hour working day. Any cleaned areas not receiving first coat within or right after the first hour period shall be re-cleaned prior to application of first coat.
- G. Prior to assemble, all surfaces that are inaccessible after assembly, shall be prepared as specified herein and shall receive the paint or coating system specified.
- H. Drop cloths shall be used to protect floor and adjoining work from splatter. Any paint surface damaged shall be repaired to the satisfaction of the Engineer before the work will be accepted. The lines formed by changes in color of coatings shall be neat and straight.

3.02 SURFACE PREPARATION

- A. General
 - 1. All surfaces to be painted shall be prepared in a workmanlike manner with the objective of obtaining a clean and dry surface. Surfaces shall be cleaned of all oil, rust, grease, dust, scale, and other foreign substances that may inhibit bonding.

- 2. Field blast cleaning for all surfaces shall be dryblasted unless otherwise directed. Maximum particle size of abrasives shall be that which will produce a profile in accordance with recommendations of the coating manufacturer.
- B. All interior and exterior welded and abraded steel shall be sandblast cleaned in conformance with SSPC Section SP10 (Near White Blast Cleaning).
- C. Shop-Primed Ferrous Metal: Contractor shall be responsible for compatibility of the applied shop primer and the proposed field primer. If primers are compatible, all surfaces shall be cleaned in conformance with the manufacturers data sheet. If shop primer is not compatible, or damage to shop applied primer is too extensive for field touch-up, the surfaces shall be sandblasted in conformance to the surface preparation used in the shop.
- D. Shop Finished Ferrous Metal: Factory finished equipment or materials which have suffered damage to the shop applied coatings during shipment or installation shall be roughed-up in the field. All surfaces shall be cleaned in conformance with SSPC Section SP2 and touch-up shall be performed with paint supplied by the manufacturer.
- E. Immersion Service Ferrous Metal: Surfaces shall be sandblasted to a "Near White Clean" SP10 before application of the primer.
- F. Non-Ferrous Metal: Surfaces to be painted shall be cleaned in conformance with SSPC Section SP1 (Solvent Cleaned).
- G. Galvanized Metals: Galvanized surfaces to be painted shall be cleaned in conformance with SSPC Section SP1. Before application of the primer, surfaces shall be treated with one coat Koppers 40 Passivator (WF=4.0, DF=0.4).
- H. PVC Pipe: Surfaces shall be cleaned in conformance with SSPC Section SP1, except hand sanding shall be used to roughen the surface.
- I. Pipe with Factory Applied Bituminous Coatings: All exposed ductile iron pipe shall be painted. Bituminous coating shall be removed by sand blasting to near white before application of primer.
- J. Masonry: Surfaces shall be reasonably smooth and free of voids, cavities, dirt, dust, oils, grease or other contaminants.
- K. Concrete: Sweep sandblast to provide a surface profile. Allow concrete to cure for 28 days prior to painting.
- 3.03 COATING SYSTEMS APPLICATION
- A. All coatings shall be applied in strict accordance with the manufacturer's printed instructions and recommendations.

RESERVOIR No.1 OVERFLOW MODIFICATION CITY OF FERNDALE, WASHINGTON

- B. All coatings shall conform to the film thicknesses as specified in Part 2 of this section. Coatings failing to meet the minimum dry film thickness shall be given additional coats until the minimum film thickness is attained.
- C. Undercoats shall be tinted similar to the finish coats. Each coat shall be slightly darker than the preceding coat.
- D. Each coat applied shall be inspected and approved by the Engineer before application of the succeeding coat.
- E. Allow each coat to dry thoroughly before applying the next coat.
- F. Finish coats shall be uniform in color and sheen without streaks, laps, runs, sags or missed areas.
- 3.04 CONTRACT CLOSE-OUT
- A. The Engineer shall make a detailed inspection of the paint work upon completion. All damage to surfaces resulting from the work of this section shall be cleaned, repaired or refinished as necessary, at no cost to the Owner.
- B. Upon completion of the work, all paint equipment and materials shall be removed from the site. Coating or paint spots, oil or stains upon adjacent surfaces shall be removed and the job site cleaned.

END OF SECTION

APPENDIX A – STATE PREVAILING WAGE RATES

The State of Washington prevailing wage rates applicable for this public works project, which is located in <u>Whatcom</u> County, may be found at the following website address of the Department of Labor and Industries:

https://fortress.wa.gov/lni/wagelookup/prvwagelookup.aspx

Based on the bid submittal deadline for this project, the applicable effective date for prevailing wages for this project is <u>September 1, 2016</u>.

A copy of the applicable prevailing wage rates are attached to this section.

State of Washington Department of Labor & Industries Prevailing Wage Section - Telephone 360-902-5335 PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 09/01/2016

WhatcomAsbestos Abatement WorkersJourney Level\$45.255D1HWhatcomBoilermakersJourney Level\$44.351WhatcomBrick MasonJourney Level\$54.325A1MWhatcomBrick MasonPointer-Caulker-Cleaner\$54.325A1MWhatcomBuilding Service EmployeesJanitor\$9.4711WhatcomBuilding Service EmployeesShampooer\$9.4711WhatcomBuilding Service EmployeesWaxer\$9.4711WhatcomBuilding Service EmployeesWindow Cleaner\$9.4711WhatcomGabinet Makers (In Shop)Journey Level\$24.8911WhatcomCarpentersAcoustical Worker\$55.515D4CWhatcomCarpentersCarpentersCarpenters\$55.515D4CWhatcomCarpentersCarpentersCarpenters\$55.515D4CWhatcomCarpentersCarpentersCarpenters\$55.515D4CWhatcomCarpentersCarpentersCarpenters\$55.555D4CWhatcomCarpentersCarpentersCarpenters\$55.645D4CWhatcomCarpentersCressoted Material\$55.615D4CWhatcomCarpentersCressoted Material\$55.645D4CWhatcomCarpentersCressoted Material\$55.645D4CWhatcom	Note
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WhatcomCarpentersFloor Layer\$55.515D4C	
WhatcomCarpentersScaffold Erector\$55.515D4C	
WhatcomCement MasonsJourney Level\$55.567A1M	
WhatcomDivers & TendersDiver\$108.775D4C	<u>8A</u>
WhatcomDivers & TendersDiver On Standby\$66.055D4C	
WhatcomDivers & TendersDiver Tender\$59.885D4C	
WhatcomDivers & TendersSurface Rcv & Rov Operator\$59.885D4C	
WhatcomDivers & TendersSurface Rcv & Rov Operator Tender\$55.765A4C	
WhatcomDredge WorkersAssistant Engineer\$56.445D3F	
Whatcom Dredge Workers Assistant Mate (Deckhand) \$56.00 5D 3F	
WhatcomDredge WorkersBoatmen\$56.445D3F	
WhatcomDredge WorkersEngineer Welder\$57.515D3F	
WhatcomDredge WorkersLeverman, Hydraulic\$58.675D3F	
WhatcomDredge WorkersMates\$56.445D3F	

Whatcom	Dredge Workers	Oiler	\$56.00	<u>5D</u>	<u>3F</u>	
Whatcom	Drywall Applicator	Journey Level	\$55.51	<u>5D</u>	<u>1H</u>	
Whatcom	Drywall Tapers	Journey Level	\$29.63		1	
Whatcom	<u>Electrical Fixture Maintenance</u> <u>Workers</u>	Journey Level	\$13.82		1	
Whatcom	<u>Electricians - Inside</u>	Cable Splicer	\$65.92	<u>7H</u>	<u>1E</u>	
Whatcom	<u>Electricians - Inside</u>	Construction Stock Person	\$32.75	<u>7H</u>	<u>1D</u>	
Whatcom	<u>Electricians - Inside</u>	Journey Level	\$60.68	<u>7H</u>	<u>1E</u>	
Whatcom	Electricians - Motor Shop	Craftsman	\$15.37		<u>1</u>	
Whatcom	<u>Electricians - Motor Shop</u>	Journey Level	\$14.69		1	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Cable Splicer	\$71.85	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Certified Line Welder	\$65.71	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Groundperson	\$44.12	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Heavy Line Equipment Operator	\$65.71	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Journey Level Lineperson	\$65.71	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Line Equipment Operator	\$55.34	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Pole Sprayer	\$65.71	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Powderperson	\$49.16	<u>5A</u>	<u>4D</u>	
Whatcom	Electronic Technicians	Journey Level	\$25.09		<u>1</u>	
Whatcom	Elevator Constructors	Mechanic	\$85.45	<u>7D</u>	<u>4A</u>	
Whatcom	Elevator Constructors	Mechanic In Charge	\$92.35	<u>7D</u>	<u>4A</u>	
Whatcom	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$13.67		1	
Whatcom	Fence Erectors	Fence Erector	\$22.97		<u>1</u>	
Whatcom	<u>Flaggers</u>	Journey Level	\$38.36	<u>7A</u>	<u>31</u>	
Whatcom	<u>Glaziers</u>	Journey Level	\$58.31	<u>7L</u>	<u>1Y</u>	
Whatcom	<u>Heat & Frost Insulators And</u> <u>Asbestos Workers</u>	Journeyman	\$65.43	<u>5J</u>	<u>15</u>	
Whatcom	Heating Equipment Mechanics	Journey Level	\$19.85		1	
Whatcom	Hod Carriers & Mason Tenders	Journey Level	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	Industrial Power Vacuum Cleaner	Journey Level	\$9.47		<u>1</u>	
Whatcom	Inland Boatmen	Boat Operator	\$56.78	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Cook	\$53.30	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Deckhand	\$53.30	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Deckhand Engineer	\$54.32	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Launch Operator	\$55.57	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Mate	\$55.57	<u>5B</u>	<u>1K</u>	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	\$9.73		1	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote	Grout Truck Operator	\$11.48		1	

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	<u>Control</u>					
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$12.78		1	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$9.47		1	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	\$10.53		1	
Whatcom	Insulation Applicators	Journey Level	\$55.51	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Ironworkers</u>	Journeyman	\$65.53	<u>7N</u>	<u>10</u>	
Whatcom	<u>Laborers</u>	Air, Gas Or Electric Vibrating Screed	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Airtrac Drill Operator	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Ballast Regular Machine	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Batch Weighman	\$38.36	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Brick Pavers	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Brush Cutter	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Brush Hog Feeder	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Burner	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Caisson Worker	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Carpenter Tender	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Caulker	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Cement Dumper-paving	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Cement Finisher Tender	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Change House Or Dry Shack	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Chipping Gun (under 30 Lbs.)	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Chipping Gun(30 Lbs. And Over)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Choker Setter	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Chuck Tender	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Clary Power Spreader	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Clean-up Laborer	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Concrete Dumper/chute Operator	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Concrete Form Stripper	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Concrete Placement Crew	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Concrete Saw Operator/core Driller	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Crusher Feeder	\$38.36	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Curing Laborer	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Demolition: Wrecking & Moving (incl. Charred Material)	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Ditch Digger	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Diver	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Drill Operator (hydraulic,diamond)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Dry Stack Walls	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Dump Person	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Epoxy Technician	\$45.25	<u>7A</u>	<u>31</u>	

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Whatcom	Laborers	Erosion Control Worker	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Faller & Bucker Chain Saw	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Fine Graders	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Firewatch	\$38.36	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Form Setter	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Gabian Basket Builders	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	General Laborer	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Grade Checker & Transit Person	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Grinders	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Grout Machine Tender	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Groutmen (pressure)including Post Tension Beams	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Guardrail Erector	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Hazardous Waste Worker (level A)	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Hazardous Waste Worker (level B)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Hazardous Waste Worker (level C)	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	High Scaler	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Jackhammer	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Laserbeam Operator	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Maintenance Person	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Manhole Builder-mudman	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Material Yard Person	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Motorman-dinky Locomotive	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Pavement Breaker	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pilot Car	\$38.36	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pipe Layer Lead	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pipe Layer/tailor	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pipe Pot Tender	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pipe Reliner	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pipe Wrapper	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Pot Tender	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Powderman	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Powderman's Helper	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Power Jacks	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Railroad Spike Puller - Power	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Raker - Asphalt	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Re-timberman	\$46.66	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Remote Equipment Operator	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rigger/signal Person	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rip Rap Person	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rivet Buster	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rodder	\$46.09	<u>7A</u>	<u>31</u>	

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Whatcom	Laborers	Scaffold Erector	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Scale Person	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Sloper (over 20")	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Sloper Sprayer	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Spreader (concrete)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Stake Hopper	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Stock Piler	\$45.25	<u>7A</u>	31	
Whatcom	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tamper (multiple & Self- propelled)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Timber Person - Sewer (lagger, Shorer & Cribber)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Toolroom Person (at Jobsite)	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Topper	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Track Laborer	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Track Liner (power)	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Traffic Control Laborer	\$41.02	<u>7A</u>	<u>31</u>	<u>8R</u>
Whatcom	<u>Laborers</u>	Traffic Control Supervisor	\$41.02	<u>7A</u>	<u>31</u>	<u>8R</u>
Whatcom	<u>Laborers</u>	Truck Spotter	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tugger Operator	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 0-30 psi	\$83.12	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$88.15	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$91.83	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$97.53	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$99.65	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$104.75	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$106.65	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$108.65	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$110.65	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Guage and Lock Tender	\$46.76	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Miner	\$46.76	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	Laborers	Vibrator	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Vinyl Seamer	\$45.25	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Watchman	\$34.86	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Welder	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Well Point Laborer	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Window Washer/cleaner	\$34.86	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers - Underground Sewer &</u> Water	General Laborer & Topman	\$45.25	<u>7A</u>	<u>31</u>	

Whatcom	Laborers - Underground Sewer & Water	Pipe Layer	\$46.09	<u>7A</u>	<u>31</u>	
Whatcom	Landscape Construction	Irrigation Or Lawn Sprinkler Installers	\$11.50		<u>1</u>	
Whatcom	Landscape Construction	Landscape Equipment Operators Or Truck Drivers	\$11.50		<u>1</u>	
Whatcom	Landscape Construction	Landscaping Or Planting Laborers	\$11.50		<u>1</u>	
Whatcom	Lathers	Journey Level	\$55.51	<u>5D</u>	<u>1H</u>	
Whatcom	Marble Setters	Journey Level	\$54.32	<u>5A</u>	<u>1M</u>	
Whatcom	Metal Fabrication (In Shop)	Fitter	\$13.81		<u>1</u>	
Whatcom	Metal Fabrication (In Shop)	Laborer	\$9.47		<u>1</u>	
Whatcom	Metal Fabrication (In Shop)	Machine Operator	\$13.81		<u>1</u>	
Whatcom	Metal Fabrication (In Shop)	Welder	\$13.81		<u>1</u>	
Whatcom	Millwright	Journey Level	\$30.79		<u>1</u>	
Whatcom	Modular Buildings	Journey Level	\$9.47		<u>1</u>	
Whatcom	Painters	Journey Level	\$40.60	<u>6Z</u>	<u>2B</u>	
Whatcom	Pile Driver	Journey Level	\$55.76	5D	4C	
Whatcom	Plasterers	Journey Level	\$53.20	7Q	1R	
Whatcom	Playground & Park Equipment Installers	Journey Level	\$9.47		1	
Whatcom	Plumbers & Pipefitters	Journey Level	\$65.52	<u>5A</u>	<u>1G</u>	
Whatcom	Power Equipment Operators	Asphalt Plant Operators	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Assistant Engineer	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Barrier Machine (zipper)	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Batch Plant Operator, Concrete	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Bobcat	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Brokk - Remote Demolition Equipment	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Brooms	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Bump Cutter	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cableways	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Chipper	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Compressor	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Finish Machine -laser Screed	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Conveyors	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes Friction: 200 tons and over	\$60.47	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 20 Tons Through 44 Tons With Attachments	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$60.47	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Crusher	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Deck Engineer/deck Winches (power)	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Derricks, On Building Work	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Dozers D-9 & Under	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Drilling Machine	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Gradechecker/stakeman	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Guardrail Punch	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Horizontal/directional Drill Locator	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Horizontal/directional Drill Operator	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hydralifts/boom Trucks Over 10 Tons	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loaders, Plant Feed	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loaders: Elevating Type Belt	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Locomotives, All	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Material Transfer Device	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Mechanics, All (leadmen - \$0.50 Per Hour Over Mechanic)	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Motor Patrol Graders	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Pavement Breaker	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Posthole Digger, Mechanical	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Power Plant	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Pumps - Water	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Rigger And Bellman	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Rigger/Signal Person, Bellman (Certified)	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Rollagon	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Roller, Other Than Plant Mix	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Roto-mill, Roto-grinder	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Saws - Concrete	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Scrapers - Concrete & Carry All	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Service Engineers - Equipment	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators	Shotcrete/gunite Equipment	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Slipform Pavers	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Spreader, Topsider & Screedman	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Subgrader Trimmer	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Bucket Elevators	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Crane Up To 175' In Height Base To Boom	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$60.47	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Transporters, All Track Or Truck Type	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Trenching Machines	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Truck Mount Portable Conveyor	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Welder	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Wheel Tractors, Farmall Type	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Yo Yo Pay Dozer	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operators	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Assistant Engineer	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Batch Plant Operator, Concrete	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Bobcat	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Brooms	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Bump Cutter	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cableways	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators- Underground Sewer & Water	Chipper	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Compressor	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine -laser Screed	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Conveyors	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes Friction: 200 tons and over	\$60.47	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$60.47	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: Friction cranes through 199 tons	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Crusher	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Deck Engineer/deck Winches (power)	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Derricks, On Building Work	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Drilling Machine	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators-	Finishing Machine, Bidwell And	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>

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	Underground Sewer & Water	Gamaco & Similar Equipment				
Whatcom	Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Gradechecker/stakeman	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Guardrail Punch	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Locator	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Operator	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom Trucks Over 10 Tons	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom Trucks, 10 Tons And Under	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Locomotives, All	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Mechanics, All (leadmen - \$0.50 Per Hour Over Mechanic)	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Motor Patrol Graders	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
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Whatcom	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Power Plant	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Pumps - Water	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Rigger And Bellman	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Rigger/Signal Person, Bellman (Certified)	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Rollagon	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Service Engineers - Equipment	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shotcrete/gunite Equipment	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Crane Up To 175' In Height Base To Boom	\$59.28	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	\$59.88	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	\$60.47	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Trenching Machines	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	\$57.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Welder	\$58.69	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Wheel Tractors, Farmall Type	\$55.21	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	\$58.17	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$47.08	<u>5A</u>	<u>4A</u>	
Whatcom	<u>Power Line Clearance Tree</u> <u>Trimmers</u>	Spray Person	\$44.64	<u>5A</u>	<u>4A</u>	
Whatcom	<u>Power Line Clearance Tree</u> <u>Trimmers</u>	Tree Equipment Operator	\$47.08	<u>5A</u>	<u>4A</u>	
Whatcom	Power Line Clearance Tree Trimmers	Tree Trimmer	\$42.01	<u>5A</u>	<u>4A</u>	
Whatcom	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$31.65	<u>5A</u>	<u>4A</u>	
Whatcom	Refrigeration & Air Conditioning Mechanics	Journey Level	\$23.95		<u>1</u>	
Whatcom	Residential Brick Mason	Journey Level	\$54.32	<u>5A</u>	<u>1M</u>	
Whatcom	Residential Carpenters	Journey Level	\$23.81		<u>1</u>	
Whatcom	Residential Cement Masons	Journey Level	\$27.28		1	
Whatcom	Residential Drywall Applicators	Journey Level	\$25.00		1	
Whatcom	Residential Drywall Tapers	lourney Level	\$73.91		1	

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Whatcom	Residential Electricians	Journey Level	\$37.65		<u>1</u>	
Whatcom	Residential Glaziers	Journey Level	\$13.79		<u>1</u>	
Whatcom	Residential Insulation Applicators	Journey Level	\$13.96		<u>1</u>	
Whatcom	Residential Laborers	Journey Level	\$20.00		<u>1</u>	
Whatcom	Residential Marble Setters	Journey Level	\$54.32	<u>5A</u>	<u>1M</u>	
Whatcom	Residential Painters	Journey Level	\$17.43		<u>1</u>	
Whatcom	Residential Plumbers & Pipefitters	Journey Level	\$28.26		<u>1</u>	
Whatcom	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$38.75	<u>5A</u>	<u>1G</u>	
Whatcom	Residential Sheet Metal Workers	Journey Level (Field or Shop)	\$36.04	<u>7J</u>	<u>11</u>	
Whatcom	Residential Soft Floor Layers	Journey Level	\$23.46		<u>1</u>	
Whatcom	<u>Residential Sprinkler Fitters (Fire</u> <u>Protection)</u>	Journey Level	\$13.23		1	
Whatcom	Residential Stone Masons	Journey Level	\$54.32	<u>5A</u>	<u>1M</u>	
Whatcom	Residential Terrazzo Workers	Journey Level	\$9.47		1	
Whatcom	Residential Terrazzo/Tile Finishers	Journey Level	\$14.00		<u>1</u>	
Whatcom	Residential Tile Setters	Journey Level	\$9.47		<u>1</u>	
Whatcom	Roofers	Journey Level	\$25.27		<u>1</u>	
Whatcom	Sheet Metal Workers	Journey Level (Field or Shop)	\$61.20	<u>7F</u>	<u>1E</u>	
Whatcom	Shipbuilding & Ship Repair	Boilermaker	\$41.72	<u>7M</u>	<u>1H</u>	
Whatcom	Shipbuilding & Ship Repair	Carpenter	\$15.16		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Crane Operator	\$16.04		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Electrician	\$15.18		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Heat & Frost Insulator	\$65.43	<u>5J</u>	<u>15</u>	
Whatcom	Shipbuilding & Ship Repair	Inside Machinist	\$16.70		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Laborer	\$23.38		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Outside Machinist	\$14.69		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Painter	\$15.16		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Pipefitter	\$15.18		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Sheet Metal	\$20.26		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Welder/burner	\$15.21		<u>1</u>	
Whatcom	<u>Sign Makers & Installers</u> <u>(Electrical)</u>	Journey Level	\$16.03		1	
Whatcom	<u>Sign Makers & Installers (Non-</u> <u>Electrical)</u>	Journey Level	\$14.23		1	
Whatcom	<u>Soft Floor Layers</u>	Journey Level	\$45.86	<u>5A</u>	<u>3D</u>	
Whatcom	Solar Controls For Windows	Journey Level	\$9.47		<u>1</u>	
Whatcom	Sprinkler Fitters (Fire Protection)	Journey Level	\$56.81	<u>7J</u>	<u>1R</u>	
Whatcom	<u>Stage Rigging Mechanics (Non</u> <u>Structural)</u>	Journey Level	\$13.23		1	
Whatcom	Stone Masons	Journey Level	\$54.32	<u>5A</u>	<u>1M</u>	
Whatcom	<u>Street And Parking Lot Sweeper</u> <u>Workers</u>	Journey Level	\$15.00		1	
Whatcom	Surveyors	All Classifications	\$36.16	<u>Null</u>	<u>1</u>	
Whatcom	Telecommunication Technicians	Journey Level	\$43.32	<u>7E</u>	<u>1E</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Cable Splicer	\$37.60	<u>5A</u>	<u>2B</u>	
Whatcom	Telephone Line Construction -	Hole Digger/Ground Person	\$20.79	<u>5A</u>	<u>2B</u>	
	Outside					
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Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Installer (Repairer)	\$36.02	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Special Aparatus Installer I	\$37.60	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Special Apparatus Installer II	\$36.82	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Equipment Operator (Heavy)	\$37.60	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Equipment Operator (Light)	\$34.94	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Lineperson	\$34.93	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television Groundperson	\$19.73	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television Lineperson/Installer	\$26.31	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television System Technician	\$31.50	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television Technician	\$28.23	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Tree Trimmer	\$34.93	<u>5A</u>	<u>2B</u>	
Whatcom	Terrazzo Workers	Journey Level	\$48.86	<u>5A</u>	<u>1M</u>	
Whatcom	<u>Tile Setters</u>	Journey Level	\$48.86	<u>5A</u>	<u>1M</u>	
Whatcom	<u>Tile, Marble & Terrazzo Finishers</u>	Finisher	\$39.69	<u>5A</u>	<u>1B</u>	
Whatcom	Traffic Control Stripers	Journey Level	\$17.41		<u>1</u>	
Whatcom	Truck Drivers	Asphalt Mix	\$30.15		<u>1</u>	
Whatcom	Truck Drivers	Dump Truck	\$19.32		<u>1</u>	
Whatcom	Truck Drivers	Dump Truck And Trailer	\$19.32		<u>1</u>	
Whatcom	Truck Drivers	Other Trucks	\$14.48		<u>1</u>	
Whatcom	Truck Drivers	Transit Mixer	\$16.81		<u>1</u>	
Whatcom	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	\$15.00		<u>1</u>	
Whatcom	Well Drillers & Irrigation Pump Installers	Oiler	\$9.47		1	
Whatcom	Well Drillers & Irrigation Pump Installers	Well Driller	\$18.02		1	

Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

- 1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
 - B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
 - G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.
 - J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.
 - K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
 - M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

- 1. O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.
 - P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
 - Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.
 - R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.
 - S. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays and all other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
 - U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
 - V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.
 - W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
 - X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.
 - Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.
 - Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

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.

Overtime Codes Continued

- 3. D. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 15% over the hourly rate of wage. All other hours worked after 6:00 am on Saturdays, shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - E. All hours worked Sundays and holidays shall be paid at double the hourly rate of wage. Each week, once 40 hours of straight time work is achieved, then any hours worked over 10 hours per day Monday through Saturday shall be paid at double the hourly wage rate.
 - F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.
 - H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.
 - I. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions during a five day work week (Monday through Friday,) or a four day-ten hour work week (Tuesday through Friday,) then Saturday may be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

- A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.
- B. All hours worked over twelve (12) hours per day and all hours worked on holidays shall be paid at double the hourly rate of wage.
- C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

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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 $(1\frac{1}{2})$ times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

- F. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 20% over the hourly rate of wage. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Holiday Codes

- 5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).
 - B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).
 - C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
 - D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).
 - H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

Holiday Codes Continued

- 5. I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
 - J. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, And Christmas Day (7).
 - K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).
 - L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).
 - N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).
 - P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.
 - Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
 - R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).
 - S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).
 - Paid Holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And The Day Before Or After Christmas (9).
 - Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
- 6. A. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
 - E. Paid Holidays: New Year's Day, Day Before Or After New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and a Half-Day On Christmas Eve Day. (9 1/2).
 - G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).
 - H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).
 - I. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (7).

6

Holiday Codes Continued

- 6. T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).
 - Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.
- 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.
 - D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
 - H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

- 7. K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - M. Paid Holidays: New Year's Day, The Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, And the Day after or before Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.
 - P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
 - Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
 - R. Paid Holidays: New Year's Day, the day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day after or before Christmas Day (10). If any of the listed holidays fall on Saturday, the preceding Friday shall be observed as the holiday. If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
 - S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
 - T. Paid Holidays: New Year's Day, the Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and The Day after or before Christmas Day. (10). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Note Codes

A. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:

Over 50' To 100' -\$2.00 per Foot for Each Foot Over 50 Feet Over 100' To 150' -\$3.00 per Foot for Each Foot Over 100 Feet Over 150' To 220' -\$4.00 per Foot for Each Foot Over 150 Feet Over 220' -\$5.00 per Foot for Each Foot Over 220 Feet

8.

Note Codes Continued

- 8. C. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more: Over 50' To 100' -\$1.00 per Foot for Each Foot Over 50 Feet Over 100' To 150' -\$1.50 per Foot for Each Foot Over 100 Feet Over 150' To 200' -\$2.00 per Foot for Each Foot Over 150 Feet Over 200' -Divers May Name Their Own Price
 - D. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
 - L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$0.75, Level B: \$0.50, And Level C: \$0.25.
 - M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: \$1.00, Levels C & D: \$0.50.
 - N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.
 - P. Workers on hazmat projects receive additional hourly premiums as follows -Class A Suit: \$2.00, Class B Suit: \$1.50, Class C Suit: \$1.00, And Class D Suit \$0.50.
 - Q. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.
 - R. Effective August 31, 2012 A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.
 - S. Effective August 31, 2012 A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
 - T. Effective August 31, 2012 A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
 - U. Workers on hazmat projects receive additional hourly premiums as follows Class A Suit: \$2.00, Class B Suit: \$1.50, And Class C Suit: \$1.00. Workers performing underground work receive an additional \$0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional \$0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do "pioneer" work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional \$0.50 per hour.

DRAWINGS

CITY OF FERNDALE, WA

RESERVOIR No. 1 OVERFLOW MODIFICATION CITY PROJECT No. WA2015-05

AREA MAP - NOT TO SCALE



VICINITY MAP - NOT TO SCALE



SHEET CO.1	COVER SHEET
SHEET C0.2	LEGEND & ABBREVIATIONS
SHEET C1.1	EXISTING CONDITIONS
SHEET C2.1	T.E.S.C. PLAN & DETAILS
SHEET C3.1	SITE PLAN
SHEET C4.1	CIVIL DETAILS
SHEET C4.2	CIVIL DETAILS
DATUM NOTES	NAD83/91 PER THE CITY OF FERNDALE SURVE
DATUM NOTES HORIZONTAL DATUM:	NAD83/91 PER THE CITY OF FERNDALE SURVE MONUMENT NETWORK OF 2001
DATUM NOTES HORIZONTAL DATUM: VERTICAL DATUM:	NAD83/91 PER THE CITY OF FERNDALE SURVEY MONUMENT NETWORK OF 2001 NGVD29 PER THE CITY OF FERNDALE SURVEY MONUMENT NETWORK OF 2001

COORDINATES WERE HELD FOR "FERNO5":

NORTHING = 683,701.32 USFT EASTING = 1,214,911.44 USFT ELEV. = 220.76

2. BASIS OF BEARINGS: HELD DERIVED INVERSE BETWEEN THE ABOVE-MENTIONED CONTROL POINT "FERNO5" AND "FERNO6", A SURFACE MONUMENT BEHIND THE SIDEWALK IN THE GRASS AREA AT THE SOUTH EDGE OF PAVED DRIVEWAY INTO COAST CONSTRUCTION, SAID BEARING BEING N 66'07'58" E, A DISTANCE OF 4403.52'. THE FOLLOWING NAD83/91 COORDINATES WERE HELD FOR "FERNO6"

> NORTHING = 685,483.06 USFT 1,218,938.40 USFT FASTING = ELEV. = 48.96'

3. BASIS OF ELEVATIONS: ELEVATIONS ARE NGVD29 PER THE CITY OF FERNDALE SURVEY MONUMENT NETWORK OF 2001. HELD PUBLISHED NGVD29 ELEVATION FOR "FERN05" OF

> ELEV. = 220.76

GENERAL NOTES

- 1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF F OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL
- 2. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF FERNDALE SHALL BE
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PRO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDE BUSINESS DAYS PRIOR TO ANY EXCAVATION.
- EROSION CONTROL MEASURES SHALL BE TAKEN BY THE CONTRACTOR DURING FACILITIES, ROADWAYS, AND ADJACENT PROPERTIES. 4.
- 5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF
- 6. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY
- ALL LINES SHALL BE CLEANED AND PRESSURE TESTED PRIOR TO PAVING, IF A SPECIFICATIONS. TESTING SHALL TAKE PLACE AFTER ALL UNDERGROUND UTILITI 7. COMPLETED.
- PRIOR TO BACKFILL ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AN CONSTRUCTION INSPECTOR. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR 8. DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CO REQUIRED INSPECTIONS.
- 9. ALL WORK AND MATERIALS SHALL BE GUARANTEED BY THE CONTRACTOR FOR
- 10. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPRO RESPONSIBLE TO VERIFY AND PROTECT ALL UTILITIES.
- 11. ALL RESTORATION AND LANDSCAPING WITHIN PUBLIC OR PRIVATE PROPERTY SI INCLUDE, BUT NOT BE LIMITED TO, ALL LAWNS, LANDSCAPING, FENCES, GRAVE
- 12. THE CONTRACTOR SHALL KEEP A RECORD OF AS-BUILT INFORMATION THROUG DEVIATIONS FROM THE PLANS AND ANY OTHER INFORMATION NOT SHOWN ON
- 13. THE CONTRACTOR SHALL REPLACE ALL MONUMENTS, RIGHT-OF-WAY MARKERS CONSTRUCTION. THE CONTRACTOR SHALL USE A SURVEYOR REGISTERED IN T

EROSION AND SEDIMENTATION CONTROL

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT POLLUTION AND EROSION BEST MANAGEMENT PRACTICES SHALL CONFORM TO THE CURRENT WASHINGTON

EXISTING UTILITIES

- CONTRACTOR IS ADVISED THAT UNDERGROUND WATER, SEWER, STORM, TELEPH THIS PROJECT. NO ATTEMPT WAS MADE TO SHOW ALL UTILITIES ON THE PLAY OTHER UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. 1.
- 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE TRI IMPACT THE WORK. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO COMMENCI PROPOSED IMPROVEMENTS. THE COST OF LOCATING, PROTECTING AND ACCOU OF THE PROJECT. IF AN ACTUAL CONFLICT REQUIRES RELOCATION OF AN EXI: THE ENGINEER WILL DETERMINE IF EXTRA PAY IS WARRANTED TO ACCOMMODAT OR VERTICAL ADJUSTMENTS OF THE PROPOSED IMPROVEMENTS TO AVOID CONF

TRAFFIC CONTROL

 CONTRACTOR IS NOT ALLOWED TO COMPLETELY CLOSE ANY STREET TO TRAFFI EACH AREA IS ONE LANE. TRAFFIC SHALL BE MAINTAINED ACCORDING TO WSD CONTROL DEVICES.



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EXISTING HATCH PATTERNS	DESCRIPTION
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	DECK
	DOCK
	FDGE OF SAWOUT
	EDGE OF PAVEMENT
xx	FENCE
·	GATE
	GRADE
	GRAVEL
	GUARDRAIL
	JERSEY BARRIER
	LAKE/POND WATER EDGE
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PROPOSED PLAN LINETYPES	DESCRIPTION
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UTILITIES EXISTING PLAN LINETYPES DESCRIPTION ----- TV ----- TV ----- CABLE TELEVISION (AERIAL) ----- FO ----- FO ----- FO ----- FIBER OPTIC LINE (AERIAL) FIBER OPTIC LINE (BURIED) ------ SC ------ SC ------ TRAFFIC SIGNAL CONDUIT LINE ----- ut ---- ut ---- ut ---- Utility (Aerial) UTILITY (BURIED) PDB------PDB------- POWER DUCT BANK (BURIED) ----- DF ------ DF ----- DRAIN FIELD ----- SANITARY SEWER ---- SD ----------D-----D-----D-----D-----D----- APPROXIMATE DRAIN LINE CULVERT (@ WIDTH) >----- CULVERT ----- WATER (PER AS-BUILT, APPROXIMATE) WATER (PER UTILITY LOCATES) ---- STE ------ STE ------ STEAM ---------------------- GAS _____O______O_____OIL ------ AIR ------ AIR ----- AIR LINE PROPOSED PLAN UTILITY LINETYPES ATER DESCRIPTION WATER ----- W ------ WATER ------ 8" WATER - IRRIGATION ---RW-----RW-----RW-----RW----- RECLAIMED WATER -- FP -----SANITARY SEWER —s— -8S-— FM — ----- FM ------ FORCE MAIN DRAIN FIELD -DF-STORM DRAIN MISC. UTILITIES -----G---------- P ------ P ------ POWER TELEPHONE/COMMUNICATIONS GRADING EROSION CONTROL

# ------ C ---------- SURVEILLLANCE CAMERA (BURIED - FM ---------- FM -------- SANITARY SEWER (FORCE MAIN) SD STORM DRAINAGE ----- GAS TANK/STRUCTURE MISC UTILITY (BURIED) WATER STRUCTURE FIRE DEPARTMENT CONNECTION FIRE PROTECTION LINE

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### DESCRIPTION

- 68 -

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CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555

**BID DOCUMENTS** 

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SYMBOLS

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IONS	
=AS-BUILT (RECORD) =ALIGNMENT	
=UTILITY POLE ANCHOR =APPROXIMATE =ASPHAIT	
-ASSEMBLY =ASSEMBLY =AMERICAN SOCIETY FOR TESTING	
& MATERIALS =BUILDING	
-BEGIN VERTICAL CURVE STATION =BEGIN VERTICAL CURVE STATION =BEGIN VERTICAL CURVE FLEVATION	
=CATCH BASIN =CHECK VALVE	
=CERTIFIED EROSION SEDIMENT CONTROL LEAD	
=COLUMN =CORRUGATED METAL PIPE =CLEAN OUT	
=CONCRETE =CORNER	
=CURRUGATED POLYETHYLENE PIPE =CRUSHED SURFACING TOP COURSE =DOUBLE CHECK VALVE ACCENTENT	
=DRAIN FIELD =DUCTILE IRON	
=DIADULVED OXYGEN =DIAMETER RATIO =DOWNSPOUT	
=EXPLORATION BORING =EFFLUENT =EXISTING CRADE	
=ELEVATION =EDGE OF GRAVEL	
=EDGE OF PAVEMENT =EXPLORATION PIT =EXISTING	
=END VERTICAL CURVE STATION =END VERTICAL CURVE ELEVATION	
=FIRE DEPARTMENT CONNECTION =FINISH FLOOR =FINISH GRADE	
=FLOWLINE OR FLANGE (CONNECTION) =FLOWLINE	
=FLOWLINE OF CURB =FENCE =GRADE BREAK	
=GAS METER =GUY POLE	
=GALLONS PER MINUTE =GRAVEL =GUTTER	
=GATE VALVE =HOSE BIB =HOT-DIP CALVANIZED	
=HIGH DENSITY POLYETHYLENE =HORIZONTAL:VERTICAL	
=High Water Level =Hydrant =Invert Elevation	
=INVERT =LINEAR FEET	
=luminaike =LEFT =MAXIMUM	
=MAIL BOX =MEMBRANE BIO-REACTOR =MAINTENANCE OF EANING	
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=manufacturer =manhole =minimum	
=MISCELLANEOUS =MECHANICAL JOINT	
=MIXED LIQUOR SUSPENDED SOLIDS =MONITORING WELL =NATIONAL POLLUTANT DISCHARGE	
ELIMINATION SYSTEM =ON CENTER =ON CENTER FACIL WAY	
=OUTSIDE DIAMETER =OVERHEAD POWER	
=uverhead Telephone =Occupational safety and health administration	
=PLANTER =POINT ON LINE =PROPOSED	
=PUMP STATION =PUMP STATION =POUNDS PER SQUARE INCH	
=POINT OF TANGENCY =POLYMMYL CHLORIDE =POINT OF VERTICAL INTERSECTION	
=POTABLE WATER =RADIUS	
=rock/boulder =retaining =record	
=REQUIRED =RAPID INFILTRATION	
-reuse pressure backflow assembly =Railroad =Right	
=RIGHT-OF-WAY =REUSE WATER =SUPERMEEDY COM	
-SUFERVISURY CONTROL AND DATA ACQUISITION =SCHEDULE	
=STORM DRAIN CATCH BASIN =STORM DRAIN =STORM DRAIN	
=SINGLE FAMILY HOUSING =SHRUB/BUSH	
=SIGN =STANDARD PROCTOR DENSITY =SPIKE	
=SANITARY SEWER =SANITARY SEWER CLEAN-OUT	
=SANITARY SEWER MANHOLE =STATION =SEPTIC TANK FEELLEAT SUME	
=SIDEWALK =TOP BACK OF CURB	
TO BE DETERMINED TEMPORARY BENCH MARK	
=TYPICAL =UTILITY POLE	
=VEGETATION =VARIABLE FREQUENCY DRMF	
=WASTE ACTIVATED SLUDGE =WATERLINE =WATER METER	
WATER SURFACE	
TRANSPORTATION =WATER VALVE =WASTE WATER TOPATION	
=WASTE WATER TREATMENT PLANT =YARD DRAIN	



### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A LICENSED LAND SURVEYOR IN THE STATE OF WASHINGTON, THAT THIS MAP IS BASED ON AN ACTUAL FIELD SURVEY DONE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT ALL DATA SHOWN HEREON ACTUALLY EXISTS IN THE LOCATIONS SHOWN AT THE TIME OF THIS SURVEY. THIS TOPOGRAPHIC MAP WAS DONE AT THE REQUEST OF <u>THE CITY OF FERNDALE</u> IN OCTOBE<u>ROP</u> 2015.

J. THOMAS BREWSTER, P.L.S. NO 44335 DATE 8-8-2016 Þ

### SURVEY CONTROL (NAD83/91, NGVD29)

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	684425.13	1214892.38	221.64	BERNTSEN SPIKE
101	684440.40	1215016.45	214.22	5/8" REBAR
102	684566.42	1214884.59	219.55	1/2" REBAR AND RED CAP
103	684443.87	1214686.36	230.96	BRASS SURFACE MONUMENT

### SITE CONTROL (NAD83/91, NGVD29)

- 1. THE SURVEY DEPICTED HEREON IS INTENDED TO BE USED FOR THE PURPOSE OF WATER FACILITY PLANNING AND DESIGN. ALTHOUGH THERE IS A BOUNDARY COMPONENT TO THIS SURVEY, NO MONUMENTS WERE SET DURING THE COURSE OF THIS SURVEY PURPORTING TO REPRESENT THE BOUNDARIES HEREON SHOWN. THIS TOPOGRAPHIC SURVEY WAS PREPARED TO SUPPORT WATER LINE DESIGN CONSIDERATIONS, AND SHOULD NOT BE CONSTRUED TO REPRESENT A COMPLETE BOUNDARY AND TOPOGRAPHIC MAP OF THE SUBJECT SITE.
- 2. CONTROL AND TOPOGRAPHY FOR THIS SURVEY WAS PERFORMED IN OCTOBER, 2015 USING A COMBINATION OF NETWORKED REAL-TIME KINEMATIC GPS AND CONVENTIONAL TECHNIQUES.
- LOCATIONS OF UNDERGROUND UTILITIES DEPICTED HEREON ARE ACCORDING TO SURFACE MARKS PROVIDED BY OTHERS, AND WILSON CAN NOT AND WILL NOT GUARANTEE THE CORRESPONDENCE BETWEEN THE MARKS AND THE EXTANT UTILITIES. UTILITIES MAY EXIST THAT WERE NOT MARKED AT THE TIME OF THIS SURVEY.

--- SSMH#1141 RIM=230.89

ISE #103 W 8" PVC INV=217.39

- OHP

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--- OHP ---

4. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT, AND THE EXISTENCE OF EASEMENTS OF RECORD THAT MAY AFFECT THE PROPERTY'S USE WAS NOT INVESTIGATED IN THE COURSE OF THIS SURVEY.







- X = 1.0' FOR SLOPES 4H:1V OR FLATTER X = 1.5' FOR SLOPES STEEPER THAN 4H:1V
- (1) COMPOST BERM NOT TO SCALE

### TESC PLAN

### NARRATIVE

EROSION AND SEDIMENT CONTROL BMPS: ANTICIPATED BMPS THAT WILL BE UTILIZED INCLUDE: MINIMIZING VEGETATION REMOV COVER MEASURES, PERMANENT SEEDING & PLANTING, SURFACE ROUGHING, AND COMPOST BERM INSTALLATION. OTHER BMPS TO MINIMIZE EROSION AND SEDIMENT TRANSPORT AS CONSTRUCTION SCHEDULES AND WEATHER CONDITIONS DICTATE.

TEMPORARY STABILIZATION: ALL DISTURBED AREAS SHALL BE STABILIZED IF IN THE EVENT OF RAIN, ALL DISTURBED AREAS STABILIZED IF UNWORKED FOR SEVEN DAYS.

PERMANENT STABILIZATION: ALL DISTURBED AREAS OUTSIDE OF ROADWAY SHOULDERS AND PARKING AREAS WILL BE PERMANE OR SEEDED AND RESTORED TO THEIR EXISTING CONDITIONS.

CONVEYANCE BYPASS: PROVISION FOR BYPASS OF STORMWATER CONVEYANCE SHALL BE PROVIDED IF NECESSARY. BYPASS SH FOR THE DURATION OF THE WORK. MATERIALS FOR BYPASS NEED NOT BE INSTALLED WHILE WORK IS IN PROGRESS AT A PAR LOCATION, BUT MATERIALS AND EQUIPMENT FOR IMMEDIATE INSTALLATION SHALL BE ON HAND. BYPASS SHALL BE IN PLACE Y UNATTERDED FOR GREATER THAN 12 HOURS. A TRENCH MAY BE DUG FOR THE BYPASS PRIOR TO INSTALLATION OF BYPASS FEASIBLE. ANY PIPING USED FOR BYPASS SHALL BE OF A DIAMETER AT LEAST 3/ OF THE EXISTING PIPE/CULVERT DIAMETER.

MAINTENANCE: THE BMPS SHALL BE INSPECTED AS NEEDED (MINIMUM OF ONCE EVERY THREE DAYS) AND DURING/AFTER RAI THE BMPS WILL BE MAINTAINED UNTIL THE RISK OF EROSION HAS PASSED AND THE AREA IS PERMANENTLY STABILIZED.

#### PROJECT WIDE BMPS

THE FOLLOWING BMPS SHALL BE IMPLEMENTED THROUGHOUT THE ENTIRE PROJECT TO THE MAXIMUM EXTENT POSSIBLE:

BMP C101 PRESERVING NATURAL VEGETATION, CONTRACTOR SHALL CLEAR AND DISTURB ONLY AREAS REQUIRED TO CONSTRUCT IMPROVEMENTS AND SHALL DILIGENTLY MINIMIZE DISTURBED AREA.

BMP C102 BUFFER ZONES. CONTRACTOR SHALL MARK CLEARING LIMITS AND KEEP ALL EQUIPMENT AND CONSTRUCTION DEBRIS OUT OF NATURAL AREAS.

BMP C120 PERMANENT SEEDING & PLANTING. CONTRACTOR SHALL COMPLETE REQUIRED LANDSCAPING AS RAPIDLY AS POSSIBLE. ALL OTHER DISTURBED AREAS OUTSIDE OF PAVED AREAS SHALL BE HYDROSEEDED AS RAPIDLY AS POSSIBLE WITH SUITABLE SEED-MULCH-FERTILIZER MIX FOR LOCAL CLIMATE.

BMP C121 MULCHING . CONTRACTOR SHALL MULCH ALL LANDSCAPED AREAS AS RAPIDLY AS POSSIBLE.

BMP C130 SURFACE ROUGHENING, CONTRACTOR SHALL ROUGHEN DISTURBED AREAS PRIOR TO PERMANENT SEEDING AND PLANTING.

BMP C140 DUST CONTROL. CONTRACTOR SHALL KEEP DUST FROM CONSTRUCTION ACTIVITIES AND EXPOSED SOILS TO A MINIMUM.

BMP C160 CERTIFIED EROSION CONTROL LEAD (MUST BE EMPLOYED BY GENERAL CONTRACTOR AND ON SITE DURING CONSTRUCTION.)

### AREA SPECIFIC BMPs

The following BMPs shall be used in locations identified on  $_{\rm B}$  . The site plan:

COMPOST BERM. CONTRACTOR SHALL INSTALL COMPOST BERM AT LOCATIONS NOTED ON PLANS.

BMPS: BEST MANAGEMENT PRACTICES (BMPS) R THIS PLAN AND IN THESE NOTES SHALL BE CON

GENERAL NOTES

- MAINTAINED AS DESCRIBED IN DEPARTMENT OF EC STORMWATER MANAGEMENT MANUAL FOR THE PUC CHAPTER II-5, "STANDARDS AND SPECIFICATIONS MANAGEMENT PRACTICES FOR EROSION AND SEDII
- EXTENT: THE EXTENT OF EROSION AND SEDIMENT MEASURES IS DEPENDENT ON WEATHER CONDITION LENGTH OF TIME GROUND IS LEFT EXPOSED, AND EXPOSED GROUND. THE CONTRACTOR SHALL AT THE RISK OF SITE EROSION BY CAREFUL SCHEDU IMPLEMENTING AND MAINTAINING BMPS UNTIL THE PERMANENTLY STABILIZED.
- UNWORKED SOILS: ALL EXPOSED AND UNWORKED STABILIZED BY SUITABLE AND TIMELY APPLICATION
- 4. VEGETATION: EXISTING VEGETATION SHALL BE PR ATTAINABLE.
- SLOPES: CUT AND FILL SLOPES SHALL BE CONS MANNER THAT WILL MINIMIZE EROSION. SLOPES S STABILIZED AS SOON AS POSSIBLE.
- OUTLETS: STABILIZATION ADEQUATE TO PREVENT OUTLETS AND ADJACENT STREAM BANKS SHALL B OUTLETS OF ALL CONVEYANCE SYSTEMS.
- 7. INLETS: ALL EXISTING AND PROPOSED STORM DF BE PROPERLY MAINTAINED AND PROTECTED FROM
- ENTRANCES: PROVISION SHALL BE MADE TO MINIM TRANSPORT OF SOIL ONTO THE PAVED ROAD. IF TRANSPORTED ONTO A ROAD SURFACE, THE ROAD THE CONSTRUCTION SITE SHALL BE CLEANED ON STREET WASHING SHALL BE ALLOWED ONLY IF WA INFILTRATED IN THE RIGHT OF WAY.
- TEMPORARY CONSTRUCTION ENTRANCE: IN PLACE CONSTRUCTION ENTRANCE, CONTRACTOR SHALL PF PROVISIONS TO ENSURE THAT NO SEDIMENT IS TF CONSTRUCTION SITE. IN THE EVENT THAT SEDIMEN OCCURS, CONTRACTOR SHALL REMOVE ALL TRACK IMMEDIATELY.
- 10. SITE RUNOFF: PRIOR TO FLOWING OFF THE SITE RUNOFF SHALL PASS THROUGH A COMPOST BERN
- 11. ADJACENT PROPERTIES: PROPERTIES ADJACENT SHALL BE PROTECTED FROM SEDIMENT DEPOSITIO
- DOWNSTREAM WATERWAYS & PROPERTY: PROPER WATERWAYS DOWNSTREAM FROM THE CONSTRUCTI PROTECTED FROM EROSION DUE TO ANY TEMPOR VOLUME, VELOCITY, AND PEAK FLOW OF STORMW, THE PROJECT SITE.
- 13. REMOVAL OF BMPS: ALL TEMPORARY EROSION A CONTROL BMPS SHALL BE REMOVED WITHIN 30 E SITE STABILIZATION IS ACHIEVED OR AFTER THE T ARE NO LONGER NEEDED. TRAPPED SEDIMENT S OR STABILIZED ON-SITE. DISTURBED SOIL AREAS REMOVAL SHALL BE PERMANENTLY STABILIZED.
- 14. INSPECTIONS: ALL BMPS SHALL BE INSPECTED, REPARED BY THE CONTRACTOR AS NEEDED TO . PERFORMANCE OF THEIR INTENDED FUNCTION. . EROSION AND SEDIMENT CONTROL MEASURES SH REGULARLY AS NEEDED (AT LEAST ONCE EVERY DURING/WITHIN 24 HOURS AFTER ANY STORM ED THAT 0.5-INCHES OF RAIN PER 24-HOUR PERIC
- REPORTS: THE CONTRACTOR SHALL PREPARE AI REPORTS SUMMARIZING THE SCOPE OF INSPECTI PERSONNEL CONDUCTING THE INSPECTION, THE INSPECTION, MAJOR OBSERVATIONS ACTIONS TAKI THESE INSPECTIONS.
- 16. OTHER REQUIREMENTS: THE ENGINEER, OWNER, DEPARTMENT OF ECOLOGY, OR OTHER AGENCIES IN ADDITION TO WHAT IS SHOWN ON THIS PLAN PREVENT VIOLATIONS OF SUFFACE WATER QUALIT CONTRACTOR SHALL IMPLEMENT THE BMPS AS R
- IF AREA OF DISTURBANCE WILL EXCEED 1.0 ACR SHALL COMPLY WITH NPDES CONSTRUCTION GEN REQUIREMENTS INCLUDING, BUT NOT LIMITED TO: PUBLIC NOTICE, PREPARTION AND MAINTENANCE MONITORING, REPORTING AND FILING OF A N.O.T.

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	$\langle 7 \rangle = 24 - MESH$	GALVANIZED SCREEN BOLTE	D BETY	EEN		U)	z
)	EL. FLANG	E AND 8"# FLANGE RING			and the second		ט 🛛
					•		z
	$\left( \frac{8}{8} \right) = AIRGAP MI$	IN. 2 PIPE DIAMETERS ABOV					ш
	9 = RECONNEC	T EXISTING DRAIN LINE, NO	RTH (IN	) & ) 5		2	$\geq$
		UT). FLEXIBLE COOPLINGS B					ш
	(10) = EXCAVATE OVERFLOW	DOWN TO EXISTING RESERV AND DRAIN LINES. ENSURE	/OIR			A BY	>
	STABILITY FOUNDATIO	CONTAINMENT OF ADJACEN	T STRU	CTURE		2	<u>~</u>
						5	ן ג
		, FL, HIRUST BLOCKING					
	$\langle 12 \rangle = 8^{*}$ TEE, FI RUN	L, WITH 8" BLIND FLANGE C	N UP-	FACING	A LAN	調を	<u>s</u>
	$\langle 13 \rangle$ = CUSTOM (	CONCRETE SLAB, 8.5' x 6.5'	x 12"				
	THICKNES	S PER DETAIL SHEET C4.1 W GRATE 19-56-4(2½ × 光6)	VITH ) MFR	BY			
	GRATING = 224.7±	ACIFIC, OR EQUAL. RIM/TO AND 4-6" ABOVE SURROU	op of Inding	SLAB GRADE	10	J.C.	X. R
	$\langle 14 \rangle = \text{REPLACE}$	EXISTING VALVE BOX			1		1 of
	(15) - 48"4 TOP			(TAST)	>	$\neg \nabla$	~
	(10) = 48 ¥ 10P	SLAD, SEE DETAILS (GRAM			S ED B		VL (ED B
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1)	EXISTING DRAIN A BASED ON AS-BU	ND OVERFLOW PIPING IS DU		KUN		ÊR	ш
	PROVIDE APPROPR REQUIRED.	GATE FITTINGS AND ADAPTE	KS KS			6	۲.
2)	ALL NEW PIPING S	HALL BE DUCTILE IRON SPE		NCE	L L	-	•'
	WITH DOT/APWA S	SPECIFICATION 9-30, UNLES	S OTHE	RWSE	0	<u>o</u>	
3)	CONTRACTOR SHA	LL RESTORE SURFACE AROL	JND			2	
5)	IMPROVEMENTS TO AREA PER TYPICA	BLEND IN W/EXISTING SUR	ROUND	ING		Ī	
4)	CONTRACTOR SHA	LL REPLACE ALL SURFACE	FEATUR	ES		R	
.,	INCLUDING BUT NO	OT LIMITED TO ASPHALT PA IF DAMAGED DURING CONST	VEMENT	Γ&c Ν.		SE E	
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		TWO BUSINESS BEFORE YOU	DAYS DIG		DATE :6-21	SHOV	NUM 15-0
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3: DWG To PDF.pc3, ANSI full bleed B (17.00 x 11.00 inches), Portrolt, 1:2, WE APWA_UN' : non-result of exercising at Nation's forge 2 x 1 incriming number - a factor of a u - in







W (SEE NOTE 4)

4



(PARTIAL RESTRAINT MUST BE

NOTES

VALUES.

PROVIDED BY PIPELINE BEYOND VALVE)

1. SQUARE FEET OF CONCRETE THRUST BLOCK AREA IS BASED ON 200 P.S.I. INTERNAL PRESSURE, A SOIL SAFE BEARING OF 3000 POUNDS PER SQUARE FOOT AND A FACTOR OF SAFETY OF 1.5.

2. BEARING AREA MUST BE ADJUSTED FOR INTERNAL PRESSURES AND LOWER SOIL BEARING

3. CONCRETE BLOCKING SHALL BE CAST IN PLACE

4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT.

AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.

С

MINIMU	M BEARII S	NG AREA OIL IN S	AGAINS	T UNDIS	TURBED	
PIPE SIZE	A	В	с	D	E	
4"	2	2	2	2	2	
6"	4	3	2	2	2	
8"	7	5	4	2	2	
10"	11	8	6	3	2	
12"	16	12	9	5	3	
16"	29	20	16	8	4	
20"	45	32	24	13	6	
		GF	- TRENC - TRENC - 2-1" I FOR 2 - AS DIR SEE N	NE H BOTTO DIA. ROD: ' PVC, S RECTED B DTE 6	M S EXCEP EE NOTE Y ENGINE	T 6 EER
	VERTIC	AL BEN	1D			

THRUST BLOCK TABLE

5. THE CONTRACTOR SHALL INSTALL BLOCKING WHICH IS ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

6. STAINLESS STEEL BANDING SHALL BE USED AT 2" PVC VERTICAL BENDS INSTEAD OF 1" RODS. CONTACT ENGINEER FOR SIZING OF THRUST BLOCK AND DETAILS.

7. ALL BENDS, TEES & CROSSES SHALL INCLUDE RESTRAINED JOINTS (ROMAC GRIPPER) AS WELL AS THRUST BLOCKING.



NOT TO SCALE



2) HAND TAMP UNDER HAUNCHES.

W (SEE NOTE 4)

In 1

3) COMPACT BEDDING MATERIAL TO 95% MAX. DENSITY; DIRECTLY OVER PIPE, HAND TAMP ON

4) SEE "EXCAVATION AND PREPARATION OF TRENCH" IN SANITARY SEWERS SECTION OF THE FOR TRENCH WIDTH "W" AND TRENCHING OPTIONS. THE PIPE ZONE WILL BE THE ACTUAL TRE WIDTH SHALL BE 1-1/2 I.D. + 18".

5) ROCKS OR LUMPS LARGER THAN 1" PER FOOT OF PIPE DIAMETER SHALL NOT BE USED IN 6) SEE "BEDDING MATERIAL FOR FLEXIBLE PIPE" IN AGGREGATES SECTION OF THE WSDOT/AP MATERIAL SPECIFICATIONS.





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		NDARD WSDOT/APV WIDTH. THE MINIMU E BACKFILL MATERI	WSDOT 9-03.19 C MAX. DENSITY PIPE ZONE GRAVE WSDOT 9-03.12(3 95% MAX. DENSIT UNDISTURBED NAT ROCK EXCAVATION WSDOT STANDARD	NATIVE BACKFILL COMPACTED TO 9 PERMITTED OUTSIE RIGHT-OF-WAY. BANK RUN GRAVE	12" BELOW FINISH BANK RUN GRAVE WSDOT 9-03.19 C MAX. DENSITY INS	2" METALLIC DETE	NEW LANDSCAPED	HYDROSEED EXPO	NCH NOTES:				TION		10P COURSE F WSDOT 9-03.9 	6" COMPACTED	
		VA S JM ( AL. CATI	IL B COMF COMF	MAT 0% I DE C	GR L B COMF	сто	SU	SED				_			-ER 9(3). D L B -03	) DE	NO.
BID		SPECIFIC CONCRE	PACTED EDDING OMPACT MATERI AY LIMIT	TERIAL ( MAX. DE DF	ADE. ACKFILL PACTED RIGHT-	OR TAPE	RFACE.	AREAS.							ASE, .10	EPTH, ING	
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