

CITY OF WOODLAND

CLARK/COWLITZ COUNTY

WASHINGTON



CONTRACT PROVISIONS

for

FILTER 2 RESTORATION AND MEDIA REPLACEMENT

G&O #21248
AUGUST 2022



Gray & Osborne, Inc.
CONSULTING ENGINEERS

CITY OF WOODLAND

CLARK/COWLITZ COUNTY

WASHINGTON



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Gray & Osborne, Inc.
CONSULTING ENGINEERS

CALL FOR BIDS

CITY OF WOODLAND

FILTER 2 RESTORATION AND MEDIA REPLACEMENT ENGINEER'S ESTIMATE \$460,000

Sealed Proposals will be received by the undersigned at the City of Woodland, 230 Davidson Avenue, Woodland, Washington 98674, up to 1:00 p.m.; local time on [DATE], for furnishing the necessary labor, materials, equipment, tools, and guarantees thereof to construct the Filter 2 Restoration and Media Replacement.

Work on this project includes recoating and rehabilitation of an existing water treatment package filter, including recoating of the filter vessel, containment, replacement of filter and adsorption clarifier media, and structural reinforcement of corroded metal, if necessary.

The Work shall be substantially complete within 60 working days after the commencement date stated in the Notice to Proceed. All bidding and construction is to be performed in compliance with the Contract Provisions and Contract Plans for this project and any addenda issued thereto that are on file at the office of the City Clerk, City Hall, Woodland, Washington.

The Proposals will be publicly opened and read aloud shortly after the time and date stated above. Proposals are to be submitted only on the form provided with the Bid Documents. All Proposals must be accompanied by a certified check, postal money order, cashiers check, or Proposal bond payable to the "City of Woodland" and in an amount of not less than five percent (5%) of the total Proposal amount.

Bid Documents for this project are available free-of-charge at the following website: <http://gobids.grayandosborne.com>. Bidders are encouraged to register in order to receive automatic email notification of future addenda and to be placed on the Bidders List. For assistance, please call (206) 284-0860. Contract questions shall be directed only to the office of the Project Engineer.

A Prebid Conference is scheduled for [DATE]. The conference will begin at the City of Woodland Public Works Department, 300 East Scott Avenue, Woodland, Washington 98674 at 1:00 p.m. (local time). Prospective bidders are encouraged to participate. No unauthorized visits or unscheduled visits will be allowed.

Financing of the Project has been provided by City of Woodland, Washington. The City of Woodland expressly reserves the right to reject any or all Proposals and to waive minor irregularities or informalities in any Proposal.

(Signed)

TRACY COLEMAN
PUBLIC WORKS
DIRECTOR

CONTRACT PROVISIONS

TABLE OF CONTENTS

CITY OF WOODLAND

FILTER 2 RESTORATION AND MEDIA REPLACEMENT

PAGE NO.

CALL FOR BIDS

PART 1. BID DOCUMENTS

BIDDER’S CHECKLIST BC-1
PROPOSAL P-1 – P-6
PROPOSAL BOND PB-1

PART 2. AGREEMENT AND BONDS

AGREEMENT A-1 – A-3
PERFORMANCE BOND B-1
PUBLIC WORKS PAYMENT BOND B-2

**PART 3. SUPPLEMENTARY GENERAL CONDITIONS AND
GENERAL CONDITIONS**

PART 4. TECHNICAL SPECIFICATIONS

PART 5. WAGE RATES

PART 6. APPENDIX

Appendix A – Supplemental Bidder Responsibility Criteria
Appendix B – Permits
Appendix C – 1997 Filter Media Information
Appendix D – Existing Coating System RCRA 8 Metals Test Results
Appendix E – Existing Filter 2 Photos
Appendix F – Project Figures/Details

PART 1

BID DOCUMENTS

BIDDER'S CHECKLIST

1. REQUIRED FORMS

The Bidder shall submit the following forms, which must be executed in full and submitted with the Proposal.

- a. Proposal (including Statement of Bidder's Qualifications) (Pages P-1 - P-6)
- b. Bid Deposit or Proposal Bond (PB-1)

2. SUPPLEMENTAL BIDDER CRITERIA

The Apparent two lowest bidders shall submit to the Contracting Agency the completed Supplemental Bidder Criteria forms in the Appendix by noon of the second business day following the bid submittal deadline.

3. AGREEMENT FORMS

The following forms (a., b., and c.) are to be executed and the Certificates of Insurance (d. and e.) are to be provided after the Contract is awarded and prior to Contract execution.

- a. Agreement (Pages A-1 - A-3)
- b. Performance Bond (Page B-1)
- c. Public Works Payment Bond (Page B-2)
- d. Certificate of Insurance
- e. Certificate of Builders Risk Insurance

FILTER 2 RESTORATION AND MEDIA REPLACEMENT

PROPOSAL

City of Woodland
230 Davison Avenue
Woodland, Washington

The undersigned has examined the Work site(s), local conditions, the Contract, and all applicable laws and regulations covering the Work. The following unit and lump sum prices are tendered as an offer to perform the Work in accordance with all of the requirements set forth in the Contract and all applicable laws and regulations.

As required by the Contract, a postal money order, certified check, cashier's check or Proposal bond made payable to the Owner is attached hereto. If this Proposal is accepted and the undersigned fail(s) or refuse(s) to enter into a contract and furnish the required performance bond, labor and material payment bond, special guarantee bonds (if required), required insurance and all other required documentation, the undersigned will forfeit to the Owner an amount equal to five percent of the Proposal amount.

After the date and hour set for submitting the Proposals, no bidder may withdraw its Proposal, unless the Award of the contract is delayed for a period exceeding 60 consecutive calendar days.

The undersigned agrees that in the event it is Awarded the contract for the Work, it shall employ only Contractors and Subcontractors that are duly licensed by the State of Washington and remain so at all times they are in any way involved with the Work.

The undersigned agrees that the Owner reserves the right to reject any or all Proposals and to waive any minor irregularities and informalities in any Proposal.

The undersigned agrees that the Owner will Award the Contract to the lowest responsible, responsive bidder whose Proposal is in the best interest of the Owner.

PROPOSAL - Continued

<u>NO.</u>	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>AMOUNT</u>
1.	Mobilization and Demobilization	1 LS	\$ _____	\$ _____
2.	Unexpected Site Changes	1 CALC	\$15,000.00	\$15,000.00
3.	Filter 3 Recoating, Incl. Containment	1 LS	\$ _____	\$ _____
4.	Filter 3 Media Replacement	1 LS	\$ _____	\$ _____
5.	Structural Repairs	7 SF	\$ _____	\$ _____
6.	Filter Underdrain	1 LS	\$ _____	\$ _____
7.	Adsorption Clarifier Water and Air Piping	1 LS	\$ _____	\$ _____
8.	Anode Assemblies	6 EA	\$ _____	\$ _____
9.	Removal of Mill Scale	150 SF	\$ _____	\$ _____
10.	Lower Flange Clean, Coat, and Seal	20 LF	\$ _____	\$ _____
Subtotal:			\$ _____	
Washington State Sales Tax (7.9%):			\$ _____	
TOTAL CONSTRUCTION COST:			\$ _____	

Note: A bid must be received on all items.

PROPOSAL - Continued

STATEMENT OF BIDDER'S QUALIFICATIONS

Name of Firm: _____

Address: _____

Telephone No. _____ Fax No. _____

Contact Person for this Project: _____

E-mail: _____

Number of years the Contractor has been engaged in the construction business under the present firm name, as indicated above:

WORK TO BE COMPLETED BY BIDDER

List the Work and the dollar amount thereof that the Bidder will complete with its forces, if awarded the contract.

Work to be Performed	Dollar Amount

PROPOSAL - Continued

PROPOSED SUBCONTRACTORS (Per RCW 39.30.060)

For Proposals exceeding one million dollars, indicate who (either the Contractor submitting this bid or a subcontractor) will be completing the work for each of the five categories listed below. Information shall include their Washington State Department of Licensing Contractor's Registration No. This information shall be provided with the Proposal or within one hour after the published Proposal submittal time in accordance with RCW 39.30.060.

Work to be Performed	Subcontractor or Prime (Name and Registration Number)
Heating, Ventilation and Air Conditioning	
Plumbing	
Electrical	
Structural Steel Installation	
Rebar Installation	

ADDENDA RECEIVED

Addendum No.	Date Received	Name of Recipient

NOTE: Bidder shall acknowledge receipt of all addenda. Bidder is responsible for verifying the actual number of addenda issued prior to submitting a Proposal.

Subject to any extensions of the Contract Time granted under the Contract, the undersigned agrees to substantially complete the Work required under this Contract within 60 working days (the Substantial Completion Date) and to physically complete the Work required under this contract within 70 working days (the Physical Completion Date) from when Contract Time begins.

The undersigned has reviewed and fully understands the provisions in the Contract regarding liquidated damages and agrees that liquidated damages shall be \$1,800.00 per day for each and every working day beyond the Contract Time allowed for substantial completion until the

PROPOSAL - Continued

Substantial Completion Date is achieved and \$500.00 for each and every working day required beyond the Contract Time for physical completion until the Physical Completion Date is achieved.

The undersigned furthermore agrees to complete all activities requiring a coating inspector within a combined period of 10 working days. These activities include blasting, prime coat application, stripe coat application, intermediate coat application, finish coat application, and testing. Liquidated damages in the amount of \$1,200 per day will be assessed for each and every working day beyond the contract time allowed for the completion of the activities requiring a coating inspector.

The undersigned is, and will remain in, full compliance with all Washington State administrative agency requirements including, but not limited to registration requirements of Washington State Department of Labor & Industries for contractors, including but not limited to requirements for bond, proof of insurance and annual registration fee. The undersigned's Washington State:

Dept. of Labor and Industries Workman's Compensation Account No. is _____;
Dept. of Licensing Contractor's Registration No. is _____;
Unified Business Identifier Number is _____;
Excise Tax Registration Number is _____; and
Employment Security Account Number is _____.

The undersigned has reviewed all insurance requirements contained in the Contract and has verified the availability of and the undersigned's eligibility for all required insurance. The undersigned verifies that the cost for all required insurance, has been included in this Proposal.

In relation to claims related in whole or in part to workplace injuries to employees, the undersigned waives any immunity granted under the State Industrial Insurance Law, RCW Title 51. This waiver has been specially negotiated by the parties, which is acknowledged by the undersigned in signing this Proposal.

By signing the proposal, the undersigned declares, under penalty of perjury under the laws of the United States and the State of Washington, that the following statements are true and correct:

1. That the undersigned person(s) or entity(ies) has(have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this Proposal is submitted.
2. The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date (**INSERT DATE**), that the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, That we _____

of _____ as principal, and the _____

a corporation duly organized under the laws of the state of _____,
_____ and authorized to do business in the State of
Washington, as surety, are held and firmly bound unto the **CITY OF WOODLAND** in the full
and penal sum of five percent of the total amount of the bid proposal of said principal for the
work hereinafter described, for the payment of which, well and truly to be made, we bind our
heirs, executors, administrators and assigns, and successors and assigns, firmly by these presents.

The condition of this bond is such, that whereas the principal herein is herewith
submitting his or its sealed proposal for the following construction project, to wit:

FILTER 2 RESTORATION AND MEDIA REPLACEMENT

said bid and proposal, by reference thereto, being made a part hereof.

NOW, THEREFORE, If the said proposal bid by said principal be accepted, and the
contract be awarded to said principal, and if said principal shall duly make and enter into and
execute said Contract and shall furnish bond as required by the **CITY OF WOODLAND** within
a period of 10 days from and after said award, exclusive of the day of such award, then this
obligation shall be null and void, otherwise it shall remain and be in full force and effect.

IN TESTIMONY WHEREOF, The principal and surety have caused these presents to be
signed and sealed this _____ day of _____, _____.

(Principal)

(Surety)

(Attorney-in-fact)

PART 2

AGREEMENT AND BONDS

AGREEMENT

THIS AGREEMENT is entered into by and between the **CITY OF WOODLAND** (hereinafter called the Owner) and _____ (hereinafter called the Contractor).

The Owner and the Contractor agree as follows:

ARTICLE 1. WORK.

[Include description of all schedules, alternate or additive items awarded]

ARTICLE 2. CONTRACT TIME.

The Contractor shall substantially complete the Work required by the Contract within _____ working days (the Substantial Completion Date) and physically complete the Work within _____ working days (the Physical Completion Date) and shall complete all activities requiring a coating inspector within a combined period of 10 working days. These activities include the blasting and painting coat applications.

ARTICLE 3. LIQUIDATED DAMAGES.

The Owner and the Contractor recognize that time is of the essence and that the Owner will suffer financial loss if the Work is not completed within the time, plus any extensions thereof, allowed in accordance with the Contract. They also recognize the inconvenience, expense, and difficulties involved in a legal proceeding to prove the actual loss suffered by the Owner if the Work is not completed within the time allowed in the Contract. Accordingly, the Owner and the Contractor agree that as liquidated damages for delay, and not as a penalty, the Contractor shall pay the Owner (\$ _____) per day for each working day beyond the Substantial Completion Date until the Contractor achieves substantial completion of the Work and (\$ _____) per day for each working day beyond the Physical Completion Date until the Contractor achieves physical completion of the Work and (\$ _____) per day for each working day beyond the contract time allowed to complete all activities requiring a coating inspector.

ARTICLE 4. CONTRACT PRICE.

The Owner shall pay the Contractor the amount(s) set forth in the Proposal (in United States dollars) for completion of the Work in accordance with the Contract.

ARTICLE 5. CONTRACT.

The Contract, which comprises the entire agreement between the Owner and the Contractor concerning the Work, consists of the following:

- This Agreement;
- The Contractor’s Proposal including the bid, bid schedule(s), information required of bidder, Proposal bond, and all required certificates and affidavits;
- The Performance Bond and the Public Works Payment Bond;
- The Contract Provisions;
- The Plans (or drawings) consisting of _____ sheets, as listed in the index on sheet _____ of the Plans;
- Addenda numbers _____, inclusive; and
- Change Orders issued after the effective date of this Agreement.

There are no Contract Documents other than those listed in this Article 5. The Contract may be amended only in writing by Change Order as provided in the Contract.

ARTICLE 6. MISCELLANEOUS.

For purpose of indemnifying and defending any work place injury claims by employees of the Contractor and Subcontractors, the Contractor waives any immunity granted under the State Industrial Insurance Law, RCW Title 51. This waiver has been specifically negotiated between the parties and is hereby acknowledged by the Contractor.

(Contractor’s initials)

The Contractor shall not assign any rights under or interests in the Contract, including but not limited to rights to payment, without the prior written consent of the Owner. Unless specifically stated in a written consent to an assignment, no assignment will release or discharge the Contractor-assignor from any duty or responsibility under the Contract.

The Contract is binding upon the Owner and the Contractor, and their respective partners, successors, assigns and legal representatives.

AGREEMENT – Continued

IN WITNESS WHEREOF, Owner and Contractor have caused this Agreement to be executed the day and year indicated below.

CITY OF WOODLAND

CONTRACTOR

By _____

License No. _____

By _____

Date _____

Title _____

Attest _____

Name and Address for giving notices (print)

INFORMATION ONLY

PUBLIC WORKS PERFORMANCE BOND
to CITY OF WOODLAND, WA

Bond No. _____

The **CITY OF WOODLAND**, Washington, (City) has awarded to _____ (Principal), a contract for the construction of the project designated as Filter 2 Restoration and Media Replacement in Woodland, Washington (Contract), and said Principal is required under the terms of that Contract to furnish a bond for performance of all obligations under the Contract.

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

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

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

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

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

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

PRINCIPAL

SURETY

Principal Signature _____ Date

Surety Signature _____ Date

Printed Name

Printed Name

Title

Title

Local office/agent of Surety Company:

Name _____

Telephone _____

Address _____

PUBLIC WORKS PAYMENT BOND
to CITY OF WOODLAND, WA

Bond No. _____

The **CITY OF WOODLAND**, Washington, (City) has awarded to _____ (Principal), a contract for the construction of the project designated as Filter 2 Restoration and Media Replacement in Woodland, Washington (Contract), and said Principal is required under the terms of that Contract to furnish a payment bond in accord with Title 39.08 Revised Code of Washington (RCW) and (where applicable) 60.28 RCW.

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

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

The Surety agrees to indemnify, defend, and protect the City against any claim of direct or indirect loss resulting from the failure of the Principal, its heirs, executors, administrators, successors, or assigns, (or the subcontractors or lower tier subcontractors of the Principal) to pay all laborers, mechanics, subcontractors, lower tier subcontractors material persons, and all persons who shall supply such contractor or subcontractors with provisions and supplies for the carrying on of such work.

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

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

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

PRINCIPAL

SURETY

Principal Signature

Date

Surety Signature

Date

Printed Name

Printed Name

Title

Title

Local office/agent of Surety Company:

Name _____

Telephone _____

Address _____

PART 3

**SUPPLEMENTARY GENERAL CONDITIONS
AND GENERAL CONDITIONS**

SUPPLEMENTARY GENERAL CONDITIONS

The General Conditions shall be supplemented as follows:

Delete Section 2.01.8.3. in its entirety and replace with the following:

3. A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1 through 8 in this Section:

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

a. **Criteria 1 – Federal Debarment**

1. Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.
2. Documentation: The Bidder shall not be listed as having an “active exclusion” on the U.S. government’s “System for Award Management” database (www.sam.gov).

b. **Criteria 2 – Delinquent State Taxes**

1. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
2. Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the Owner) that the Bidder does not owe delinquent taxes to the Department of Revenue. If the Bidder owes delinquent taxes, they must submit a written payment plan approved by the Department of Revenue, to the Owner by the deadline listed below.

c. **Criteria 3 – Claims Against Retainage and Bonds**

1. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the 3 years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its

subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.

2. Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the Owner) that the Bidder has not had claims against claims against retainage and bonds in the 3 years prior to the bid submittal date. If the Bidder has had claims against retainage and bonds in the three years prior to the bid submittal date, they shall submit a list of the public works projects completed in the 3 years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

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

d. **Criteria 4 – Public Bidding Crime**

1. Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

e. **Criteria 5 – Termination for Cause / Termination for Default**

1. Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be

provided by the Owner) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

f. **Criteria 6 – Lawsuits**

1. **Criterion:** The Bidder shall not have lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.
2. **Documentation:** The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Owner shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts.

g. **Criteria 7 – Contract Time (Liquidated Damages)**

1. **Criterion:** The Bidder shall not have had liquated damages assessed on any projects it has completed 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet contract time.
2. **Documentation:** The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had liquidated damages assessed on any projects it has completed within the 5 years prior to the bid submittal date, or shall submit a list of Projects with assessed liquated damages along with Owner contact information, and number of days assessed liquated damages.

h. **Criteria 8 – Experience and Capacity**

1. **Criterion:** The Bidder shall have sufficient current capacity and experience to meet the requirements of this Project. The Bidder shall have successfully completed at least three projects, of a similar size and scope, during the 5-year period immediately preceding the bid submittal deadline for this project. Similar size is defined as a minimum of 60 percent of the bid submitted by the Bidder.
2. **Documentation:** The Bidder shall, if and when required as detailed below, on a form to be provided by the Owner, provide the Bidder's gross dollar amount of work currently under contract, the Bidder's gross dollar amount of contracts currently not completed, five major pieces of equipment anticipated to be on the project and whether the equipment is leased or owned, number of years the contractor has been in business, number of superintendents on staff, superintendent assigned to this project and their number of years of experience, and three project references of similar size and scope during the 5-year period immediately preceding the bid submittal deadline for this project. The Owner may check owner references for the previous projects and may evaluate the owner's assessment of the Bidder performance.

i. **Criteria 9 – Filter Coating Experience**

1. **Criterion:** The Bidder or subcontractor performing the surface preparation and painting shall have completed at least five potable water filter and/or reservoir recoating projects in the State of Washington during the 10-year period immediately preceding the bid submittal deadline for this project.
2. **Documentation:** The Bidder shall, if and when required as detailed below, on a form to be provided by the Owner, provide the Project name, Owner contact information, whether the project was completed for a government agency, award contract amount, completion date, and project description for five projects.

As evidence that the Bidder meets Supplemental Responsibility Criteria 2 through 9 stated above, the apparent two lowest Bidders must submit to the

Owner by 12:00 p.m. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets Supplemental Criteria 2 through 9 together with supporting documentation (sufficient in the sole judgment of the Owner) demonstrating compliance with Supplemental Responsibility Criteria 2 through 9. The Owner reserves the right to request further documentation as needed from the low bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Owner also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Owner may consider mitigating factors in determining whether the Bidder complies with the requirements of the Supplemental Criteria.

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

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

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

GENERAL CONDITIONS

<u>TABLE OF CONTENTS</u>		<u>PAGE</u>
SECTION 1 - GENERAL INFORMATION APPLICABLE TO PROPOSAL AND CONTRACT.....		
1.01	DEFINITIONS AND TERMINOLOGY.....	1-1
1.02	ABBREVIATIONS AND TERMINOLOGY	1-1
1.02.1	REFERENCED STANDARDS AND CODES	1-1
1.02.2	TERMINOLOGY	1-3
1.02.3	ITEMS OF WORK AND UNITS OF MEASUREMENT	1-3
1.03	DEFINITIONS.....	1-4
SECTION 2 - INSTRUCTIONS FOR PREPARATION OF PROPOSAL (OR BID).....		
2.01	BID PROCEDURES AND CONDITIONS	2-1
2.01.1	QUALIFICATIONS OF BIDDERS	2-1
2.01.2	CONTRACT PROVISIONS AND CONTRACT PLANS	2-1
2.01.3	ESTIMATED QUANTITIES	2-1
2.01.4	EXAMINATION OF CONTRACT AND SITE	2-1
2.01.4(1)	<u>General</u>	2-1
2.01.4(2)	<u>Interpretation of the Contract Provisions and Contract Plans</u>	2-2
2.01.4(3)	<u>Subsurface Information</u>	2-2
2.01.4(4)	<u>Availability of Specified Items</u>	2-3
2.01.5	PROPOSAL DEPOSIT.....	2-3
2.01.6	PROPOSAL	2-3
2.01.7	WITHDRAWING OR REVISING PROPOSAL	2-5
2.01.8	DISQUALIFICATION OF BIDDERS.....	2-5
2.01.9	PROPOSAL ERRORS.....	2-10
2.02	AWARD AND EXECUTION OF CONTRACT	2-11
2.02.1	AWARD OF CONTRACT.....	2-11
2.02.2	EXECUTION OF CONTRACT.....	2-11
2.02.3	FAILURE TO EXECUTE CONTRACT.....	2-12
2.02.4	RETURN OF PROPOSAL DEPOSIT.....	2-12
2.02.5	NOTICE TO PROCEED	2-12
SECTION 3 - GENERAL REQUIREMENTS OF THE CONTRACT.....		
3.01	SCOPE OF THE WORK.....	3-1
3.01.1	INTENT OF THE CONTRACT.....	3-1
3.01.2	COORDINATION OF CONTRACT	3-1
3.01.3	ASSIGNMENT OF CONTRACT	3-1
3.02	CONTROL OF WORK	3-2
3.02.1	AUTHORITY AND ROLE OF THE ENGINEER	3-2
3.02.2	AUTHORITY OF FIELD REPRESENTATIVE	3-3
3.02.3	CONSTRUCTION OBSERVATION AND INSPECTIONS	3-4
3.02.4	EMERGENCY CONTACT LIST	3-5
3.02.5	ORAL AGREEMENTS.....	3-5
3.02.6	ELECTRONIC FILES	3-5

3.03	LEGAL RELATIONS AND RESPONSIBILITIES	3-5
3.03.1	APPLICABLE LAWS AND REGULATIONS	3-5
3.03.1(1)	<u>General</u>	3-5
3.03.1(2)	<u>Utilities and Similar Facilities</u>	3-6
3.03.1(3)	<u>Site Maintenance</u>	3-6
3.03.1(4)	<u>State Taxes</u>	3-6
3.03.1(5)	<u>Equal Employment Responsibilities</u>	3-7
3.03.1(6)	<u>Archaeological and Historical Objects</u>	3-8
3.03.2	SAFETY MEASURES	3-8
3.03.3	HAZARDOUS MATERIAL	3-8
3.03.4	PAYMENT OF WAGES AND RELATED REQUIREMENTS	3-9
3.03.4(1)	<u>Minimum Prevailing Wage Requirements</u>	3-9
3.03.4(2)	<u>Posting Notice Requirements</u>	3-10
3.03.4(3)	<u>Apprentices</u>	3-10
3.03.4(4)	<u>Required Documents</u>	3-11
3.03.5	BONDS, INSURANCE AND INDEMNITY OBLIGATIONS.....	3-12
3.03.5(1)	<u>Contract Bonds</u>	3-12
3.03.5(1.1)	Two-Year Guarantee Period	3-13
3.03.5(2)	<u>Worker’s Benefits</u>	3-13
3.03.5(4)	<u>Public Liability & Property Damage Insurance</u>	3-13
3.03.5(4.1)	General Requirements.....	3-13
3.03.5(4.2)	Additional Insured	3-14
3.03.5(4.3)	Subcontractors.....	3-15
3.03.5(4.4)	Verification of Coverage.....	3-15
3.03.5(4.5)	Coverages and Limits	3-15
3.03.5(4.5)A	Commercial General Liability	3-16
3.03.5(4.5)B	Automobile Liability.....	3-16
3.03.5(4.5)C	Workers’ Compensation	3-16
3.03.5(4.5)D	Excess or Umbrella Liability	3-16
3.03.5(4.5)E	Builders Risk Insurance	3-17
3.03.5(4.5)F	LHWCA Insurance	3-17
3.03.5(4.5)G	Protection and Indemnity Insurance Including Jones Act	3-18
3.03.5(4.5)H	Hull and Machinery	3-18
3.03.5(4.5)I	Marine Pollution	3-18
3.03.5(4.5)J	Pollution Liability	3-18
3.03.5(4.5)K	Professional Liability	3-19
3.03.5(5)	<u>Indemnity and Hold Harmless</u>	3-19
3.03.5(6)	<u>Patent Royalties & Process Fees</u>	3-20
3.03.6	METHOD OF SERVING NOTICE	3-20
3.04	PROSECUTION AND PROGRESS OF THE WORK	3-20
3.04.1	QUALITY OF WORK	3-20
3.04.1(1)	<u>Workmanship</u>	3-20
3.04.1(2)	<u>Contractor’s Supervisory and Site Personnel</u>	3-21
3.04.2	MATERIALS AND EQUIPMENT.....	3-21
3.04.3	SPECIFICATION OF PARTICULAR MATERIALS AND EQUIPMENT	3-22
3.04.4	STORAGE	3-23
3.04.4(1)	<u>On-Site Storage</u>	3-23

3.04.4(2)	<u>Off-Site Storage</u>	3-23
3.04.5	DEFECTIVE MATERIALS, EQUIPMENT AND WORKMANSHIP	3-23
3.04.6	CHANGES IN THE WORK	3-24
3.04.7	DIFFERING SITE CONDITIONS	3-29
3.04.8	PROTEST BY THE CONTRACTOR	3-29
3.04.9	SUBCONTRACTORS AND SUBCONTRACTS	3-30
3.04.9(1)	<u>Contractor Responsibility</u>	3-30
3.04.9(2)	<u>Contractor Work Performance Requirement</u>	3-31
3.04.9(3)	<u>Approval of Subcontractors</u>	3-31
3.04.9(4)	<u>Subcontracts</u>	3-31
3.04.9(5)	<u>Incorporation of Contract</u>	3-31
3.04.9(6)	<u>Replacement of Subcontractors</u>	3-32
3.04.10	MUTUAL RESPONSIBILITY OF CONTRACTORS	3-32
3.04.11	RISK OF LOSS	3-32
3.04.12	MEASUREMENT AND PAYMENT	3-33
3.04.12(1)	<u>General</u>	3-33
3.04.12(2)	<u>Measurement</u>	3-33
3.04.12(3)	<u>Payment</u>	3-33
3.04.12(4)	<u>Access to Books and Records</u>	3-33
3.04.12(5)	<u>Progress Payment Estimates</u>	3-33
3.04.12(6)	<u>Payment for Materials on Hand</u>	3-33
3.04.12(7)	<u>Payments Withheld</u>	3-34
3.04.12(8)	<u>Payment Upon Correction of Deficiencies</u>	3-34
3.04.12(9)	<u>Final Payment</u>	3-34
3.04.13	WORK HOURS	3-35
3.04.14	CONTRACT TIME	3-36
3.04.15	CONSTRUCTION SCHEDULE	3-37
3.04.15(1)	<u>Progress Schedule</u>	3-37
3.04.15(2)	<u>Extensions of the Contract Time</u>	3-39
3.04.15(3)	<u>Liquidated Damages</u>	3-40
3.04.16	COMPLETION AND ACCEPTANCE OF THE WORK	3-40
3.04.16(1)	<u>Substantial Completion Date</u>	3-40
3.04.16(2)	<u>Physical Completion Date</u>	3-41
3.04.16(3)	<u>Contract Completion Date (Acceptance of the Project)</u>	3-42
3.04.16(4)	<u>Use of Completed Portions of the Work</u>	3-43
3.04.16(5)	<u>Waiver of Claims by Contractor</u>	3-43
3.04.17	CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT	3-43
3.04.18	RETAINAGE	3-43
3.05	DISPUTES AND CLAIMS	3-45
3.05.1	DISPUTES	3-45
3.05.2	CLAIMS	3-45
3.05.3	TIMELINE AND JURISDICTION	3-48
3.05.4	CONTINUATION OF WORK PENDING RESOLUTION OF DISPUTES ...	3-48
3.06	AUDITS	3-49
3.07	SUSPENSION OF WORK AND TERMINATION OF CONTRACT	3-49
3.07.1	SUSPENSION OF WORK	3-49
3.07.2	TERMINATION FOR DEFAULT	3-50

3.07.3 TERMINATION FOR CONVENIENCE OF THE OWNER 3-50
3.07.4 RESPONSIBILITY OF THE CONTRACTOR AND SURETY 3-50

GENERAL CONDITIONS

SECTION 1 - GENERAL INFORMATION APPLICABLE TO PROPOSAL AND CONTRACT

1.01 DEFINITIONS AND TERMINOLOGY

The following terms are abbreviated and defined as they are used in the Contract. When used in the Proposal form to denote items of Work and units of measurements, abbreviations mean the full expression of the abbreviated term.

1.02 ABBREVIATIONS AND TERMINOLOGY

1.02.1 REFERENCED STANDARDS AND CODES

The following is a partial list of specifications and codes that may be referenced in sections of the Contract. The Contractor shall be responsible for conducting its Work and carrying out its operations and furnishing equipment in accordance with the latest edition or versions, in effect at the time of bid opening, of any applicable specified portions of the referenced standards and codes.

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AFBMA	Anti-friction Bearing Manufacturing Association
AGA	American Gas Association
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANLA	American Nursery and Landscape Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ARA	American Railway Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Material
AWPA	American Wood Preservers' Association
AWS	American Welding Society

AWWA	American Water Works Association
CFR	Code of Federal Regulations
CLI	Chain Link Institute
CRAB	County Road Administration Board
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Associations
CSI	Construction Specifications Institute
DIPRA	Ductile Iron Pipe Research Association
EEI	Edison Electric Institute
EPA	Environmental Protection Agency
ETL	Electrical Testing Laboratories
FHWA	Federal Highway Administration
FM	Factory Mutual
FSS	Federal Specifications and Standards, General Services Administration
HUD	United State Department of Housing and Urban Development
IBC	International Building Code
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illumination Engineering Society
IMSA	International Municipal Signal Association
IPC	International Plumbing Code
ISA	Instrumentation Society of America
JIC	Joint Industry Conference Electrical Standards for Industrial Equipment
LID	Local Improvement District
LPI	Lightning Protection Institute
MSHA	Mine Safety and Health Act
MSS	Manufacturer's Standardization Society of the Valve and Fitting Industry
MUTCD	Manual on Uniform Traffic Control Devices
NCMA	National Concrete Manufacturer's Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NRMCA	National Ready Mix Concrete Association
OMWBE	Office of Minority and Women's Business Enterprises
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastic Pipe Institute
P/PCI	Precast/Prestressed Concrete Institute
RCW	Revised Code of Washington
SAE	Society of Automotive Engineers
SEPA	State Environmental Policy Act
SIES	Specifications and Illuminating Engineering Society
SSPC	Steel Structures Painting Council
UL	Underwriters' Laboratory
ULID	Utility Local Improvement District
UMTA	Urban Mass Transit Administration

WABO	Washington Association of Building Officials
WAC	Washington Administrative Code
WCLIB	West Coast Lumber Inspection Bureau
WISHA	Washington Industrial Safety and Health Administration
WRI	Wire Reinforcement Institute
WSDL&I	Washington State Department of Labor and Industries
WSDOE	Washington State Department of Ecology
WSDOT	Washington State Department of Transportation
WWPA	Western Wood Products Association

1.02.2 TERMINOLOGY

The use of pronouns of any gender in these General Conditions shall include pronouns of all genders, as applicable.

The terms “provide,” “furnish” and “install” are used interchangeably in the Contract and mean that the Contractor shall provide, furnish, and install the item(s) described unless specifically noted otherwise.

The terms “Plans” and “Drawings” are used interchangeably in the Contract and shall mean the Contract Plans, which show location, character, and dimensions of prescribed Work, including layouts, profiles, cross-sections, and other details.

1.02.3 ITEMS OF WORK AND UNITS OF MEASUREMENT

AC	Asbestos Cement Pipe
Agg.	Aggregate
Al.	Aluminum
ATB	Asphalt Treated Base
BST	Bituminous Surface Treatment
CB	Catch Basin
Cfm	Cubic Feet per Minute
Cfs	Cubic Feet per Second
Cl.	Class
CMP	Corrugated Metal Pipe
Comb.	Combination
Conc.	Concrete
CPEP	Corrugated Polyethylene Pipe
Crib.	Cribbing
Culv.	Culvert
Cy or Cu. Yd.	Cubic Yard(s)
Dia.	Diameter
DI	Ductile Iron
DIM	Dimension
EA	Each
EL	Elevation
Est.	Estimate or Estimated

Excl.	Excluding
F	Fahrenheit
FIG	Figure
Ft.	Foot or Feet
GALV	Galvanized
Gph	Gallon(s) per Hour
Gpm	Gallon(s) per Minute
HDPE	High Density Polyethylene
HMA	Hot Mix Asphalt
HR	Hour
Hund.	Hundred
In.	Inch or Inches
Incl.	Including
L	Liter
Lb.	Pound(s)
LF or Lin. Ft.	Linear Foot (Feet)
LS	Lump Sum
M	Thousand
MBM	Thousand Feet Board Measure
Pres.	Pressure
PSI	Pounds per Square Inch
PSF	Pounds per Square Foot
PVC	Polyvinyl Chloride
QTY	Quantity
Reg.	Regulator
Reinf.	Reinforced, Reinforcing
SF	Square Foot (Feet)
Sec.	Section
SL	Slope
St.	Street
Stl.	Steel
SST	Stainless Steel
Str.	Structural
Sy or Sq. Yd.	Square Yard(s)
Th.	Thick or Thickness
TN	Ton
Tr.	Treatment
TYP	Typical
VC	Vitrified Clay

1.03 DEFINITIONS

ACCEPTANCE

The formal action by Owner or Owner's governing body as provided in RCW 39.08 and RCW 60.28, as existing or amended.

ADDENDUM

A written or graphic document issued to all Bidders prior to bid opening and identified as an addendum, which clarifies, modifies or supplements the bid documents and becomes part of the Contract.

ADDITIVE

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

ALTERNATE

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

AWARD

The formal decision of the Owner awarding the Contract to the lowest or most favorable responsible and responsive Bidder for the Work.

BID DOCUMENTS

The component parts of the proposed Contract which may include, but not limited to, the Proposal form, the proposed Contract Provisions, the proposed Contract Plans, Addenda, and Subsurface Boring Logs (if any).

BIDDER

A natural person or legal entity (e.g., partnership, corporation, limited liability company, firm, or joint venture) submitting a proposal or bid.

BUSINESS DAY

A business day is any day from Monday through Friday, except holidays, as listed in Section 3.04.14.

CLERK

The duly elected or appointed Clerk of the Commission, Council, or Board of Directors of the Owner or authorized designee.

COMMISSION, COUNCIL, OR BOARD OF DIRECTORS

The duly elected or appointed Council, Commission, or Board of Directors of the Owner.

CONTRACT

The written agreement between the Owner and the Contractor. It describes, among other things:

1. What work will be done, and by when;
2. Who will provide labor and materials; and
3. How Contractor will be paid.

The Contract includes: the agreement form, Bidder's completed Proposal form, all required certificates and affidavits, Performance Bond and Public Works Payment Bond, Contract Provisions, Contract Plans, and all Addenda and Change Orders executed pursuant to the provisions of the Contract.

CONTRACT BOND

The approved form of security furnished by the Contractor and the Contractor's Surety as required by the Contract, that guarantees performance of all the Work required by the Contract and payment to anyone who provides supplies or labor for the performance of the Work.

CONTRACT DOCUMENTS

See definition for "Contract."

CONTRACT PLANS (PLANS OR DRAWINGS)

The Contract Plans (or drawings) are those plans, drawings or other illustrations and all addenda and revisions, whether issued before or after the award of the Contract to Contractor, which show location, character, and dimensions of the Work, including layouts, profiles, cross-sections and other details.

CONTRACT PROVISIONS

A publication addressing the Work required for an individual project. At the time of the Call for Bids, the Contract Provisions may include, for a specific individual project, general conditions, supplemental general conditions, specifications, a listing of the applicable WSDOT Standard Plans, the prevailing minimum hourly wage rates, and an informational Proposal form with the listing of Bid items. The proposed Contract Provisions may also include, for a specific individual project, various required certifications or declarations. At the time of the Contract execution date, the Contract Provisions include the proposed Contract Provisions and include any Addenda, a copy of the agreement form, and a copy of the Proposal form with the Contract prices and extensions.

CONTRACT TIME

The period of time established by the terms and conditions of the Contract within which the Work shall be complete.

CONTRACTOR

The natural person(s) or legal entity (e.g., partnership, corporation, limited liability company, firm, joint venture) Contracting with the Owner to do the prescribed Work.

DATES

Substantial Completion Date is the day that the Engineer determines the Owner has full and unrestricted use and benefit of the Work, from both an operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the physical completion of the total Work.

Physical Completion Date is the day that the Engineer determines that all of the Work required by the Contract is physically completed and the Owner has received from the Contractor all required record drawings, operation and maintenance manuals, manufacturers' affidavits, and software and programming.

Contract Completion Date is the day when all the Work and all the obligations of the Contractor under the Contract are fulfilled by the Contractor. All documentation and other items required by the Contract and required by law shall be furnished by the Contractor before establishment of this date.

Final Acceptance Date is the date on which the Owner accepts the Work as complete.

FIELD REPRESENTATIVE

The Owner's representative who observes the Contractor's performance of the Work. Such observation shall not be relied upon by the Contractor or others as approval or acceptance of the Work, nor shall it in any manner relieve the Contractor from its obligations and responsibilities under the Contract.

NOTICE TO PROCEED

The written notice from the Owner or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract Time begins.

OWNER

The government entity or agency that awards the Contract to the Contractor and is responsible for the execution and administration of the Contract.

PROJECT ENGINEER/ENGINEER

The Owner's representative who administers the construction program for the Owner.

PROPOSAL (or BID)

A Bidder's offer, on a properly completed Proposal form, to perform the Work required by the Contract. The terms Proposal and Bid may be used interchangeably.

SPECIFICATIONS

Written provisions describing the Work and requirements thereof.

STANDARD PLANS

A manual of specific plans or drawings adopted by the Owner, which show frequently recurring components of work that, have been standardized for use.

SUBCONTRACTOR

A natural person, or entity (e.g., partnership, corporation, limited liability company, firm or joint venture) to which the Contractor sublets a portion of the Work.

SUBGRADE

The top surface of the roadbed on which subbase, base, surfacing, pavement, or layers of similar materials are placed.

SUPPLEMENTARY GENERAL CONDITIONS

That part of the Contract amends or supplements these General Conditions.

TRAVELED WAY

That part of the roadway made for vehicle travel, excluding shoulders and auxiliary lanes.

WORK

The provision of all labor, materials, tools, equipment, supervision and other things needed to complete the project in full accordance with the Contract Documents.

WORKING DRAWINGS

Shop drawings, shop plans, erection plans, falsework plans, framework plans, cofferdam, cribbing and shoring plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data, including a schedule of submittal dates for working drawings where specified, that the Contractor shall submit to the Engineer for approval.

SECTION 2 - INSTRUCTIONS FOR PREPARATION OF PROPOSAL (OR BID)

2.01 BID PROCEDURES AND CONDITIONS

2.01.1 QUALIFICATIONS OF BIDDERS

Where applicable and required, Bidders shall provide all requested information relating to experience, financing, equipment, and organization relating to their ability to properly perform the Work. The Owner reserves the right to take whatever action it deems necessary to ascertain the responsibility of the Bidder and the ability of the Bidder to perform the Work satisfactorily.

2.01.2 CONTRACT PROVISIONS AND CONTRACT PLANS

Contract Provisions and Contract Plans are on file in the offices of the Owner and the Engineer, Gray & Osborne, Inc. After award of the Contract, up to five sets of Contracts will be issued without charge to the Contractor. Additional sets of Contracts may be purchased from the Owner by the Contractor.

2.01.3 ESTIMATED QUANTITIES

The quantities shown in the Proposal form are estimates and are stated only for bid comparison purposes. The Owner does not warrant, expressly or by implication, that the actual quantities will correspond with those estimates. Payment will be made on the basis of the actual quantities of each item of Work satisfactorily completed in accordance with the requirements of the Contract.

2.01.4 EXAMINATION OF CONTRACT AND SITE

2.01.4(1) General

Bidders shall satisfy themselves by personal examination of Contract Provisions, Contract Plans, and site of the proposed improvements, and by any other examination and investigation which they may desire to make as to the accuracy of the estimate of quantities, the nature of the Work and the difficulties to be encountered. Bidders shall review the entire Contract to ensure that the completeness of their Proposal includes all items of Work regardless of where shown in the Contract. Bidders are cautioned that alternate sources of information (copies of the Contract obtained from third parties) are not necessarily an accurate or complete representation of the Contract. Bidders shall use such information at their own risk.

Bidders shall be familiar and comply with all applicable federal, state, and local laws, ordinances, and regulations in any way applicable to the performance the Work. Bidders are responsible for familiarizing themselves with all current state and federal wage rates applicable to the Work and its duration before submitting a Proposal based on the Contract Provisions and Contract Plans. Any wage determination contained in the Contract is for the Bidder's general information only and is not warranted to be complete or accurate. The Owner will not consider any plea of misunderstanding or ignorance of such requirements. Bid prices shall reflect what the Bidder has determined to be the total cost of completing the Work, including but not limited to: construction methods, materials, labor, administrative costs, any and all applicable taxes, and equipment.

Except as the Contract may provide, the Bidder to which the Contract is awarded shall receive no payment for any costs that exceed those set forth in the Proposal.

2.01.4(2) Interpretation of the Contract Provisions and Contract Plans

If any Bidder desires interpretation or clarification of the Contract Provisions and Contract Plans, the Bidder shall make a written request to the Engineer for such clarification or interpretation prior to the submission of a Proposal. If the Engineer determines that the Contract Provisions and/or Contract Plans do not require interpretation or clarification, the Engineer will so notify the Bidder making the request. All interpretations and clarifications made by the Engineer will be by written addendum to all planholders of record, and a copy of the addendum will be filed in the office of the Owner. Neither the Owner nor the Engineer will be responsible for any interpretation, clarification or explanation of the Contract Provisions and Contract Plans that is not set forth in a written addendum to all planholders of record, and Bidders shall not under any circumstances rely on any other interpretation, clarification or explanation.

2.01.4(3) Subsurface Information

If the Owner has made a subsurface investigation of the site of the proposed Work, the boring log data and soil sample test data accumulated by the Owner will be made available for inspection by the Bidders. However, the Owner makes no representation or warranty, express or implied, that:

- a. The Bidders' interpretations from the boring logs may be correct;
- b. Moisture conditions and indicated water tables will not vary from those found at the time the borings were made;
- c. The ground at the location of the borings has not been physically disturbed or altered after the boring was made; and
- d. Conditions below the surface of the ground are consistent throughout the site with the information made available hereunder, or that conditions to be encountered on the site are uniform or consistent with geological conditions usually encountered in the area.

The Owner makes no representations, guarantees, or warranties as to the condition, materials, or proportions of the materials between the specific borings, regardless of any subsurface information the Owner may make available to the prospective Bidders. Bidders are solely responsible for making the necessary investigations to support and/or verify any conclusions or assumptions used in preparation of their Proposals.

Any subsurface investigations and analysis were carried out for design purposes only. Contractor may not rely upon or make any claim against Owner, Engineer, or any of their subconsultants, with respect to:

1. The completeness of such reports for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and

procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. Other conclusions, interpretations, opinions, representations, and information contained in such reports; or
3. Any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, conclusions, interpretations, opinions or information.

2.01.4(4) Availability of Specified Items

Prior to submitting a Proposal, all Bidders shall verify that all items necessary to complete the Work will be available in time to allow the Work to be completed within the Contract Time. In the event that one or more items may not be available to allow the Work to be completed within the Contract Time, the Bidder shall notify the Engineer in writing prior to submitting a Proposal. Responsibility for delays and related costs because of non-availability of items necessary to complete the Work shall be borne by the Contractor.

2.01.5 PROPOSAL DEPOSIT

A deposit of at least 5 percent of the total Proposal amount shall accompany each Proposal (Proposal Deposit). The Proposal Deposit may be in the form of a Proposal bond (surety bond), certified check, cashier’s check, or postal money order made payable to the Owner. All Proposal bonds shall be on the form included within the Contract Provisions and shall be signed by the Bidder and the surety. The surety shall: (1) be registered with the Washington State Commissioner, and (2) appear on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner. The Proposal bond shall not be conditioned in any way to modify the minimum 5 percent required. The Proposal Deposit will be held as a guaranty that the successful Bidder will, within 10 days from the date of notification of Award, enter into a Contract and furnish approved Performance and Public Works Payment Bonds, on forms attached, in amounts equal to 100 percent of the amount of the Contract, including state sales tax.

The failure to furnish a Proposal Deposit of a minimum of 5 percent with the Proposal shall make the Proposal non responsive and shall cause the Proposal to be rejected by the Owner.

2.01.6 PROPOSAL

- (1) Proposals shall be submitted on the Proposal form included in the Contract Provisions. All Proposals shall be completed, signed by an authorized person and dated. To be considered by the Owner as a responsive Proposal, the Bidder shall bid on all Additive or Alternate items set forth in the Proposal form, unless otherwise specified in the Contract Documents.
- (2) To be responsive, a Proposal shall state that it will remain valid for a period of 60 days following the date of Proposal opening. In the event that a conflict in this

duration appears elsewhere in the Contract Provisions, the longest duration shall apply.

- (3) All prices set forth on the Proposal form shall be legible and either be written in ink or typed. In the space provided on the Proposal form, Bidders shall identify all Addenda that have been received. The Proposal, Proposal Deposit, and all other certificates, forms or other documents required by the Contract Provisions to be executed and delivered with the Proposal shall be submitted in a sealed package, addressed to the Owner, and plainly marked "Proposal for _____ (insert name of project as shown on the Proposal) to be opened on the _____ day of _____, 20 __," (insert the day, month and year shown in the published bid notice). The Owner will not consider any Proposal received after the time established for opening Proposals.
- (4) Where noted in the Proposal, the Bidder is to furnish information concerning its experience with work of a similar nature, equipment to be used on this project, and general background information. Information that is incomplete, evasive, or of a general nature only, may be considered as grounds for rejection of the Proposal.
- (5) RCW 39.30.060 requires Bidders on public works projects expected to cost one million dollars or more to provide the names of the structural steel installation, rebar installation, heating, ventilation and air conditioning, plumbing and electrical Subcontractors to whom the Bidder will directly subcontract those portions of the Work if awarded the Contract. The Bidder may not list more than one Subcontractor for each category of Work identified, unless Subcontractors vary with bid alternates, in which case the Bidder shall indicate which Subcontractor will be used for which alternate. Failure of the Bidder to list the names of such Subcontractors or to name itself to perform such Work, or listing two or more Subcontractors to perform the same Work, shall render the Bidder's Proposal unresponsive and void. Under RCW 39.30.060, the required names of such Subcontractors shall be provided with the Proposal or within one hour after the published Proposal submittal time. In addition to compliance with the requirements of RCW 39.30.060, the apparent successful Bidder may be required to submit to the Engineer as soon as possible after the Proposal opening, and not later than three calendar days thereafter, a written list of all proposed Subcontractors in addition to structural steel installation, rebar installation, heating, ventilation, and air conditioning, plumbing and electrical contractors, that will perform subcontracting Work on the project. If not previously provided, the following information shall be provided for each Subcontractor:
 - a. Name, address, email address, facsimile number, telephone number, contractor registration number and certification numbers;
 - b. The type of Work to be performed;

- c. A list of at least three recently completed projects for Work similar to that to be performed by the proposed Subcontractor, with the following information for each project:
 - i. Name of project,
 - ii. Name, address, and telephone number of the project owner; and
 - d. Any additional pertinent information establishing the experience or qualifications of the proposed Subcontractor.
- (6) After opening and reading Proposals, the Owner will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit, converted to the actual extension, will control. The total extensions, corrected where necessary, will be used by the Owner for comparison and award purposes and to establish the amount of the Contractor's Performance and Public Works Payment Bonds.

2.01.7 WITHDRAWING OR REVISING PROPOSAL

After submitting a physical Proposal to the Owner, the Bidder may withdraw, or revise it if:

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

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

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

2.01.8 DISQUALIFICATION OF BIDDERS

1. A Proposal will be considered irregular and will be rejected if:
 - a. The Bidder is not prequalified when so required;

- b. The authorized proposal form furnished by the Owner is not used or is altered;
 - c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
 - d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
 - e. A price per unit cannot be determined from the Bid Proposal;
 - f. The Proposal form is not properly executed;
 - g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable;
 - h. The Bidder fails to submit or properly complete a Disadvantaged, Minority or Women’s Business Enterprise Certification, if applicable;
 - i. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
 - j. More than one proposal is submitted for the same project from a Bidder under the same or different names.
2. A Proposal may be considered irregular and may be rejected if:
- a. The Proposal does not include a unit price for every Bid item;
 - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Owner;
 - c. Receipt of Addenda is not acknowledged;
 - d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
 - e. If Proposal form entries are not made in ink.
3. A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1 through 8 in this Section:

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

a. **Criteria 1 – Federal Debarment**

- 1. Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.
- 2. Documentation: The Bidder shall not be listed as having an “active exclusion” on the U.S. government’s “System for Award Management” database (www.sam.gov).

b. **Criteria 2 – Delinquent State Taxes**

1. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
2. Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the Owner) that the Bidder does not owe delinquent taxes to the Department of Revenue. If the Bidder owes delinquent taxes, they must submit a written payment plan approved by the Department of Revenue, to the Owner by the deadline listed below.

c. **Criteria 3 – Claims Against Retainage and Bonds**

1. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the 3 years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its Subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.
2. Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the Owner) that the Bidder has not had claims against claims against retainage and bonds in the 3 years prior to the bid submittal date. If the Bidder has had claims against retainage and bonds in the three years prior to the bid submittal date, they shall submit a list of the public works projects completed in the 3 years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:
 - Name of project
 - The owner and contact information for the owner;
 - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
 - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

d. **Criteria 4 – Public Bidding Crime**

1. Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.
2. Documentation: The Bidder, if and when required as detailed

below, shall sign a statement (on a form to be provided by the Owner) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

e. **Criteria 5 – Termination for Cause / Termination for Default**

1. **Criterion:** The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.
2. **Documentation:** The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

f. **Criteria 6 – Lawsuits**

1. **Criterion:** The Bidder shall not have lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.
2. **Documentation:** The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Owner shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts.

g. **Criteria 7 – Contract Time (Liquidated Damages)**

1. **Criterion:** The Bidder shall not have had liquated damages assessed on any projects it has completed 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet Contract Time, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.

2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had liquidated damages assessed on any projects it has completed within the 5 years prior to the bid submittal date, or shall submit a list of projects with assessed liquidated damages along with Owner contact information, and number of days assessed liquidated damages.

h. **Criteria 8 – Capacity and Experience**

1. Criterion: The Bidder shall have sufficient current capacity and the project superintendent assigned to the project shall have experience to meet the requirements of this project. The Bidder and the project superintendent shall have successfully completed at least two projects as the prime contractor, of a similar size and scope, during the 5-year period immediately preceding the bid submittal deadline for this project. Similar size is defined as a minimum of 70 percent of the bid amount submitted by the Bidder.
2. Documentation: The Bidder shall, if and when required as detailed below, on a form to be provided by the Owner, provide the Bidder's gross dollar amount of work currently under contract, the Bidder's gross dollar amount of contracts currently not completed, five major pieces of equipment anticipated to be on the project and whether the equipment is leased or owned, the superintendent assigned to this project and their number of years of experience, and two project references of similar size and scope during the 5-year period immediately preceding the bid submittal deadline for this project. The Owner may check owner references for the previous projects and may evaluate the owner's assessment of the Bidder performance.

As evidence that the Bidder meets Supplemental Responsibility Criteria 2 through 8 stated above, the apparent two lowest Bidders must submit to the Owner by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets Supplemental Criteria 2 through 8 together with supporting documentation (sufficient in the sole judgment of the Owner) demonstrating compliance with Supplemental Responsibility Criteria 2 through 8. The Owner reserves the right to request further documentation as needed from the low bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Owner also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and Supplemental Criteria, and to use that information in their evaluation. The Owner may consider mitigating factors in determining whether the Bidder complies with the requirements of the Supplemental Criteria.

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

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

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

2.01.9 PROPOSAL ERRORS

If a Bidder discovers an error in the Bidder's Proposal after the Proposals have been opened and tabulated and desires to withdraw the erroneous Proposal, the Bidder shall submit a notarized affidavit signed by the Bidder, accompanied by original certified worksheets used in the preparation of the Proposal, requesting relief from the Award. The affidavit shall describe the specific error(s) and certify that the worksheets are the originals used in the preparation of the Proposal.

The affidavit and the certified worksheets shall be received by the Engineer before 5:00 p.m. local time on the next business day following the day of the Proposal opening or the claim of error will not be considered. The Engineer will review the certified worksheets to determine the validity of the claimed error, and make its recommendation to the Owner. If the Owner and Engineer concur that the claim of error is allowable under applicable law, the Bidder will be relieved of responsibility for the Proposal, and the Proposal Deposit will be returned to the Bidder. Thereafter, at the discretion of the Owner, all Proposals may be rejected or an Award made to the next lowest responsive, responsible Bidder.

2.02 AWARD AND EXECUTION OF CONTRACT

2.02.1 AWARD OF CONTRACT

A Contract will not be awarded until the Owner is satisfied that the successful Bidder is responsible, reasonably familiar with the Work to be performed and has the necessary capital, tools, personnel and equipment to satisfactorily perform the Work.

The Owner reserves the right to waive informalities in the bidding, accept a Proposal of the lowest responsive, responsible Bidder, reject any or all Proposals, republish the call for Proposals, or revise or cancel the project.

After the date and hour set for the opening of the Proposals, no Bidder may withdraw its Proposal unless the Award of the Contract is delayed for a period exceeding 60 calendar days following Proposal opening. In the event that a conflicting duration appears elsewhere in the Invitation for Proposals or Contract Provisions or advertisement, the longer period shall govern.

2.02.2 EXECUTION OF CONTRACT

Within 10 calendar days after notification by the Owner of the Award, the successful Bidder shall return to the Engineer the signed Owner-prepared Contract, all insurance certificates and endorsements required by the Contract Provisions, all other certificates, information, and forms required by the Contract Provisions, and Performance and Public Works Payment Bonds required by the Contract Provisions. If the Contract is signed by an officer, agent, or other authorized representative of the Contractor, the officer, agent, or other representative shall furnish satisfactory evidence of authority to sign as the legal representative of the Contractor, if required by the Owner. An authorized partner of a joint venture may sign the Contract, subject to the approval of the Owner, which may, at its discretion, require each and every member of the joint venture to sign the Contract.

Should the successful Bidder fail to return to the Engineer the signed Owner-prepared Contract, all insurance certificates and endorsements required by the Contract Provisions, all other certifications, information, and forms required by the Contract Provisions, and Performance and Public Works Payment Bonds required by the Contract Provisions within 10 calendar days after notification by the Owner of the Award, the Owner reserves the right to and may elect to withdraw the award to the successful Bidder and award the Contract to the next responsible, responsive Bidder.

Until the Owner executes the Contract, no Proposal shall bind the Owner, and the Contractor shall not commence any Work. The Contractor shall bear all risks for any Work begun before the Contract is executed by the Owner.

2.02.3 FAILURE TO EXECUTE CONTRACT

If the Contractor fails to submit the insurance certificates, bonds, and all other certificates, forms, information and documents as required by the Contract Provisions, with the executed Contract within the time required by the Contract Provisions, the Owner may then award the Contract to the next lowest responsive, responsible Bidder or reject any or all Proposals.

2.02.4 RETURN OF PROPOSAL DEPOSIT

When Proposals have been examined and corrected as necessary, Proposal Deposits accompanying Proposals ineligible for further consideration will be returned. All other Proposal Deposits will be held until the Contract is awarded and fully executed, after which the Proposal Deposits, except those subject to forfeiture, will be returned.

2.02.5 NOTICE TO PROCEED

A written Notice to Proceed will be issued to the Contractor by the Owner or Engineer after the Contract has been executed by the Contractor and the Owner, and the Performance and Public Works Payment Bonds and required insurance and other certificates and documents are approved by the Owner and, when applicable, by State or Federal agencies responsible for funding any portion of the project. The Contractor shall not commence Work until the Notice to Proceed has been issued.

SECTION 3 - GENERAL REQUIREMENTS OF THE CONTRACT

3.01 SCOPE OF THE WORK

3.01.1 INTENT OF THE CONTRACT

The intent of the Contract is to describe a functionally complete project to be constructed in accordance with the Contract. The Contractor shall provide all labor, supervision, materials, tools, equipment, transportation, supplies, and other things required expressly by, or reasonably implied from, the Contract, to complete all Work. Omissions from the Contract of details of Work which are necessary to carry out the intent of the Contract, or which are customarily performed, shall not relieve the Contractor from performing the complete Work called for by the Contract; such Work shall be performed as if fully set forth and described in the Contract. The unit or other bid prices shall be full payment for everything required to complete the Work, including but not limited to labor, supervision, materials, equipment, jobsite and home office overhead and profit.

3.01.2 COORDINATION OF CONTRACT

The Contract Plans and the Contract Provisions for the Work shall be considered as a whole, and anything shown or called for in one and omitted in any other is as binding as if called for or shown on both. Figure dimensions shall, in all cases, be used in preference to scale dimensions. Any inconsistency in the Contract Documents shall be resolved by the following order of precedence (e.g., 1 presiding over 2 through 4, 2 presiding over 3 through 4, etc.):

1. Addenda;
2. The Agreement and Proposal Form;
3. Specifications;
- 3a. Supplementary General Conditions (including conditions supplied by federal or state agencies on projects funded, in whole or part, by such agencies. In the event of a conflict in various forms of General Conditions, those conditions affording the greatest benefit or protection to the Owner shall govern.);
- 3b. General Conditions;
- 3c. Technical Specifications;
4. Contract Plans.

3.01.3 ASSIGNMENT OF CONTRACT

The Contractor shall not assign the Contract or any part of the Contract or of the funds to be received under the Contract unless such assignment is approved by the Owner and the Contractor's Performance and Public Works Payment Bonds surety prior to the execution or effectiveness of the assignment.

3.02 CONTROL OF WORK

3.02.1 AUTHORITY AND ROLE OF THE ENGINEER

- (1) The Engineer is the authorized representative of the Owner, and is employed to act as advisor and consultant to the Owner in engineering matters relating to the Contract. Among other things, the Engineer may determine the quantity of material installed or Work completed, evaluate whether materials and equipment comply with the Specifications, and assist the Owner with answering questions relating to the meaning and intent of the Contract. The Owner, with the advice of the Engineer, will make the final determination relating to quality, acceptability and conformity of labor and materials to the requirements of the Contract.
- (2) The Engineer does not purport to be a safety expert, and is not engaged in that capacity under the Contract or the Engineer's contract with the Owner. The Engineer does not have either the authority or the responsibility to enforce construction safety laws, rules, regulations or procedures, or to order the stoppage of Work for claimed violations thereof. From time to time, the Engineer may inform the Contractor of conditions that may constitute safety issues or violations. Such information will be provided solely to cooperate with and assist the Contractor and shall not make the Field Representative or the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures. After receiving information relating to safety issues from the Engineer, the Contractor shall make its own examination and analysis of the situation reported and take such action, if any, that the Contractor determines to be appropriate. The Engineer's performance of project representation and observation services shall not make the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures; nor shall it make the Engineer responsible for construction means, methods, techniques, sequences, or procedures, or for the Contractor's failure to properly perform the Work, all of which are entirely the responsibility of the Contractor.
- (3) The Engineer shall have no liability whatsoever to, or contractual relationship with, the Contractor in any way relating to the Contract. The Owner and the Contractor shall look solely to each other for the enforcement with respect to any rights, obligations, claims or liabilities arising under or in any way relating to the Contract. Neither the authority given to the Engineer herein, nor any action or service provided by the Engineer or its subconsultants with regard to the Work, shall create any duty owed by the Engineer or its subconsultants to the Contractor or a cause of action against the Engineer or its subconsultants by Contractor.
- (4) Nothing in the Contract shall, in any way, be construed to place responsibility on the Field Representative, Engineer or the Owner for the method, manner, direction or superintendency of the performance of the Work by the Contractor. Such responsibility rests solely with the Contractor.

- (5) Neither the Engineer nor any of its assistants or agents shall have any power to waive any obligation of the Contract. The Engineer's failure to reject Work that is defective or otherwise does not comply with the requirements of the Contract shall not constitute approval or acceptance of the Work or relieve the Contractor of its obligations under the Contract, notwithstanding that such Work has been estimated for payment or that payments have been made for that Work. Neither shall such failure to reject Work, nor any acceptance by the Engineer or by the Owner of any part or of the whole of the Work bar a claim by the Owner at any subsequent time for recovery of damages for the cost of removal and replacement of any portions of the Work that do not comply with the Contract.
- (6) No order, measurement, determination or certificate by the Engineer or Owner for payment of money or payment for or acceptance of the whole or of any part of the Work by the Engineer or the Owner or extension of time or possession taken by the Owner shall constitute a waiver of any portion of the Contract, nor shall any waiver of any breach of the Contract constitute a waiver of any other or subsequent breach thereof.

3.02.2 AUTHORITY OF FIELD REPRESENTATIVE

- (1) Field Representatives are assigned to the project site to keep the Engineer and Owner generally informed as to the progress of the Work and the manner in which it is being done; to keep records; and to act as liaison between the Contractor, Owner and Engineer. When observed, the Field Representative shall call the attention of the Contractor to any deviations from the Contract. However, failure of the Field Representative to call the attention of the Contractor to faulty Work or deviations from the Contract shall not constitute either a waiver of any requirement in the Contract or acceptance of said Work.
- (2) Since one of the Field Representative's primary responsibilities is to observe that the Work progresses expediently and in a workmanlike manner, the Field Representative may offer suggestions to the Contractor, which the Contractor, at its sole discretion, may or may not choose to follow. Such suggestions are not to be considered as anything but suggestions offered to cooperate with and assist the Contractor and shall not constitute an assumption of responsibility, financial or otherwise, by the Field Representative, the Engineer or the Owner.
- (3) The presence or absence of the Field Representative on the job site will be at the sole discretion of the Owner, and the presence or absence of the Field Representative at any time will not relieve the Contractor of its responsibility to properly perform the Work as required by the Contract.
- (4) The Field Representative will have the authority, but not the obligation, to reject defective materials and equipment if observed; however, the failure of the Field Representative to reject defective materials and equipment or any other Work involving deviations from the Contract will not constitute acceptance of such Work. The Field Representative is not authorized to approve or accept any portion of the

Work or to issue instructions contrary to the Contract; all such approvals, acceptances or instructions shall be in writing and signed by the Engineer or the Owner.

- (5) The Field Representative does not purport to be a safety expert, and is not engaged in that capacity under the Contract or the Engineer's contract with the Owner. The Field Representative does not have either the authority or the responsibility to enforce construction safety laws, rules, regulations or procedures, or to order the stoppage of Work for claimed violations thereof. From time to time, the Field Representative may inform the Contractor of conditions that may constitute safety issues or violations. Such information will be provided solely to cooperate with and assist the Contractor and shall not make the Field Representative or the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures. After receiving information relating to safety issues from the Field Representative, the Contractor shall make its own examination and analysis of the situation reported and take such action, if any, that the Contractor determines to be appropriate. The Field Representative's performance of observation services shall not make the Field Representative responsible for the enforcement of safety laws, rules, regulations or procedures; nor shall it make the Field Representative responsible for construction means, methods, techniques, sequences, or procedures, or for the Contractor's failure to properly perform the Work, all of which are entirely the responsibility of the Contractor.

3.02.3 CONSTRUCTION OBSERVATION AND INSPECTIONS

- (1) All Work required by the Contract, including all materials and equipment to be furnished and the manufacture and preparation thereof shall, at all times, be subject to observation by the Owner's designated representatives, who may, at any time in the performance of their duties, enter upon the Work or the shops and factories where any part of the Work, materials or equipment are being prepared, fabricated or manufactured.
- (2) Observation of Work by the Owner, the Engineer, or the Field Representative shall not relieve the Contractor of its obligation to furnish satisfactory materials and workmanship. Work or materials found unsatisfactory at any time during the life of the Contract, and the applicable warranty periods, guarantees or limitation periods shall be promptly corrected or replaced immediately by the Contractor at its own expense.
- (3) Upon request by the Owner or Engineer, the Contractor shall furnish all tools, labor, equipment and materials necessary to examine any Work that may be completed or in progress, even to the extent of uncovering or taking down portions of completed or covered Work. Work shall be left exposed until examined by the Owner or Engineer, at no additional cost to the Owner. If the Owner or the Engineer determines that the uncovered Work does not comply with the requirements of the Contract, the cost of such examination and the cost of reconstruction and/or repair shall be borne by the Contractor.

- (4) The Contractor shall promptly comply with all directions of the Engineer with reference to correcting any Work or replacing any materials or equipment found to be not in accordance with the Contract. In the event of a dispute, the Contractor may appeal to the Engineer's decision to the Owner in accordance with the Contract, and the Owner's decision shall be final.

3.02.4 EMERGENCY CONTACT LIST

The Contractor shall submit an emergency contact list to the Engineer no later than five calendar days after the date the Contract is executed. The list shall include, at a minimum, the Contractor's project manager or equivalent, project superintendent, traffic control supervisor, and erosion and sediment control lead. The list shall identify a representative with delegated authority to act as the emergency contact on behalf of the Contractor and include one or more alternates. The emergency contact shall be available upon the Engineer's request at other than normal working hours. The emergency contact list shall include 24-hour telephone numbers for all individuals identified as emergency contacts or alternates.

3.02.5 ORAL AGREEMENTS

No oral agreement or conversation with any officer, agent, or employee of the Owner, either before or after execution of the Contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the Contract. Such oral agreement or conversation shall be considered as unofficial information and in no way binding upon the Owner, unless subsequently put in writing and signed by the Owner.

3.02.6 ELECTRONIC FILES

All Work performed shall be in conformity with the signed Contract Plans and Contract Provisions. If the Contractor requests electronic files, the Engineer may provide the files. The use of the electronic files shall be at the Contractor's sole risk. The Engineer does not warrant the completeness or accuracy of the electronic files and the Engineer assumes no liability for any errors or omissions in the digital data. The Contractor shall be responsible for reviewing and checking the electronic files to ensure that they are suitable for the Contractor's purpose.

3.03 LEGAL RELATIONS AND RESPONSIBILITIES

3.03.1 APPLICABLE LAWS AND REGULATIONS

3.03.1(1) General

The Contractor shall comply with all laws, ordinances, rules and regulations of any authority having jurisdiction in any way relating to the project, including, but not limited to, regulations governing site maintenance, clean-up, air pollution control, noise control, water quality control, surface water control and runoff, tree and vegetation protection, cultural resources and oil and hazardous substance control.

3.03.1(2) Utilities and Similar Facilities

The Contractor shall protect all private and public utilities from damage. Utilities include, among others: telephone lines; cable television and high-speed internet lines; gas; electric power lines; sanitary sewer; septic sewer systems; storm sewer, waterlines, and irrigation lines; street lighting and traffic signal and signing systems; and railroad tracks and related equipment.

In accordance with Chapter 19.122 of the Revised Code of Washington, the Contractor shall call the One-Number Locator Service for the field location of underground utilities. If no locator service is available for the area where the project is located, the Contractor shall provide written notice to all owners of utilities known to, or suspected of, having underground facilities within or near all areas of that will be excavated.

The Contractor shall be responsible for all costs required to protect public and private utilities from damage.

3.03.1(3) Site Maintenance

The Contractor shall keep the Work site, staging areas, and Contractor's facilities clean and free from rubbish and debris. Materials and equipment shall be removed from the Work site when they are no longer necessary. Upon completion of the Work and before final acceptance, the Work site shall be cleared of equipment, unused materials, and rubbish and the Work site shall be left in clean and neat condition.

3.03.1(4) State Taxes

The Washington State Department of Revenue has issued special rules on the State sales tax. Section 3.03.1(4) a through Section 3.03.1(4) c are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Owner will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 3.03.1(4) b describes this exception.

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

a. State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political

subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the Work.

b. State Sales Tax — Rule 170

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

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

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

c. Services

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

3.03.1(5) Equal Employment Responsibilities

The Contractor shall, at its sole cost and expense, comply with all applicable laws, policies and regulations pertaining to nondiscrimination and equal employment opportunities. The absence of specific provisions or other requirements mandated by state, municipal or federal laws, policies or regulations from these General Conditions shall not excuse the Contractor from compliance with such laws, regulations or policies.

3.03.1(6) Archaeological and Historical Objects

Archaeological or historical objects, such as ruins, human skeletal remains, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint, which may be encountered by the Contractor, shall not be further disturbed. The Contractor shall immediately notify the Engineer of any such finds.

The Engineer will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made. The Engineer may require the Contractor to suspend Work in the vicinity of the discovery until salvage is accomplished.

If the Engineer finds that the suspension of Work in the vicinity of the discovery increases or decreases the cost or time required for performance of any part of the Work under the Contract, the Engineer will make an adjustment in payment or the time required for the performance of the Work in accordance with Section 3.04.6.

3.03.2 SAFETY MEASURES

All Work under the Contract shall be performed in a safe manner. The Contractor and all Subcontractors shall comply with all applicable rules, regulations, and safety standards of the Washington State Department of Labor and Industries and all other federal, state, local and other governmental entities having jurisdiction over the project. The Contractor shall be solely and completely responsible for the conditions of the job site, including the safety of all persons and property during the performance of the Work. This requirement shall apply continuously and not be limited to normal working hours.

The Engineer's review of the Contractor's work plan, safety plan, construction sequences, schedule or performance does not and is not intended to include review or approval of the adequacy of the Contractor's safety measures in, on, or near the job site. The Engineer does not purport to be a safety expert, and is not engaged in that capacity under the Contract. The Engineer has neither the authority nor the responsibility to enforce construction safety laws, rules, regulations, or procedures, or to order the stoppage of Work for claimed violations thereof.

The Contractor shall exercise all required and appropriate precautions to protect all persons and property from injury and damage.

3.03.3 HAZARDOUS MATERIAL

Biological hazards and associated physical hazards may be present at the Work site. The Contractor shall take precautions and perform any necessary Work to provide and maintain a safe and healthful Work site in accordance with all applicable laws. The cost for all Work necessary to provide and maintain a safe Work site shall be included in the Contractor's Proposal, unless the Contract includes provisions to the contrary.

3.03.4 PAYMENT OF WAGES AND RELATED REQUIREMENTS

3.03.4(1) Minimum Prevailing Wage Requirements

- a. The Contract is subject to the minimum prevailing wage and hour requirements of RCW 39.12 and RCW 49.28 (as amended or supplemented). On projects having federal funding, federal wage laws and rules may also apply. The Contract may list minimum hourly rates for wages for trades or occupations in the locality within the state where such labor is performed as determined by the Industrial Statistician for the Department of Labor and Industries or under the federal Davis-Bacon Act. These rates are for general reference purposes only and may not be current or complete. The Contractor, any Subcontractor, or other person doing any Work under the Contract shall not pay any worker less than the applicable current minimum hourly wage rates required by applicable law. Higher wages and benefits may be paid.
- b. The Contractor, any Subcontractor, and all individuals or firms required by RCW 39.12, WAC 296-127, or the Federal Davis-Bacon and Related Acts (DBRA) to pay minimum prevailing wages, shall not pay any worker less than the minimum hourly wage rates and fringe benefits required by RCW 39.12 or the DBRA. Higher wages and benefits may be paid.
- c. In accordance with WAC 296-127, the applicable prevailing wage rates that are in effect on the date when Proposals are due shall remain in effect for the duration of the Contract. By incorporating prevailing wage rates into the Contract, the Owner does not warrant or imply that the Contractor will find labor available at those rates. The Contractor shall calculate in its Proposal any amounts above the minimums that it will actually have to pay. Further, rates for wages and/or fringe benefits may change while the Contract is in force. If they do, the Contractor shall bear the cost of paying rates above those in effect at time of bid.
- d. If employing labor in a class not listed in the Contract Provisions on State funded projects, the Contractor shall request the Industrial Statistician, Department of Labor and Industries to determine the correct wage and benefits rate.
- e. If employing labor in a class not listed in the Contract Provisions on a federally funded project, the Contractor shall request the U.S. Secretary of Labor to determine the correct wage and benefits rate.
- f. The Contractor shall ensure that any firm (Supplier, Manufacturer, or Fabricator) that falls under the provisions of RCW 39.12 because of the definition "Contractor" in WAC 296-127-010, complies with all the requirements of RCW 39.12.
- g. The Contractor shall be responsible for compliance with the requirements of the DBRA and RCW 39.12 by all firms (Subcontractors, lower tier Subcontractors, Suppliers, Manufacturers, or Fabricators) engaged in any part of the Work necessary to complete the Contract. Therefore, should a violation of this

Subsection occur by any firm that is providing Work or materials for completion of the Contract whether directly or indirectly responsible to the Contractor, the Owner will take action against the Contractor, as provided by the provisions of the Contract, to achieve compliance, including, but not limited to, withholding payment on the Contract until compliance is achieved.

3.03.4(2) Posting Notice Requirements

Notice of intent to pay prevailing wages and prevailing wage rates for the project shall be posted for the benefit of workers. The Contractor shall post the following, together with anything else necessary to comply with all applicable laws and regulations:

- a. One copy of the approved “Statement of Intent to Pay Prevailing Wages” for the Contractor, each Subcontractor, and any other firm (Supplier, Manufacturer, of Fabricator) that falls under the provisions of RCW 39.12 because of the definition of “Contractor” in WAC 296-127-010;
- b. One copy of the prevailing wage rates for the project;
- c. The address and telephone number of the Industrial Statistician for the Department of Labor and Industries, along with a statement that complaints and questions about wage rates may be directed there; and
- d. FHWA 1495/1495A “Wage Rate Information” poster if the project is funded with federal aid.

Notice shall be posted at a location readily visible to workers at the job site, or where no field office is established, at a local office. The Contractor shall supply a copy of the Notice to any employee upon request.

3.03.4(3) Apprentices

If employing apprentices, the Contractor shall submit to the Owner written evidence showing:

- a. That each apprentice is enrolled in a program approved by the Washington State Apprenticeship and Training Council;
- b. The progression schedule for each apprentice; and
- c. The established apprentice-journeyman ratios and wage rates in the project locality upon which the Contractor shall base such ratios and rates under the Contract. Any worker for whom an apprenticeship agreement has not been registered and approved by the Washington State Apprenticeship and Training Council shall be paid the prevailing hourly rate for journeymen provided in RCW 39.12.021.

3.03.4(4) Required Documents

1. General

All “Statements of Intent to Pay Prevailing Wages”, “Affidavits of Wages Paid” and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be submitted on the State L&I online Prevailing Wage Intent & Affidavit (PWIA) system. Statements of Intent to Pay Prevailing Wages”, and “Affidavits of Wages Paid” shall also be submitted to the Engineer. When requested by the Engineer, Certified Payrolls shall also be submitted to the Engineer.

2. Intentions and Affidavits

On forms provided by the Industrial Statistician of State L&I, the Contractor shall submit to the Engineer the following for themselves and for each firm covered under RCW 39.12 that will or has provided Work and materials for the Contract:

- a. The approved “Statement of Intent to Pay Prevailing Wages” State L&I’s form number F700-029-000. The Contracting Agency will make no payment under this Contract until this statement has been approved by State L&I and reviewed by the Engineer.
- b. The approved “Affidavit of Prevailing Wages Paid”, State L&I’s form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for the Contractor and all Subcontractors have been received by the Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until “Affidavit of Prevailing Wages Paid” forms have been approved by State L&I and all of the approved forms have been submitted to the Engineer for every firm that worked on the Contract.

The Contractor is responsible for requesting these forms from State L&I and for paying any fees required by State L&I.

3. Certified Payrolls

Certified payrolls are required to be submitted by the Contractor for themselves, all Subcontractors and all lower tier Subcontractors. The payrolls shall be submitted weekly on all Federal-aid projects and no less than monthly on State funded projects.

4. Penalties for Noncompliance

The Contractor is advised, if these payrolls are not supplied within the prescribed deadlines, any or all payments may be withheld until compliance is achieved. In addition, failure to provide these payrolls may result in other sanctions as provided by State laws (RCW 39.12.050) and/or Federal regulations (29 CFR 5.12).

3.03.5 BONDS, INSURANCE AND INDEMNITY OBLIGATIONS

3.03.5(1) Contract Bonds

The successful Bidder shall provide an executed Performance Bond and Public Works Payment Bond for the full Contract amount (including sales tax). The Contract Bonds shall:

1. Be on Owner-furnished forms;
2. Be signed by an approved Surety (or Sureties) that:
 - a. Is registered with the Washington State Insurance Commissioner; and
 - b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner.
3. Be conditioned upon the faithful performance of the Contract by the Contractor within the prescribed time; and
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under Titles 50, 51 and 82 RCW; and
5. Guarantee that the Surety shall indemnify, defend, and protect the Owner against any claim of direct or indirect loss resulting from the failure:
 - a. Of the Contractor (or any of the employees, Subcontractors, or lower tier Subcontractors of the Contractor) to faithfully perform the Contract; or
 - b. Of the Contractor (or the Subcontractors or lower tier Subcontractors of the Contractor) to pay all laborers, mechanics, Subcontractors, lower tier Subcontractors, materialperson, or any other person who provides supplies or provisions for carrying out the Work.
6. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
7. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond must be signed by the president or vice-president, unless accompanied by written proof of the authority of the individual signing the bond to bind the corporation (i.e., corporate resolution, power of attorney or a letter to such effect by the president or vice-president).

The Owner may require Sureties or Surety companies on the Contract Bonds to appear and qualify themselves. Whenever the Owner deems the Surety or Sureties to be inadequate, it may, upon

written demand, require the Contractor to furnish additional Surety to cover any remaining Work. Until the added Surety is furnished, payments on the Contract will stop.

3.03.5(1.1) Two-Year Guarantee Period

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within 2 years after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Owner's written notice of a defect, and shall complete such Work within the time stated in the Owner's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Owner's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the Work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for 2 years after acceptance of the corrections by Owner.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's Work comply with the requirements of the Contract or any other legal rights or remedies of the Owner.

3.03.5(2) Worker's Benefits

- a. The Contractor shall make all payments required for unemployment compensation under RCW Title 50 and for industrial insurance and medical aid required under RCW Title 51. If any payment required by Title 50 or Title 51 is not made when due, the Contractor shall indemnify the Owner with respect to all costs and damages, including attorneys' fees and expenses, associated with such nonpayment. The Owner may retain payments due under Title 50 or Title 51 from any money due to the Contractor and make payment to the appropriate fund.
- b. The Contractor shall include in the various items in its bid Proposal all costs for payment of unemployment compensation and for providing the required insurance coverage(s). The Contractor will not be entitled to any additional payment for: (1) failure to include such costs in the Proposal, or (2) post-Award determinations made by the U.S. Department of Labor, the Washington State Department of Labor and Industries, or any other agency or entity regarding insurance coverage requirements.

3.03.5(4) Public Liability & Property Damage Insurance

3.03.5(4.1) General Requirements

- A. The Contractor shall procure and maintain insurance described in all subsections in this Section, from insurers with a current A.M. Best rating not less than A – VII

and licensed to do business in the state of Washington. The Owner reserves the right to approve or reject the insurance provided, based on the insurer (including financial condition), terms and coverage, the Certificate of Insurance, and/or endorsements.

- B. The Contractor shall keep this insurance in force during the term of the Contract and for 30 days after the Physical Completion Date, unless otherwise indicated.
- C. All insurance coverage required by this section shall be written and provided by “occurrence-based” policy forms rather than by “claims made” forms.
- D. The insurance policies shall contain a “cross liability” provision.
- E. The Contractor’s and all Subcontractors’ insurance coverage shall be primary and non-contributory insurance as respects the Owner’s insurance, self-insurance, or insurance pool coverage. Any insurance, self-insurance or self-insured pool coverage maintained by the Owner shall be excess of the Contractor’s insurance and shall not contribute with it.
- F. The Contractor shall provide the Owner and all Additional Insured with written notice of any policy cancellation and the date of effective cancellation within 2 business days of receipt.
- G. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Owner.
- H. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of Contract, upon which the Owner may, after giving 5 business days notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Owner on demand, or at the sole discretion of the Owner, offset against funds due the Contractor from the Owner.
- I. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

3.03.5(4.2) Additional Insured

All insurance policies, with the exception of Workers Compensation, shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- The Owner and its officers, elected/appointed officials, employees, agents, and volunteers;
- Gray & Osborne, Inc.;

The above-listed entities shall be additional insured(s) for the full available limits of liability

maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by the Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 3.03.5(4.4) describes limits lower than those maintained by the Contractor.

3.03.5(4.3) Subcontractors

Contractor shall ensure that each Subcontractor of every tier obtains and maintains at a minimum the insurance coverages listed in 3.03.5(4.5)A and 3.03.5(4.5)B. Upon request of the Owner, the Contractor shall provide evidence of such insurance.

3.03.5(4.4) Verification of Coverage

The Contractor shall deliver to the Owner a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the Work. The certificate and endorsements shall conform to the following requirements:

1. An ACORD certificate or a form determined by the Owner to be equivalent. The certificate or an endorsement form shall indicate the Contractor's insurance is primary and non-contributory.
2. The Contractor shall obtain endorsement forms CG 2010 10 01, CG 2032 07 04 and CG 2037 10 01 or the equivalent of each, naming the Owner and all other entities listed in 3.03.5(4.2) as Additional Insured(s) and showing the policy number. If the Contractor is unsuccessful in securing these endorsements after exerting commercially reasonable efforts, the Contractor shall obtain other endorsements providing equivalent protection to the Additional Insured. Commercially reasonable efforts shall be evidenced by a signed statement by the Contractor's insurance broker indicating that endorsement forms CG 2010 10 01, CG 2032 07 04 and CG 2037 10 01 are not available and the endorsements submitted provide equivalent protection to the Additional Insured.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notification of coverage enhancements on the Certification of Insurance shall not satisfy these requirements; actual endorsement must be submitted.

Upon request, the Contractor shall forward to the Owner a full and certified copy of the insurance policy(s). If Builders Risk Insurance is required on this project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the Work.

3.03.5(4.5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions shall be disclosed and

are subject to approval by the Owner. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

3.03.5(4.5)A Commercial General Liability

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

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

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least 3 years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

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

3.03.5(4.5)B Automobile Liability

Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if "pollutants" are to be transported. Such policy(ies) shall provide the following minimum limit:

\$1,000,000	combined single limit each accident
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3.03.5(4.5)C Workers' Compensation

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

3.03.5(4.5)D Excess or Umbrella Liability

The Contractor shall provide Excess or Umbrella Liability coverage at limits of \$2 million per occurrence and annual aggregate. This excess or umbrella liability coverage shall apply, at a minimum, to both the Commercial General and Auto insurance policy coverage and employers liability.

This requirement may be satisfied instead through the Contractor's primary Commercial General and Automobile Liability coverage, or any combination thereof.

3.03.5(4.5)E Builders Risk Insurance

The Contractor shall purchase and maintain Builders Risk insurance covering interests of the Owner, the Contractor, Subcontractors, and lower tier Subcontractors in the Work. Builders Risk shall be required for all structures on the project. A structure is any equipment, facility, building, bridge, retaining wall, or tank extending 4 feet or more above adjacent grade; or any facility less than 4 feet above adjacent grade, and containing more than \$50,000 worth of electrical or mechanical equipment. Poles, light standards, or antenna less than 50 feet in height and less than 2 feet in diameter shall not be considered structures. Builders Risk insurance, when required, shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including flood, earthquake, theft, vandalism, malicious mischief and collapse. The Builders Risk insurance, when required, shall include coverage for temporary buildings, debris removal, and damage to materials in transit or stored off-site. Such insurance shall cover “soft costs” including but not limited to design costs, licensing fees, and architect’s and engineer’s fees. Builders Risk insurance shall be written in the amount of the completed value of the applicable portions of the project, with no coinsurance provisions.

The Builders Risk insurance covering the Work shall have a deductible of \$5,000 for each occurrence, which will be the responsibility of the Contractor. Higher deductibles for flood, earthquake and all other perils may be accepted by the Owner upon written request by the Contractor and written acceptance by the Owner. Any increased deductibles accepted by the Owner will remain the responsibility of the Contractor.

The Builders Risk insurance shall be maintained until the Physical Completion Date.

The Contractor and the Owner waive all rights against each other and any of their Subcontractors, lower tier Subcontractors, agents and employees, each of the other, for damages caused by fire or other perils to the extent covered by Builders Risk insurance or other property insurance applicable to the Work. The policies shall provide such waivers by endorsement or otherwise.

Liability for facilities not covered by Builders Risk shall remain the responsibility of the Contractor.

3.03.5(4.5)F LHWCA Insurance

If the Contract involves work on or adjacent to Navigable Waters of the United States, the Contractor shall procure and maintain insurance coverage in compliance with the statutory requirements of the U.S. Longshore and Harbor Workers' Compensation Act (LHWCA).

Such policy must provide the following minimum limits:

\$1,000,000	Bodily Injury by Accident – each accident
\$1,000,000	Bodily Injury by Disease – each employee
\$1,000,000	Bodily Injury by Disease – policy limits

3.03.5(4.5)G Protection and Indemnity Insurance Including Jones Act

If the Contract involves marine activities, or work from a boat, vessel, or floating platform, the Contractor shall procure and maintain Protection and Indemnity (P&I) coverage including collision liability, injury to crew (Merchant Marine Act of 1920 - Jones Act) and passengers, removal of wreck and liability for seepage, pollution, containment and cleanup using form SP-23 or SP 38 or a form as least as broad.

All entities listed under Section 3.03.5(4.2) of the General Conditions shall be named as additional insureds on the Contractor's Protection and Indemnity insurance policy.

Such policy must provide the following minimum limits:

\$1,000,000	Bodily Injury by Accident – each accident or occurrence
\$1,000,000	Bodily Injury by Disease – each employee
\$1,000,000	Bodily Injury by Disease – policy limits

3.03.5(4.5)H Hull and Machinery

If the Contract involves use of a boat, vessel, or floating platform, the Contractor shall procure and maintain coverage at Market Value of vessel on American Institute Hull Clauses, 6/2/77 form.

3.03.5(4.5)I Marine Pollution

If this Contract is near or on water, the Contractor shall procure and maintain Pollution Liability (OPA, CERCLA) insurance to satisfy U.S. Coast Guard requirements as respects the Federal Oil Pollution Act of 1990 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended.

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

\$1,000,000	per Occurrence
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3.03.5(4.5)J Pollution Liability

If this Contract includes work with lead based paint, materials containing asbestos or transportation of hazardous materials, the Contractor shall provide a Contractors Pollution Liability policy, providing coverage for claims involving bodily injury, property damage (including loss of use of tangible property that has not been physically injured), cleanup costs, remediation, disposal or other handling of pollutants, including costs and expenses incurred in the investigation, defense, or settlement of claims, arising out of any one or more of the following:

1. Contractor's operations related to this project.
2. Remediation, abatement, repair, maintenance or other work with lead-based paint or materials containing asbestos.
3. Transportation of hazardous materials away from any site related to this project.

All entities listed under 3.03.5(4.2) of these general conditions shall be named by endorsement as additional insureds on the Contractors Pollution Liability insurance policy.

Such Pollution Liability policy shall provide the following minimum limits:

\$1,000,000 each loss and annual aggregate

3.03.5(4.5)K Professional Liability

If the Contract requires engineering design services, the Contractor and/or its Subcontractor(s) and/or its design consultant providing construction management, value engineering, or any other design-related non-construction professional services shall provide evidence of Professional Liability insurance covering professional errors and omissions.

Such policy shall provide the following minimum limits:

\$1,000,000 per claim and annual aggregate

If the scope of such design-related professional services includes work related to pollution conditions, the Professional Liability insurance shall include coverage for Environmental Professional Liability.

If insurance is on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract.

3.03.5(5) Indemnity and Hold Harmless

- a. To the fullest extent permitted by law and subject to the limitations of RCW 4.24.115, the Contractor shall defend, indemnify and hold harmless the Owner and the Engineer and their appointed and elected officials, agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees and expenses arising out of or resulting from the negligent performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. Provided, however, that when any such claim, damage, loss or expense arises from the concurrent negligence of (1) the Owner, or anyone for whose acts it may be liable, and (2) the Contractor, or anyone for whose acts it may be liable, it is expressly agreed that the Contractor's obligations of defense and indemnity under this section shall be effective only to the extent of the Contractor's negligence and those for whose negligence the Contractor is responsible. This obligation of indemnity shall not extend to claims, losses or expenses arising from the sole negligence of the Owner, its appointed or elected officials, agents or employees.

- b. In any and all claims against the Owner or the Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this section shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts, it being the expressed intent of the parties that Contractor herein specifically waives any immunity granted under the State Industrial Insurance Law, RCW Title 51. **THIS WAIVER HAS BEEN SPECIALLY NEGOTIATED BY THE PARTIES, WHO HAVE ACKNOWLEDGED SAME BY AFFIXING THEIR SIGNATURES TO THE PROPOSAL FORM.**

3.03.5(6) Patent Royalties & Process Fees

The Contractor shall be responsible for all costs arising from the use of patented devices, materials, or processes used in or incorporated in the Work. The Contractor agrees to indemnify, defend, and save harmless the Owner from all claims and damages, in any way relating to the use of patented devices, materials, or processes used in or incorporated in the Work.

3.03.6 METHOD OF SERVING NOTICE

All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, shall be in paper format, hand delivered or sent via mail delivery service to the Owner. Electronic formats such as emails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

3.04 PROSECUTION AND PROGRESS OF THE WORK

3.04.1 QUALITY OF WORK

3.04.1(1) Workmanship

- a. The Contractor represents that it is fully experienced and possesses all the necessary capital, facilities and expertise to perform all of the Work, and hereby guarantees that all of the Work performed by it under the Contract will be of the highest quality and done in a workmanlike fashion in strict accordance with the requirements of the Contract.
- b. The Contractor shall at all times employ skilled workers and use skilled Subcontractors in the performance of the Work. When required in writing by the Owner or the Engineer, the Contractor or its Subcontractors shall remove from the Work site any person or Subcontractor who is, in the opinion of the Owner or the Engineer, not competent, not qualified, disorderly, or otherwise unsatisfactory and shall not again employ such discharged person or Subcontractor on the Work,

except with the prior written consent of the Owner. Discharge of any person or Subcontractor shall not be the basis of any claim for compensation or damages against the Owner or the Engineer.

- c. All Work performed under the Contract shall be of first quality workmanship throughout, with the Work complete and in full working order upon completion.
- d. Except when otherwise expressly specified in the Contract, the Contractor shall design, survey, layout and be responsible for all methods, materials and equipment used in performing the Work.
- e. If, at any time, the Contractor's workforce (including Subcontractors), in the opinion of the Owner and/or the Engineer, shall be inadequate for maintaining the necessary progress required to complete the Work within the Contract Time, the Contractor shall at its sole cost, if so required by the Owner and/or the Engineer, increase the workforce or equipment to such an extent as to give reasonable assurance of compliance with the Work schedule. The failure of the Owner and/or the Engineer to make such demand shall not relieve the Contractor of its obligation to perform the Work in accordance with the requirements of the Contract. The Contractor alone shall be responsible for the safety, efficiency and adequacy of its activities, construction methods and the rate of progress required by the Contract.

3.04.1(2) Contractor's Supervisory and Site Personnel

- a. The Contractor shall assign sufficient supervisory personnel to ensure the faithful prosecution of the Work and shall have adequate supervisory personnel present at the Work site who are either employees of the Contractor or duly authorized representatives designated in writing to the Owner and/or the Engineer. The Contractor shall at all times maintain at the Work site a complete copy of the Contract Provisions, Contract Plans, and record drawings of the Work that has been completed.
- b. The Contractor shall at all times have at least one duly authorized supervisory representative at the Work site who shall be fully authorized to make binding decisions on behalf of the Contractor with respect to the Work. If the Contractor's duly authorized supervisory representative at the Work site will be absent from the Work site for more than four hours, he/she shall designate an assistant who possesses the same authority and so inform the Owner and the Field Representative, if applicable.

3.04.2 MATERIALS AND EQUIPMENT

- (1) Materials and equipment furnished and installed shall be manufactured, fabricated or constructed to meet all applicable safety requirements. All material and equipment supplied by the Contractor and incorporated in the Work shall be of new manufacture, free from defects and in strict compliance with the requirements of

the Contract. When required by the Owner, a certificate from the manufacturer or other responsible supplier shall be supplied attesting to this fact.

- (2) All tools and equipment used for construction operations shall be of the size and type suitable for the Work and shall be kept in safe and good working condition at all times.
- (3) The Contractor shall, whenever required during the progress of the Work and after completion of the Work, furnish proof acceptable to the Owner that all items of equipment and all materials installed equal or exceed all requirements specified in the Contract.
- (4) The Contractor shall use all means possible to protect materials and equipment from damage or degradation of any kind before, during and after installation.
- (5) The Contractor shall replace any materials or equipment damaged during the performance of the Work to the approval of the Owner and the Engineer. The cost of replacing damaged materials and equipment shall be borne by the Contractor.

3.04.3 SPECIFICATION OF PARTICULAR MATERIALS AND EQUIPMENT

- (1) Within the Contract, certain items are specified by brand, style, trade name, or manufacturer in order to set forth a standard of quality, and/or preference by the Owner. Unless specifically noted otherwise, it is not the intent of the Contract to exclude other processes or materials of a type and quality equal to those designated.
- (2) The term “or equal” as used in the Contract does not mean that the Contractor’s substitution of material or equipment will necessarily be approved as equal by the Engineer. If the Contractor desires to substitute material or equipment on the basis that it is equal to that specified, the Contractor shall submit a written request to the Engineer to substitute the material or equipment. The Contractor shall not use or incorporate such material or equipment into the Work until the Contractor has received written approval from the Engineer.
- (3) If the Contractor proposes substitutions, the Engineer will record all time used to evaluate each proposed substitution. If an approved substitution requires revisions to the Contract Documents, the Engineer will record all time to accomplish the revisions. Whether or not the Engineer approves a proposed substitution all direct and indirect cost to evaluate the proposed substitution shall be deducted from amounts due or to become due to the Contractor.
- (4) No additional compensation or extension of time will be allowed the Contractor for any changes required to incorporate substituted materials or equipment.

3.04.4 STORAGE

3.04.4(1) On-Site Storage

The Contractor shall store all equipment and materials in a safe and suitable place in accordance with the manufacturer's recommendations. Materials and equipment shall be covered or wrapped to protect them from moisture, dust and deterioration, as required or necessary. All on-site storage areas shall be approved in advance by the Owner and the Engineer.

3.04.4(2) Off-Site Storage

The Contractor may be required to provide offsite storage of equipment and materials to enable construction to occur at the Work site. The Contractor has full responsibility to secure all offsite storage areas, if needed, and shall include the costs for providing such storage areas in the bid Proposal for the individual equipment and material items requiring off-site storage. All off-site storage areas shall be enclosed or fenced and be secure.

3.04.5 DEFECTIVE MATERIALS, EQUIPMENT AND WORKMANSHIP

- (1) Materials, equipment, or workmanship which, in the opinion of the Owner or the Engineer, does not conform to the Contract or are in any other way unsatisfactory or unsuited to the purpose for which they are intended may be rejected. The Contractor shall remove from the Work site without delay, all rejected materials, equipment and work, and shall promptly replace the same in strict conformity with the requirements of the Contract. Unsatisfactory materials, equipment and workmanship may be rejected at any time, notwithstanding any previous testing, inspection or acceptance of such materials, equipment or workmanship, or inclusion thereof in any previously issued progress estimates.
- (2) If the Contractor fails to correct defective Work, equipment or materials, the Owner shall have the right to exercise any of the following options or any combination thereof:
 - a. The Owner may replace the defective Work, materials or equipment by purchase from or contract with any other parties at the expense of the Contractor, and in this event, the Owner shall be entitled without compensation to the Contractor, to the use of the defective Work or equipment for such reasonable time as is necessary to enable Owner to replace such defective Work, materials or equipment.
 - b. The Owner may elect to accept the defective Work, materials or equipment and issue a Change Order reflecting a credit against the Contract price, computed under the terms of the Contract in an amount to be determined by the Engineer, which amount shall reflect the actual value to the Owner of the accepted Work.

- c. Upon receipt of notice from the Owner of any defects in material, equipment or workmanship which appear within a two-year period following the Substantial Completion Date, or within any other warranty or guarantee period required by the Contract or provided by a manufacturer or supplier, the Contractor shall promptly and with the least possible delay and inconvenience to the Owner, repair or replace such defective workmanship, material or equipment without expense to the Owner.
- d. The Contractor shall be responsible for the full cost of correcting defective Work and complying with warranties and guarantees as required by the Contract. Direct or indirect costs, including administrative and engineering, incurred by the Owner attributable to correcting and remedying defective or unauthorized work, or Work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Owner from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.
- e. All warranties, guarantees, and other obligations to correct work that does not comply with the Contract are material requirements of the Contract. The performance of all warranties, guarantees and other obligations shall be secured by the Performance Bond and the Public Works Payment Bond submitted by the Contractor at the time the Contract is signed.

3.04.6 CHANGES IN THE WORK

- (1) The Owner or the Engineer may, at any time, without notice to the Performance Bond or Public Works Payment Bond sureties, by written order designated or indicated to be a Change Order or Change Directive, make any change, including modifications to, additions to or deletions from the Work including, but not limited to, changes:
 - a. To the Contract Provisions and Contract Plans;
 - b. To quantities or performance of the Work;
 - c. To Owner-furnished facilities, equipment, materials, services or the Work site; or
 - d. To the schedule for the Work or the Contract Time.
- (2) A Change Order is an amendment to the Contract, which signifies changes in the scope of the Work, the Contract Time, and/or the Contract price. A Change Order shall be the complete expression of the agreement between the Owner and the Contractor. No claims or entitlement to an equitable adjustment or changes to the

Contract Time and/or Contract price will be allowed for alleged verbal or oral agreements or directives.

- (3) The Engineer will issue a written change order for any change. If the Engineer determines that the change increased or decreased the Contractor's costs or time to do any of the Work, the Engineer will make an equitable adjustment to the Contract. The equitable adjustment will be by agreement with the Contractor. However, if the parties are unable to agree, the Engineer will determine the amount of the equitable adjustment in accordance with Section 3.04.6(7) and adjust the time as the Engineer deems appropriate. Extensions of time will be evaluated in accordance with Section 3.04.15(2).

The Contractor shall proceed with the Work upon receiving:

1. A written change order approved by the Owner; or
2. An oral order from the Engineer before actually receiving the written change order.

Within 14 calendar days of delivery of the change order the Contractor shall endorse and return the change order, request an extension of time for endorsement or respond in accordance with Section 3.04.8. The Owner may unilaterally process the change order if the Contractor fails to comply with these requirements. Changes normally noted on field stakes or variation from estimated quantities, except as provided in Section 3.04.6(8), will not require a written change order. These changes shall be made at the unit prices that apply. The Contractor shall respond immediately to changes shown on field stakes without waiting for further notice.

The Contractor shall obtain written consent of the Surety or Sureties if the Engineer requests such consent.

- (4) All Change Orders will be prepared by the Owner or Engineer and executed in triplicate with one copy to the Owner, one to the Contractor, and one retained by the Engineer.
- (5) If the Contractor encounters any circumstances during the performance of the Work that the Contractor contends creates any entitlement to a change in the Contract Time, the Contract price, or both, the Contractor shall immediately provide written notice to the Engineer. Within 10 calendar days after providing written notice, the Contractor shall provide a written request to the Engineer for a change to the Contract Time and/or Contract price and provide detailed information supporting the request, including cost and schedule information.
- (6) No claim by the Contractor shall be allowed if the terms of this Section 3.04.6 are not strictly followed. In the event of any non-compliance, the Contractor shall be conclusively determined to have waived any claim or entitlement to an adjustment of the Contract Time or the Contract price.

- (7) The cost to be included in an adjustment for any changes to the Work, adjustment of the Contract Time or Contract price and any equitable adjustment or entitlement related to the Work or the Contract shall meet the notice provisions of Section 3.04.6, and will be determined strictly by one or a combination of the following methods:
- a. Contract unit bid prices previously agreed upon; or
 - b. If there are no unit bid prices, an agreed lump sum; or
 - c. If the amount of the adjustment cannot be agreed upon in advance or in the manner provided in subparagraph a or b above, the cost will be determined by the actual cost of:
 1. Labor including working foremen. Labor rates will only include the basic wage and fringe benefits, the current rates for Federal Insurance Compensation Act (FICA), Federal Unemployment Tax Act (FUTA) and State Unemployment Tax Act (SUTA), and the company's present rates for medical aid and industrial insurance premiums. Labor reimbursement calculations will be based on a "Labor List" (List) prepared and submitted by the Contractor and any Subcontractor before the Contractor commences force account Work. The Engineer may compare the List to payrolls and other documents and may at any time, require the Contractor to submit a new List.

In the event that an acceptable List is not received by the time that force account calculations are begun, the Engineer will develop a List unilaterally, utilizing the best data available.

2. Materials incorporated permanently into the Work;
3. The ownership or rental cost of equipment during the time of use on the extra work. Equipment rates shall be as set forth in the then current AGC/WSDOT Equipment Rental Agreement. These rates shall be full compensation for all costs incidental to furnishing and operating the equipment. The Contractor shall submit copies of the applicable portions of the AGC/WSDOT Equipment Rental Agreement to the Engineer. The rates listed in the Rental Rate Blue Book (as modified by the current AGC/WSDOT Equipment Rental Agreement) shall be full compensation for all fuel, oil, lubrication, ordinary repairs, maintenance, and all other costs incidental to furnishing and operating the equipment except labor for operation; plus

4. Overhead and Profit as follows:

For Work performed by the Contractor, an amount to be agreed upon but not to exceed 15 percent of the labor, material, and equipment cost agreed to by the Engineer as compensation for supervision, small tools, provisions for safety, home office and field overhead, profit and other general conditions expenses, including, but not limited to, insurance, bond and business and occupation taxes.

For Subcontractor Work, the Subcontractor will be allowed an amount to be agreed upon but not to exceed 15 percent of the labor, material, and equipment cost agreed to by the Engineer as compensation for supervision, small tools, provisions for safety, home office and field overhead, profit and other general conditions expenses, including, but not limited to, insurance, bond and business and occupation taxes. The Contractor will be allowed an additional markup of 10 percent to compensate the Contractor for all administrative costs, including home office and field overhead, profit, bonding, insurance, business and occupation taxes and any other costs incurred.

In no case will the total fixed fee for the Contractor and all Subcontractors of all tiers exceed 30 percent.

- (8) Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original bid quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of any Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original bid quantity, and that bid item represents 10 percent or more of the total original Contract price. In that case, payment for Contract Work may be adjusted as described herein.

The adjusted final quantity shall be determined by starting with the final accepted quantity measured after all Work under an item has been completed. From this amount, subtract any quantities included in additive change orders accepted by both parties. Then, to the resulting amount, add any quantities included in deductive change orders accepted by both parties. The final result of this calculation shall become the adjusted final quantity and the basis for comparison to the original Proposal quantity.

- a. **Increased Quantities.** Either party to the Contract will be entitled to renegotiate the price for that portion of the adjusted final quantity in excess of 1.25 times the original Proposal quantity, if 10 percent or more of the original Contract price. The price for excessive increased quantities will be determined by agreement of the parties, or, where the parties cannot agree,

the price will be determined by the Engineer based upon the actual costs to perform the Work, including reasonable markup for overhead and profit. The final price will be determined by the Engineer.

- b. **Decreased Quantities.** Either party to the Contract will be entitled to an equitable adjustment if the adjusted final quantity of Work performed is less than 75 percent of the original Bid quantity, if 10 percent or more of the original Contract price. The Contractor shall submit the documentation to support the equitable adjustment to the Engineer. The equitable adjustment shall be based upon and limited to three factors:
1. Any increase or decrease in unit costs of labor, materials or equipment, utilized for Work actually performed, resulting solely from the reduction in quantity;
 2. Changes in production rates or methods of performing Work actually done to the extent that the nature of the Work actually performed differs from the nature of the Work included in the original plan; and
 3. An adjustment for the anticipated contribution to unavoidable fixed cost and overhead from the units representing the difference between the adjusted final quantity and 75 percent of the original plan quantity.

The following limitations shall apply to renegotiated prices for increases and/or equitable adjustments for decreases:

1. The equipment rates shall be actual cost but shall not exceed the rates set forth in the AGC/WSDOT Equipment Rental Agreement.
2. No payment will be made for extended or unabsorbed home office overhead and field overhead expenses to the extent that there is an unbalanced allocation of such expenses among the Contract Bid items.
3. No payment for consequential damages or loss of anticipated profits will be allowed because of any variance in quantities from those originally shown in the Proposal form, Contract Provisions, and Contract Plans.
4. The total payment (including the adjustment amount and unit prices for Work performed) for any item that experiences an equitable adjustment for decreased quantity shall not exceed 75 percent of the amount originally Bid for the item.

If the adjusted final quantity of any item does not vary from the quantity shown in the Proposal by more than 25 percent, then the Contractor and the Owner agree that all Work under that item will be performed at the original Contract unit price.

When ordered by the Engineer, the Contractor shall proceed with the Work pending determination of the cost or time adjustment for the variation in quantities.

The Contractor and the Owner agree that there will be no cost adjustment for decreases if the Owner has entered the amount for the item in the Proposal form only to provide a common Proposal for Bidders.

3.04.7 DIFFERING SITE CONDITIONS

The Contractor shall promptly, and before such conditions are disturbed, notify the Engineer in writing of: (1) pre-existing subsurface or latent physical conditions at the Work site that differ materially from those indicated in the Contract Documents, or (2) pre-existing unknown physical conditions at the Work site, of an unusual nature, that differ materially from those ordinarily encountered and generally recognized as inherent in the Work of the character required by the Contract. The Engineer shall be given an opportunity to examine such conditions in order to advise the Owner of possible modifications to the Work to mitigate such conditions. If the Engineer determines that conditions are materially different and cause a material increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, an equitable adjustment shall be made in the Contract Time and/or Contract price in accordance with other applicable provisions of the Contract relating to changes in the Work. Failure of the Contractor to give notice of such conditions at the time of discovery shall constitute a waiver of any claim for an equitable adjustment. Any such adjustments to the Contract price shall be computed strictly limited to amounts provided under paragraph 3.04.6.

3.04.8 PROTEST BY THE CONTRACTOR

If the Contractor disagrees with anything in a Change Order or a written directive, or with any interpretation or determination by the Engineer, the Contractor shall:

- a. Immediately submit a signed written notice of protest to the Engineer before doing the Work;
- b. Supplement the written protest within 14 calendar days with a written statement and supporting documents providing the following:
 1. The date and nature of the protested order, direction, instruction, interpretation or determination;
 2. A full discussion of the circumstances which caused the protest, including names of persons involved, time, duration, and nature of

the Work involved and a review of the Plans and Contract Provisions referenced to support the protest;

3. The estimated dollar cost, if any, of the protested Work and a detailed breakdown showing how that estimate was determined; and
4. An analysis of the progress schedule showing the schedule change or disruption if the Contractor is asserting a schedule change or disruption; and
5. If the protest is continuing, the information required above shall be supplemented upon request by the Engineer until the protest is resolved.

The Contractor shall keep detailed and complete records of extra costs and schedule impacts to Contract Time that in any way relate to a protest. The Contractor shall allow the Engineer to have access to all documents and records needed for evaluating the protest.

The Engineer will evaluate all protests that comply with this Section. If the Engineer determines that a protest is valid, the Engineer will adjust the Contract price and/or the Contract Time by an adjustment in accordance with Section 3.04.6 and 3.04.15(2).

During the time when any protest is pending, the Contractor shall proceed promptly with the Work, as the Engineer orders in writing.

The Contractor's failure to submit a protest in strict accordance with the requirements of this Section shall constitute a waiver of any claim for an adjustment to the Contract Time, the Contract price, or other relief.

3.04.9 SUBCONTRACTORS AND SUBCONTRACTS

3.04.9(1) Contractor Responsibility

Nothing contained in the Contract shall create any contractual or other relationship between the Owner and/or the Engineer and any Subcontractor or lower tier Subcontractor, and no performance undertaken by any such Subcontractor or lower tier Subcontractor shall, under any circumstances, relieve the Contractor of its obligations and responsibilities under the Contract.

Prior to subcontracting any Work, the Contractor shall verify that every first tier Subcontractor meets the responsibility criteria stated below at the time of subcontract execution. The Contractor shall include these responsibility criteria in every subcontract, and require every Subcontractor to:

1. Possess any electrical contractor license required by 19.28 RCW or elevator contractor license required by 70.87 RCW, if applicable;
2. Have a certificate of registration in compliance with Chapter 18.27 RCW;

3. Have a current State unified business identifier number;
4. If applicable, have:
 - a. Industrial insurance coverage for the Subcontractor's employees working in Washington (Title 51 RCW);
 - b. An employment security department number (Title 50 RCW);
 - c. A state excise tax registration number (Title 82 RCW).
5. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or RCW 39.12.065(3);
6. Verify these responsibility criteria for every lower tier subcontractor at the time of subcontract execution; and
7. Include these responsibility criteria in every lower tier subcontract.

3.04.9(2) Contractor Work Performance Requirement

Work done by the Contractor's own organization shall account for at least 30 percent of the awarded Contract price.

3.04.9(3) Approval of Subcontractors

The Contractor shall not subcontract Work unless the Engineer approves in writing. Each request to subcontract shall be on the form the Engineer provides. If the Engineer requests, the Contractor shall provide proof that the Subcontractor has the experience, ability, and equipment the Work requires. The Contractor shall require each Subcontractor to comply with Section 3.03.4 and to furnish all certificates and statements required by the contract. Approval of a Subcontractor by the Owner shall not relieve the Contractor or Subcontractor of any obligations or responsibilities under the Contract. Any delays or other impacts caused by the failure of the Contractor to provide required information and obtain approval of any Subcontractor in a timely manner will not be considered as justification for additional compensation or an extension of the Contract Time.

3.04.9(4) Subcontracts

Upon approval of Subcontractors by the Engineer, the Contractor shall, if requested, provide the Owner with complete copies of all subcontracts entered into between the Contractor and any Subcontractor. Providing requested subcontracts to the Owner shall be a condition precedent to the Owner's obligation to make any progress payment to the Contractor.

3.04.9(5) Incorporation of Contract

Every subcontract entered into by the Contractor shall expressly bind each Subcontractor to all of the terms and conditions of the Contract, which the Contractor shall incorporate into each

subcontract by reference. The Contractor shall provide a copy of the Contract to all Subcontractors and obtain written confirmation from Subcontractors that the Subcontractor received a copy of the Contract. All Subcontractors shall provide a copy of the Contract to all lower tier Subcontractors and obtain written confirmation from lower tier Subcontractors that the lower tier Subcontractor received a copy of the Contract.

3.04.9(6) Replacement of Subcontractors

Subject to the requirements of state and/or federal agencies having jurisdiction over MBE/WBE/DBE requirements applicable to the Work, should it become impossible for a Subcontractor to perform the Subcontractor's intended work, the Contractor shall submit the information required above for an alternate Subcontractor at least 10 days prior to the time that the Subcontractor is scheduled to begin work. The failure of any Subcontractor to perform its portion of the Work in a timely or workmanlike fashion is the sole responsibility of the Contractor.

3.04.10 MUTUAL RESPONSIBILITY OF CONTRACTORS

The Owner reserves the right to perform other work on or near the Work site using its own forces and/or other contractors. The Contractor shall take all reasonable steps to coordinate its performance of the Work with the Owner and/or such other contractors and Subcontractors. If, through acts of commission or omission on the part of the Contractor, any other contractor or any Subcontractor shall suffer loss or damage with respect to the other work being performed by the Owner, the Contractor agrees to promptly settle with such other Contractor or Subcontractor by agreement or other dispute resolution process. The Contractor agrees to indemnify and hold harmless the Owner and the Engineer from all claims asserted against and liability incurred by the Owner or the Engineer resulting from disputes between the Contractor and any other contractor or any Subcontractor or material supplier. The indemnification rights of the Owner and the Engineer include expenses such as, but not limited to, salaries/wages of employees and all other expenses relating to any mediation, litigation, or arbitration, including costs, consulting fees and attorneys' fees. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained by an act or omission of the Contractor or anyone for whose acts it may be liable, the Owner or the Engineer shall notify the Contractor, which shall defend, indemnify and save harmless the Owner and the Engineer against such claim.

The coordination of the Work with other work by the Owner shall be taken into account by the Contractor as part of its site investigation obligations under Section 2.01.4, and all costs thereof shall be borne by the Contractor as part of the Contract price for the Work.

3.04.11 RISK OF LOSS

The Contractor shall have all risk of loss for all Work in progress, all materials, all equipment and all other items in any way relating to the Work through theft, fire, other casualty, act of God, or any other cause until the Contract Completion Date.

3.04.12 MEASUREMENT AND PAYMENT

3.04.12(1) General

The Contract price for the Work, whether lump sum or unit prices, shall constitute full compensation for furnishing all facilities, labor, materials, appurtenances, and incidentals and performing all operations necessary to construct and complete all items of the Work in accordance with the Contract, notwithstanding that minor or incidental features of the Work may not be shown on the Contract Plans or Contract Provisions.

3.04.12(2) Measurement

Measurement for all items shall be as specified in the Contract for unit price and lump sum price items.

3.04.12(3) Payment

Payment for all of the Work will be made at the lump sum or unit Contract price as set forth in the Contract. Payment of the Contract price shall constitute full compensation for the complete performance of all of the Work.

3.04.12(4) Access to Books and Records

The Contractor shall, whenever so requested, give the Owner and/or the Engineer access to all invoices, bills of lading and other documents relating to the Work. The Contractor shall, without charge, provide personnel and measures and scales with adequate capacity for measuring or weighing any materials or other items paid for on a unit price basis.

3.04.12(5) Progress Payment Estimates

Progress payment estimates shall be prepared by the Engineer and reviewed by the Contractor and will be submitted with the Engineer's recommendation to the Owner for its approval on the first day of the month for all Work completed through the 26th day of the preceding month, unless otherwise agreed upon by the Owner, the Engineer and the Contractor. The Engineer will prepare progress payment estimates as accurately as available information permits. The Owner will make no payment under the Contract for the Work performed until the "Statement of Intent to Pay Prevailing Wages," in accordance with RCW 39.12.040, is submitted to the Engineer, including Subcontractor wage rates. In general, each progress payment will be based upon the payment schedule and the value of Work performed during the preceding pay period. Before the final progress payment estimate is prepared, all quantities will be reviewed by the Engineer.

3.04.12(6) Payment for Materials on Hand

The Owner may reimburse the Contractor for 90 percent of the invoice amount of materials and equipment purchased before their incorporation into the Work if properly stored on or near the Work site. Invoices for equipment and materials will be verified and approved by the Engineer. Each invoice shall be sufficiently detailed to enable the Engineer to determine actual costs.

Payment for materials on hand shall not exceed the total Contract cost of the Contract item. Payment will not be made for granular materials, forming materials, consumables, nails, tie wire, etc. Payment will not be made for materials for any invoice that is less than \$2,000.00 or for freight bills and similar items. Payment for equipment or materials on hand shall not constitute acceptance of the equipment or materials. Equipment and materials will be rejected if found to be faulty, even if payment for it has been made.

3.04.12(7) Payments Withheld

The Engineer may decide not to recommend approval of all or a portion of a progress estimate, and/or the Owner may decide to withhold from a progress estimate an amount sufficient to protect the Owner from loss because of:

- a. Defective Work not remedied;
- b. Third-party claims or reasonable evidence indicating the probability that a third-party claim will be asserted;
- c. Failure of the Contractor to make timely and proper payments to Subcontractors or for labor, materials or equipment;
- d. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract price;
- e. Damage to the Owner or another contractor;
- f. Reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance of the Contract price will not be adequate to cover actual or liquidated damages for the anticipated delay;
- g. Repeated failure by the Contractor to comply with the directions of the Owner or the Engineer or to carry out the Work in accordance with the Contract;
- h. Other appropriate reasons necessary to protect the Owner.

3.04.12(8) Payment Upon Correction of Deficiencies

When the reason or reasons for withholding payment are resolved, payment will be made for amounts previously withheld.

3.04.12(9) Final Payment

After final inspection (Section 3.04.16(2)) of the Work and a determination by the Engineer that the Physical Completion Date has been achieved, the balance of the Contract price due to the Contractor will be paid based upon the final estimate by the Engineer and presentation of a Final Contract Voucher Certification signed by the Contractor. The Final Contract Voucher Certification shall be deemed to be a release of all claims of the Contractor unless a claim is filed

in accordance with the requirements of Section 3.05 and is expressly excepted from release in the Contractor's Final Contract Voucher Certification. The date the Owner signs the Final Contract Voucher Certification constitutes the Contract Completion Date in accordance with Section 3.04.16(3).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required in order to achieve the Contract Completion Date, the Owner reserves the right to establish a completion date (for the purpose of meeting the requirements of RCW 39.08 and RCW 60.28) and unilaterally accept the Work. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a completion date and unilateral final acceptance will be provided by certified letter from the Owner to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the certified letter is received by the Contractor. The date on which the Owner unilaterally signs the Final Contract Voucher Certification shall constitute the Contract Completion Date under Section 3.04.16(3). The Owner shall have the right to unilaterally establish a Contract Completion Date when either (1) the Physical Completion Date for the Work has been achieved in accordance with Section 3.04.16(2), or (2) the Owner terminates the contract in accordance with Section 3.07. Unilateral establishment of the Contract Completion Date by the Owner shall not in any way relieve the Contractor of any liability for failing to comply with the Contract or from responsibility for compliance with all federal, state, tribal, or local laws, ordinances, and regulations that affect the Work.

Payment to the Contractor of partial or final payment estimates and retained percentages shall be subject to applicable laws.

3.04.13 WORK HOURS

Except in the case of emergency or unless otherwise approved by the Owner, the normal straight time working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a 5-day work week. The normal straight time 8-hour working period for the Contract shall be established at the preconstruction conference or prior to the Contractor commencing the Work.

Written permission from the Engineer is required, if a Contractor desires to perform Work on holidays, Saturdays, or Sundays; before 7:00 a.m. or after 6:00 p.m. on any day; or longer than an 8-hour period on any day. The Contractor shall apply in writing to the Engineer for such permission, no later than noon on the working day prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Owner's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operations. The

Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Permission to work Saturdays, Sundays, holidays, or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Owner or Engineer. These conditions may include but are not limited to:

- The Engineer may require designated representatives to be present during the Work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Owner's material testing lab; inspectors; and other Owner employees when in the opinion of the Engineer, such Work necessitates their presence.
- Requiring the Contractor to reimburse the Owner all the costs in excess of straight time costs for the Owner's representatives who work during such times. These costs shall be deducted from amounts due or to become due to the Contractor.
- Considering the Work performed on Saturdays, Sundays, and holidays as working days with regard to the Contract Time.
- Considering multiple work shifts as multiple working days with respect to Contract Time, even though the multiple shifts occur in a single 24-hour period.

3.04.14 CONTRACT TIME

The Contract Time shall begin on the first working day following the 10th calendar day after the issuance of the written Notice to Proceed or the first day on which the Contractor begins to perform Work on the site, whichever occurs first. Time is of the essence of the Contract. All of the Work shall be completed within the time limits set forth in the Contract, and the Contractor's unexcused failure to do so shall result in the assessment of liquidated damages as provided in the Contract.

The Contractor shall complete all of the physical Work within the number of working days that are specified as the Contract Time. Every day will be counted as a working day unless it is a non-working day or the Engineer determines the day to be an unworkable day. A non-working day is a Saturday, a Sunday, a day on which the Contract suspends work, or one of the following holidays: January 1st; the third Monday of January; the third Monday of February; Memorial Day; June 19th; July 4th; Labor Day; November 11th; Thanksgiving Day; the day after Thanksgiving; and Christmas. Whenever any of these holidays falls on a Sunday, the following Monday shall be counted a non-working day. When the holiday falls on a Saturday, the preceding Friday shall be counted a non-working day.

The days between December 25th and January 1st will be classified as nonworking days, provided that the Contractor actually suspends performance of the Work.

An unworkable day is defined as a partial or whole day that the Engineer determines to be unworkable because of weather, conditions caused by the weather, or such other conditions beyond the control of the Contractor that prevent the satisfactory and timely performance of the Work, and

such performance, if not hindered, would have otherwise progressed toward physical completion of the Work.

Each working day shall be charged to the Contract Time as it occurs until the Work is physically complete. If requested by the Contractor in writing, the Engineer will provide the Contractor with a weekly statement that shows the number of working days: (1) charged to the Contract Time the week before; (2) specified for the substantial and physical completion of the Contract Time; and (3) remaining to achieve the substantial and physical completion of the Contract. The statement will also show the nonworking days and any partial or whole days that the Engineer declares to be unworkable. If the Contractor disagrees with any statement issued by the Engineer, the Contractor shall submit a written protest within 10 calendar days after the date of the statement. The protest shall be sufficiently detailed to enable the Engineer to ascertain the basis for the dispute and amount of time disputed. Any statement that is not protested by the Contractor as required in this Section shall be deemed as having been accepted as correct. If the Contractor elects to work 10 hours a day 4 days a week (a 4-10 schedule), the fifth day of that week will be charged as a working day if that day would be chargeable as a working day if the Contractor had not elected to utilize a 4-10 schedule.

3.04.15 CONSTRUCTION SCHEDULE

3.04.15(1) Progress Schedule

- a. The Contractor shall submit to the Engineer four copies of a progress schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule shall be a critical path method (CPM) schedule, bar chart, or other standard schedule format unless otherwise specified in the Technical Specifications. Regardless of which format is used, the schedule shall identify the critical path. The Engineer will evaluate the schedule and return the schedule for corrections. No progress payments will be made until the required progress schedules have been submitted in a form acceptable to the Engineer.
- b. Scheduling terms and practices shall conform to the standards established in Construction Planning and Scheduling, Second Edition, published by the Associated General Contractors of America. Except for Weekly Look-Ahead Schedules, all schedules shall meet these general requirements, and provide the following information:
 - i. Show the construction start date.
 - ii. Include all activities necessary to physically complete the Work on the project.
 - iii. Show the planned order of Work activities in a logical sequence.
 - iv. Show the durations of Work activities in working days as defined in Section 3.04.13 and 3.04.14.

- v. Show activities in durations that are reasonable for the intended Work.
- vi. Define activity duration in sufficient detail to evaluate the progress of individual activities on a daily basis.
- vii. Show the Substantial and Physical Completion of all Work within the Contract Time.

Total float belongs to the project and shall not be for the exclusive benefit of any party. If the Engineer determines that the Progress Schedule or any necessary Schedule Update does not provide the required information, then the schedule will be returned to the Contractor for correction and resubmittal.

- c. Each week the Work is performed, the Contractor shall submit a Weekly Look-Ahead Schedule showing the Contractor's and all the Subcontractors' proposed Work activities for the next two weeks. The Weekly Look Ahead Schedule shall include the description, duration and sequence of Work, along with the planned hours of Work. This schedule may be network schedule, bar chart, or other standard schedule format. The Weekly Look-Ahead Schedule shall be submitted to the Engineer by the mid-point of the week preceding the scheduled Work or some other mutually agreed upon submittal time.
- d. The Engineer may request a Schedule Update when any of the following events occur:
 - i. The project has experienced a change that affects the critical path.
 - ii. The sequence of Work is changed from that in the approved schedule.
 - iii. The project is significantly delayed.
 - iv. Upon receiving an extension of Contract Time.

The Contractor shall submit four copies of the Schedule Update within 15 calendar days of receiving a written request, or when an update is required by any other portion of the Contract. A "significant" delay in time is defined as 10 working days or 10 percent of the original Contract Time, whichever is greater.

In addition to the other requirements in this Section, Schedule Updates shall reflect the following information:

- v. The actual duration and sequence of as-constructed Work activities, including changed Work.
- vi. Approved time extensions.

- vii. Any construction delays or other conditions that affect the progress of the Work.
- viii. Any modifications to the as-planned sequence or duration of remaining activities.
- ix. The Substantial and Physical Completion of all remaining Work in the remaining Contract Time.

Unresolved request for time extensions shall be reflected in the Schedule Update by assuming no time extension will be granted, and by showing the effects to follow-on activities necessary to substantially and physically complete the project within the currently authorized time for completion.

- e. The original Progress Schedule and all Schedule Updates shall not conflict with any time and order-of-work requirement in the Contract.
- f. If the Engineer deems that the original or any necessary supplemental progress schedule does not provide the information required in this section, the Owner may withhold progress payments until a schedule containing the required information has been submitted by the Contractor and accepted by the Engineer.
- g. The Contractor shall comply with other progress schedule requirements that are further defined in the Technical Specifications.
- h. The Engineer's approval of any schedule shall not transfer any of the Contractor's responsibilities to the Owner. The Contractor alone shall remain responsible for adjusting forces, equipment, and work schedules to ensure completion of the Work within the time(s) specified in the Contract.

3.04.15(2) Extensions of the Contract Time

- a. The Contractor specifically waives claims for damages for any hindrance or delay, excepting unreasonable delays caused by the Owner. In lieu thereof, the Contractor will be granted equitable extensions of the Contract Time for which liquidated damages will not otherwise be claimed by the Owner under the following circumstances:
 - i. A delay caused by any suit or other legal action against the Owner will entitle the Contractor to an equivalent extension of time, unless the period of such delay exceeds 90 calendar days. When such period is exceeded, the Owner will, upon written request of the Contractor, either negotiate a termination of the Contract or grant a further extension of the Contract Time, whichever is in the best interests of the Owner.
 - ii. Should any other unforeseen condition occur that is beyond the reasonable control of Contractor, requires more time for the Contractor to complete the

performance of the Work by the Substantial Completion Date, the Contractor shall notify the Owner and the Engineer in writing prior to the performance of such Work, and in any event within 10 calendar days after the occurrence of the unforeseen condition. The notice shall set forth in detail the Contractor's estimate of the required time extension. The Owner will allow such equitable extension of the Contract Time that the Engineer determines to be appropriate. Failure to comply with the notice provisions required by the Contract shall be deemed a complete waiver of any entitlement to adjustment of the Contract Time.

3.04.15(3) Liquidated Damages

- a. The Contractor acknowledges that the Owner will suffer monetary damages in the event of an unexcused delay in the Substantial Completion Date and the Physical Completion Date of the Work. If the Contractor fails, without excuse under the Contract, to complete the Work within the Contract Time, or any proper extension thereof granted by the Owner, the Contractor agrees to pay to the Owner the amount specified in the Proposal form, not as a penalty, but as liquidated damages for such breach of the Contract, for each day that the Contractor shall be in default after the time stipulated for the Substantial Completion Date and the Physical Completion Date of the Work.
- b. The amount of liquidated damages is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is specifically agreed to be a reasonable approximation of damages that the Owner would sustain as a result of an unexcused delay in the Substantial Completion Date and the Physical Completion Date; said amount may be retained from time to time by the Owner from current progress payments.

3.04.16 COMPLETION AND ACCEPTANCE OF THE WORK

3.04.16(1) Substantial Completion Date

- a. When the Contractor considers the Work to be substantially complete and ready for its intended purpose, the Contractor shall notify the Engineer in writing and include an itemized list of remaining Work to be completed. On the Substantial Completion Date, the Owner shall have full and unrestricted use and benefit of all of the facilities that comprise the Work, both from an operational and safety standpoint, with only minor incidental work, replacement of temporary substitute facilities, or correction or repair of work remaining for the physical completion of the total Work.
- b. If the Engineer determines that the Work is not substantially complete, it will so notify the Contractor in writing identifying those items of the Work that shall be completed by the Contractor in order to achieve the Substantial Completion Date.

- c. If the Engineer believes that the Work is substantially complete, the Engineer will meet with the Contractor to: (1) prepare a list of incomplete or unsatisfactory items of the Work that shall be completed or corrected; (2) define the division of responsibility between Owner and Contractor with respect to security, operation, maintenance, heat, utilities, insurance, etc., for the facilities; and (3) describe any other issues related to approval of the substantially completed Work. Upon reaching agreement with the Contractor, the Engineer will notify the Owner that, in its opinion and based on the information supplied by the Contractor, the Work is substantially complete, listing the items of incomplete Work, defining the division of responsibilities for the facilities, and setting forth any other terms related to final completion and acceptance.
- d. The Owner, who has sole authority to make the determination of the Substantial Completion Date, will review the Engineer's recommendation that the Work is substantially complete and, if it concurs, will instruct the Engineer to notify the Contractor that the Work is accepted as being substantially complete. Except for any portion(s) of Work specified for early completion or required by the Owner for early possession, substantial completion will not occur for any portion of the Work until the entire Work is ready for possession and use. The approval notice will include a list of incomplete Work items, establish the Substantial Completion Date, and describe any other terms relating to such approval. The Contractor shall acknowledge receipt of the approval notice in writing, indicating acceptance of all of its terms and provisions.
- e. The date of Substantial Completion, as determined by the Engineer and agreed to by the Owner, shall be the date for the beginning of the warranty period.
- f. Subsequent to the Substantial Completion Date, the Owner may exclude the Contractor from the Work during such periods when construction activities might interfere with the operation of the project. The Owner, however, shall allow the Contractor reasonable access for completion of incomplete punch list items.

3.04.16(2) Physical Completion Date

- a. The Contractor shall complete all physical Work within the Contract Time.
- b. Upon physical completion of the Work, including completion of all corrective Work described in Section 3.04.16(1) above and the submission of all required record drawings, operation and maintenance manuals, manufacturers' affidavits, software and programming, and other items required by the Contract, the Contractor shall notify the Engineer in writing that the Work is physically complete. Upon receipt of the notification, the Engineer will determine if the Work is physically complete in accordance with the Contract. If the Engineer determines that any materials, equipment, or workmanship do not meet the requirements of the Contract, the Engineer will prepare a list of such items and submit it to the Contractor. Following the satisfactory completion of the corrective Work by the

Contractor, the Engineer will notify the Owner that the Work is physically complete in accordance with the requirements of the Contract.

- c. The Engineer, with the concurrence of the Owner, will give the Contractor written notice of the Physical Completion Date for all of the Work. The Physical Completion Date shall not constitute the Owner's acceptance of the Work.

3.04.16(3) Contract Completion Date (Acceptance of the Project)

- a. When all of the Contractor's obligations under the Contract have been performed satisfactorily, the Owner will provide the Contractor with written notice of the Contract Completion Date. The following events shall occur in order for the Contractor to achieve the Contract Completion Date:
 - 1. The Contractor shall have achieved the Substantial Completion Date and the Physical Completion Date for the Work; and
 - 2. The Contractor shall furnish all documentation required by the Contract and required by law. The documents shall include, but are not limited to, the following:
 - i. Complete and legally effective releases and/or waivers of liens or bond or retainage claims in a form acceptable to the Owner. Subject to prior approval of the Owner, the Contractor may, if approved by the Owner, submit in lieu of the lien or claims releases and waivers: (1) receipts showing payment of all accounts in full; (2) an affidavit that the release and receipts cover all labor, services, materials, and equipment for which a lien or other claim could be filed and that all payrolls, material, and equipment bills and other indebtedness connected with the Work for which the Owner or the Owner's property might in any way be responsible, have been paid; and (3) the consent of the surety, if any, to final payment. If any Subcontractor or supplier fails to furnish a release waiver or receipt in a form satisfactory to the Owner, the Contractor may be permitted by the Owner to furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any lien or similar claim;
 - ii. Certified Payrolls (Federal Aid projects or if requested);
 - iii. Final Contract Voucher Certification.
 - iv. Affidavits of Wages Paid for the Contractor and all Subcontractors must be submitted to the Owner.
- b. The Contractor agrees that neither completion nor final acceptance shall relieve the Contractor of the responsibility to indemnify, defend, and protect the Owner against any claim or loss resulting from the failure of the Contractor (or the Subcontractors

or lower tier Subcontractors) to pay all laborers, mechanics, Subcontractors, materialpersons, or any other person who provides labor, supplies, or provisions for carrying out the Work or for any payments required for unemployment compensation under Title 50 RCW or for industrial insurance and medical aid required under Title 51 RCW.

Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The Owner shall not be barred from requiring the Contractor to remove, replace, repair, or dispose of any unauthorized or defective work or material or from recovering damages for any such work or material.

3.04.16(4) Use of Completed Portions of the Work

The Owner reserves the right to use and occupy any portion of the Work which has been completed sufficiently to permit partial use and occupancy, and such partial use and occupancy shall not be construed as an acceptance of the Work as a whole or any part thereof. Any claims that the Owner may have against the Contractor shall not be deemed to have been waived by such partial use and occupancy.

3.04.16(5) Waiver of Claims by Contractor

The Contractor's acceptance of the final payment from the Owner constitutes an irrevocable and complete waiver of any and all claims against the Owner under the Contract or otherwise arising from the Work, except for those claims that have been properly identified in writing in advance of final payment, and for which timely and sufficient prior written notice has been given, all in accordance with the Contract.

3.04.17 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The Owner's final payment to the Contractor shall not relieve the Contractor of responsibility for faulty materials, equipment or workmanship. The Contractor shall promptly repair or replace any such defects discovered within the warranty or other applicable limitations period.

3.04.18 RETAINAGE

1. Pursuant to RCW 60.28, there will be retained from monies earned by the Contractor on progress estimates a sum not to exceed 5 percent of the monies earned by the Contractor. Such retainage shall be used as a trust fund for the protection and payment (1) to the State with respect to taxes imposed pursuant to RCW Title 82, which may be due from such Contractor, and (2) the claims of any other person or entity arising under the Contract or RCW 60.28.
2. Monies retained pursuant to RCW 60.28 shall, at the option of the Contractor, be:
 - a. Retained in a fund by the Owner;

- b. Deposited by the Owner in an interest-bearing account in a bank, mutual savings bank, or savings and loan association (interest on monies so retained may be paid to the Contractor);
- c. Deposited by the Owner in an escrow (interest-bearing) account in a bank, mutual saving bank, or savings and loan association (interest on monies so retained shall be paid to the Contractor). Deposits are to be in the name of the Owner and are not to be allowed to be withdrawn without the Owner's written authorization. The Owner will issue a check representing the sum of the monies reserved, payable to the bank or trust company;
- d. In choosing option (b) or (c), the Contractor agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retainage in securities.

At the time the Contract is executed the Contractor shall designate the option desired.

- 3. Release of retainage will be made within the statutory period following the last date for filing of claims pursuant to RCW Chapter 60.28, provided that the following conditions are met:
 - a. A release has been obtained from the Washington State Department of Revenue;
 - b. A "Certificate of Payment of Contributions Penalties and Interest on Public Works Contract" is received from the Washington State Employment Security Department;
 - c. The Washington State Department of Labor and Industries indicates the Contractor is current on the payment of industrial insurance and medical aid premiums;
 - d. All claims by the Owner against the Contractor have been resolved;
 - e. No claims have been filed against the retained percentage;
 - f. All required "Affidavits of Wages Paid" are on file with the Owner for the Contractor and all Subcontractors, regardless of tier;
- 4. In the event that claims are filed against the retainage, the Contractor will be paid the retained percentage less an amount sufficient to pay all such claims, together with a sum determined by the Owner to be sufficient to pay the costs of foreclosing on claims and to attorneys' fees, all in accordance with applicable law.

3.05 DISPUTES AND CLAIMS

3.05.1 DISPUTES

When disputes occur, the Contractor shall pursue resolution through the Engineer. The Contractor shall follow the notice and protest procedures outlined in Section 3.04. If negotiation using the procedures outlined in Section 3.04 fails to provide satisfactory resolution, the Contractor shall pursue the more formalized method set forth in Section 3.05.2 for submitting claims.

3.05.2 CLAIMS

If the Contractor contends that additional payment is due, has provided timely notices and protests as required by Section 3.04, and the Contractor has pursued and exhausted all of the means provided in that section to resolve the dispute, the Contractor may submit a claim as provided in this Section. Any claim for an increase in the Contract price or for an extension of the Contract Time by the Contractor is waived if the written notifications and protests required in Section 3.04 have been not provided, or if the Engineer is not afforded reasonable access to the Contractor's complete records relating to the claim, as required by Section 3.04.8, or if a claim is not submitted in accordance with the requirements of this Section. The fact that the Contractor has provided proper notification, properly submitted a claim, or provided the Engineer with access to records, shall not in any way be construed as proving or substantiating the validity of the claim. If, after consideration by the Owner, the claim is found to have merit, the Owner will make an equitable adjustment to either the Contract price, the Contract Time, or both. If the Owner finds the claim to be without merit, no adjustment will be made.

All claims submitted by the Contractor shall be in writing and in sufficient detail to enable the Engineer to ascertain the basis for and amount of the claim. All claims shall be submitted to the Engineer in the manner in Section 3.03.6. The following information shall accompany each claim submitted:

1. A detailed factual statement of the basis for the claim for additional compensation and/or extension of time, including all relevant dates, locations, and items of work relating to the claim.
2. The date on which the events occurred that give rise to the claim.
3. The name of each person involved in or having knowledge about the claim.
4. The specific provisions of the Contract which support the claim and a statement of the reasons why such provisions support the claim.
5. If the claim relates to a decision of the Engineer that the Contract leaves to the Engineer's discretion or as to which the Contract provides that the Engineer's decision is final, the Contractor shall set out in detail all facts supporting its position relating to the decision of the Engineer.

6. The identification of any documents and the substance of any oral communications that support the claim.
7. Copies of any identified documents, other than Owner documents and documents previously furnished to the Owner by the Contractor, that support the claim (manuals which are standard to the industry may be included by reference).
8. If an extension of the Contract Time is sought:
 - a. The specific days and dates for which the extension is sought;
 - b. The specific reasons why the Contractor believes a time extension should be granted;
 - c. The specific provisions of Section 3.04.15(2) under which the time extension is sought; and
 - d. An analysis of the Contractor's progress schedule, demonstrating the reasons why a time extension should be granted.
9. If additional compensation is sought, the exact amount sought and a breakdown of that amount into the following categories:
 - a. Labor;
 - b. Materials;
 - c. Direct equipment. The actual cost for each piece of equipment for which a claim is made, or, in the absence of actual cost, the rates established by the AGC/WSDOT Equipment Rental Agreement which was in effect when the Work was performed. The amounts claimed for any piece of equipment shall not exceed the rates established by the Equipment Rental Agreement, even if the actual cost for such equipment is higher. The Owner may audit the Contractor's cost records, as provided in Section 3.06, to determine actual equipment costs. The following information shall be provided for each piece of equipment:
 - i. Detailed description (e.g., make, model, year, diesel or gas, size of bucket);
 - ii. The hours of use or standby; and
 - iii. The specific day and dates of use or standby.
 - d. Subcontractor claims (in the same level of detail as specified herein); and
 - e. Other information as requested by the Engineer or the Owner.

10. A notarized statement containing the following language:

Under the penalty of law for perjury or falsification, the undersigned,

_____, _____
(name) (title)

of _____
(company)

hereby certifies that the claim for extra compensation and time, if any, made herein for work on this Contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the Contract between the parties.

If the claim for extra time and/or compensation involves any work of a Subcontractor or lower tier Subcontractor, the undersigned duly authorized agent of the Contractor hereby swears that Contractor has investigated the basis for the Subcontractor's or lower tier Subcontractor's claims and has determined that all such claims are justified as to entitlement and amount of money and/or time requested, has reviewed and verified the adequacy of all back-up documentation and has no reason to believe and does not believe that the factual basis for the Subcontractor's or lower tier Subcontractor's claim is falsely represented.

Dated _____/s/_____

Subscribed and sworn before me this _____ day of _____

Notary Public

My Commission Expires:_____

It will be the responsibility of the Contractor to keep full and complete records of the costs and additional time incurred with respect to any claim. The Contractor shall permit the Engineer to have access to those records and any other records and documents as may be required by the Engineer to determine the facts or contentions involved in the claim. The Contractor shall retain all records and documents in any way relating to the Work for a period of not less than three years after the Contract Completion Date.

The Contractor shall in good faith attempt to reach a negotiated resolution of all claims with the Engineer or its designee.

The Contractor's failure to submit with the Final Contract Voucher Certification a list of all claims, together with the information and details required by this Section shall operate as a waiver of the claims by the Contractor, as provided in

Section 3.04.12(9).

If the Contractor submits a claim in full compliance with all the requirements of this Section, the Owner will respond in writing to the claim as follows:

1. Within 45 calendar days from the date the claim is received by the Owner, if the claim amount is less than \$100,000;
2. Within 90 calendar days from the date the claim is received by the Owner, if the claim amount is equal to or greater than \$100,000; or
3. If these time periods are unreasonable due to the complexity of the claim, the Contractor will be notified within 15 calendar days from the date the claim is received by the Owner of the amount of time which will be necessary for the Owner to evaluate the claim and issue a response.

Full compliance by the Contractor with the provisions of this Section is a condition precedent to the Contractor's right to commence a lawsuit or pursue other legal remedies.

3.05.3 TIMELINE AND JURISDICTION

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Owner arising from the Contract shall be brought within 180 calendar days from the date of Physical Completion (Section 3.04.16(2)) of the Contract by the Owner; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Owner headquarters is located, provided that where an action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Owner arising from the Contract are filed with the Owner or initiated in court, the Contractor shall permit the Owner to have timely access to any records deemed necessary by the Owner to assist in evaluating the claims or action.

3.05.4 CONTINUATION OF WORK PENDING RESOLUTION OF DISPUTES

The Contractor shall expeditiously carry on the Work, adhere to the progress schedule, and comply with all written directives of the Owner or the Engineer regardless of any dispute or claim that may exist between the Owner and the Contractor. No Work shall be delayed or postponed pending resolution of any dispute or claim. Failure or refusal of the Contractor to comply with the written directives of the Owner or the Engineer shall constitute a material breach of the Contract and immediately constitute grounds for the Owner to withhold payments to the Contractor, suspend the Work or terminate the Contract. Notice under this Section shall be in accordance with other provisions of the Contract.

3.06 AUDITS

If the Contractor requests an equitable adjustment to either the Contract price or the Contract Time, the Owner shall have the right to audit the Contractor's books, records, other documents, and accounting practices and procedures, and to inspect the Contractor's plant, equipment and facilities to examine all facts and verify all direct and indirect costs of whatever nature claimed to have been incurred or are anticipated to be incurred. The right to audit encompasses all subcontracts and is binding upon Subcontractors. All subcontracts that the Contractor enters into shall contain a clause allowing the Owner to audit all Subcontractor books, records, other documents, and accounting practices and procedures, and to inspect the Subcontractor's plant, equipment and facilities. All audits shall be performed by auditors of the Owner during normal working hours at the Contractor's or Subcontractor's office or any other location mutually agreed upon. The Contractor, Subcontractor, or lower tier Subcontractor shall cooperate fully with the auditor and shall make available all required information. Failure to cooperate or provide requested information shall be grounds for denial of the claim.

3.07 SUSPENSION OF WORK AND TERMINATION OF CONTRACT

3.07.1 SUSPENSION OF WORK

1. The Owner or the Engineer may order suspension of all or any part of the Work if:
 - a. Unsuitable or other conditions that are beyond the reasonable control of the Contractor exist or arise that prevent satisfactory and timely performance of the Work; or
 - b. The Contractor does not comply with the Contract; or
 - c. It is in the public interest.
2. If the Engineer determines that the suspension is for reasons set forth in Subsection a. or c. above, an equitable adjustment will be made in the Contract Time but not the Contract price. If the Engineer determines that the suspension is for reasons set forth in Subsection b. above, no adjustment shall be made in the Contract Time or the Contract price.
3. If the Contract is suspended for reasons set forth in Subsection a. or c. above and the Contractor believes that the suspension of performance of all or part of the Work has continued for an unreasonable period of time, the Contractor shall give written notice to the Engineer of its intention to seek an equitable adjustment in the Contract Time or the Contract price. In the event that an equitable adjustment is allowed, no adjustment shall be allowed for any time lost or costs incurred more than 10 calendar days before delivery of the written notice to the Engineer. No profit of any kind will be allowed on any increase in costs due to the suspension, delay or interruption.

3.07.2 TERMINATION FOR DEFAULT

1. The Owner may terminate the Contract for default, effective seven days following delivery of written notice of default to the Contractor, if the Contractor:
 - a. Refuses or fails to supply enough properly skilled laborers or conforming materials to complete the Work in a timely manner;
 - b. Refuses or fails to prosecute the Work with such diligence as will ensure its physical completion by the Physical Completion Date;
 - c. Performs work which deviates from the requirements of the Contract and refuses or fails to correct the non-conforming work;
 - d. Fails to make prompt payment to Subcontractors and/or suppliers for labor or materials;
 - e. Fails to comply with laws, ordinances, rules, regulations or orders of a public authority having jurisdiction; or
 - f. Otherwise fails to follow written directives of the Owner or the Engineer or is in default of a material provision of the Contract.
2. If the Contractor abandons the Work for any cause other than failure of the Owner to make monthly progress payments for Work properly performed, or if the Contractor refuses to comply with requirements of the Contract, the Owner has the additional right to notify the Contractor's performance bond surety and require the surety to complete the Work in accordance with the Contract.

3.07.3 TERMINATION FOR CONVENIENCE OF THE OWNER

The Owner may by written notice terminate the Contract at any time in whole or in part, without cause, and except where termination is due to the Contractor's default, the Owner shall pay the Contractor that portion of the Contract price corresponding to the acceptable Work completed to the Owner's satisfaction, together with reasonable costs, as determined in the sole discretion of the Owner, necessarily incurred by the Contractor in terminating the remaining portion of Work, less any payments made before termination. In no event shall the Owner be required to pay the Contractor any amount in excess of the completed portion Contract price. The Owner shall not be required to pay the Contractor any amount for consequential damages including but not by means of limitation lost or anticipated profits on Work that is not performed as a result of termination.

3.07.4 RESPONSIBILITY OF THE CONTRACTOR AND SURETY

Termination of the Contract shall not relieve the Contractor of any responsibilities under the Contract for Work performed. Nor shall termination of the Contract relieve the sureties of their obligations under the bonds required or permitted by the Contract or applicable law.

PART 4

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
Division 1 General Technical Requirements		
01110	Summary of Work.....	01110-1
01160	Regulatory Requirements	01160-1
01200	Measurement and Payment.....	01200-1
01300	Submittals	01300-1
01310	Project Meetings	01310-1
01385	Documentation of Existing Conditions	01385-1
01400	Quality Control	01400-1
01500	Temporary Facilities	01500-1
01505	Mobilization and Demobilization	01505-1
01720	Record Drawings.....	01720-1
01740	Cleanup.....	01740-1
Divisions 2 through 4		
Not Used		
Division 5 Metals		
05120	Structural Steel.....	05120-1
05500	Miscellaneous Metal Fabrications	05500-1
Divisions 6 through 8		
Not Used		
Division 9 Finishes		
09950	Filter Surface Preparation and Painting.....	09950-1
Division 10 Specialties		
Not Used		
Division 11 Equipment		
11250	Filter Media	11250-1
Divisions 12 through 16		
Not Used		

DIVISION 1

GENERAL TECHNICAL REQUIREMENTS

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 SCOPE OF WORK

The work specified in this Section consists of furnishing all labor, materials, and equipment necessary for construction of the Filter 2 Restoration and Media Replacement Project, as shown on the Plans, and hereinafter specified, at the existing water treatment plant site. Work shall include, but not be limited to, the following:

- A. Recoating of Filter 2, including containment.
- B. Replacement of Filter and Clarifier Media.
- C. Structural repair, as necessary, and as preapproved by the Engineer.
- D. Installation of filter underdrains, adsorption clarifier water and air piping, and sacrificial anodes.
- E. Removal, cleaning, and reinstallation of clarifier screens.
- F. Restoration of all surfaces disturbed by construction activities.
- G. Testing, commissioning, and training as specified herein.
- H. Execution of all associated work as shown on the Plans and specified herein, for a complete and workable system.

1.2 PROJECT INFORMATION

The Contract Documents show the location, arrangement, and type of work to be performed under the proposed project.

The Contractor shall be responsible for proper notification to and coordination with all utility districts, service districts, and all other persons and services that will be affected by this project at least one week in advance of beginning any construction that affects them.

It is the intent and purpose of these Contract Documents to have constructed complete facilities in good working order for the least practical cost to the Owner. Suggestions, recommendations, as well as inquiries from the Contractor that will

serve this purpose are welcome and will be given consideration by the Owner and the Engineer.

1.3 CONTRACTOR USE OF SITE AND PREMISES

Construction operations shall be limited to the area shown in Appendix F within the Water Treatment Plant and subject to the approval of the Engineer.

The Contractor shall allow representatives of the Owner, funding, and regulatory agencies access to the project site at all times.

The Water Treatment Plant (with exception of Filter 2) must be maintained in service at all times for the duration of the project.

1.4 ORDER OF WORK

The order of work will be at the option of the Contractor, except as noted below, in keeping with good construction practice, time restrictions, requirements of the permits applicable to this project, and the order of work as outlined herein, all costs of which shall be included in the various bid amounts. The Contractor shall conduct the order of work to allow the existing facilities to remain operational during the construction of the Project and shall coordinate all of their activities through the Engineer with the Owner's operations and maintenance staff. The Contractor shall provide a written plan of activities to the Engineer and Owner each Thursday for the following week, for review and coordination with existing facility operations.

The implementation of any measure required to protect the environment shall supersede any order of work designated within these Specifications. The Contractor shall meet the conditions as outlined in any and all permits and requirements of the Federal, State, County, and City regulatory agencies.

The Contractor shall keep the disruption of the existing facility operations to a minimum.

Access to the existing operations areas shall be maintained. Disruption of this access shall be kept to a minimum and must be prearranged and scheduled through the Engineer with the Owner's operations and maintenance staff.

The following summary shall be used as a general guideline of the construction tasks to be performed. The tasks are generally listed in the order of completion. The tasks, however, can be completed in a different order than listed herein, including performance of two or more tasks concurrently. The Contractor shall prepare a complete project schedule, which shall be provided in accordance with the limitations specified herein.

A. REMOVE EXISTING FILTER MEDIA

The Contractor shall remove and dispose of the existing filter and adsorption clarifier media.

B. Remove filter underdrains, adsorption clarifier piping, anodes, and other accessories.

C. SETUP CONTAINMENT

Containment of the existing filter vessel shall be installed prior to completion of any other work items.

D. SWEEP BLAST POTENTIAL METAL REPAIR AREAS

The Contractor shall sweep blast the existing vessel structure areas to identify areas where structural modifications are necessary. The Engineer shall approve the locations for structural modifications to the filter before that work is completed.

E. STRUCTURAL REPAIRS (IF REQUIRED)

Complete any approved structural repairs to the existing filter vessel. All welding modifications shall be completed prior to application of the new coating system.

F. REMOVE EXISTING FILTER COATING SYSTEM

The Contractor shall blast the existing filter surfaces as described in Section 09950.

G. COATING APPLICATION

Contractor shall perform surface preparation and apply new coating system as described within Section 09950.

H. INSTALL FILTER PIPING AND ACCESSORIES

Install new filter underdrains, adsorption clarifier air and water piping, anodes, and other accessories.

I. INSTALL NEW FILTER MEDIA

Contractor shall install new filter and adsorption clarifier media as specified in Section 11250.

J. DISINFECTION AND TESTING

Contractor shall disinfect and test the filter as described within Section 09950, prior to placing the filter back in service.

***** END OF SECTION *****

SECTION 01160

REGULATORY REQUIREMENTS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section contains information pertaining to permits and licenses, and use of private property.

1.2 PERMITS AND LICENSES

Except as noted below, the Contractor shall be responsible for obtaining and paying all fees associated with all the necessary permits, licenses, approvals, and construction permits necessary for the execution of this Contract, whether they be City, County, State, or federal permits.

The Owner is in possession of, or will be responsible for obtaining the following approvals and permits, and will pay the fees associated with the application and procurement of such approvals and permits. The Contractor is advised to become familiar with these approvals and permits as necessary for this project. The Contractor shall comply with all conditions of each approval/permit as if the conditions were detailed herein. Copies of these permits are required to be onsite at all times.

- A. WSDOH plan review and approval (obtained by Owner)

***** END OF SECTION *****

PROPERTY RELEASE

(Property Address)

DATE: _____

I, _____, owner of _____
(Property Owner's Name) (Property Description or

_____, hereby release
Address)

_____, from any property
(Contractor's Name)

damage or personal injury resulting from construction adjacent

to or on my property located at _____,
(Property Address)

during construction of the Filter 2 Restoration and Media Replacement.

My signature below is my acknowledgment and acceptance that my property, as identified above, was returned to a satisfactory condition.

Name: _____

Signed: _____

Address: _____

Phone: _____

SECTION 01200

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SCOPE

This Section further defines Measurement and Payment for this project.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
GC Section 3.04.12	Measurement and Payment
01300	Submittals

1.3 MEASUREMENT

Measurement for all items shall be as indicated in these Specifications for unit price and lump sum price bid items. Bid items are outlined in detail in this Specification Section and listed in the Proposal.

1.4 INDIVIDUAL BID ITEMS

The following is a list of bid items for the project. The contract price for each item constitutes full compensation for furnishing all equipment, labor, materials, appurtenances, and incidentals and performing all operations necessary to construct and complete the various bid items in accordance with the Contract Documents. Payment for each item shall be considered as full compensation, notwithstanding that minor features may not be mentioned herein. Work paid for under one item will not be paid for under any other item. If a particular item of work shown on the Plans or described in Specifications is not described in a specific bid item, this item of work shall be considered as incidental to the work and the costs for this work shall be merged into the various respective unit price and lump sum bid items.

1. Mobilization and Demobilization
 - a. Measurement: Will be measured by lump sum.
 - b. Payment: The lump sum contract price for MOBILIZATION AND DEMOBILIZATION shall include all costs for the labor, materials, and equipment required for mobilization and demobilization on the project as described in Section 01505.

Payment for MOBILIZATION AND DEMOBILIZATION shall be as follows:

35% Payment: When Contractor has mobilized on-site and temporary facilities are in place.

50% Payment: When 5 percent of the total pay items are completed (not including payment for materials on hand).

75% Payment: When 50 percent of the total pay items are completed (not including payment for materials on hand).

100% Payment: When Project is completed and recommended for acceptance.

2. Unexpected Site Changes

- a. Measurement: Will be negotiated prior to commencing any such work under this pay item and shall be for work to remedy unforeseen conditions.
- b. Payment: Payment or credits for changes amounting to \$15,000 or less may be made under the Bid Item UNEXPECTED SITE CHANGES. At the discretion of the Owner, this procedure for Unexpected Site Changes may be used in lieu of the more formal procedure as outlined in General Conditions Section 3.04.6. The Contractor will be provided a copy of the completed order for Unexpected Site Changes. The agreement for the Unexpected Site Changes will be documented by signature of the Contractor or notation of the verbal agreement. If the Contractor is in disagreement with anything required by the order for Unexpected Site Changes, the Contractor may protest the order as provided in General Conditions Section 3.04.8.

Payments or credits will be determined in accordance with General Conditions Section 3.04.6. For the purpose of providing a common Proposal for all Bidders, the Owner has entered an amount for UNEXPECTED SITE CHANGES in the Proposal to become part of the total Bid by the Contractor.

3. Filter 2 Recoating, Incl. Containment
 - a. Measurement: Will be measured by lump sum.
 - b. Payment: The lump sum contract price for FILTER 2 RECOATING, INCL. CONTAINMENT shall include all costs for the labor, materials, tools and equipment necessary and incidental to install and maintain the required containment and to protect all three filters, sweep blast prior to structural modifications, reblast to prepare the surface of the filter to receive the specified coating system; applying prime, stripe, intermediate and finish coats on the filter, including proper disposal of blast materials and providing environmental controls such as heating and dehumidification through full cure, and testing and disinfection.

4. Filter 2 Media Replacement
 - a. Measurement: Will be measured by lump sum.
 - b. Payment: The lump sum contract price for FILTER 2 MEDIA REPLACEMENT shall include all costs for the labor, materials, and equipment required to remove, wastehaul, and properly dispose of the existing filter and adsorption clarifier media, and installation of the new filter and adsorption clarifier media as specified herein.

5. Structural Repairs
 - a. Measurement: Will be measured by the square foot.
 - b. Payment: The unit price bid per square foot for STRUCTURAL REPAIRS shall include all costs for the labor, materials, and equipment required to prepare corroded steel, weld steel plate as required, and grind welds, and edges as specified herein. The square foot price shall pertain to repairs with 3/8-inch plate. For repairs with thicker plate, the square foot measurement shall be adjusted by multiplying the area by the ratio of the plate thickness installed divided by 3/8 inch. The extent of structural repairs is unknown and will be determined after the media has been removed. The Contractor shall hold his price regardless of quantity.

6. Filter Underdrains
 - a. Measurement: Will be measured by lump sum.
 - b. Payment: The lump sum contract price for FILTER UNDERDRAINS shall include all costs for the labor, materials, and equipment to remove, wastehaul, and dispose of the existing underdrain assemblies and install new underdrain assemblies including all gaskets, mounting hardware, and other appurtenances for a complete underdrain assembly.
7. Adsorption Clarifier Water and Air Piping
 - a. Measurement: Will be measured by lump sum.
 - b. Payment: The lump sum contract price for ADSORPTION CLARIFIER UNDERDRAINS shall include all costs for the labor, materials, and equipment to remove, wastehaul, and dispose of the existing water and air underdrain assemblies and install new water and air underdrain assemblies including all piping, laterals, gaskets, strainers, mounting hardware, and other appurtenances for complete water and air underdrain assemblies.
8. Anode Assemblies
 - a. Measurement: Will be measured per each.
 - b. Payment: The unit price per each for ANODE ASSEMBLIES shall include all costs for the labor, materials, and equipment to remove, wastehaul, and dispose of the existing anode assemblies and replacement with new anode assemblies.
9. Removal of Mill Scale
 - a. Measurement: Will be measured per square foot.
 - b. Payment: The unit price per square foot for REMOVAL OF MILL SCALE shall include all costs for labor, materials, tools, and equipment necessary for the removal of mill scale if and where encountered. Due to the unknown quantity, the unit bid price will be held regardless

of quantity and will be paid only for the actual quantity determined in the field. Quantity will be as determined by the Engineer during surface preparation.

10. Lower Flange Clean, Coat, and Seal
 - a. Measurement: Will be measured by the linear foot.
 - b. Payment: The unit price bid per linear foot for LOWER FLANGE CLEAN, COAT, AND SEAL shall include all costs for labor, materials, tools, and equipment necessary for the removal of corroded steel back to clean metal, coating with zinc primer, filling with grout, and finishing. Due to the unknown quantity, the unit price bid will be held regardless of quantity and will be paid for the actual quantity installed. The quantity of lower flange work required will be determined by the Engineer after the initial surface preparation has been completed to determine extend of work required.

1.5 PROJECT MATERIALS ON HAND

See General Conditions Section 3.04.12(6).

1.6 PAYMENT

Payment for all work will be made at the contract unit price or lump sum price as indicated in the Proposal, payment of which shall constitute full compensation, for a complete installation.

For items of equipment, acceptable operating and maintenance information shall be delivered to the Engineer before the Contractor will be paid for more than 90 percent of the purchase value of that equipment. Purchase value shall be the net price for the equipment as given on the invoice.

Final operating and maintenance manuals per Section 01300 must be delivered to the Engineer prior to the Project being 90 percent complete. Progress payments for work in excess of 90 percent completion will not be made until the specified acceptable operating and maintenance information has been delivered to the Engineer.

***** END OF SECTION *****

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes requirements that apply to all equipment and materials supplied on the Project.

The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment or method of work shall be as described in the submittal. The Contractor shall verify that all features of all products conform to the requirements of the Contract Documents. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment that are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated. The Contractor shall ensure that there is no conflict with other submittals and notify the Engineer in each case where their submittal may affect the work of another contractor or the Owner. The Contractor shall ensure coordination of submittals among the related crafts and subcontractors and shall verify such coordination on all submittals.

Where noted in the Contract Documents, the structural, mechanical, and electrical designs associated with the indicated equipment items are specific to the manufacturer and model number specified. Any structural, mechanical, or electrical modifications required to utilize an approved substitution to the specified equipment shall be made by the Contractor at no additional cost to the Owner. Where approved substitutions of specified equipment affect other materials or equipment, mechanical, structural, or electrical work, the Contractor shall note in the equipment submittal any necessary changes to accommodate the substituted equipment. It shall also be the responsibility of the Contractor to coordinate other mechanical, structural, or electrical equipment submittals to make sure that all changes necessary to accommodate the substituted equipment are addressed in these submittals as well. See General Condition 3.04.3.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01720	Record Drawings
01800	Testing, Commissioning, and Training
11000	Equipment General Provisions

1.3 WORK INCLUDED

Submittals required for this work shall include any or all of the following as required by the particular specification section and the submittal schedule:

- A. SCHEDULES AND PLANS
- B. PRODUCT SUBMITTALS
 - 1. Manufacturer's Literature
 - 2. Shop Drawings
 - 3. Color and Material Samples
 - 4. Design Calculations
 - 5. Test Reports
 - 6. Safety Data Sheets
- C. EQUIPMENT OPERATION AND MAINTENANCE MANUALS
- D. RECORD DRAWINGS

1.4 SUBMITTAL INFORMATION

Shop, catalog, and other appropriate drawings and information shall be submitted to the Engineer for review prior to fabrication or ordering of all equipment and materials specified. The number of copies of submittal information to be submitted shall be as indicated below.

All submittal information shall be sent to the Engineer through the Contractor. The Contractor shall assign a separate submittal number to each item or group of items that relate to each specification section. Submittal numbers shall be assigned in consecutive ascending order, with the first project submittal assigned the number "1." Resubmittals shall be numbered using the same number followed by an alphabetical suffix. All submittals shall bear the Contractor's certification that they have reviewed, checked, and approved the submittal information prior to transmitting to the Engineer. The submittal number and related specification section shall be marked on each submittal.

PART 2 PRODUCTS

2.1 GENERAL

When the Contract Documents require a submittal the contractor shall submit the following number of documents.

Type of Submittal	Number of Copies
Schedules or Plans	1
Product Submittal	1
Design Calculations	1
Test Reports	1
Preliminary Equipment Manuals	1
Final Equipment Manuals	1

If requested by the Contractor and approved by the Engineer and Owner, the Contractor may submit one copy of submittals electronically in lieu of submitting hard copies for all submittals except Equipment Manuals. Hard copies of Equipment Manuals must be submitted. If submittals are provided electronically, only one reviewed copy will be returned to the Contractor.

2.2 PRODUCT SUBMITTALS

A. GENERAL

When indicated in the Contract Documents the contractor shall submit product data for review by the Engineer. Unless otherwise specified, within 30 calendar days after receipt of the submittal, the Engineer shall review the submittal and return three copies of the marked-up submittal. The reproducible original will be retained by the Engineer. The returned submittal shall indicate one of the following actions:

1. If the review indicates that the material, equipment, or work method complies with the project Specifications, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.
2. If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED." The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be

incorporated in operation and maintenance data, a corrected copy shall be provided.

3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AND RESUBMIT." Except at their own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted, and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."
4. If the review indicates that the material, equipment, or work method does not comply with the project Specifications, copies of the submittal will be marked "REJECTED - SEE REMARKS." Submittals with deviations that have not been identified clearly may be rejected. Except at their own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

B. MANUFACTURER'S LITERATURE

Where the contents of submitted literature include data not pertinent to the submittal, the portion(s) of the contents being submitted for the Engineer's review shall be clearly indicated.

C. SHOP DRAWINGS

Shop drawings shall be submitted in the form of blue-line or black-line prints of each sheet. Blueprint submittals will not be acceptable.

All shop drawings shall be accurately drawn to a scale sufficiently large enough to show pertinent features and method of connection or joining. On all shop drawings, figure dimensions shall be used as opposed to scaled dimensions.

D. COLOR AND MATERIAL SAMPLES

All material samples shall be of the exact article proposed to be furnished for the work and shall be submitted in the quantity required. Samples shall be returned to the Contractor, with one retained by the Engineer.

Unless the precise color is specifically described in the Contract Documents, or whenever a choice of color or pattern is available in a specified product, accurate color charts shall be submitted to the Engineer for their review and selection.

E. TEST REPORTS

Copies of all test reports shall be submitted to the Engineer.

2.3 EQUIPMENT MANUALS

A. GENERAL

For all items of equipment, manufacturer's equipment operation and maintenance manuals shall be submitted to the Engineer for review. One copy will be returned to the Contractor with comments.

The following information shall be furnished for all items of equipment installed on the project requiring operational and/or maintenance procedures, and for any additional items indicated by the Engineer.

1. Lubrication Information

This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed.

2. Electrical and Control Diagrams

Diagrams shall show internal and connection wiring.

3. Startup Procedures

These instructions consist of equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.

4. Operating Procedures

These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.

5. Preventive Maintenance Procedures

These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.

6. Overhaul Instructions

These instructions consist of the manufacturer's directions for the disassembly, repair, and reassembly of the equipment and any safety precautions that must be observed while performing the work.

7. Parts List

This list consists of the generic title and identification number of each component part of the equipment.

8. Spare Parts List

This list consists of the manufacturer's recommendations of number of parts, which should be stored by the Owner and any special storage precautions, which may be required.

9. Exploded View

Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When exploded or cut views are not available, plan and section views shall be provided with detailed callouts.

10. Test Documentation

Reports, records, data and forms documenting the results of equipment factory tests, including pump and blower performance curves, shall be provided, with the operating points for the specific equipment designated. When a special factory test of the supplied equipment is not performed, the manufacturer's standard performance reports and curves, with specified operating points, shall be provided for the supplied equipment.

11. Specific Information

Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.

12. Warranty Information

13. Maintenance Information Summaries

In addition, the following items of equipment shall be provided with Maintenance Information Summaries in each appropriate section of the equipment manuals, prepared according to the format specified herein:

Maintenance information summaries shall be prepared on 8-1/2-inch x 11-inch paper only and shall contain the following information compiled from manufacturer's recommendations in the order shown.

1. Description or name of item of equipment.
2. Manufacturer.
3. Name, address, and telephone number of local manufacturer's representative.
4. Serial number (where applicable). The Contractor shall verify that it matches the equipment installed on the project.
5. Equipment nameplate data including model number.
6. Recommended maintenance procedures:
 - a. Description of procedures.
 - b. Maintenance frequency required.
 - c. Lubricant(s) or other materials required (where applicable), including type of lubricant, lubricant manufacturer, and specific compound.
 - d. Additional information as required for proper maintenance.
7. Recommended spare parts. (where applicable)

The maintenance information summary shall be placed at the beginning of the manual.

All operation and maintenance information shall be comprehensive and detailed, and shall contain information adequately covering all normal operation and maintenance procedures.

For ease of identification, each manufacturer's brochure and manual shall be appropriately labeled with the equipment name and equipment specification number as it appears in the project Specifications. The information shall be organized in binders. The binders shall be provided with a table of contents and tab sheets to permit easy location of desired information.

Lubricants shall be described in detail, including type, recommended manufacturer, and manufacturer's specific compound to be used.

It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project acceptance.

B. EXTRANEIOUS DATA

Where the contents of the manuals include manufacturers' standard brochures or catalog pages, the exact item(s) used in this installation shall be clearly indicated and all manufacturers' data which is extraneous shall be clearly deleted.

C. FINAL EQUIPMENT MANUALS

The Contractor shall be responsible for tracking and coordinating each separate manufacturer's equipment operation and maintenance manual submittal and shall resubmit, as necessary, until the Engineer's review indicates that the submittal is acceptable. The Contractor shall maintain equipment manual files until final approval copies are delivered to the Engineer. The Contractor shall be responsible for collating the approved operation and maintenance submittal sections into complete final manufacturers' equipment operation and maintenance manuals bound in post binders which are indexed to the Specifications. The Contractor shall deliver the complete final operation and maintenance manuals to the Engineer prior to project completion. All copies final manufacturers' equipment manuals submitted will be retained by the Engineer or Owner.

PART 3 EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. GENERAL

Each submittal shall be accompanied by a letter of transmittal showing the date of transmittal, specification section, or drawing number to which the submittal pertains, submittal number, and a brief description of the material submitted.

B. RESUBMITTALS

When material is resubmitted for any reason, it shall be submitted under a new letter of transmittal and referenced to the previous submittal.

3.2 REVIEW OF SUBMITTALS

The Engineer will review all submittals for general conformance with the design and other requirements of the Contract Documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the Contract Documents. Submittals may be rejected based on inadequate information and/or not meeting the requirements of the Contract Documents. Rejection of submittals requires action on the part of the Contractor to correct the reason for the rejection. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, and for techniques of assembly and installation.

3.3 COORDINATION OF PRODUCT SUBMITTALS

A. GENERAL

Prior to submittal for review by the Engineer, all data shall be fully coordinated, including the following:

1. All field dimensions and conditions.
2. All trades and public agencies involved, including necessary approvals.
3. All deviations from the Contract Documents.

B. GROUPING OF SUBMITTALS

1. All submittals shall be grouped with associated items, unless otherwise specifically permitted by the Engineer.
2. The Engineer may reject the submittals in their entirety or any part thereof, if not in accordance with the Contract Documents.

C. CERTIFICATION

Submittals shall bear the Contractor's certification that they has reviewed, checked, and approved the shop drawings prior to forwarding them to the Engineer.

3.4 TIMING OF PRODUCT SUBMITTALS

A. GENERAL

1. All submittals shall be made far enough in advance of installation to provide all required time for reviews and securing necessary approvals.
2. In scheduling, the Contractor shall allow for the time indicated in Part 2.2A for the Engineer's review following their receipt of the submittal.

B. DELAYS

No additional or separate payment will be made for costs of delays occasioned by tardiness of submittals on the part of the Contractor.

3.5 EQUIPMENT MANUALS

The preliminary copies of the manufacturer's equipment manuals shall be delivered to the Engineer for review not later than the time of equipment delivery to the project site.

Final copies of the manufacturer's equipment manuals shall be delivered to the Engineer at least 14 calendar days prior to requesting payment in excess of 90 percent completion for the project. Prior to submittal of the final equipment manuals, the Contractor shall check the manuals for accuracy and completeness and shall verify that prior review comments have been addressed.

***** END OF SECTION *****

SECTION 01310

PROJECT MEETINGS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes information pertaining to the various meetings that will be held during the course of constructing this project.

1.2 PRECONSTRUCTION CONFERENCE

As soon as possible following the award of the Contract, a preconstruction conference shall be scheduled for representatives of the Owner, the Contractor, the Engineer, funding agencies, regulatory agencies, and affected utilities.

1.3 PROJECT PROGRESS MEETINGS

The Owner and the Engineer will schedule and attend regular weekly meetings with the Contractor for coordination, administrative, and procedural requirements of the project. Project meetings will take place at the Public Works Department or on-site at the Water Treatment Plant based upon current COVID-19 protocols as outlined by the State of Washington.

1.4 CONSTRUCTION MEETINGS

The Contractor shall schedule and hold regular meetings during the project:

- A. Safety Meetings (Contractor's subcontractors shall attend if they are working onsite.)
- B. Project Progress Meetings
- C. Equipment Installation Meetings
- D. Coordination Meetings
- E. Startup and Testing Meetings

The Contractor shall notify the Owner and Engineer in advance of all meetings. The meetings may or may not be attended by the Owner and Engineer.

***** END OF SECTION *****

SECTION 01385

PHOTOGRAPHS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes all photography requirements for the project.

The Contractor shall provide comprehensive preconstruction photographs of the entire construction area and adjacent properties. The photographs shall provide complete coverage of all features in the project area, and in no event shall photographs be more than 20 feet apart.

Prior to construction, photographs shall be taken in the project area where work is to be done. Special attention shall be given to depict existing roadway and property conditions, fences, buildings, trees, ditches, culverts, meter boxes, etc. The photographs shall be of commercial quality and must be submitted to the Engineer prior to the initiation of construction.

Photographs may be submitted to the Engineer in either of the following formats:

A. HARD COPY FORMAT

Contractor shall submit two 5-inch by 7-inch color glossy prints of each exposure, together with the associated negative. The photographs shall be delivered to the Engineer in a suitable, durable plastic 2-inch, three-ring binder equipped with plastic inserts specifically designed and manufactured for preserving photographs. The binder shall be sufficiently labeled, and shall, at a minimum include the name of the Owner, name of the Contractor, Date, Project Name, and the title, "Pre-Construction Photographs" in sufficiently legible text.

B. ELECTRONIC FORMAT

The Contractor shall submit digital photographs on an electronic storage device (flash/thumb drive). Three copies of each storage device shall be submitted to the Engineer. Each photograph shall be of good quality, sufficiently large to distinguish unique features captured in the photograph, and should be at least 4 MB in size. Each electronic storage device shall be labeled, and shall, at a minimum include the name of the Owner, name of the Contractor, Date, Project Name, and the title, "Pre-Construction Photographs" in sufficiently legible text.

The photographs shall be arranged in a continuous fashion indicating topographical features from one end of the project to the other. The Contractor shall invite the Engineer to the site while collecting these photographs.

Photographs shall be taken during a period of good visibility. Unless otherwise directed by the Engineer, photographs will not be allowed during times of precipitation or poor visibility.

Following construction, the Contractor shall provide post-construction photographs of the entire construction area and adjacent properties in a similar format to the preconstruction photographs.

***** END OF SECTION *****

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the control tests, test sample collection, required field-testing, and special inspections as specified herein, and indicated on the Plans.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
05120	Structural Steel
05500	Miscellaneous Metal Fabrication

1.3 PAYMENT

All testing as required by this Section shall be paid for by the Contractor. All costs to prepare and implement the sample and testing program shall be included in the bid prices for the various items associated with the sampling and testing program.

Retesting and reinspection required because of defective work and testing performed for the convenience of the Contractor shall also be paid for by the Contractor.

Testing requirements shall not be cause for claims of delay by the Contractor and all expenses accruing therefrom shall be deemed incidental to the performance of the Contract.

PART 2 PRODUCTS

2.1 GENERAL

The Contractor shall be responsible for all material testing specified in the Contract Documents and any applicable permits and codes. The materials testing laboratory shall be accredited for performing the various testing methods either by AASHTO R18, AASHTO 150/IEC 17025 or the American Association for Laboratory Accreditation and further approved by the Owner. The materials testing laboratory shall send test results directly to the Engineer.

PART 3 EXECUTION

3.1 SAMPLING AND TESTING FREQUENCY

A. SPECIAL INSPECTIONS

Contractor shall perform all required Special Inspections per WABO requirements (Chapter 17 of the IBC). Special inspections include, but are not limited to, structural welded connections.

***** END OF SECTION *****

SECTION 01500

TEMPORARY FACILITIES

PART 1 GENERAL

1.1 SCOPE

The Contractor shall note that space within the Water Treatment Plant building is limited. Construction activities within the building will be limited to a 4-foot radius around Filter 2. The work specified in this Section includes the temporary facilities required for this project, but not necessarily limited to:

- A. Temporary utilities such as water, electricity, telephone, off-site staging, and off-site parking.
- B. Temporary piping, pumps, valves, fittings, manholes, vaults, and appurtenances necessary to keep existing facilities fully operational during construction.
- C. Sanitary facilities.
- D. Temporary enclosures such as fences, tarpaulins, barricades, and canopies.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01505	Mobilization and Demobilization

PART 2 PRODUCTS

2.1 UTILITIES

A. TEMPORARY ELECTRICITY

The Contractor shall provide temporary power for construction at the project site. They shall make arrangements with the electrical utility (to obtain temporary power) and shall pay all costs and fees charged by the utility associated with connection of temporary power. The Contractor shall provide all special connections, receptacles, panelboards, etc., which are required for temporary service, and are not provided by the utility.

The Contractor shall furnish and install all temporary wiring and associated equipment required to keep all portions of the existing facilities in operation at all times.

Area distribution boxes shall be furnished, installed, and so located that the individual trades may use their own construction-type extension cords to obtain proper power and artificial lighting at all points where required. The Contractor shall provide a main disconnect on all temporary wiring panels, labeled "MAIN DISCONNECT," to ensure the safety of personnel using extension cords and hand tools. Panels shall also be properly grounded and equipped with GFCI breakers in accordance with WISHA requirements.

The Contractor shall provide the Engineer single line diagrams of the temporary wiring showing all circuit breakers. These diagrams shall be provided prior to installation of this wiring. These diagrams are necessary to provide information to Owner personnel for off-hours operation.

The Contractor shall pay all demand, consumption, taxes, and fees associated with the temporary electrical service.

B. WATER

The Contractor shall be responsible for providing water necessary for construction. This includes costs for supplying potable water for hydrostatic pressure leak testing of all water-holding structures and operational testing of all equipment and processes. Water is available from the Owner free of charge, provided that it is used responsibly. The Contractor shall install a meter with backflow prevention device prior to obtaining water from the Owner.

C. TELEPHONE

The Contractor shall provide and pay for telephone service at their construction site office. Cellular phone service is acceptable.

2.2 TEMPORARY PIPING

The Contractor shall furnish and install all temporary piping and pumping and, upon completion of the work, remove all such temporary piping as required, except as designated on the Plans to remain as a part of the Project. Prior to installation, the Contractor shall submit drawings to the Engineer showing the proposed installation of temporary piping and pumps, including location, type of pipe, fittings, and valves. The Contractor shall obtain the Engineer's approval for temporary piping and pumping plan prior to installation.

Temporary piping and pumping shall be provided as necessary to maintain the existing facilities in operation until the new facilities are constructed, operational.

An effort has been made on the Plans and/or Specifications to note instances and locations where temporary piping and/or pumping may be required; however, this in no way limits the temporary piping and pumping to be provided by the Contractor at these locations.

2.3 SANITARY FACILITIES

The Contractor shall provide toilet and wash-up facilities for their workforce and the Engineer at the site of work. They shall comply with applicable laws, ordinances, and regulations pertaining to the public health and sanitation of dwellings and camps.

2.4 ENCLOSURES

The Contractor shall furnish, install, and maintain during the project time all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the work in compliance with all pertinent safety and other regulations.

PART 3 EXECUTION

All temporary facilities and controls shall be maintained as long as required for the safe and proper completion of the work. The Contractor shall remove such temporary facilities and controls as rapidly as progress of the work will permit or as directed by the Owner.

***** END OF SECTION *****

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section consists of mobilization and demobilization. Mobilization consists of preconstruction activities and preparatory work for the project necessary to mobilize labor, materials, and equipment to the project site. Demobilization consists of activities to remove materials and equipment from the project site upon project completion, including final cleanup. Items which are not considered mobilization or demobilization include but are not limited to:

- A. On-going activities throughout the duration of construction.
- B. Profit, interest on borrowed money, overhead, or management costs.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
Division 1	General Technical Requirements
01500	Temporary Facilities

PART 2 PRODUCTS

Products and materials required for mobilization and demobilization are described in the various sections of Division 1 and in other parts of the Contract Documents.

PART 3 EXECUTION

Complete mobilization and demobilization as required by the various sections of Division 1 and other parts of the Contract Documents.

***** END OF SECTION *****

SECTION 01720

RECORD DRAWINGS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the record drawings, which shall be maintained and annotated by the Contractor during construction.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals

1.3 INFORMATION PROVIDED BY THE OWNER

The Contractor will be provided with the following items to maintain record drawings for the project:

- A. One full size paper set of Plans.
- B. One set of AutoCAD drawing files for the Project.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall maintain the following record drawings for the project:

- A. A neat and legibly marked set of Contract Plans showing the final location of piping, equipment, electrical conduits, outlet boxes and cables;
- B. Additional documents such as schedules, lists, drawings, and electrical and instrumentation diagrams included in the Contract Documents; and
- C. Contractor layout and installation drawings.

Unless otherwise specified, record drawings shall be full size and maintained in a clean, dry, and legible condition. Record documents shall not be used for

construction purposes and shall be available for review by the Engineer during normal working hours at the Contractor's field office. At the completion of the work, prior to final payment, all record drawings shall be submitted to the Engineer.

Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:

- A. Additions - Red
- B. Deletions - Green
- C. Comments - Blue
- D. Dimensions - Graphite

Legibly mark drawings to record actual depths, horizontal and vertical location of underground raceways, cables, and appurtenances referenced to permanent surface improvements.

The Contractor shall be responsible for furnishing the Owner one full size, signed mylar, with as-built information in AutoCAD format on CD-rom. Each record drawing shall be stamped and signed by the onsite field representative of the Contractor.

The Contractor's record drawings (full-size hard-copy) will be reviewed monthly for completeness by the Engineer prior to preparing the progress estimate for payment. If the record drawings do not reflect the work performed, payment for that item of work will not be included in the progress estimate.

***** END OF SECTION *****

SECTION 01740

CLEANUP

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the maintenance of the building, structures, and site(s) in a standard of cleanliness throughout the construction period as described herein.

Throughout the construction period, the Contractor shall maintain the cleanliness of the site and structures as described herein. The Contractor is also to maintain access to all existing, operating equipment such that the equipment may be serviced and operated.

Dust of all kinds, including concrete dust produced by construction activities, shall be controlled to avoid damage to existing, operating equipment. Enclosures, ventilation, and air scrubbing may be required where significant potential for damage is determined by the Engineer.

1.2 RELATED WORK SPECIFIED ELSEWHERE

In addition to standards described in this Section, comply with all requirements for cleaning up when described in other sections of these Contract Documents.

1.3 QUALITY ASSURANCE

A. INSPECTION

The Contractor shall conduct daily site inspections, and more often if necessary, to verify that requirements are being met.

B. CODES AND STANDARDS

In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Engineer.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

A. GENERAL

Retain all stored materials and equipment in an orderly fashion allowing maximum access, not impeding drainage or traffic, and providing protection.

Do not allow the accumulation of scrap, debris, waste material, and other items not required for this work.

At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the project site.

Provide adequate storage for all materials awaiting removal from the project site, observing all requirements for fire protection and protection of the environment.

B. SITE

Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Move these items into a place designated for their storage until disposal becomes available.

Weekly, and more often if necessary, inspect all arrangements of materials stored on the site, restack, arrange, or otherwise service all arrangements to meet the requirements above.

Maintain the site in a neat and orderly condition at all times so as to meet the approval of the Engineer.

C. STRUCTURES

Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris and waste material. Move these items into a place designated for their storage until disposal becomes available.

Weekly, and more often if necessary, sweep clean all interior spaces. “Clean” shall be interpreted to mean free from dust and other materials that can be swept with a broom using reasonable diligence.

In preparing to install succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material. Use all equipment and materials required to achieve the required cleanliness.

D. STREETS

All paved and unpaved streets in the vicinity of the project shall be kept free of material tracked from the project site(s) or dropped from vehicles entering and leaving the site(s). The Contractor shall inspect roads in each active area daily, and all material deposited on the road from the Contractor’s activities shall be removed prior to the end of the workday. This shall include sweeping, as required, to collect any mud, dirt and dust from the surface. All catch basins and culverts in the work area shall be inspected before completion and cleaned as directed by the Engineer.

3.2 FINAL CLEANING

A. DEFINITION

Except as otherwise specifically provided, “clean” shall be interpreted as meaning the level of cleanliness generally provided by commercial building maintenance equipment and materials.

B. GENERAL

Prior to final inspection, remove from the jobsite all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final project cleaning as described below.

C. STRUCTURES

1. Exterior

Visually inspect all exterior surfaces and remove all traces of soil, waste, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. If necessary, to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure. In the event of stubborn stains not removable with

water, the Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.

2. Interior

Visually inspect all interior surfaces and remove all traces of soil, waste, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only appropriate cleaning materials and equipment.

3. Glass

Clean all glass inside and outside.

D. TIMING

Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean project, ready for occupancy.

***** END OF SECTION *****

DIVISION 5

METALS

SECTION 05120

STRUCTURAL STEEL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes structural steel work as shown on the Plans, including schedules, notes, and details to show size and location of members, typical connections, and type of steel required. Miscellaneous metal fabrications are specified elsewhere in Division 5.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
05500	Miscellaneous Metal Fabrications

1.3 REFERENCES

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
ASTM A36	Structural Steel
ASTM A53	Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe
ASTM A123	Zinc (Hot Dipped Galvanized) Coatings on Iron and Steel Products
ASTM A153	Zinc Coating (Hot Dip) on Iron and Steel Hardware
ASTM A276	Stainless Steel Bars and Shapes
ASTM A307	Carbon Steel Externally Threaded Standard Fasteners
ASTM A325	High Strength Bolts for Structural Steel Joints
ASTM A490	Quenched and Tempered Alloy Steel Bolts for Structural Steel Joints
ASTM A500	Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes
ASTM A501	Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
ASTM A572	High-Strength Structural Steel
ASTM A992	High-Strength Structural Steel
AWS A2.4	Standard Welding Symbols
AWS D1.1	Structural Welding Code
AISC	Specification for Structural Steel Buildings
SSPC	Steel Structures Painting Council

1.4 SUBMITTALS

Submit under provisions of Section 01300.

A. SHOP DRAWINGS

Indicate profiles, sizes, spacing, locations, and complete details of structural members, to include openings, cuts, camber, fasteners, connections, and other pertinent data. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed as work of other sections.

B. MANUFACTURER'S MILL CERTIFICATE

Submit under provisions of Section 01300 certifying that products meet or exceed specified requirements.

C. MILL TEST REPORTS

Submit under provisions of Section 01300 Manufacturer's Certificates, indicating structural strength, destructive and non-destructive test analysis.

D. WELDERS' CERTIFICATES

Submit under provisions of Section 01300 Manufacturer's Certificates, certifying welders employed on the Work, verifying AWS qualifications within the previous 12 months.

1.5 QUALITY ASSURANCE

Codes and Standards: Comply with the provisions of the following, except otherwise indicated:

<u>Standard</u>	<u>Title</u>
AISC	"Code of Standard Practice for Steel Buildings and Bridges"
AISC	"Specifications for Structural Steel Buildings," including "Commentary" and Supplements thereto as issued
AISC	"Specifications for Structural Joints using ASTM A325 or A490 Bolts" approved by the Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation.

American Welding Society (AWS) D1.1 “Structural Welding Code – Steel”

ASTM A6 “General Requirements for Delivery of Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use”

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver material to site at such intervals to ensure uninterrupted progress of work.

Deliver anchor bolts and anchorage devices that are to be embedded in cast-in-place concrete or masonry in ample time as to not delay work.

Store materials to permit easy access for inspection and identification. Keep steel members off ground, using pallets, platforms, or other supports. Protect steel members and packaged materials from erosion and deterioration.

Do not store materials on structure in a manner that might cause distortion or damage to members or supporting structures. Repair or replace damaged materials or structures as directed.

PART 2 PRODUCTS

2.1 MATERIALS

A. STRUCTURAL STEEL PLATES AND BARS

ASTM A36, unless noted otherwise.

B. WELDING MATERIALS

AWS A5.1 or A5.5, E70XX; AWS A5.17, E70S-X; AWS A5.20, E70XT-X. Comply with AWS code.

2.2 FABRICATION

A. CONNECTIONS

Weld or bolt shop connections, as indicated on the Plans or as specified.

Bolt field connections, except where welded connections or other connections are indicated.

Provide high-strength threaded fasteners for all bolted connections, except where unfinished bolts are indicated.

B. WELDED CONSTRUCTION

Comply with AWS Code for procedures, appearance and quality of welds, and methods used in correcting welding work. Assemble and weld built-up sections where indicated by methods which will produce true alignment of axes without warp.

PART 3 EXECUTION

3.1 ERECTION

A. GENERAL

Comply with Section 01400 for independent testing and inspection agency to inspect high strength bolted connections and welded connections and to perform tests and prepare test reports.

Testing agency shall conduct and interpret tests and state in each report whether test specimens comply with requirements, and specifically state any deviations therefrom.

Provide testing agency access to places where structural steel work is being fabricated or produced so that required inspection and testing can be accomplished.

Testing agency may inspect structural steel at plant before shipment; however, the Engineer reserves right, at any time before final acceptance, to reject material not complying with specified requirements.

Correct deficiencies in structural steel work that inspections and laboratory test reports indicate as not in compliance with requirements. The performance of additional tests, at the Contractor's expense, may be necessary to reconfirm any non-compliance of original work, as well as to show compliance of corrected work.

B. FIELD WELDING

Inspect and test during erection of structural steel as follows:

Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.

Perform visual inspection of all welds.

Perform tests of welds as follows:

Liquid Penetrant Inspection:	ASTM E165
Magnetic Particle Inspections:	ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.
Radiographic Inspection:	ASTM E94
Ultrasonic Inspection:	ASTM E164

***** END OF SECTION *****

SECTION 05500

MISCELLANEOUS METAL FABRICATIONS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the miscellaneous metal fabrication work including, but is not limited to, the following: steel plates, stainless steel threaded rods and angle sections.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
09950	Filter Surface Preparation and Painting

1.3 REFERENCES

This section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
ASTM A36	Structural Steel
ASTM A53	Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe
ASTM A123	Zinc (Hot-Galvanized) Coatings on Products Fabricated From Rolled, Pressed and Forged Steel Shapes, Plates, Bars, and Strip
ASTM A153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A240	Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels
ASTM A283	Carbon Steel Plates, Shapes, and Bars
ASTM A307	Carbon Steel Externally Threaded Standard Fasteners
ASTM A325	High Strength Bolts for Structural Steel Joints
ASTM A500	Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes
ASTM A501	Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
ASTM A653	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM B221	Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
ASTM B241	Aluminum-Alloy Seamless Pipe and Seamless Extruded Steel Tube

NAAMM	National Association of Architectural Metal Manufacturers, “Metal Bar Grating Manual”
AISC	American Institute of Steel Construction
AWS D1.1	Structural Welding Code - Steel
AWS D1.2	Structural Welding Code - Aluminum
SSPC	Steel Structures Painting Council

1.4 SUBMITTALS

Submit under provisions of Section 01300.

Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

PART 2 PRODUCTS

2.1 MATERIALS

A. STRUCTURAL STEEL

Structural steel members and sections as defined in the AISC “Code of Standard Practice” are specified in Section 05120.

B. STAINLESS STEEL

Comply with ASTM A276, Type 316.

C. WELDING MATERIALS

As specified in Section 05120.

2.2 FABRICATION

Fit and shop assemble components in the largest practical size for delivery and installation at site.

A. STRUCTURAL STEEL MEMBERS AND SECTIONS

Fabrication of structural steel members and sections shall comply with Section 05120.

B. ACCESSORIES

Provide necessary accessories as required for complete installation of products. Provide anchors, anchor bolts, plates, angles, hangers, struts, and other items required for connecting stairs to structure.

PART 3 EXECUTION

3.1 EXAMINATION

Verify that field conditions are acceptable and are ready to receive the work.

3.2 PREPARATION

Clean and strip primed steel items to bare metal where site welding is required. Supply items required to be cast into concrete or embedded in masonry with setting templates.

3.3 INSTALLATION

A. TOLERANCES

Install items plumb and level, accurately fitted, free from distortion or defects. Comply with the following tolerances:

Maximum Variation from Plumb: 1/4 inch (6 mm) per story, non-accumulative.

Maximum Offset from True Alignment: 1/4 inch (6 mm).

Allow for erection loads and provide sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments. Handrail installation shall be sturdy and without play.

B. BOLTING AND WELDING

Field bolt and weld to match shop bolting and welding. Conceal bolts and screws whenever possible. Field weld components as indicated on the Drawings. Perform field welding in accordance with AWS D1.1 or AWS D1.2.

Obtain Owner's approval prior to field cutting or making adjustments not scheduled on the shop drawings.

C. COATINGS

Coat filter vessel per Section 09950.

D. DISSIMILAR MATERIALS

Avoid direct fastening of dissimilar metals to one another. Connections shall include means as required to isolate dissimilar metals from one another. Possible methods of isolation include, but are not limited to, non-metallic bushings/washers at bolts, and epoxy paint coating of contact surfaces. Intended means of isolation shall be noted on the submitted shop drawings. See Section 09950 for epoxy paint requirements.

***** END OF SECTION *****

DIVISION 9

FINISHES

SECTION 09950

FILTER SURFACE PREPARATION AND PAINTING

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes preparation of surfaces and recoating of the interior and exterior of the Water Treatment Plant Filter 2 as required by the Drawings. The work as specified herein to include, but is not limited to, the following:

- A. RECOAT WTP FILTER 2 INTERIOR AND EXTERIOR
1. Assist City to disconnect controls and appurtenance attached to Filter 2. Remove and pressure wash clarifier screens and gate.
 2. Remove and dispose of existing filter media down to concrete floor. Remove and dispose of all adsorption clarifier media and expose clarifier chamber floor.
 3. Provide containment of blast material, per SSPC Guide 6 and Specifications.
 4. Provide adequate lighting, ventilation, and equipment.
 5. Provide dehumidification, heaters, and/or forced air fans as required.
 6. Blast interior to obtain an SSPC-SP10 (near white blast) finish and prep other damaged areas and welds as specified.
 7. Blast exterior to obtain an SSPC-SP10 (near white blast) finish and prep other damaged areas and welds as specified;
 8. Dispose of blast material, see Section 3.1 E.
 9. Apply prime, stripe, intermediate, and finish coats of paint;
 10. Allow proper curing time while providing dehumidification, heaters and/or forced air fans, as required;
 11. Install new filter underdrains and clarifier air and water piping. Intall new clarifier media and new filter media.

12. Disinfect and test the filter before placing the filter back into service.
13. Assist City to reconnect controls and appurtenances attached to Filter 1. Reinstall clarifier screens and gate. Provide and install new gasketing for clarifier screens.

All coating materials and workmanship shall be in conformance with AWWA standards and as specified herein. The more stringent requirements of the AWWA Standard or this Section shall apply. All coatings in contact with potable water shall be certified by the National Sanitation Foundation (NSF) for compliance with NSF Standards 60 and 61.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals

1.3 REFERENCES

ANSI/NSF 61 - Drinking Water System Components - Health Effects.

ASTM D 16 - Terminology Relating to Paint, Varnish, Lacquer, and Related Products.

AWWA C 653 – Disinfection of Water Treatment Plants.

SSPC-SP 10/NACE 2 – Near-White Metal Blast Cleaning.

SSPC-Guide 6 – Guide for Containing Surface Preparation Debris During Paint Removal Operation.

SSPC-Guide 7 – Guide for Disposal of Lead-Contaminated Surface Preparation Debris.

SSPC-Guide 12 – Guide to Illumination of Industrial Coating Projects

1.4 SUBMITTALS

The following information shall be submitted in accordance with Section 01300 (Submittals).

- A. Paint system data sheet for each of the distinctive products to be used. The information shall include manufacturer's name, product name, and number and required minimum dry film thickness.paint.
- B. Manufacturer's written instructions for applying the primer, stripe, intermediate, finish and mural coats of paint.
- C. Manufacturer's quality assurance: submit paint manufacturer's certification that coatings comply with specified requirements and are suitable for the intended application.
- D. Material Safety Data Sheets for all substances to be used and/or stored at the Project site.
- E. Waste Handling and Disposal Plan that includes but is not limited to a description of the wastes that the Contractor expects to generate, waste characterizations, procedures and how wastes are to be collected, stored, contained, and disposed during the Project.
- F. Ventilation Plan to provide adequate ventilation and respirators for personnel to meet all safety requirements and to carry away solvents during the curing phase of each coat.
- G. Filter environmental control plan that includes a description of the dehumidifier, ventilation, heating systems, environmental monitoring equipment, and procedures the contractor anticipates using on the project.
- H. A Health and Safety Plan that includes but is not limited to methods for protecting workers from dust, paint fumes, exposure to lead, a description of the air handling system and appropriate emergency procedures.
- I. IA Materials Storage Plan, that includes but is not limited to provisions for temporary on-site storage of coating products and related materials.
- J. A Fueling Plan, that includes but is not limited to provisions for temporary on-site storage and transfer of fuels and lubricants.
- K. A Disinfection and Testing Plan, that includes but is not limited to written procedures and drawings for disinfection of the filter and collecting of

samples to be tested by an independent laboratory. The Disinfection and Testing Plan shall include a plan for disposal of test water.

- L. A Containment Plan that includes, but is not limited to, written procedures and drawings for providing dust containment during the surface preparation of the filter, meeting the requirements of SSPC Guides 6 and 7.
- M. Certification that the interior paint coating in contact with potable water is certified in accordance with the National Sanitation Foundation Standard No. 61.
- N. An abrasive blast disposal plan that includes, but is not limited to, methods and materials planned for the proper storage, testing, disposal method, and disposal site for project blast material. Documentation of proper disposal will be required prior to project closeout. Proper adherence to all applicable laws, regulations, and standards for the safe handling of lead and chromium contaminated materials will be the responsibility of the Contractor

The above information shall be submitted 20 days prior to the painting process and shall be approved by the Owner before any coatings are applied.

1.5 SITE ENVIRONMENTAL REQUIREMENTS

- A. The contractor, in executing the work, shall maintain affected areas within and outside project boundaries free from environmental pollution that would be in violation of any federal, state, county, or local regulations.
- B. Staging areas established by the contractor shall be limited to the minimum area absolutely required. Hazardous materials stored in the staging areas shall be placed on a leak proof membrane and surrounded with temporary retaining curbs as required to prevent soil contamination and/or the release of any contaminated material. Other precautions to prevent soil contamination shall consist of acceptable containers for the collection and disposal of all waste materials including rubbish, other debris, existing paint chips and other painting materials used for this project.
- C. Any liquid, semi-liquid, or saturated solids that tend to bleed must be conveyed in watertight containers.
- D. The contractor shall not dispose of volatile wastes such as mineral spirits, oil, chemicals, paint thinner, or paint stripper in storm or sanitary drains. Disposal of wastes into streams or waterways is also strictly prohibited.

Wastes shall be prohibited from entering the surface or subsurface water source(s). No paint or solvent material shall be disposed of on site, nor shall the contractor burn or bury rubbish or waste materials on the project site.

- E. The use of petroleum products on the site shall be limited during construction to that amount absolutely necessary. Refueling shall be done in an area covered by a leak-proof membrane and surrounded by temporary retaining curbs as required. Any vehicle or piece of equipment that is leaking petroleum products, including fuel or hydraulic fluid, shall be prohibited from the construction site.
- F. In the event a spill occurs on the construction site, the Contractor is responsible for contacting the Owner and all appropriate agencies in accordance with applicable federal, state, and local regulations, including but not limited to WAC 173-303-145 (Spills and Discharges into the Environment).
- G. The Contractor shall comply with all applicable federal, state, and local laws including but not limited to WAC 173-303 Dangerous Waste Regulation relating to the collection, containment and transportation of hazardous substances and shall be contractually responsible for ensuring all subcontractors comply as well.
- H. Noise shall be minimized by using appropriate construction methods and equipment. The Contractor shall provide mufflers and acoustical barriers to maintain noise levels from tools and equipment within legal noise levels.
- I. The Contractor shall strictly adhere to applicable regulations for fugitive dust emissions as specified by the Southwest Clean Air Agency. Any dust complaints received shall be immediately addressed by the Contractor.
- J. The Contractor shall be responsible for the temporary storage of painting materials, solvents, plus the collection and containment of all non-hazardous and hazardous wastes, debris and rubbish generated by construction activities for the duration of the Project and until the Owner accepts the work as complete. The Contractor shall employ the necessary safe guards to protect the materials temporarily stored on site from accidental spills and vandalism. Temporary storage areas required for the Contractor to store hazardous substances and other wastes on site shall be confined to mutually agreed upon locations within the site. The Contractor shall be confined to the location(s) specified. Changes or modification to the temporary storage shall be permitted, provided the

request is submitted in writing with a sketch of the proposed modification to the Owner for review.

- K. Hazardous and non-hazardous substance storage on site is limited to the length of the Contract. All containers with hazardous substances shall be water tight and environmentally safe. When temporarily stored on site, all containers shall be placed on wooden pallets and contained within leakproof membranes surrounded with temporary retaining curbs. Containers shall be stored up right in multiple rows, stacking containers on top of one other is prohibited.
- L. The Contractor shall be responsible for transporting and disposal of all materials generated from the cleaning process to include but not limited to: all abrasive paint removal materials and all other hazardous and non-hazardous substances, debris and rubbish generated from the surface preparation, application of the new coating system and other construction activities. All materials shall be removed from the site by the Contractor prior to Project acceptance and disposed of or recycled in accordance with all federal, state, county, and local regulations.

1.6 CONTRACTORS'S QUALIFICATIONS

The Contractor or subcontractor performing the surface preparation and painting (shop and field) shall have completed at least five potable water filter and/or reservoir recoating projects in the State of Washington during the 10-years period immediately preceding the bid submittal deadline for this project. The Owner shall have the right to reject the painter based on lack of qualifications.

1.7 MANUFACTURER'S SERVICE

It shall be the responsibility of the paint manufacturer to work with the Contractor as a working team to obtain a good protective coating for the interior and exterior surfaces of the reservoir.

- A. The Paint Manufacturer shall attend the preconstruction conference.
- B. The Manufacturer's representative shall be notified and be present at the jobsite on the first day of painting to verify that proper surface preparation has been provided and that coatings are being applied in conformance with these Specifications.
- C. The Manufacturer's representative shall be available on request by either the Owner or the Contractor for further confirmation of proper painting procedures throughout the field painting phase of construction, particularly prior to applying the next coat of paint.

- D. The Manufacturer's representative shall assist in the inspection of the surface coatings, upon completion of the final coats of paint to principally check the minimum dry film thickness (DFT) of the coatings.
- E. The Manufacturer's representative shall assist in performing the first year and second year anniversary inspection of the interior and exterior coatings at no additional cost to the Owner.

1.8 INSPECTION

It shall be the responsibility of the paint manufacturer to work with the Contractor as a working team to obtain a good protective coating for the interior and exterior surfaces of the reservoir

1.9 EXISTING FILTER CONDITIONS

A. PREVIOUS INTERIOR COATING

Previous coating systems are as follows:

1. Prime Coat: Tnemec Series 66 Hi-Build Epoxoline White 6.0-8.0 mils DFT
2. Finish Coat: Tnemec Series 66 Hi-Build Epoxoline Beige 6.0-8.0 mils DFT
3. Total DFT: 12.0-16.0 mils DFT

B. PREVIOUS EXTERIOR COATING

Previous coating systems are as follows:

1. Prime Coat: Tnemec Series 66 Hi-Build Epoxoline White 6.0-8.0 mils DFT
2. Finish Coat: Tnemec Series 66 Hi-Build Epoxoline 10 mils DFT
3. Total DFT: 16.0 to 18.0 mils DFT

C. RCRA 8 METALS

Appendix D summarizes the RCRA 8 Metals found from testing existing Filters 2 and 3.

1.10 DELIVERY, STORAGE AND HANDLING

Deliver materials to the site in the paint manufacturer's original, unopened containers and packaging, with label clearly identifying:

- Coating or material name.
- Name of Paint Manufacturer.
- Color name and number.
- Date of manufacture.
- Batch number.
- Mixing and thinning instructions

Store paint materials in a protected area that is heated or cooled to maintain temperature range recommended by the paint manufacturer.

Keep materials sealed until time of application.

Do not use materials after expiration of shelf life limit as indicated by the Paint Manufacturer.

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

Subject to compliance with the Specifications contained herein, approved manufacturers offering coating systems which may be incorporated into the work include, but is not necessarily limited to the following:

1. Tnemec Company.
2. Sherwin Williams.

Tnemec Company, Inc. and Sherwin Williams paint products are listed. All colors and types of paints indicated are Tnemec or Sherwin Williams coating systems.

All coating applications shall be to the manufacturers' standards, specifications, requirements, and recommendations. Substitutions will be considered but must meet the performance requirements stated herein and be approved by the Owner. Offers for substitutions will not be considered which decrease dry film thickness, increase volume of solvents, decrease the number of coats to be applied, or which proposes a change from the generic type of coating specified herein.

Substitutions must be shown to be compatible as a coating system. All substitutions shall include complete laboratory test reports to demonstrate proposed coating materials comply with specified performance criteria.

Paint application shall be performed in strict accordance with manufacturer's printed instructions except that minimum coating thickness specified in paint schedule herein shall govern.

2.2 STORAGE AND HANDLING

All materials delivered to the jobsite shall be in original sealed and labeled containers of the paint manufacturer.

Store paint materials in a protected area that is heated or cooled to maintain temperature range recommended by the paint manufacturer.

2.3 INTERIOR FILTER COATING

The interior coating system shall be suitable for potable water service (AWWA D102, ICS-3 modified for zinc-rich primer for entire interior surface). The interior system shall include:

A. ALTERNATIVE SYSTEM 1 – TNEMEC

1. Primer: Tnemec Series 91-H2O or 94-H2O Hydro-Zinc, 2.5 to 3.5 mils DFT.
2. Stripe Coat: Tnemec Series 20 Pota-Pox, 2.5 to 3.5 mils DFT.
3. Intermediate Coat: Tnemec Series 20 Pota-Pox, 3.0 to 6.0 mils DFT.
4. Finish Coat: Tnemec Series 20 Pota-Pox, 3.0 to 6.0 mils DFT.

The total dry film thickness of the complete interior paint coating system shall be in the range of 8.5 to 15.5 mils, not including the stripe coat. The stripe coat shall be applied at 2.5 to 3.5 mils DFT with a total dry film thickness in the range of 11.0 to 19.0 mils.

B. ALTERNATIVE SYSTEM 2 – SHERWIN WILLIAMS

1. Primer: Corothane 1 Galvapak 1K or 2K Zinc, 2.0 to 4.0 mils DFT.
2. Stripe Coat: Macropoxy 646 PW, 2.0 to 3.0 mils DFT.
3. Intermediate Coat: Macropoxy 646 PW, 4.0 to 6.0 mils DFT.

4. Finish Coat: Macropoxy 646 PW, 4.0 to 6.0 mils DFT.

The total dry film thickness of the complete interior paint coating system shall be in the range of 10.0 to 16.0 mils, not including the stripe coat. The stripe coat shall be applied at 2.0 to 3.0 mils DFT with a total dry film thickness in the range of 12.0 to 19.0 mils.

2.4 EXTERIOR FILTER COATING

The exterior coating system shall meet the requirements of AWWA D102, OCS-6, as modified herein. The exterior system shall include:

A. ALTERNATIVE SYSTEM 1 – TNEMEC

1. Primer: Tnemec Series 91-H2O or 94-H2O Hydro-Zinc, 2.5 to 3.5 mils DFT.
2. Stripe Coat: Tnemec Series 20 Pota-Pox, 2.5 to 3.5 mils DFT.
3. Intermediate Coat: Tnemec Series 20 Pota-Pox, 3.0 to 6.0 mils DFT.
4. Finish Coat: Tnemec Series 20 Pota-Pox, 3.0 to 6.0 mils DFT.

The total dry film thickness of the complete interior paint coating system shall be in the range of 8.5 to 15.5 mils, not including the stripe coat. The stripe coat shall be applied at 2.5 to 3.5 mils DFT with a total dry film thickness in the range of 11.0 to 19.0 mils.

B. ALTERNATIVE SYSTEM 2 – SHERWIN WILLIAMS

1. Primer: Corothane 1 Galvapak 1K or 2K Zinc, 2.0 to 4.0 mils DFT.
2. Stripe Coat: Macropoxy 646 PW, 2.0 to 3.0 mils DFT.
3. Intermediate Coat: Macropoxy 646 PW, 4.0 to 6.0 mils DFT.
4. Finish Coat: Macropoxy 646 PW, 4.0 to 6.0 mils DFT.

The total dry film thickness of the complete interior paint coating system shall be in the range of 10.0 to 16.0 mils, not including the stripe coat. The stripe coat shall be applied at 2.0 to 3.0 mils DFT with a total dry film thickness in the range of 12.0 to 19.0 mils.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

A. PREPARATION

Preparation for recoating the interior surfaces shall include removal of existing filter and adsorption clarifier media and cleaning of the entire filter. Inlet and outlet piping shall be plugged to prevent sediment and abrasive blast material from entering them.

All appurtenances that are not to be painted shall be removed such as instrumentation, old anodes, the backwash gate, etc. Coordinate with City staff for storage of these items during work.

B. ABRASIVE BLASTING

All interior and exterior steel surfaces to be painted shall receive a blast cleaning in accordance with sspc sp-10 (near white blast), as verified using sspc-vis-1, to remove all existing paint, corrosion, and mill scale. Surfaces shall be cleaned of all dirt, mud, oil, grease, mill scale, weld spatter, weld scabs, and foreign materials. The final prepared surface shall be clean, dry, and free of contaminants.

All blast-cleaned areas shall be primed the same day that the surfaces are blasted. Longer time periods for painting after blasting may be allowed if the dew point, humidity and temperature are within the coating manufacturers requirements. Longer time periods must be approved by the owner.

C. CONTAINMENT OF ABRASIVE BLASTING

The Contractor shall contain airborne and other materials using best management practices and available technologies that are in compliance with applicable federal, state, and local air pollution authorities, environmental control regulations and fugitive dust emissions. The Contractor shall use acceptable containers for the collection, storage, transport and disposal of specified waste materials.

The filter to be abrasive blasted must be fully contained as described within this specification. Furthermore, the remaining filters and all other equipment within the water treatment plant must be protected from dust and other contaminants in order to remain operational throughout the duration of the project. The containment shall, as a minimum, meet the

requirements of Class 1A containment as provided by the SSPC Guide 6 and meet the following:

Penetrability:	Type B1 – Air Impenetrable
Joints:	Type D1 – Fully Sealed
Entryways:	Type E2 – Entryway through Resealable Doors
Air Supply (Intake Points):	Type F1 – Controlled Air Supply (Intake)
Air Pressure Inside Containment:	Type H2 – Visual Verification
Exhaust Air Flow/Dust Collection:	Type J1 – Air Filtration Required
Methods for Assessing Quantity of Emissions:	Method G – Visual Assessment of Site Cleanliness. Owner may elect to use Methodology A-F, as necessary, at Owner’s expense.

D. SURFACE CONDITIONS FOR PAINTING

After surface preparation has been completed and prior to painting, all dirt, dust and similar contaminants from the surface shall be removed. It is the responsibility of the Contractor to ensure that all surfaces are prepared in accordance with the written recommendations and the directions of the Paint Manufacturer.

Coatings shall be applied only when humidity, air and surface temperatures are within limits prescribed by the Paint Manufacturer for the coating being applied.

E. ABRASIVE BLAST DISPOSAL

The interior and exterior coatings systems of existing Filters 2 and 3 within the WTP have been tested for RCRA 8 metals, and the results can be seen in Appendix D. The Contractor should assume that the interior and exterior coatings of Filter 1 contain similar levels of RCRA 8 metals as Filters 1 and 2, and should further be aware that the levels of detectable metals found in the field may be twice that of those levels listed in the test results.

The Contractor shall be responsible for transporting and disposing of all materials generated from the cleaning and painting processes, including but not limited to: all abrasive paint removal materials and all other non-hazardous substances, debris and rubbish generated from the surface preparation, application of the new coating system, and other construction activities. The Contractor shall have a TCLP test run on at least one composite sample of the waste prior to disposal, or as required by agency accepting the waste material.

All costs shall be borne by the Contractor. The Contractor shall dispose of the waste material in accordance with all federal, state and local regulations. Documentation of the location and proper disposal of blast materials shall be provided to the Owner prior to project closeout.

If materials chosen, or materials not chosen, by the Contractor for surface preparation, i.e., abrasives and/or additives, cause the waste blast to be categorized as hazardous waste, the additional costs for hazardous waste disposal shall be borne by the Contractor, regardless of any hazardous materials in the paint removed.

3.2 ENVIRONMENTAL REQUIREMENTS

A. GENERAL

The space to be controlled shall be sealed off as well as possible allowing air to escape at the bottom of the filter through the dust collection system away from the point where the dehumidified air is being introduced. For the interior, maintain a slight negative pressure. In no event shall dust or other particulates be allowed to leave the interior or containment system around the filter without being filtered. Environmental conditions shall be monitored using a manual Sling Psychrometer and US Department of Commerce Psychrometric tables.

Contractor shall take and record conditions at 4-hour intervals beginning at the start of each shift and throughout each work day where blasting and/or coating application takes place.

All submerged or intermittently submerged materials shall have surface preparation and coatings applied prior to installation unless otherwise approved by the Engineer. All pipe, pipe supports, and pipe hangers that will be painted shall have surface preparation and coatings applied prior to installation.

B. HUMIDITY

Provide dehumidification as required to maintain the relative humidity within the Paint Manufacturer's specified humidity range.

C. TEMPERATURE

1. Provide auxiliary heaters as required to maintain the temperature within the Paint Manufacturer's specified temperature range until complete cure of the coating system.
2. Heaters shall be installed in the process air supply duct between the dehumidifier and the filter, as close to the filter as possible.
3. Only electric or indirect gas-fired auxiliary heaters shall be used. No direct-fired space heaters will be allowed.
4. Air heaters or refrigeration equipment are not acceptable substitutions for dehumidification equipment.

D. VENTILATION

1. Provide ventilation during the coating evaporation stage in confined or enclosed areas in accordance with AWWA D102.
2. The ventilation system must be designed to match the air volume of the dehumidification equipment in such a manner that it will not interfere with the dehumidification equipment's capacity to control the filter as described herein.
3. Do not recirculate the air from the filter or from filtration equipment back through the dehumidifier when coating or solvent vapors are present.

E. DUST AND CONTAMINANTS

1. Schedule coating work to avoid excessive dust and airborne contaminants.
2. Protect work areas from excessive dust and airborne contaminants during coating application and curing.
3. Protect work areas from excessive dust and airborne contaminants falling onto wet paint from scaffolding during coating application and curing. If more than 10 percent of the work area, as

determined by the Owner, must be scraped to removed trapped contaminants and abrasives, the Owner shall have the option to require an additional coat of the affected coating layer on the entire interior or exterior of the filter.

F. LIGHTING

Lighting shall meet the requirements of SSPC Guide 12.

3.3 PAINTING

A. GENERAL APPLICATION REQUIREMENTS

It is the intent of these specifications that materials and workmanship be provided such that the highest quality job is obtained. The completed work, as a condition of acceptance, shall be free from runs, skips, mars and any other disfiguring mark due to faulty workmanship or faulty care of the completed work, and shall be free of film characteristics or defects that would adversely affect coating performance.

All accessories that are not to be painted as part of this project shall be removed, stored and reinstalled or masked off at the approval of the Owner to include, but not limited to galvanized metal, aluminum, and non-ferrous materials.

Mix, thin and apply coatings in accordance with the manufacturer's printed instructions. All containers brought onsite shall be new, unopened containers. Keep products in closed containers when not in use, to avoid contamination. Do not use mixed coatings beyond pot life limits. Use application equipment, tools, pressure settings and techniques in accordance with the recommendations of the Paint Manufacturer and the equipment manufacturer. Use full kit or measuring equipment to meet manufacturer's requirements.

After surface preparation has been completed and prior to painting, remove all dirt, dust, and similar contaminants from the surface.

It shall be the responsibility of the Contractor to ensure that all surfaces are prepared as specified herein and in accordance with the written recommendations and the directions of the paint manufacturer whose paint is being applied. The Contractor shall also comply with the directions of the Painting Inspector and the Owner.

All surfaces to be painted shall be in proper condition at the time the work is in progress, and no painting shall be performed under adverse

conditions. Air and surface temperatures and humidity shall be continuously monitored and be within specified limits prescribed by the manufacturer for the coatings being applied. Work areas shall be reasonably free of airborne dust at the time of application and while the coating is drying. Allow each coat of paint to dry thoroughly before applying next coat. Contractor shall provide fans, heaters, and dehumidifiers as necessary to provide proper painting and curing. The interior coating system must be cured within 7 days after application of the final coat unless otherwise approved by the Owner. Time to cure is defined as time to immersion and shall be 7 days at 77 degrees Fahrenheit unless provided in writing by the coating manufacturer.

Finish coats shall be uniform in color and sheen without streaks, laps, runs, sags, drips, ridges, or missed areas. Apply sprayed coatings uniformly at the spreading rate required to achieve the specified dry film thickness.

All welds, edges, and sharp angles shall be provided with a stripe coat prior to the application of the intermediate coat. The stripe coat shall be applied using a two-way, directional brush stroke to ensure a pinhole-free and monolithic film. Stripe coat shall be applied as a separate/stand alone coat. It shall be applied following the application of the prime coat and before application of the intermediate coat. Wet on wet stripe coating will not be allowed.

The coatings manufacture's recommended dry time for the prime coat must be adhered to prior to the application of stripe coat.

The Contractor shall correct finish coat defects to the satisfaction of the Owner. Repair or replace damaged materials and surfaces not scheduled to be coated. Touch-up of minor damage shall be acceptable where result is not visibly different from adjacent surfaces. Follow Paint Manufacturer's recommendations for preparation and application of recoats. Recoat entire surface where touch-up result is visibly different, either in sheen, texture, or color. Repair in accordance with the Paint Manufacturer's recommendations all coatings that exhibit film characteristics or defects that would adversely affect performance of the coating system.

B. CONTRACTOR DOCUMENTATION

The Contractor shall provide a final written report that paint coatings have been applied properly and meet the requirements of the Specifications. This report is in addition to the report prepared by the Owner's Painting Inspector.

As a minimum, the report shall include: Daily Activities Log, Surface Preparation Checklist, Coating Materials Report, Mixing Data Report, Wet Mil Thickness Report, Dry Mil Thickness Report and product batch numbers.

The Contractor shall make the information available to the Owner and Painting Inspector as requested for periodic review.

3.4 INSPECTION AND TESTING

The Owner may employ an independent Painting Inspector to perform specified inspections during preparation for painting and the painting process of the reservoir. Principal inspections will occur to ensure compliance with these Specifications:

- Surface preparation
- Application of full prime coat
- Brush on stripecoat
- Application of intermediate coat
- Application of finish coat
- Dry film thickness test
- Holiday testing

The Contractor shall be responsible for coordinating with the Owner and the Painting Inspector at least 24 hours prior to reaching an inspection stage. The inspections will be performed in accordance with Steel Structures Painting Council (SSPC) PA-2.

The Contractor shall be responsible (Owner may verify) for assuring conformance with all requirements of these Specifications. Contractor shall have onsite a wet film thickness gauge, dry film thickness gauge, steel temperature gauge, manual sling psychrometer, wet sponge type “holiday” detector and any other testing equipment necessary to ensure that the quality control requirements of the paint manufacturer and these Specifications are met. The full filter surface from the full water level down shall be checked for “holidays” using a low voltage, wet sponge, holiday detector producing 67.5 volts. Once all holidays are repaired to the satisfaction of the Owner, a complete recheck of the filter with a holiday detector shall be performed.

The total dry film thickness on all surfaces shall be measured in accordance with SSPC PA-2. A sufficient number of measurements shall be taken which are considered representative based on the surface area of the filter. The Owner reserves the right to determine compliance with the Specification for each individual coating (prime, intermediate and finish) via an SSPC PA-2.

Within one hour prior to the application of any coating, and thereafter at any time during the coating process if the conditions appear to deteriorate as noted by the Paint Manufacturer, Painting Inspector or the Owner, the Contractor shall record weather conditions, ambient air temperature, steel temperature, and dewpoint.

The Contractor shall provide the Painting Inspector and Owner or their representative with necessary equipment and labor to inspect all areas of the reservoir. Necessary equipment shall include safety harness, hoisting equipment, ladders, etc., and this equipment shall be the same as that used by the Contractor to paint the filter. If equipment operators are required, the Contractor shall provide the operators.

Wet film thickness tests shall be measured with a gauge that measures the wet film thickness within an accuracy of plus or minus 0.5 mil. A wet film thickness measurement shall be made for each 100 square feet of surface area painted. Dry film thickness tests shall be measured with a magnetic gauge that will measure the dry film thickness within an accuracy of plus or minus 0.25 mil. A sufficient number of dry film thickness measurements shall be made so that there is approximately one measurement for each 100 square feet of surface painted.

The Contractor shall furnish the Owner four copies of a written test report showing the results of the wet and dry film thickness tests made on the filter surfaces as well as daily weather and humidity conditions for all days when painting was performed on site. The report shall include the daily reports prepared by the Contractor.

The Owner and Painting Inspector will monitor the painting process, note the products used and verify the dry film thickness measurements. The Contractor shall provide all necessary safety equipment for the Owner, Painting Inspector, and Paint Manufacturer's Representative during all inspections including, but not limited to:

- A. Respiration protection equipment equal or better than that being used by workers on the project in compliance with applicable safety regulations; and
- B. Fall protection equipment including, but not limited to, full body harness, shock-arresting lanyards, proper connectors and lifelines, tie rods, and connections to structural members. Safety equipment shall be in good condition and fully functional for its intended purpose.

3.5 DISINFECTION

Before disinfecting, all scaffolding, planks, tools, rags, and any other material not part of the filter or operating facilities of the reservoir shall be removed. Then the surfaces of the filter shall be cleaned thoroughly using a high-pressure water jet and/or by wiping, sweeping and rinsing. Contractor shall perform washdown cleaning within 2 weeks of last interior coating application unless otherwise approved by the Owner. Contractor shall be careful not to damage the structure or the new coating system during preparation of the filter for disinfection. All water, dirt, and foreign material accumulated in the cleaning operation shall be removed.

The filter shall be disinfected and tested after all interior accessories are in place and the interior painting is completed and properly cured. Methods and procedures for disinfecting the filter shall conform to AWWA C653, Disinfection of Water Treatment Plants.

The use of chlorine solution (sodium hypochlorite) or dry chlorine (calcium hypochlorite) is anticipated as the active disinfecting agent. The Contractor shall be responsible for safe and proper handling and storage of chlorine compounds or other hazardous chemical that are used to perform this work. Handling of such chemicals shall be in accordance with chemical manufacturer's instructions and federal, state and local regulations. Other hazardous chemicals shall be used only after acceptance by the Owner and the Department of Health.

The intent of this Part of the Specifications is to ensure successful completion of bacterial and odor tests, protection of materials, health/safety and conservation of water. To achieve these requirements, the Contractor shall submit a Disinfection and Testing Plan, to include written procedures and drawings for disinfection of the filter and collecting of samples to be tested by an independent laboratory. The submittal shall include:

- A. Type of disinfection solution and method of preparation.
- B. Method of disposal for disinfecting filter wastewater.
- C. Disinfect all interior surfaces of the filter including filter media in accordance with the following method:
 1. Add sufficient chlorine through the filter effluent water or by the backwash water to ensure 25 mg/L chlorine residual.
 2. Allow disinfecting solution to remain at a minimum of 12 hours before being rinsed off.

3. Purge chlorinated water from the filter by backwashing.
4. Drain, dechlorinate and dispose of all chlorinated cleaning water into the Water Treatment Plant backwash disposal pond. Chlorinated water used for disinfection will be dechlorinated prior to disposal in accordance with AWWA C655. Residual chlorine and ammonia levels shall meet State of Washington standards for discharge into the receiving waters in accordance with WAC 173-201A – Table 240 Toxic Substances Criteria. Measured pH and measurable changes in pH and dissolved oxygen shall be in accordance with WAC 173-201A. No chlorinated water will be permitted to enter storm drains or surface waters.

D. SAMPLING

Prior to disinfecting the filter, the Contractor shall schedule sampling with the Owner.

- E. After disinfection and flushing of the chlorinated water, the Owner will allow the filter to stand for 24 hours. The water will then be tested by the Owner for the following:

- Bacteriological
- Volatile Organic Chemical (VOC) analysis

- F. Upon satisfactory test of the above, the filter will be placed into service.

- G. The filter will not be accepted as complete until all tests are acceptable. Any retesting required because of a failed purity test shall be paid for by the Contractor. Any water wasted due to a failed test shall be paid for by the Contractor.

3.6 GENERAL RESTORATION

Areas damaged by the Contractor, which are not specifically allowed for under the Contract shall be repaired or replaced by the Contractor at the Contractor's expense. The filter site shall be cleaned and restored to its original condition or better.

3.7 FIRST ANNIVERSARY INSPECTION

A first anniversary inspection of the coatings shall be performed after the Project is accepted by the Owner as complete. The Owner will notify the Contractor of the specific date of the second anniversary inspection. As part of this inspection, the Owner will drain and inspect the interior of the filter. The paint

manufacturer's representative and the Contractor shall attend the inspection. An inspection report will be prepared for the Contractor and paint manufacturer's representative to review. The report will include documentation pertaining to the number and types of failures observed.

The Contractor shall perform remedial work to correct any failures noted during the inspections, and shall be prepared to start immediately following notification of any failures by the Owner. All required remedial work shall be scheduled with the Owner. Such remedial work shall be completed in the shortest practicable time possible, considering the prevailing weather conditions that would affect such work.

A failure of the painting system shall be considered to have occurred at any location where coating has peeled off, blistered, or cracked, or at any location where rusting is evident. The Contractor shall make repairs at all points where failures are observed by removing the deteriorated coating, cleaning the surface, and recoating with the same paint system.

All repairs shall be performed in accordance with the paint manufacturer's specifications for preparation and recoating. All repair work shall be subject to the requirements for new work as specified herein, including disinfection and testing. The Contractor shall furnish the Owner two copies of all repair data recorded in relationship to weather conditions and testing reports showing the results of the dry film thickness measurements made on the filter.

If the area of failure on either the interior or exterior exceeds 25 percent of the respective area of the filter surface repaired as part of this Project, the entire coating system installed under this Project shall be removed and repainted, and the warranty period shall be extended for 2 years from the date of the repainting, including the requirement specified herein for a first and second year inspection. Contractor shall pay all costs borne by the Owner for full-time, Owner selected, NACE inspection and administration costs associated with recoating due to failure.

The Contractor shall be responsible for disinfection and testing of the filter at the anniversary inspection whether repairs are required or not.

***** END OF SECTION *****

DIVISION 11
EQUIPMENT

SECTION 11250

FILTER ACCESSORIES AND MEDIA

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes furnishing and installing, complete and in-place, filter underdrains, adsorption clarifier piping, sacrificial anodes, and other filter accessories, as well as for the adsorption clarifier and filter media, as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
02510	Disinfection

1.3 QUALITY ASSURANCE EQUIPMENT LIST

Filter media shall meet requirements of AWWA B100-01

1.4 SUBMITTALS

Submit gradation information and Safety Data Sheets for each media material in accordance with Section 01300 of the Specifications. Provide manufacturer's information for filter and clarifier piping and other accessories.

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

Filter media shall be media specifically manufactured for use in drinking water treatment plants. Media shall be as supplied by Leopold, Loprest, CEI, or approved equal. The depths of each layer of filter media, as well as the overall finished bed depth (33.75 inches) shall match the existing conditions with markup changes as shown in Appendix C. The quantity of the filter and adsorption clarifier media to be installed shall be as follows:

Garnet: 49 cubic feet
Silica Sand: 105 cubic feet
Anthracite: 210 cubic feet
Adsorption Clarifier Media: 280 cubic feet

All filter accessories shall be from Westech, Salt Lake City, Utah.

2.2 FILTER UNDERDRAINS

The filter underdrains shall be stainless steel Triton 93"OAL 0.005-93-SS with 3" Tri-seal.

2.3 ADSORPTION CLARIFIER WATER PIPING

The adsorption clarifier influent distribution piping shall be PVC to match existing and provided by Westech. Contractor to verify condition, size, and type of piping after media has been replaced.

2.4 ADSORPTION CLARIFIER AIR PIPING

The adsorption clarifier air piping header and laterals shall be PVC to match existing and provided by Westech. Contractor to verify condition, size, and type of piping after media has been replaced.

The air piping strainers shall be 0.75" MNPT, 640 style provided by Westech.

2.5 ANODE ASSEMBLIES

The sacrificial anodes shall be magnesium, 2.024-inch diameter, 1.5-inch NPT threaded on one end, 49 inches overall length to match existing. Contractor to verify type and condition of existing anodes after media has been removed.

2.6 ADSORPTION CLARIFIER MEDIA SCREEN GASKETS

The adsorption clarifier media screen gaskets shall be by Westech to match existing.

2.7 GARNET

The high density sand shall be 0.20 to 0.32 mm garnet. The garnet shall have a specific gravity between 4.0 to 4.1. The with a uniformity coefficient if 1.5. Acid solubility shall be 0.1 percent.

2.8 SILICA SAND

The filter sand shall be 0.35 to 0.45 mm silica sand with a uniformity coefficient of 1.4. The silica sand shall have a specific gravity greater than 2.6. The acid solubility shall be less than 5 percent.

2.9 ANTHRACITE

The anthracite shall be 1.0 to 1.2 mm with a uniformity coefficient of 1.3. Anthracite shall have a specific gravity greater than 1.55, acid solubility of <5 percent, Moh's hardness of 3.0, and moisture content of <2 percent.

2.10 ADSORPTION CLARIFIER MEDIA

The adsorption clarifier media shall be NSF61 approved, HPDE plastic beads with a specific gravity of less than 1.0.

The design mixture shall be 50 percent MS110, rolled/scarified beads and 50 percent MS107 virgin beads as supplied by Westech.

PART 3 EXECUTION

3.1 FILTER UNDERDRAINS

Install the filter underdrains per manufacturer's recommendation. The filter underdrains will be backwashed prior to media placement to visually verify distribution of backwash flow.

3.2 ADSORPTION CLARIFIER WATER PIPING

The adsorption clarifier influent distribution piping shall be installed per the manufacturer's recommendations.

3.3 ADSORPTION CLARIFIER AIR PIPING

The adsorption clarifier air piping header, laterals, and strainers shall be installed per the manufacturer's recommendations.

3.4 ANODE ASSEMBLIES

The sacrificial anodes shall be installed per the manufacturer's recommendations.

3.5 ADSORPTION CLARIFIER MEDIA SCREENS AND GASKETS

The Contractor shall install new clarifier media screen gaskets to replace the existing when he reinstalls the existing clarifier media screens. The existing clarifier media screens will be removed prior to the recoating work and filter replacement. The screens will be pressure washed to remove accumulated residue with care taken not to damage the screens.

3.6 HANDLING AND STORAGE OF FILTER AND ADSORPTION CLARIFIER MEDIA

Filter and adsorption clarifier media shall be handled and stored in a manner as approved by the Engineer that will ensure against contamination by dust, dirt, lubrication oils and greases, and other debris.

3.7 INSTALLATION OF FILTER AND ADSORPTION CLARIFIER MEDIA

The filter media layers shall be placed as shown in Appendix C, 1997 Filter Media Information, Triton Water Systems Filter with Triton Underdrain Media Design with markup changes for this project

Filter and adsorption clarifier media shall be installed in accordance with AWWA B100-01.

3.8 DISINFECTION

Filter and adsorption clarifier media and filter underdrains shall be disinfected in accordance with AWWA C653 and Section 09950-3.5 of the Specifications.

***** END OF SECTION *****

PART 5
WAGE RATES

PART 6
APPENDIX

APPENDIX A

SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

APPENDIX A

**SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA FORMS
FILTER 2 RESTORATION AND MEDIA REPLACEMENT**

These forms shall be completed in their entirety and submitted by the apparent two lowest Bidders to the City of Woodland by 12:00 p.m. (noon) of the second business day following the bid submittal deadline.

Failure to submit and meet the requirements as stated in Section 2.01.8 of the General Conditions shall be grounds for rejection of the bid. The City of Woodland will be the sole judge in determining if the prospective contractor meets the minimum experience requirements.

Contractor:

Name: _____

Address: _____

Phone: _____

Contact Person: _____

2. Delinquent State Taxes

Instructions to Bidders: Check the appropriate box

- The Bidder does not owe delinquent taxes to the Washington State Department of Revenue.

- Alternatively, the Bidder does owe delinquent taxes to the Washington State Department of Revenue.

If the Bidder owes delinquent taxes, they must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency.

(Date)

(Signature)

(Print Name)

(Title)

3. Claims Against Retainage and Bonds:

Instructions to Bidders: Check the appropriate box

- The Bidder has not had claims against retainage and bonds in the 3 years prior to the bid submittal date.
- Alternatively, the Bidder has had claims against retainage and bonds in the 3 years prior to the bid submittal date.

If the Bidder has had claims against retainage and bonds in the 3 years prior to the bid submittal date, submit a list of public works projects completed during this period that have had claims against retainage and bonds and include name of Project, contact information for the Owner, a list of claims filed against retainage and/or payment bond for any of the projects listed; and a written explanation of circumstances surrounding each claim and the ultimate resolution of the claim.

(Date)

(Signature)

(Print Name)

(Title)

4. Public Bidding Crime:

Instructions to Bidders: Check the appropriate box

- The undersigned certifies that the Bidder and/or its Owners have not been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.

- Alternatively, the undersigned confirms that the Bidder and/or its Owners have been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.

If the Bidder and/or its Owners have been convicted of a crime involving bidding on a public works contract, provide a written explanation identifying the date of the conviction and a description of the circumstances surrounding the conviction.

(Date)

(Signature)

(Print Name)

(Title)

5. Termination for Cause/Termination for Default

Instructions to Bidders: Check the appropriate box

- The undersigned certifies that the Bidder has not had any public works contracts terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date.

- Alternatively, the undersigned confirms that the Bidder has had public works contracts terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date.

If the Bidder has had any public works contracts terminated for cause or terminated for default in the 5 years prior to the bid submittal date, provide a written explanation for all contracts terminated for cause or terminated for default by identifying the project contract that was terminated, the government agency which terminated the Contract, the date of the termination, and a description of the circumstances surrounding the termination.

(Date)

(Signature)

(Print Name)

(Title)

6. Lawsuits

Instructions to Bidders: Check the appropriate box

- The undersigned certifies that the Bidder has not had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts.

- Alternatively, the undersigned confirms that the Bidder has had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts.

If the Bidder has had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, submit a list of lawsuits along with a written explanation of the circumstances surrounding each lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet the terms of contracts.

(Date)

(Signature)

(Print Name)

(Title)

7. Contract Time (Liquidated Damages)

Instructions to Bidders: Check the appropriate box

- The undersigned certifies that the Bidder has not had liquidated damages assessed on any project it has completed in the 5 years prior to the bid submittal date.

- Alternatively, the undersigned confirms that the Bidder has had liquidated damages assessed on projects in the 5 years prior to the bid submittal date.

If the Bidder has had liquidated damages assessed against projects in the 5 years prior to the bid submittal date, submit a list of projects along with Owner contact information, and number of days assessed liquidated damages. The Contracting Agency shall determine whether the Contractor has a pattern of failing to complete projects within Contract Time.

(Date)

(Signature)

(Print Name)

(Title)

8. Capacity and Experience

The Bidder shall have sufficient current capacity and the Project Superintendent assigned to the Project shall have experience to meet the requirements of this Project. The Bidder and Project Superintendent shall have successfully completed at least two projects as the prime contractor, of a similar size and scope, during the 5-year period immediately preceding the bid submittal deadline for this project. Similar size is defined as a minimum of 70 percent of the bid amount submitted by the Bidder.

A. Capacity

i. Gross dollar amount of work currently under contract:

ii. Gross dollar amount of contracts currently not completed:

iii. List five major pieces of equipment which are anticipated to be used on this project by the Contractor and note which items are owned by the Contractor and which are to be leased or rented from others:

iv. Number of superintendents on Bidder's staff:

B. Experience

i. General character of work performed by firm:

ii. Identify who will be the superintendent on this project and years of experience. Also, list the number of years this person has been with your firm.

iii. Similar Size and Scope Projects Completed in the Past 5 Years

#1 Owner's Name and Contact Information: _____

Owner is a Government Agency? ___ Yes ___ No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

#2 Owner's Name and Contact Information: _____

Owner is a Government Agency? ___ Yes ___ No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

#3 Owner's Name and Contact Information: _____

Owner is a Government Agency? ___ Yes ___ No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

9. Filter Coating Experience

The Contractor or subcontractor performing the surface preparation and painting shall have completed at least five potable water filter and/or reservoir recoating projects in the State of Washington during the 10-year period immediately preceding the bid submittal deadline for this project.

#1 Owner's Name and Contact Information: _____

Owner is a Government Agency? Yes No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

#2 Owner's Name and Contact Information: _____

Owner is a Government Agency? Yes No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

#3 Owner's Name and Contact Information: _____

Owner is a Government Agency? ___ Yes ___ No
Superintendent's Name: _____
Project Name: _____
Awarded Contract Amount: _____
Final Contract Amount: _____
Completion Date: _____
Project Description: _____

#4 Owner's Name and Contact Information: _____

Owner is a Government Agency? ___ Yes ___ No
Superintendent's Name: _____
Project Name: _____
Awarded Contract Amount: _____
Final Contract Amount: _____
Completion Date: _____
Project Description: _____

#5 Owner's Name and Contact Information: _____

Owner is a Government Agency? ___ Yes ___ No
Superintendent's Name: _____
Project Name: _____
Awarded Contract Amount: _____
Final Contract Amount: _____
Completion Date: _____
Project Description: _____

APPENDIX B

PERMITS

APPENDIX C

1997 FILTER MEDIA INFORMATION

Parent Item Component Item	Parent Description Component Description	Parent Draw # Qty Per	UM T Sz Rev Number	Oper Level Seq No R F Ty Seq	Size A	Rev	O In
99678	EQUIPMENT LIST-TR420A-W/TRITON						520STR
1 99675	UNDERDRAINS-WOODLAND, WA						
2 72232	ASSEMBLY-EQUIPMENT-CLARIFIER & FILTER-1/2TR420A W/TRITON	2.000	EA M B B 5200-310-11	1	1.00	N S S	520STR
3 78353	MEDIA DESIGN-A/C-1/2TR420A	2.000	EA M A 4 LOC-41C	1	1.00	N S S	520STR
	MEDIA DESIGN-FILTER-W/TRITON- 1/2TR420A	2.000	EA M B E LOC-52C	1	1.00	N S S	520STR
	REVISION: CHANGED ILMENITE TO GARNET JULY 16, 1997						
4 99754	INSTALLATION-VALVE & CONTROL- WOODLAND, WA	1.000	EA M B 52001310-35	1	1.00	N S S	520STR
5 99906	ASSEMBLY-BLOWER-TR420A/LP-W/ TRITON UNDERDRAINS	1.000	EA M B 52001310-15	1	1.00	N S S	520STR
6 77755	ANALYZER-TURB-HACH SS-6 4-20M+ OUTPUT-SURFACE SCATTER TYPE	1.000	EA P	1	1.00	N S S	520STR
	MODEL SS-6-120V-60HZ-TWO ALARM OUTPUTS- WITH CALIBRATION KIT, HACH #45000-10 (MANUALS REQUIRED)						
10 8323	ADHESIVE-SPRAY-SUPER77-3M CO + 17 OZ CAN SATERLEE #10077 OPT	1.000	EA P	1	1.00	N S S	520STR
11 95309	PAINT-TOUCH UP-TANK-2 GAL KIT TNEPEC FC20-	1.000	EA P	1	1.00	N S S	520STR
	COLOR: GB03 DELFT BLUE						
12 72208	THINNER-PAINT-1 GAL-TNEPEC #4	1.000	EA P	1	1.00	N S S	520STR
13 103630	ANALYZER-TURB-HACH 1720D- AQUATREND INTERFACE ONLY	1.000	EA P	1	1.00	N S S	520STR
	W/ SOM (SIGNAL OUTPUT MODULE) CATALOG #51350-00 (MANUAL LITERATURE REQUIRED)						

Parent Item Component Item	Parent Description Component Description	Parent Draw # Qty Per	UM T Sz Rev Number	Drawing . . . Level Seq No R F Ty Seq	Oper Seq No R F Ty Seq	Size B	Rev B	520STR
99675	ASSEMBLY-EQUIPMENT-CLARIFIER & FILTER-1/2TR420A W/TRITON	52001310-11						520STR
2 99676	M TANK-TR420A-TRITON STYLE WOODLAND, WA	1.000	EA P B	52001310-51	1	1.00 N S S		520STR
3 78020	M WASTE GATE-TR420A	1.000	EA P B	L3S-25	1	1.00 N S S		520STR
5 72486	M BRACKET-CYLINDER SUPPORT- TR420A	1.000	EA P C B	3082-1	1	1.00 N S S		520STR
6 89374	M BRACKET-MOUNTING-LEVEL TRANSMITTER	1.000	EA P B	52000858-22	1	1.00 N S S		520STR
7 50361	M TRITON~ 93.00-005-PVC+ BOTTOM DROP TUBE CONNECTION W/ 3" TRISEAL GASKET	18.000	EA P D	49187-1	1	1.00 N S S		520STR
8 72489	M STRAP-HEADER HOLDDOWN-8"-304SS	1.000	EA P B	3086-1	1	1.00 N S S		520STR
9 72491	M RETAINER-MEDIA-"A"-TR420A	2.000	EA P C 2	L3S-12A	1	1.00 N S S		520STR
10 72492	M RETAINER-MEDIA-"B"-TR420A	1.000	EA P C 2	L3S-12B	1	1.00 N S S		520STR
11 72494	M HEADER-INFLUENT DISTRIBUTION- TR420A-PER DWG L3S-24A	1.000	EA P B B	L3S-24A	1	1.00 N S S		520STR
12 78238	M ANGLE-HOLDDOWN-UNDERDRAIN-"A"- TRITON-TR420A	2.000	EA P B	L3S-28-1	1	1.00 N S S		520STR
13 78239	M ANGLE-HOLDDOWN-UNDERDRAIN-"B"- TRITON-TR420A	2.000	EA P B	L3S-28-2	1	1.00 N S S		520STR
14 72360	M LATERAL-AIR DISTRIBUTION- SCH80 PVC	7.000	EA P C	L3S-22	1	1.00 N S S		520STR
15 78021	M RETAINER-SEAL-SIDE-TR420A	2.000	EA P B	L3S-26	1	1.00 N S S		520STR
17 89364	M MONITOR-ULTRASONIC-LEVEL- + TWO WIRE-12 TO 28VDC POWER-4-20MA OUTPUT-ADJUSTABLE DAMPING- 2" NPT THREADED NOSE-NEVA 4 CONSTRUCTION-0.8' TO 16.4' RANGE MILLITRONICS "THE PROBE" PART NUMBER 86112010 (INSTRUCTION MANUALS REQUIRED)	1.000	EA P		1	1.00 N S S		520STR
18 78022	M RETAINER-SEAL-BOTTOM-TR420A	1.000	EA P B	L3S-27	1	1.00 N S S		520STR
19 81345	M ANCHOR-BOLT-RAWL-STUD-304SS- 1/2"-13-9" LG	18.000	EA P		1	1.00 N S S		520STR
20 72474	M NIPPLE-TBE-3.00X2.625 (CL)- SCH 80-PVC	2.000	EA P		1	1.00 N S S		520STR
21 97663	M CYLINDER-WATER ENERGIZED- 3.00 BORE-304SS BODY-303SS PISTON ROD- ANODIZED PISTON AND END CAPS FOR WATER SERVICE- 14" STROKE-5/8"-18UNF ROD END- BIMBA CYLINDER #D27962-A-14 (NOTE: EQUIVALENT TO 7014-DXP BUT ANODIZED FOR WATER SERVICE) WITH ROD CLEVIS #D-8314-A WITH PIVOT BRACKET #D-13512-A MUST SHIP COMPLETE	1.000	EA P		1	1.00 N S S		520STR
24 72249	M SWITCH-FLOAT-10AMP-PIPE MOUNT+ NO CONTACTS-W/20FT CABLE- SERIES 2900, HEALY RUFF #P20-NO (INSTRUCTION MANUALS REQUIRED)	1.000	EA P		1	1.00 N S S		520STR
25 72387	M SCREEN-SUCTION-3.00 NPT- MALE-FLOWEZY #M-24-10	2.000	EA P		1	1.00 N S S		520STR
26 72508	M COUPLING-SELF RESTRAINING-8FPS+	1.000	EA P		1	1.00 N S S		520STR

Parent Item Component Item	Parent Description Component Description	Parent Draw # Qty Per	UM T Sz Rev Number	Level Seq No R F Ty Seq	Oper O Ln	
99675	ASSEMBLY-EQUIPMENT-CLARIFIER GALVANIZED- WITH GRADE E SYNTHETIC GASKET AND GALVANIZED HARDWARE- VICTAULIC #STYLE 77	52001310-11		Rev B	Size B	520STR
29 72404	M ELBOW-90D-1.0NPT-150LB-GALV	1.000	EA P		1	1.00 N S S
30 72405	M CONNECTOR-CORD-STRAIGHT- .50 HUB-.400 TO .560 RANGE- NONMETALLIC LIQUIDTIGHT STRAIN RELIEF-T&B #2673	1.000	EA P		1	1.00 N S S
31 78241	M BOX-OUTDOOR-SINGLE GANG- 4 HOLE-.50 DIA-ALUMINUM- GRAY FINISH-SLATER #B-24	1.000	EA P		1	1.00 N S S
32 72411	M COVER-OUTDOOR BOX-SINGLE GANG+ BLANK-ALUMINUM-GRAY FINISH- SLATER #B-1 OR RED DOT #CCB OR RACO #5173	1.000	EA P		1	1.00 N S S
33 72412	M PIPE-TOE-1.0 SCH40 X 8.0" LG- GALV	1.000	EA P		1	1.00 N S S
34 72413	M PIPE-TOE-1.0 SCH40 X 66.0" LG- GALV	1.000	EA P		1	1.00 N S S
36 72415	M PIPE-TOE-2.0 SCH80 X 24.0" LG- PVC	1.000	EA P		1	1.00 N S S
37 72420	M BOLT-U-1.0PS-.31DIA X 2.19LEG- + ZINC PLATED	1.000	EA P		1	1.00 N S S
38 72426	M STRIP-.50 THK X 1.00 WIDE- NEOPRENE- WITH PRESSURE SENSITIVE ADHESIVE ON ONE SIDE- RUBATEX #G-207-N	240.000	IN P		1	1.00 N S S
39 72252	M STRIP-.25 THK X 1.50 WIDE- + NEOPRENE- WITH PRESSURE SENSITIVE ADHESIVE ON ONE SIDE- RUBATEX #G-207-N	480.000	IN P		1	1.00 N S S
40 72510	M CLEVIS-ROD-304SS-TR420A/LP	1.000	EA P B	L3S-23	1	1.00 N S S
41 72513	M PIN-CLEVIS-.50DIA X 1.25-SS- MCMMASTER #92390A381 OR EQUAL	1.000	EA P		1	1.00 N S S
42 72515	M PIN-COTTER-.125DIA X 1.25-SS- MCMMASTER #98401A477 OR EQUAL	1.000	EA P		1	1.00 N S S
43 72519	M NUT-HEX-JAM-.63-18 UNF-18-8 MCMMASTER #91847A435	1.000	EA P		1	1.00 N S S
44 72354	M STRAP-HEADER HOLDOWN-6"-304SS	2.000	EA P B	307--1	1	1.00 N S S
46 1967	M BOLT-HXHD-.38-16UNC X 1.25/18-8	32.000	EA P		1	1.00 N S S
47 3907	M BOLT-HXHD-.25-20UNC X .75/18-8	4.000	EA P		1	1.00 N S S
48 72427	M BEARING-PILLOW BLOCK- .75 SHAFT-SELF LUBRICATING- SELF ALIGNING-DODGE SERIES LMB800-PART #033692	2.000	EA P		1	1.00 N S S
49 72521	M BOLT-HXHD-.44-14UNC X 1.50/18-8	2.000	EA P		1	1.00 N S S
50 72523	M WASHER-LOCK-.44-MEDIUM/18-8	2.000	EA P		1	1.00 N S S
52 72525	M WASHER-FLAT-.44-MEDIUM/18-8	4.000	EA P		1	1.00 N S S
53 549	M NUT-HEX-.38-16 UNC/18-8	32.000	EA P		1	1.00 N S S
54 1037	M NUT-HEX-.31-18 UNC/18-8	2.000	EA P		1	1.00 N S S
55 1035	M NUT-HEX-.25-20 UNC/18-8	32.000	EA P		1	1.00 N S S

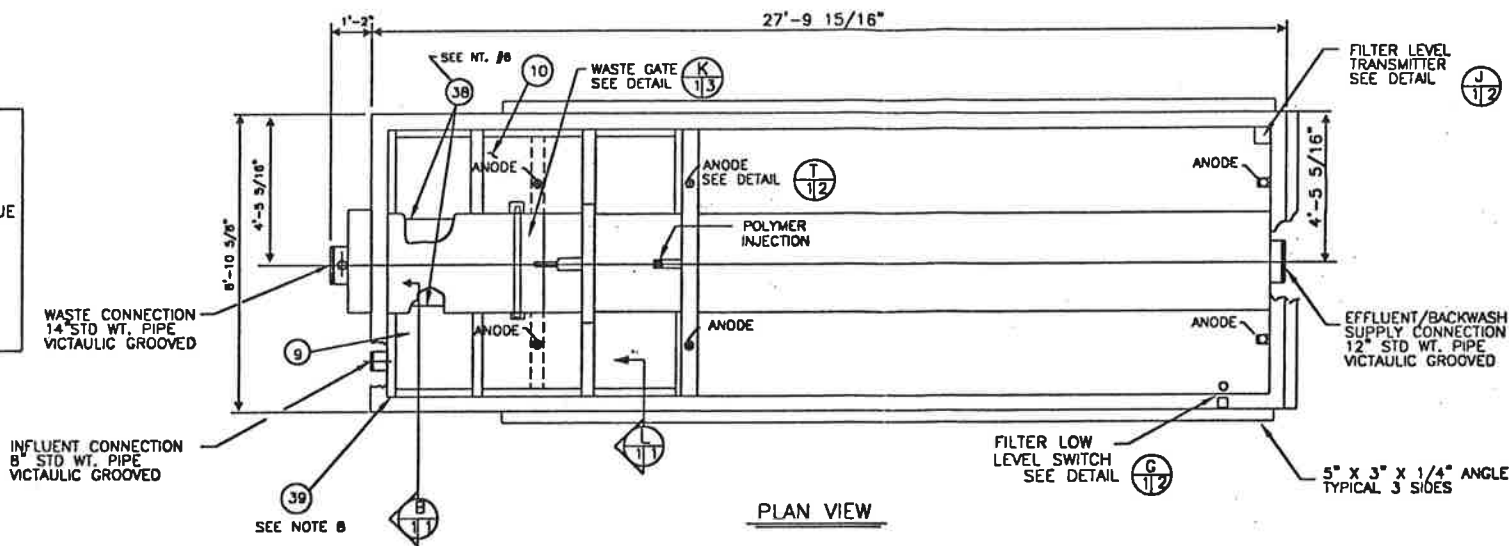
U. S. FILTER
 Bill of Material
 Single Level

Parent Item	Component Description	Parent Draw #	UM T Sz Rev Number	Oper	O Ltn	520STR
Component Item	Component Description	Qty Per	Rev B	Level Seq No R F Ty Seq	Level Seq No R F Ty Seq	520STR
99675	ASSEMBLY-EQUIPMENT-CLARIFIER	52001310-11		1	1.00 N S S	520STR
56 72428	M COLLAR-SHAFT-.75-1 PIECE-SS-DODGE #456232 OR RULAND#SC12SS	2.000	EA P	1	1.00 N S S	520STR
58 72526	M NUT-HEX-.44-14 UNC/18-8	2.000	EA P	1	1.00 N S S	520STR
60 938	M WASHER-LOCK-.38-MEDIUM/18-8	32.000	EA P	1	1.00 N S S	520STR
61 72446	M WASHER-LOCK-.31-MEDIUM/18-8	2.000	EA P	1	1.00 N S S	520STR
62 936	M WASHER-LOCK-.25-MEDIUM/18-8	34.000	EA P	1	1.00 N S S	520STR
66 935	M WASHER-FLAT-.38/18-8	64.000	EA P	1	1.00 N S S	520STR
67 72449	M WASHER-FLAT-.31-MEDIUM/18-8	2.000	EA P	1	1.00 N S S	520STR
68 934	M WASHER-FLAT-.25/18-8	36.000	EA P	1	1.00 N S S	520STR
69 72423	M BOLT-U-1.5PS-.25DIAx3.25LEG- + STAINLESS STEEL-1/4"-20 UNC-COMMERCIAL	14.000	EA P	1	1.00 N S S	520STR
72 72466	M ROD-ALL THREAD-.75-10UNCx6.0"/18-8	12.000	EA P	1	1.00 N S S	520STR
73 72468	M ROD-ALL THREAD-1.0-8UNCx6.0"/18-8	4.000	EA P	1	1.00 N S S	520STR
74 2490	M NUT-HEX-.75-10 UNC/18-8	36.000	EA P	1	1.00 N S S	520STR
75 5687	M NUT-HEX-1.00-8 UNC/18-8	12.000	EA P	1	1.00 N S S	520STR
76 2386	M WASHER-FLAT-.75/18-8	24.000	EA P	1	1.00 N S S	520STR
77 3770	M WASHER-FLAT-1.00/18-8	8.000	EA P	1	1.00 N S S	520STR
79 72460	M PAD-.25THKx2.5SQ-304SS	16.000	EA P	1	1.00 N S S	520STR
80 72528	M BEAM-HOLDDOWN-TR420A	2.000	EA P C	1	1.00 N S S	520STR
81 72530	M ANGLE-3.0X3.0X.38x93.0-CS- + ANGLE PER PROJECT PAINT SPECIFICATIONS-TANK INTERVALS	2.000	EA P	1	1.00 N S S	520STR
82 72533	M HEADER-AIR DISTRIBUTION-TR420A	1.000	EA P C 1	1	1.00 N S S	520STR
83 72535	M COUPLING-SELF RESTRAINING-4PS+ GALVANIZED- WITH GRADE E SYNTHETIC GASKET AND GALVANIZED HARDWARE- VICTAULIC #STYLE 77	1.000	EA P	1	1.00 N S S	520STR
84 72539	M STRAP-HOLDDOWN-4"HEADER-304SS	2.000	EA P B	1	1.00 N S S	520STR
85 72251	M SCREEN-SUCTION-.75NPT-FLOWEZY- #M-6-20	42.000	EA P	1	1.00 N S S	520STR
86 74469	M STRIP-.25 THK X 2.50 WIDE- + NEOPRENE- WITH PRESSURE SENSITIVE ADHESIVE ON ONE SIDE- RUBATEX #G-207-N	120.000	IN P	1	1.00 N S S	520STR
87 78016	M SCREW-HX HD-#10-24x1.00-18/8	26.000	EA P	1	1.00 N S S	520STR
88 78018	M WASHER-FLAT-#10-18/8	26.000	EA P	1	1.00 N S S	520STR
89 78019	M NUT-HEX-LOCK-#10-24-SS-ESNA	26.000	EA P	1	1.00 N S S	520STR
90 2003	M NUT-HEX-.50-13 UNC/18-8	36.000	EA P	1	1.00 N S S	520STR
91 1081	M WASHER-FLAT-.50/18-8	36.000	EA P	1	1.00 N S S	520STR
105 97494	M ANODE-SACRIFICIAL-2" NOM DIA- 1-1/2" NPT X 49" O.A. LENGTH	6.000	EA P B	1	1.00 N S S	520STR

DRAWING NUMBER:

11-01310029

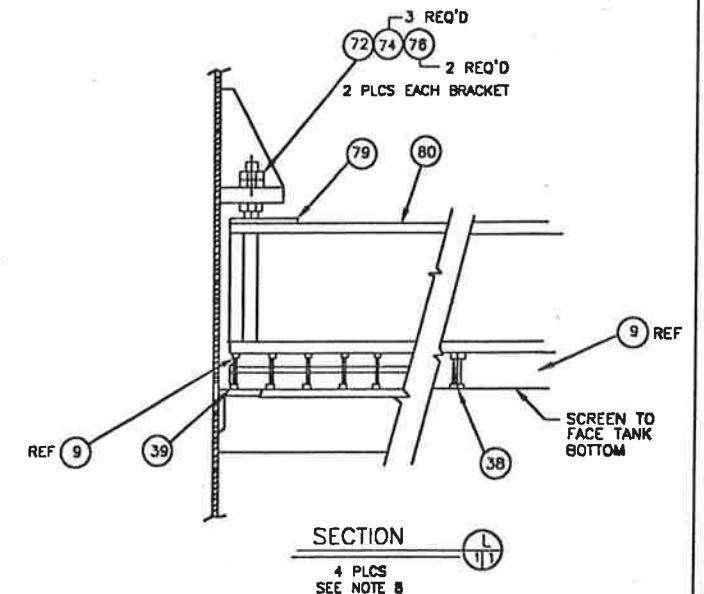
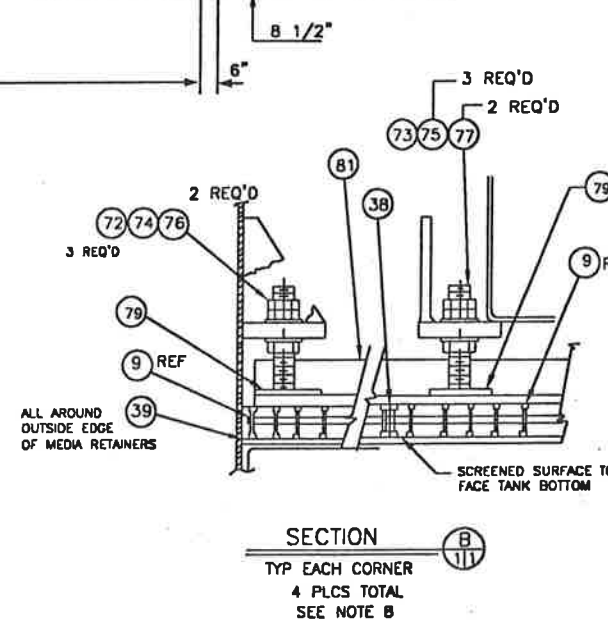
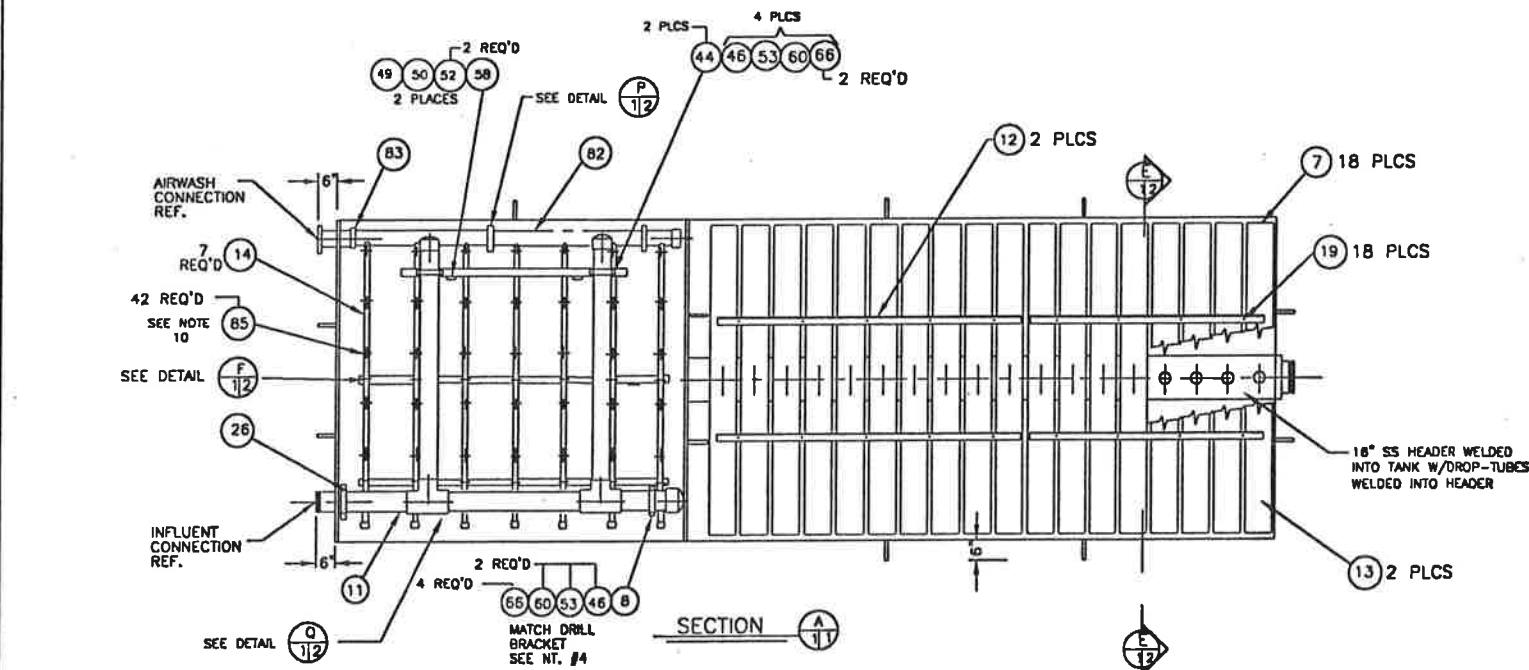
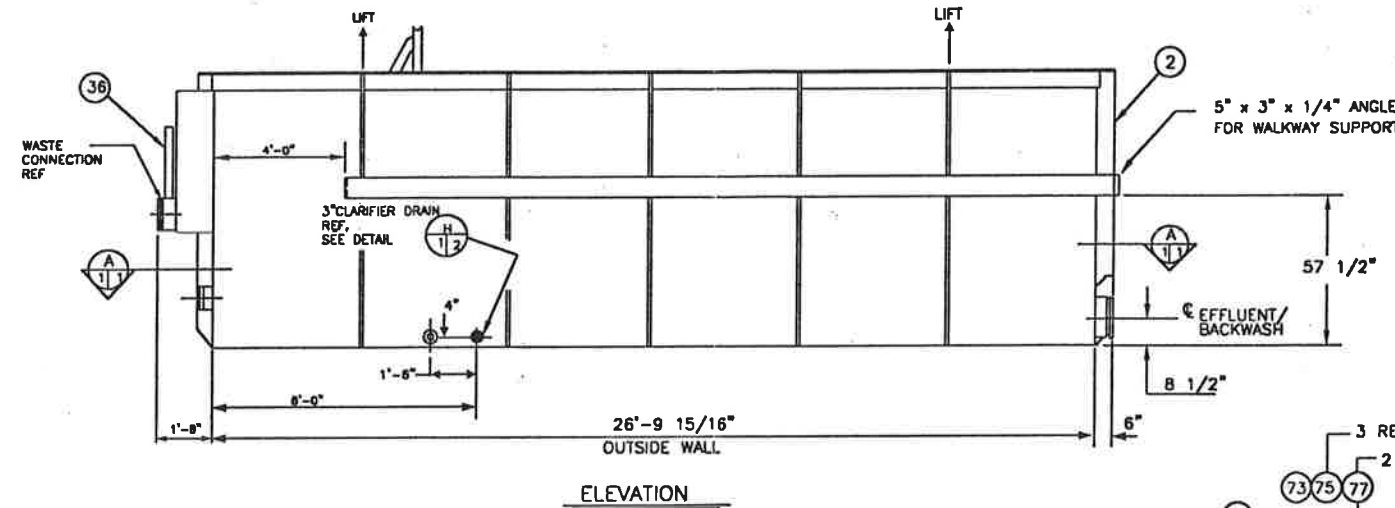
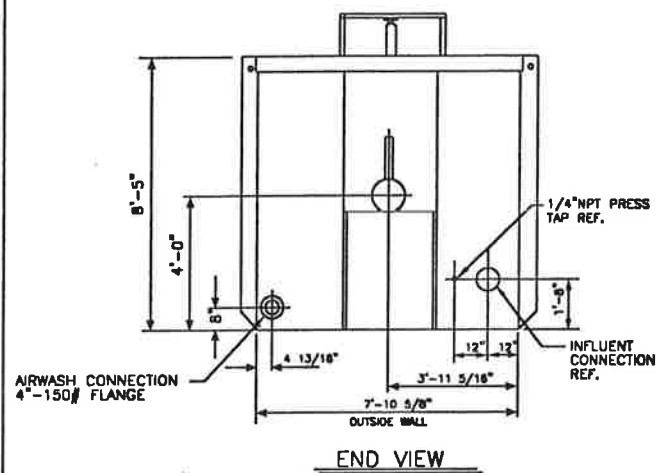
FINISH:
 INTERIOR (8-12mils DFT)
 SURFACE PREP PER PCS 2.10-NEAR WHITE BLAST
 1ST COAT = TNE MEC POTA-POX FC20-1255 BEIGE
 2ND COAT = TNE MEC POTA-POX FC20-GB03 DELFT BLUE
 EXTERIOR (4-6mils DFT)
 SURFACE PREP PER PCS 2.6
 1ST COAT = TNE MEC POTA-POX FC20-1255 BEIGE
 EXTERIOR FINISH COAT FIELD PAINTED BY OTHERS
 EXTERIOR TANK BASEPLATE TO BE UNFINISHED



NOTES:

1. ALL BOLTS AND NUTS SHALL BE INSTALLED WITH A FLAT WASHER NEXT TO THE PAINTED SURFACE. ALL FASTENERS SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH GOOD ASSEMBLY PRACTICES. DO NOT OVER TIGHTEN.
2. ALL EQUIPMENT TO BE ASSEMBLED AT THE JOBSITE BY OTHERS.
3. SEE BILL OF MATERIAL FOR QUANTITIES OF ALL ITEMS.
4. REMOVE ALL FOREIGN MATERIAL (METAL CUPS, SAND, GRAVEL, ETC.) FROM TANK INTERIOR PRIOR TO MEDIA INSTALLATION.
5. MEDIA SHOULD BE PLACED IN ADSORPTION CLARIFIER AFTER ALL AIR WASH LATERALS AND SUPPORTS HAVE BEEN ASSEMBLED AND PRIOR TO INSTALLATION OF MEDIA RETAINER COVER. THERE IS TO BE NO UNSCREENED OPENINGS IN MEDIA RETAINING COVER. SEE O&M MANUAL FOR MEDIA INSTALLATION PROCEDURES.
6. TANK BOTTOM IS TO BE SET IN COAL TAR OR ASPHALTIC BASE MASTIC COMPOUND FURNISHED AND APPLIED TO BASE PAD BY OTHERS.
7. SEE EQUIPMENT ADJUSTMENT PROCEDURE IN THE OWNERS MANUAL.
8. GASKET MATERIAL (ITEM 38) TO BE INSTALLED BETWEEN MEDIA RETAINER SCREENS. GASKET MATERIAL (ITEM 39) TO BE INSTALLED UNDER EDGES OF MEDIA RETAINER SCREENS.
9. CARE SHOULD BE TAKEN TO INSURE THAT ALL CAP-PLUGS AND FIBERGLASS TAPE ARE REMOVED FROM AIR WASH AND UNDERDRAIN LATERALS AT TIME OF INSTALLATION.
10. ALL AIR NOZZLES (ITEMS 85) MUST BE LEVELLED TO WITHIN 1/8\"/>

SEE ADDITIONAL NOTES ON SHEET 3.



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REF: BOM# 78191

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 2-PLACE DECIMALS +/-
 3-PLACE DECIMALS +/-
 ANGLES +/-
 BREAK ALL SHARP EDGES

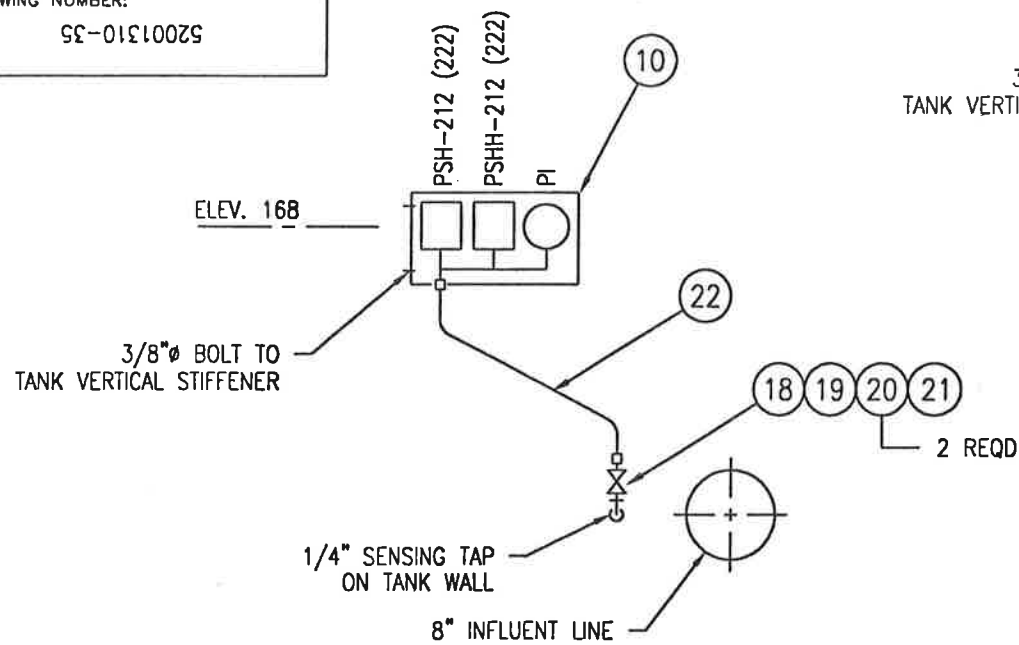
REF: L3A-2 (REV C)

APPR. BY: JK
 DRAWN BY: SMD
 SCALE: -

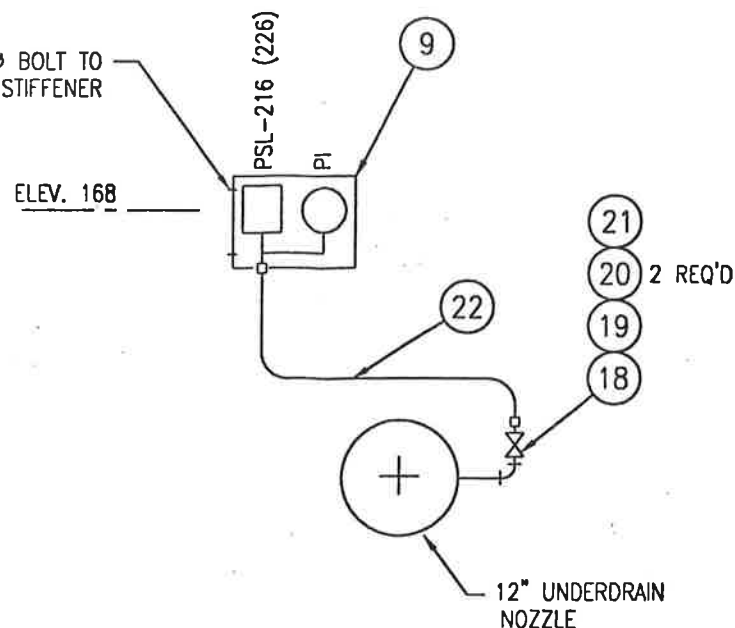
REV. NO.	REVISION	DATE	BY	APPR.
USFilter 441 Main St., P.O. Box 36, Sturbridge, MA 01566				
TITLE: CITY OF WOODLAND, WA ASSEMBLY, EQUIPMENT CLARIFIER & FILTER, 1/2 TR-420A W/TRITONS				
DATE: 10/20/98	SHEET NUMBER: SHEET 1 of 3	DWG. NUMBER: 52001310-11	REV: -	

Parent Item Component Item	Parent Description Component Description	Parent Draw # Qty Per	UM T Sz Rev Number	.. Drawing . Rev	Level Seq No R F Ty Seq	Oper O Ln
72232 2 72270	MEDIA DESIGN-A/C-1/2TR420A M MEDIA-HDPE-50/50 MIX- DESIGN MIXTURE OF 50% MS110 (ROLLED/SCARIFIED BEADS) & 50% MS107 (VIRGIN BEADS)	LOC-41C + 10600.000 LB P		4	1	520STR 520STR

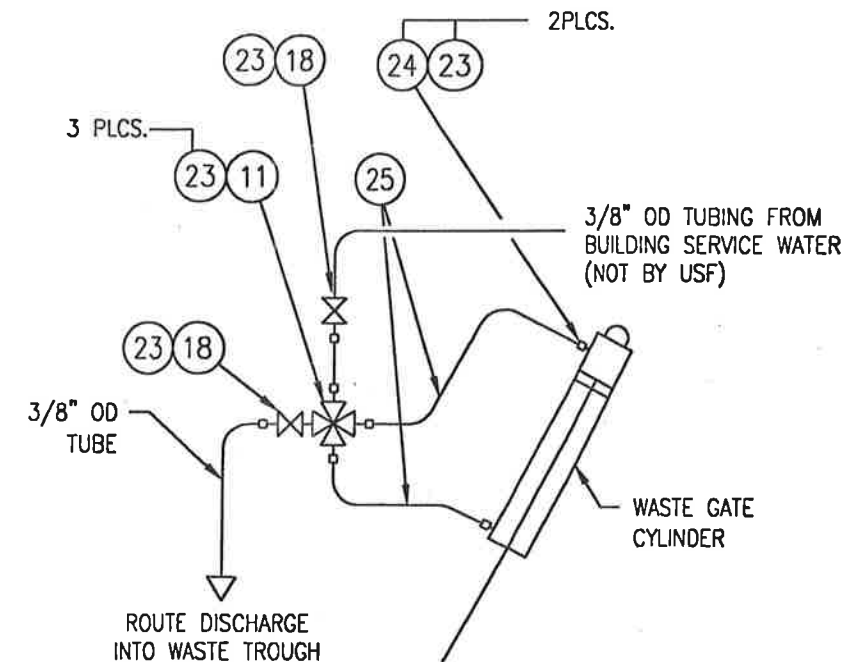
Parent Item Component Item	Parent Description Component Description	Parent Draw # Qty Per	UM T Sz Rev Number	.. Drawing . Level Seq No R F Ty Seq	Oper Size B	O Ln 520STR
78353	MEDIA DESIGN-FILTER-W/TRITON- 1/2TR420A	L0C-52C				
	REVISION: CHANGED ILMENITE TO GARNET					
	JULY 16, 1997					
2 72279	M ANTHRACITE-COAL-MS4-50# BAGS	229.000	BG P		1	1.00 N S S 520STR
3 72281	M SAND-SILICA-MS18-100 LB BAGS- .35 TO .45 mm EFFECTIVE SIZE	125.000	BG P		1	1.00 N S S 520STR
4 73773	M SAND-HI DENSITY-GARNET-MS-21- E.S. = .20-.32 MM-100 LB BAGS	42.000	BG P		1	1.00 N S S 520STR



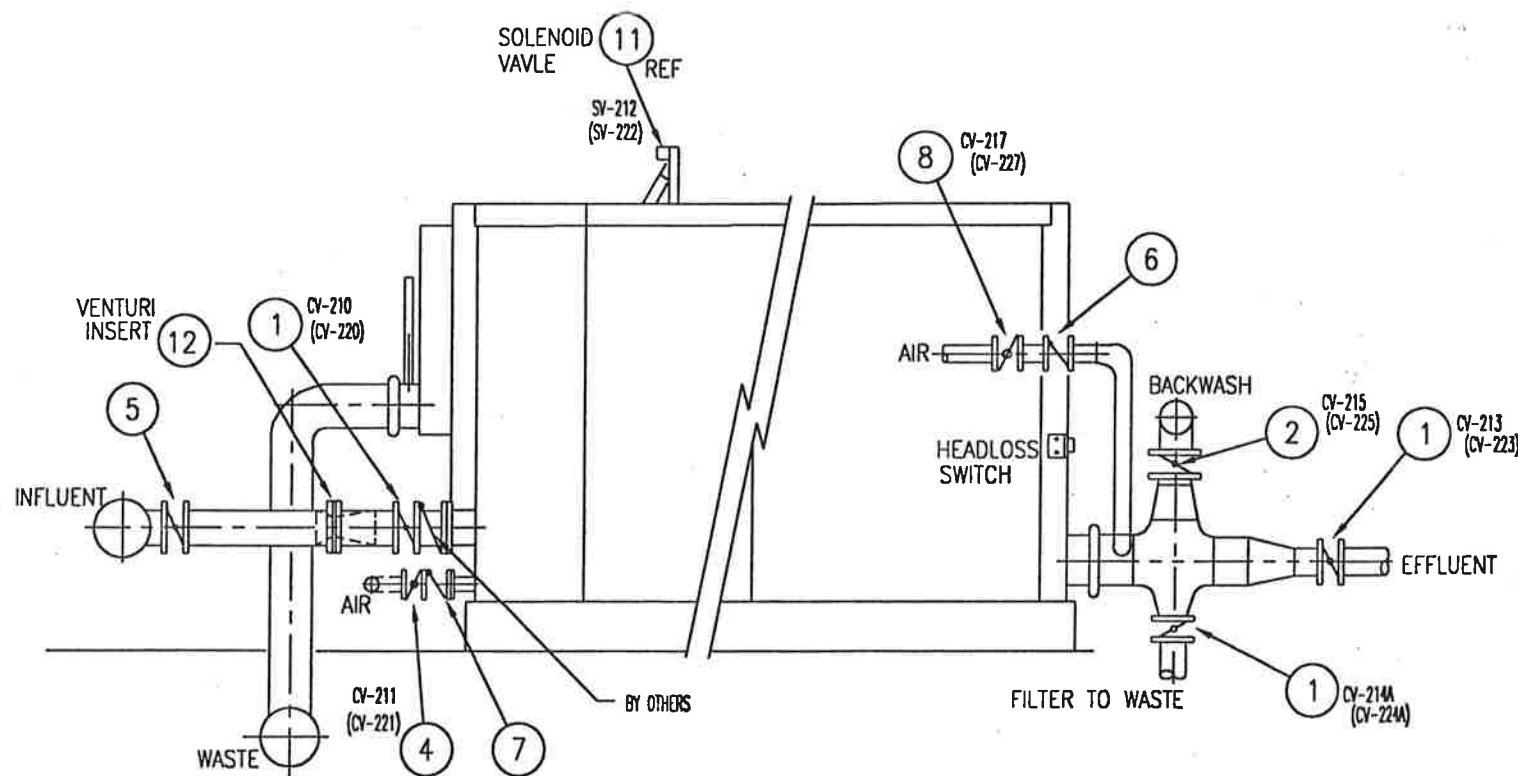
CLARIFIER PRESSURE SWITCHES
TYPICAL 2 PLACES



FILTER HEADLOSS SWITCH
TYPICAL 2 PLACES

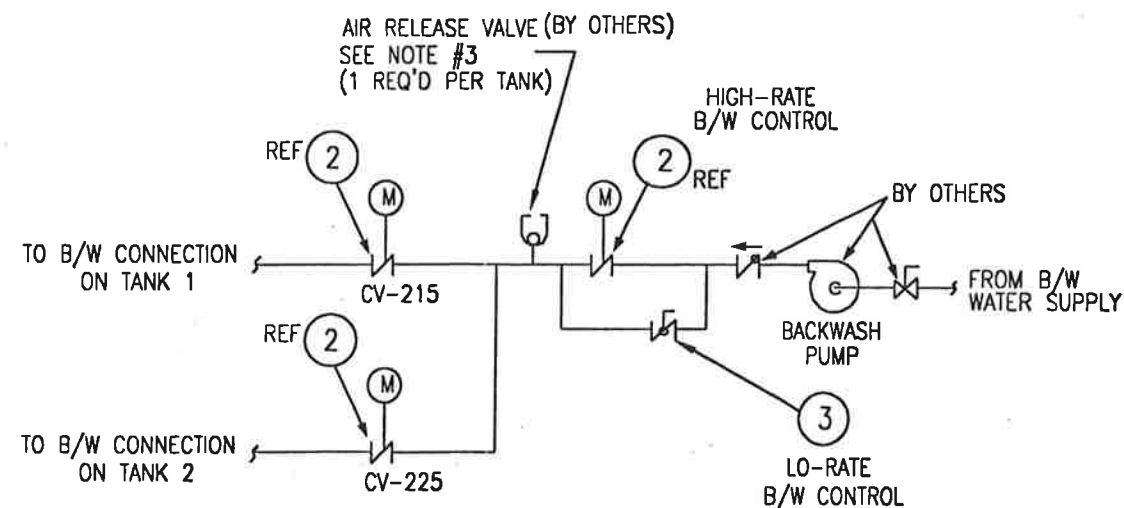


WASTE GATE SOLENOID VALVE
TYPICAL EACH TREATMENT UNIT
SV-212, SV-222



VALVES LOCATION

PIPING SHOWN IS REPRESENTATIVE - SEE CONTRACT DRAWINGS FOR EXACT LAYOUT



BACKWASH PIPING DETAIL

NOTES:

- ONLY THOSE ITEMS LISTED IN THE BILL OF MATERIALS ARE FURNISHED BY U.S.FILTER
- INSTALLATION OF ALL EQUIPMENT IS BY PURCHASER
- ONE AIR RELEASE VALVE (BY OTHERS) IS REQUIRED AT THE HIGH POINT OF THE BACKWASH PIPING. ADDITIONAL AIR RELEASE VALVES LOCATED AS CLOSE UPSTREAM OF EACH BACKWASH VALVE AS POSSIBLE ARE RECOMMENDED TO AVOID AIR DISRUPTION OF THE FILTER DURING BACKWASHING.

P/N 99754

SEE SEPARATE BILL OF MATERIALS

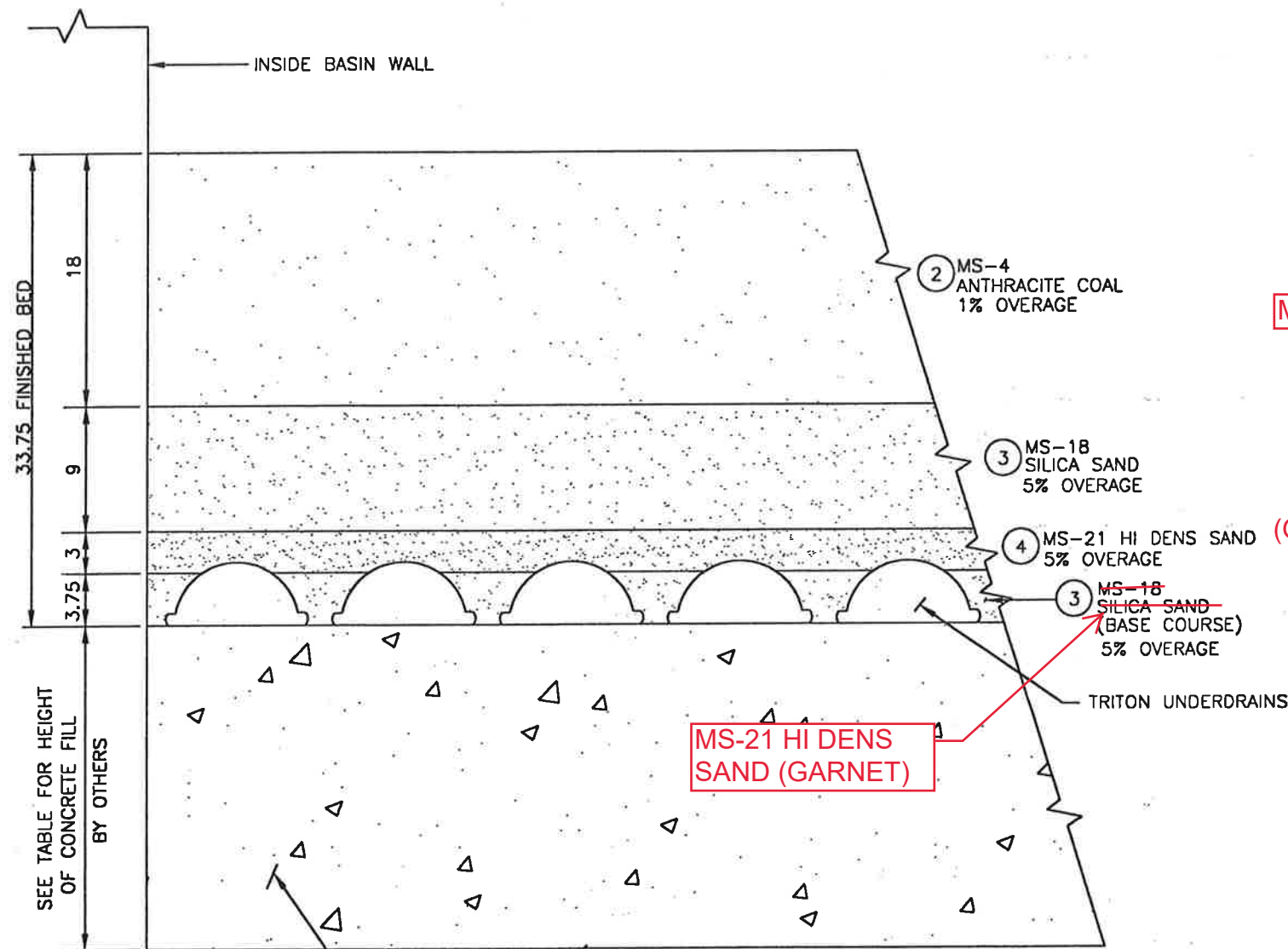
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DIMENSIONS ARE IN INCHES-
TOLERANCES OR:
2-PLACE DECIMALS +/-
3-PLACE DECIMALS +/-
ANGLES +/-
FRACTIONS +/-
BREAK ALL SHARP EDGES

APPL BY: JK DRAWN BY: SMD SCALE: DATE: 10/23/98 SHEET NUMBER: SHEET 1 OF 2 DRAWING NUMBER: 52001310-35 REV:

REV. NO.	REVISION	DATE	BY	APPL.
441 Main St., P.O. Box 38, Sturbridge, MA 01568				
CITY OF WOODLAND, WA				
VALVE & CONTROL INSTALLATION				

DRAWING NUMBER:
LOC-52



SEE TABLE
CONCRETE FILL (3,000 PSI MIN)
BY OTHERS

NOTES:

- 1A FILTER MEDIA BAGS MUST BE PROTECTED FROM THE WEATHER AND STACKED NOT MORE THAN 5(FIVE) HIGH TO PRECLUDE BREAKAGE.
- 1B WHEN BULK SHIPMENT IS USED, FILTER MEDIA MUST BE PROTECTED FROM THE WEATHER AND COVERED TO PREVENT WIND-BLOWN LOSS.
- 2 DURING MEDIA PLACEMENT, APPROXIMATELY TWO BACKWASH & SKIMMING OPERATIONS WILL BE REQUIRED. EACH BACKWASH WILL BE ABOUT A 10 MINUTE DURATION.
- 3 FILTER MEDIA PLACEMENT MUST BE DONE UNDER CPC TECHNICAL DIRECTION AFTER ALL ELECTRICAL, HYDRAULIC AND CONTROL SYSTEMS ARE INSTALLED AND/OR REPAIRED & OPERABLE PRIOR TO ARRIVAL OF TECHNICAL DIRECTOR.

- 4 PLACEMENT TOLERANCE:
THE FOLLOWING TOLERANCES SHALL APPLY TO MEDIA PLACEMENT.

3" LAYERS ± 1/2"
9" & DEEPER ± 1"
FINISHED FILTER BED ± 1"

ALL LAYERS OF MEDIA TO BE LEVEL IN ACCORDANCE WITH CPC MEDIA PLACEMENT SPECIFICATIONS.

- 5 FILTER GUARANTEE REQUIRES CPC TECHNICAL DIRECTION DURING MEDIA PLACEMENT.

B.O.M. QUANTITIES ARE FOR ONE TANK ONLY

B.O.M. NUMBER	LOC-52B / JDE 88123	LOC-52C / JDE 78353	LOC-52D / JDE 93140
UNIT DESIGNATION	1/2TR-210A	1/2TR-420A	1/2TR-840A
BED AREA (SQ. FT. EACH FILTER)	70 SQ FT	140 SQ FT	280 SQ FT
HEIGHT OF CONCRETE FILL IN TANK	15 1/8"	18 1/8"	22 3/4"
VOLUME OF UNDERDRAIN HEADERS WITHIN THE CONCRETE FILL	7.9 CU FT	25.7 CU FT	56.4 CU FT
VOLUME OF CONCRETE FILL REQUIRED AT BOTTOM OF TANK	81.0 CU FT	185.3 CU FT	474.2 CU FT
NUMBER OF TRITON PVC UNDERDRAINS	8	18	25
VOLUME OF TRITON PVC UNDERDRAINS WITHIN MS-18 FILL LAYER	13.3 CU FT	29.9 CU FT	57.7 CU FT
VOLUME OF TRITON PVC UNDERDRAINS WITHIN MS-21 LAYER	1.2 CU FT	2.5 CU FT	4.8 CU FT
NET VOLUME OF MS-4 REQUIRED *	105 CU FT	210.0 CU FT	420.0 CU FT
NET VOLUME OF MS-18 REQUIRED *	61.1 CU FT	118.8 CU FT	240.0 CU FT
NET VOLUME OF MS-21 REQUIRED *	16.4 CU FT	32.5 CU FT	65.2 CU FT
BACKWASH RATE AT 60° F. (SEE NOTE 5)		15 GPM/FT ²	
BACKWASH FLOW AT 60° F	1050 GPM	2100 GPM	4.200 GPM
MEDIA PLACEMENT WATER QUANTITY REQ'D AT 60° F	31,500 GAL./TANK (3 B/W'S @ 10 MIN EACH)	63,000 GAL./TANK (3 B/W'S @ 10 MIN EACH)	126,000 GAL./TANK (3 B/W'S @ 10 MIN EACH)

* VOLUME DOES NOT INCLUDE OVERAGE

SEE SEPARATE BILL OF MATERIAL

REV.	REVISION	DATE	BY	APPR.
E	CORRECTED TR840 TABLE & BOM - SEE ECN 99-03	3/8/98	WNB	
D	ADDED TR840 TO TABLE	8/16/98	DCS	
C	CHANGED MS-21 MATERIAL FROM ILMENITE TO GARNET.	9/3/97	WNB	
B	ADDED 1/2TR-210 TO TABLE AND EXPANDED TABLE INFORMATION	11/07/96	WNB	
A	CORRECTED MEDIA QUANTITIES; ADDED INFO ON VOLUME OF LATERALS WITHIN MS-18 & MS-21 LAYERS	10/23/96	WNB	

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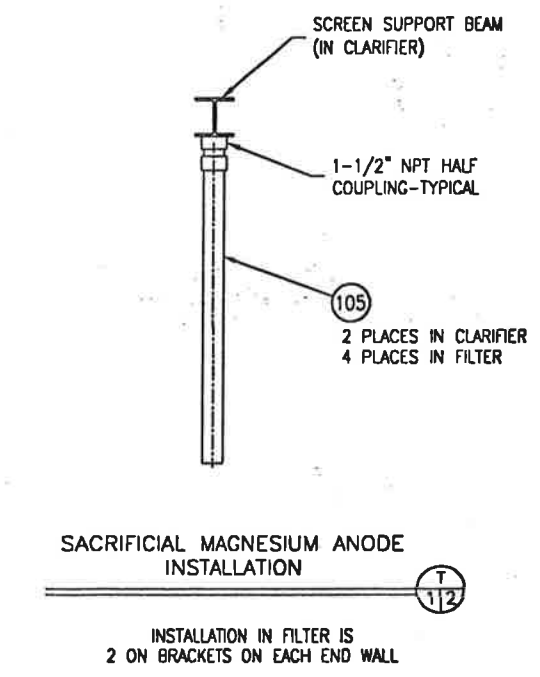
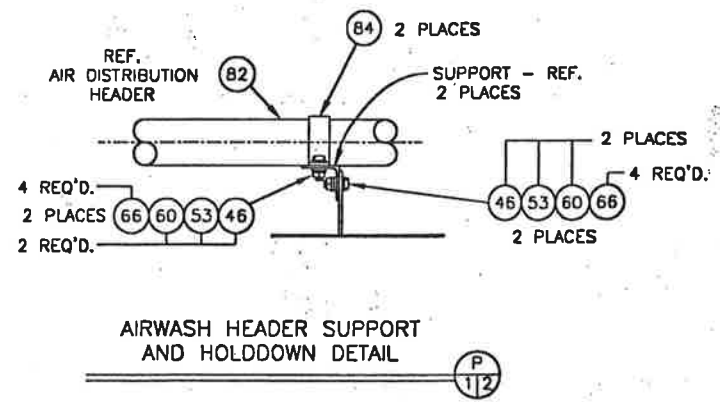
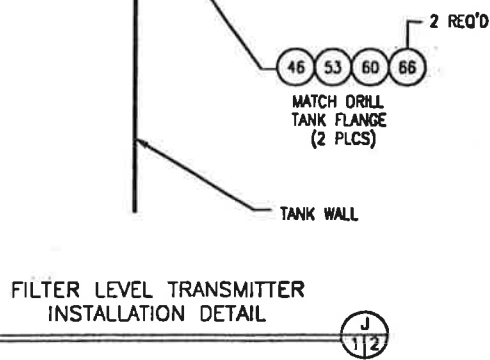
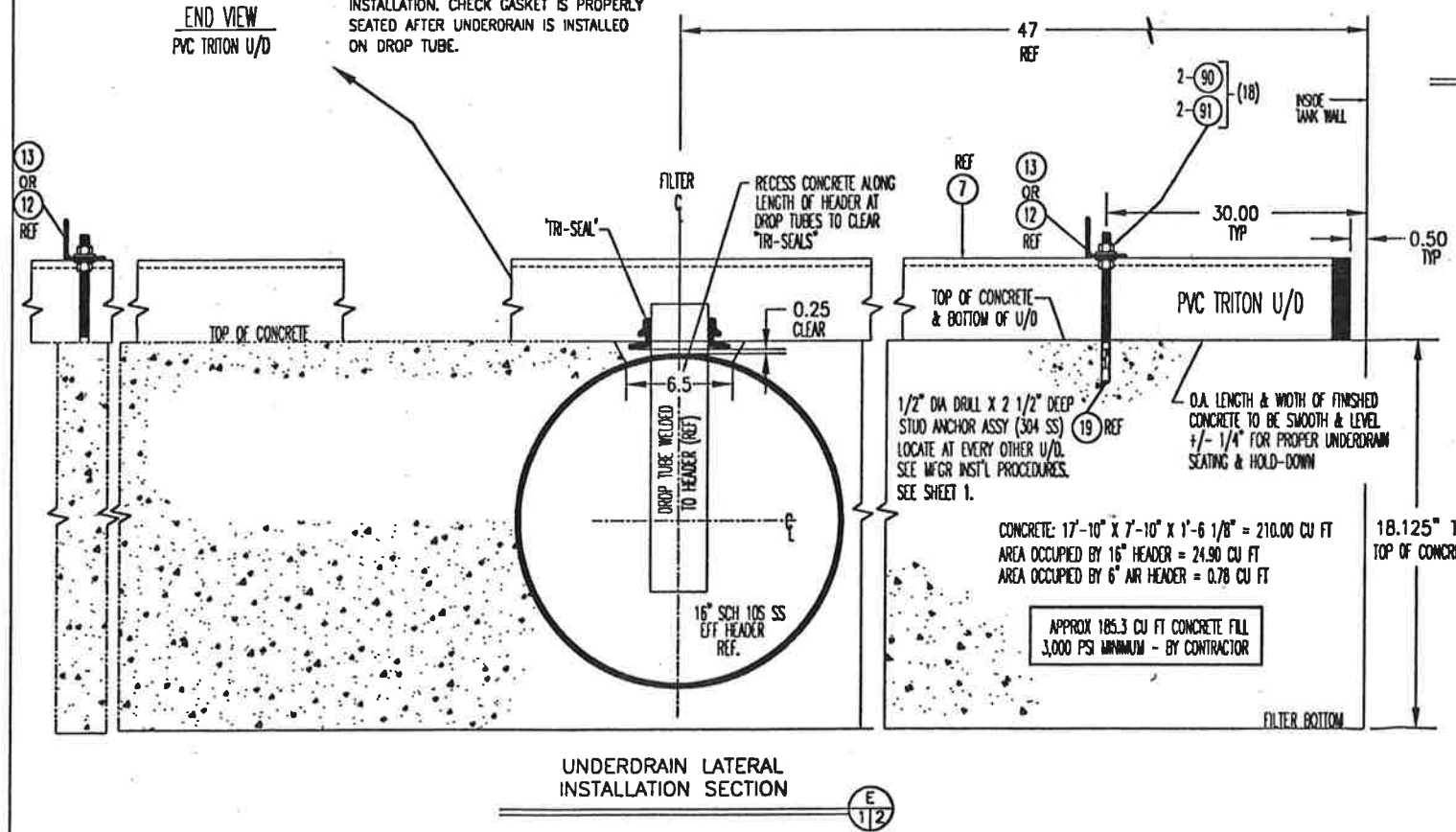
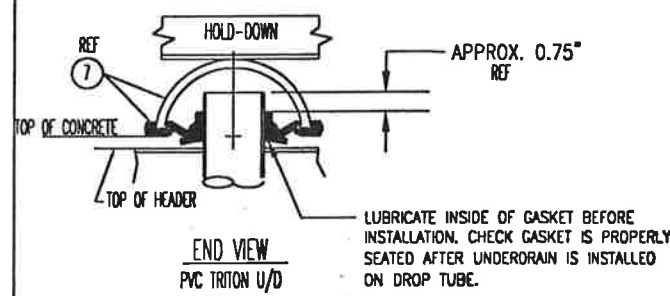
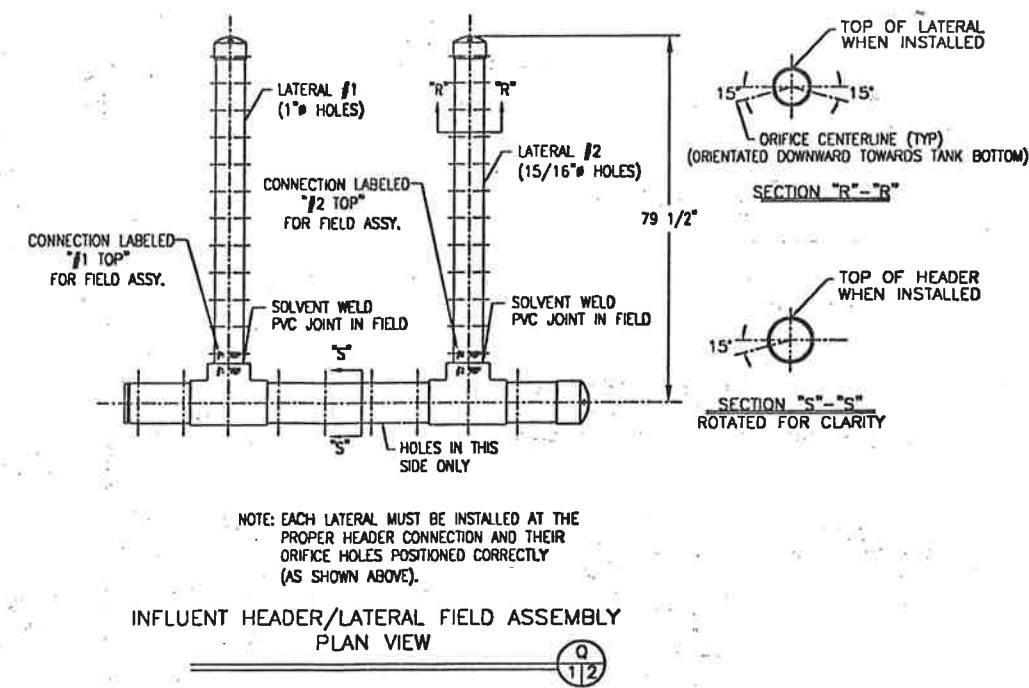
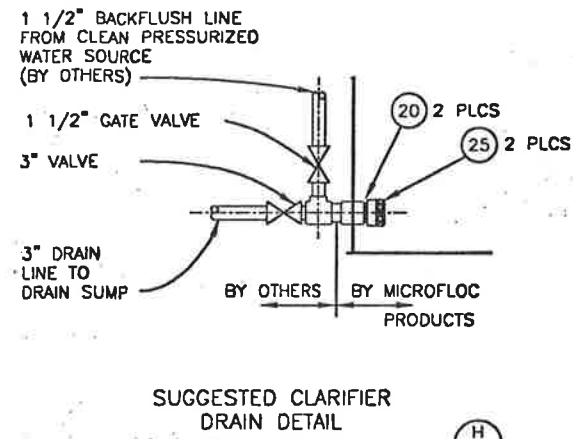
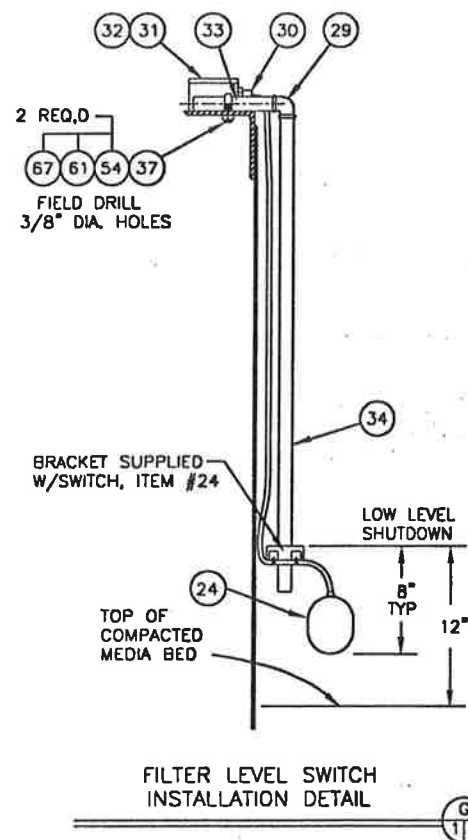
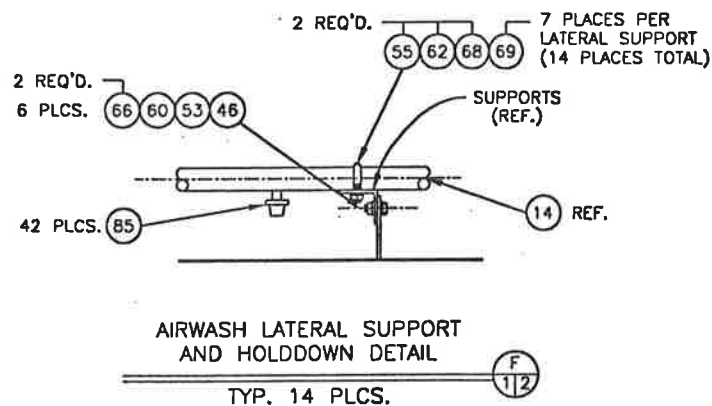
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3-PLACE DECIMALS +/-
ANGLES +/-
FRACTIONS +/-
BREAK ALL SHARP EDGES

USFilter USFilter
441 Main St., P.O. Box 36, Sturbridge, MA 01568

TITLE: TRIDENT WATER SYSTEMS
FILTER WITH TRITON UNDERDRAIN
MEDIA DESIGN

APPR. BY:	DESIGN BY:	SCALE:	DATE:	SHEET NUMBER:	DRAWING NUMBER:	REV.:
	WNB	NONE	3/5/96	SHEET 1 OF 1	LOC-52	E



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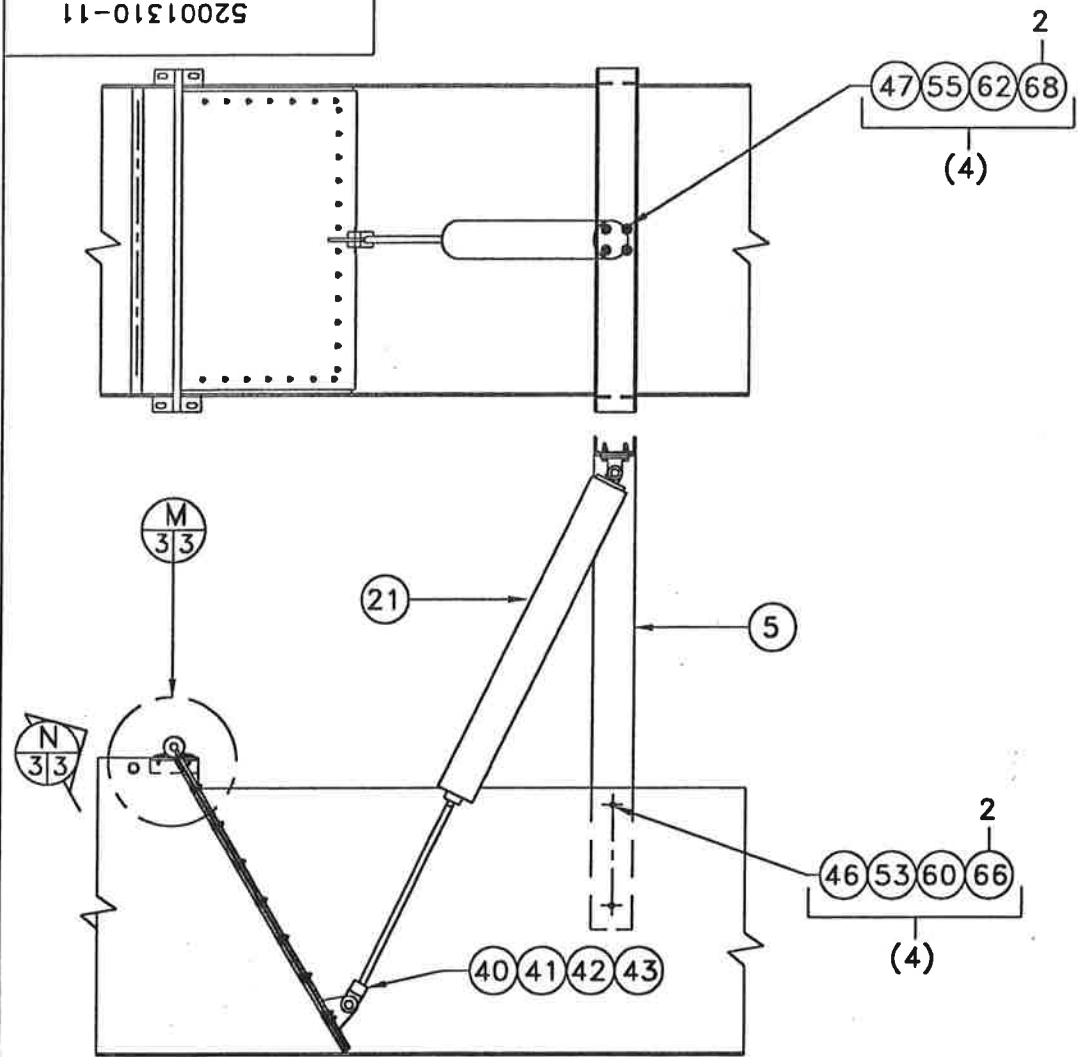
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ALL SURF. ✓

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APPR. BY: JK DRAWN BY: SMD SCALE: NTS DATE: 10/20/98 SHEET NUMBER: SHEET 2 OF 3 DRAWING NUMBER: 52001310-11

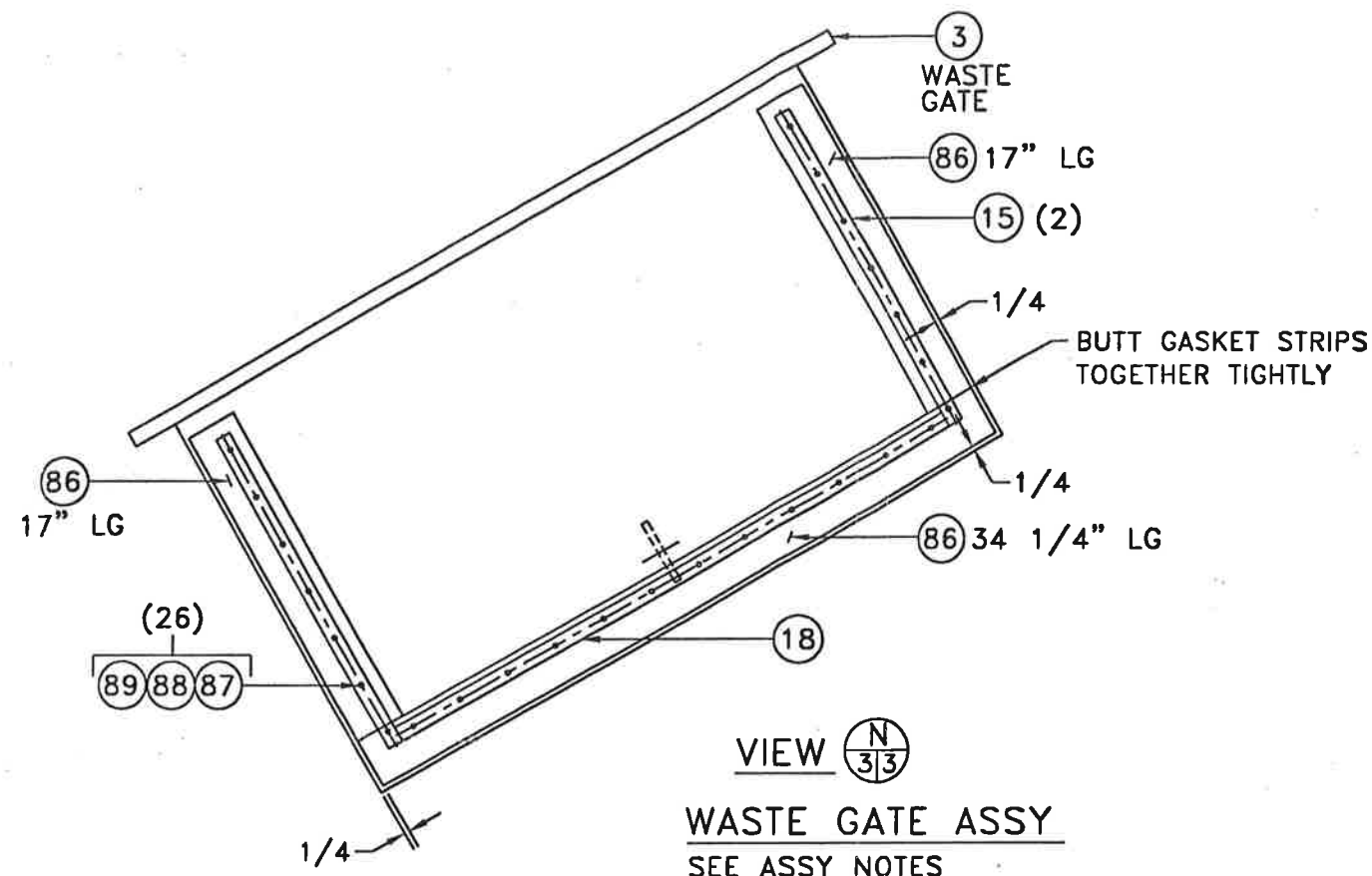
REV. NO.	REVISION	DATE	BY	APPR.
441 Main St., P.O. Box 38, Sturbridge, MA 01568				
CITY OF WOODLAND, WA ASSEMBLY, EQUIPMENT CLARIFIER & FILTER, 1/2 TR-420A W/TRITONS				
DATE:	10/20/98	SHEET NUMBER:	SHEET 2 OF 3	DRAWING NUMBER:
				52001310-11



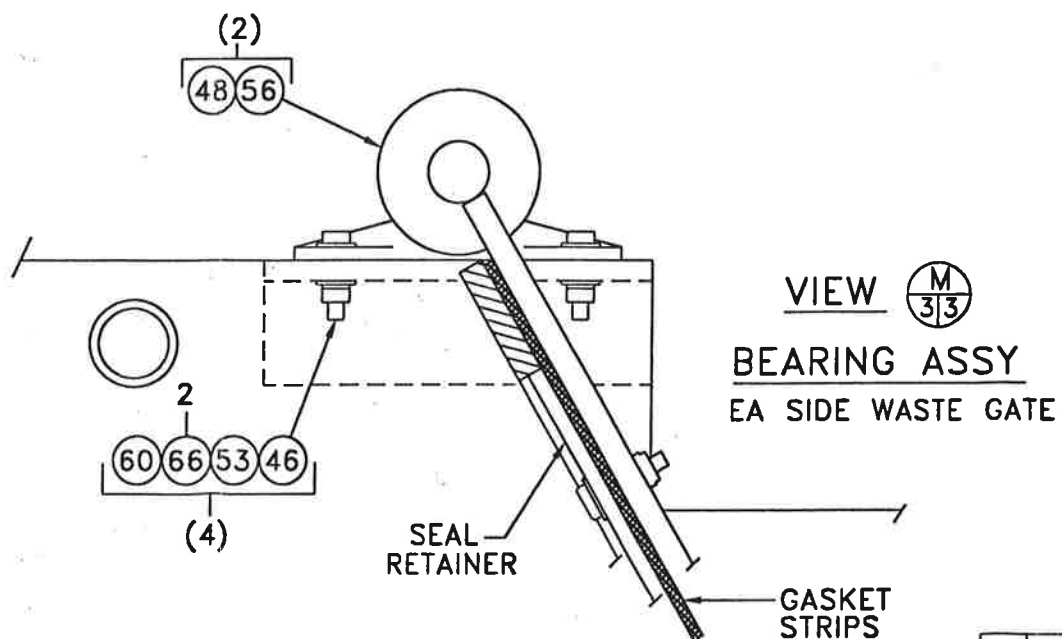
VIEW $\frac{K}{1/3}$ CLARIFIER TROUGH & WASTE GATE

ADDITIONAL NOTES (CONTINUED FROM SHEET 1):

- A. UNDERSIDE OF WASTE GATE MUST BE THOROUGHLY CLEANED & DRY FOR EFFECTIVE ADHESION OF NEOPRENE.
- B. MARK A LINE 1/4" IN FROM EDGE OF GATE ON BOTTOM & BOTH SIDES FOR LOCATING NEOPRENE STRIPS
- C. NEOPRENE IS 1/4 X 2 1/2" WIDE (ITEM 86) - CUT (2) STRIPS 17" LG FOR SIDES & 34 1/4" LG FOR BOTTOM
- D. APPLY A SMOOTH, EVEN COAT OF SPRAY ADHESIVE (FURNISHED) ON CLEANED & MARKED SIDE OF GATE, LOCATE STRIPS ON MARKES & APPLY EVEN PRESSURE TO SECURE
- E. PUNCTURE NEOPRENE AT EACH OF THE 20 HOLES, PLACE SEAL RETAINER STRIPS (ITEM 15 & 18) AS SHOWN & LOOSELY INSTALL HARDWARE.
- F. TIGHTEN HARDWARE EVENLY TO COMPRESS THE NEOPRENE TO APPROX 1/8"



VIEW $\frac{N}{3/3}$
WASTE GATE ASSY
SEE ASSY NOTES



VIEW $\frac{M}{3/3}$
BEARING ASSY
EA SIDE WASTE GATE

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ANGLES +/-
FRACTIONS +/-
BREAK ALL SHARP EDGES

REF:L3A-2 (REV C)

APPR. BY: JK
DRAWN BY: SMD
SCALE: NTS

REV. NO.	REVISION	DATE	BY	APPR.
USFilter USFilter 441 Main St., P.O. Box 36, Sturbridge, MA 01566				
TITLE: CITY OF WOODLAND, WA ASSEMBLY, EQUIPMENT CLARIFIER & FILTER, 1/2 TR-420A W/TRITONS				
DATE: 10/20/98	SHEET NUMBER: SHEET 3 OF 3	DRAWING NUMBER: 52001310-11	REV: ---	

APPENDIX D

**EXISTING COATING SYSTEM
RCRA 8 METALS TEST RESULTS**

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Jul 31 2019
Gray & Osborne
701 Dexter Avenue North
Suite 200
Seattle, WA 98109
Attention: RYAN WALTERS

Dear RYAN WALTERS:

Enclosed please find the analytical data for your WOODLAND FILTER RESTORATION & MEDIA project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
ILWACO-EXTERIOR	Paint Chips	19-A009114	MET, Hg-CV
ILWACO-INTERIOR	Paint Chips	19-A009115	MET, Hg-CV
WOODLAND FILTER 2-EXTERIOR	Paint Chips	19-A009116	MET, Hg-CV
WOODLAND FILTER 2-INTERIOR	Paint Chips	19-A009117	MET, Hg-CV
WOODLAND FILTER 3-EXTERIOR	Paint Chips	19-A009118	MET, Hg-CV
WOODLAND FILTER 3-INTERIOR	Paint Chips	19-A009119	MET, Hg-CV

Your samples were received on Wednesday, July 3, 2019. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,



Aaron W. Young
Laboratory Manager

Project #: 19250
PO Number: G&O #19250

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

AMTEST Identification Number 19-A009116
Client Identification WOODLAND FILTER 2-EXTERIOR
Sampling Date

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	AG	07/19/19
Silver	< 0.94	ug/g		0.94	EPA 6010D	KF	07/24/19
Arsenic	5.11	ug/g		0.94	EPA 6010D	KF	07/24/19
Barium	8050	ug/g		0.094	EPA 6010D	KF	07/24/19
Cadmium	< 0.094	ug/g		0.094	EPA 6010D	KF	07/24/19
Chromium	124.	ug/g		0.94	EPA 6010D	KF	07/24/19
Lead	8.96	ug/g		1.9	EPA 6010D	KF	07/24/19
Selenium	< 0.94	ug/g		0.94	EPA 6010D	KF	07/24/19
Mercury	< 0.01	ug/g		0.0100	SW-846 7471B	DM	07/09/19

AMTEST Identification Number 19-A009117
Client Identification WOODLAND FILTER 2-INTERIOR
Sampling Date

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	AG	07/19/19
Silver	< 0.98	ug/g		0.95	EPA 6010D	KF	07/24/19
Arsenic	8.13	ug/g		0.95	EPA 6010D	KF	07/24/19
Barium	4450	ug/g		0.095	EPA 6010D	KF	07/24/19
Cadmium	< 0.098	ug/g		0.095	EPA 6010D	KF	07/24/19
Chromium	210.	ug/g		0.95	EPA 6010D	KF	07/24/19
Lead	6.40	ug/g		1.9	EPA 6010D	KF	07/24/19
Selenium	< 0.95	ug/g		0.95	EPA 6010D	KF	07/24/19
Mercury	0.0187	ug/g		0.0100	SW-846 7471B	DM	07/09/19

AMTEST Identification Number **19-A009118**
Client Identification **WOODLAND FILTER 3-EXTERIOR**
Sampling Date

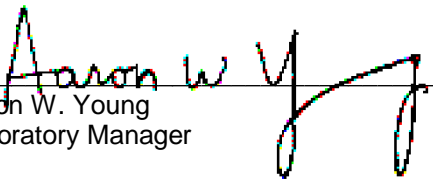
Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	AG	07/19/19
Silver	< 0.95	ug/g		0.95	EPA 6010D	KF	07/24/19
Arsenic	< 0.95	ug/g		0.95	EPA 6010D	KF	07/24/19
Barium	241.	ug/g		0.095	EPA 6010D	KF	07/24/19
Cadmium	< 0.095	ug/g		0.095	EPA 6010D	KF	07/24/19
Chromium	35.6	ug/g		0.95	EPA 6010D	KF	07/24/19
Lead	3.35	ug/g		1.9	EPA 6010D	KF	07/24/19
Selenium	< 0.95	ug/g		0.95	EPA 6010D	KF	07/24/19
Mercury	< 0.01	ug/g		0.0100	SW-846 7471B	DM	07/09/19

AMTEST Identification Number 19-A009119
Client Identification WOODLAND FILTER 3-INTERIOR
Sampling Date

Total Metals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Acid Digestion	Y				SW-846 3050B	AG	07/19/19
Silver	< 0.995	ug/g		1.0	EPA 6010D	KF	07/24/19
Arsenic	< 0.995	ug/g		1.0	EPA 6010D	KF	07/24/19
Barium	292.	ug/g		0.10	EPA 6010D	KF	07/24/19
Cadmium	< 0.0995	ug/g		0.10	EPA 6010D	KF	07/24/19
Chromium	34.5	ug/g		1.0	EPA 6010D	KF	07/24/19
Lead	2.30	ug/g		2.0	EPA 6010D	KF	07/24/19
Selenium	< 0.995	ug/g		1.0	EPA 6010D	KF	07/24/19
Mercury	< 0.01	ug/g		0.0100	SW-846 7471B	DM	07/09/19


Aaron W. Young
Laboratory Manager

QC Summary for sample numbers: 19-A009114 to 19-A009119

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
19-A009897	Silver	ug/g	< 0.499	< 0.5	
19-A009163	Arsenic	ug/g	0.210	0.200	4.9
19-A009897	Arsenic	ug/g	1.04	0.830	22.
19-A009163	Cadmium	ug/g	0.01000	0.01000	0.00
19-A009897	Cadmium	ug/g	0.2900	0.2700	7.1
19-A009897	Chromium	ug/g	3.96	3.95	0.25
19-A009117	Mercury	ug/g	0.0187	0.0131	35.
19-A009119	Mercury	ug/g	< 0.01	< 0.01	
19-A009163	Lead	ug/g	< 0.05	< 0.05	
19-A009897	Lead	ug/g	7.19	7.29	1.4
19-A009163	Selenium	ug/g	0.030	0.030	0.00
19-A009897	Selenium	ug/g	1.43	1.40	2.1

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
19-A009163	Arsenic	ug/g	0.210	0.364	0.200	77.00 %
19-A009897	Arsenic	ug/g	1.04	5.00	5.00	79.20 %
19-A009163	Cadmium	ug/g	0.01000	0.1690	0.2000	79.50 %
19-A009897	Cadmium	ug/g	0.2900	4.310	5.000	80.40 %
19-A009897	Chromium	ug/g	3.96	7.74	5.00	75.60 %
19-A009117	Mercury	ug/g	0.0187	0.212	0.198	97.63 %
19-A009119	Mercury	ug/g	< 0.01	0.262	0.242	108.26 %
19-A009163	Lead	ug/g	< 0.05	0.14	0.20	70.00 %
19-A009897	Lead	ug/g	7.19	11.3	5.00	82.20 %
19-A009163	Selenium	ug/g	0.030	0.198	0.200	84.00 %
19-A009897	Selenium	ug/g	1.43	4.94	5.00	70.20 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Silver	ug/g	0.200	0.210	105. %
Arsenic	ug/g	2.00	2.03	102. %
Barium	ug/g	0.800	0.818	102. %
Cadmium	ug/g	0.8000	0.8180	102. %
Chromium	ug/g	0.800	0.824	103. %
Mercury	ug/g	0.0250	0.0270	108. %
Lead	ug/g	0.80	0.82	102. %
Selenium	ug/g	2.00	2.01	100. %

QC Summary for sample numbers: 19-A009114 to 19-A009119...

BLANKS

ANALYTE	UNITS	RESULT
Silver	ug/g	< 0.5
Arsenic	ug/g	< 0.5
Barium	ug/g	< 0.5
Cadmium	ug/g	< 0.05
Chromium	ug/g	< 0.5
Mercury	ug/g	< 0.01
Lead	ug/g	< 1
Selenium	ug/g	< 0.5



Gray & Osborne, Inc.
CONSULTING ENGINEERS

AS
USPS
7/3/19
3:15
T=23.7

DATE: June 29, 2019

TO: AM Test Inc. **ATTN:** Aaron W. Young
13600 NE 126th PL
Suite C
Kirkland, Washington 98034

FROM: Ryan Walters, P.E. **PROJECT #:** 19459
19250

SUBJECT: Coating Samples for Analysis

WE ARE TRANSMITTING:

- Herewith
- Under Separate Cover

Number of Copies:

THE FOLLOWING:

- Prints
- Construction Drawings
- Specifications
- Shop Drawings
- Change Order
- Legal Description
- Letters
- Coating Samples

FOR:

- Review and Comment
- Approval
- Signature
- Your Use and Files
- As Requested
- Action Noted Below
- RCRA 8 Total Metals Test

COMMENTS:

Aaron,

Please find enclosed six (6) coating samples for RCRA 8 total metals analysis for the Ilwaco Reservoir Rehab and Distribution System Improvements (#19459) and Woodland Filter Restoration and Media Replacement (#19250). The enclosed coating samples are: Ilwaco – Exterior, Ilwaco – Interior, Woodland Filter 2 – Exterior, Woodland Filter 2 – Interior, Woodland Filter 3 – Exterior, and Woodland Filter 3 – Interior. Please prepare a report and invoice for G&O #19459 and #19250.

Thanks,

9114, 9115, 9116, 9117, 9118, 9119

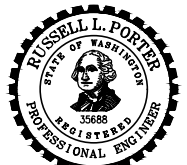
Ryan Walters, P.E.
Gray & Osborne, Inc.
8513 NE Hazel Dell Avenue, Suite 202
Vancouver, WA 98665

APPENDIX E

EXISTING FILTER 2 PHOTOS

APPENDIX F

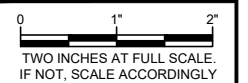
PROJECT FIGURES/DETAILS



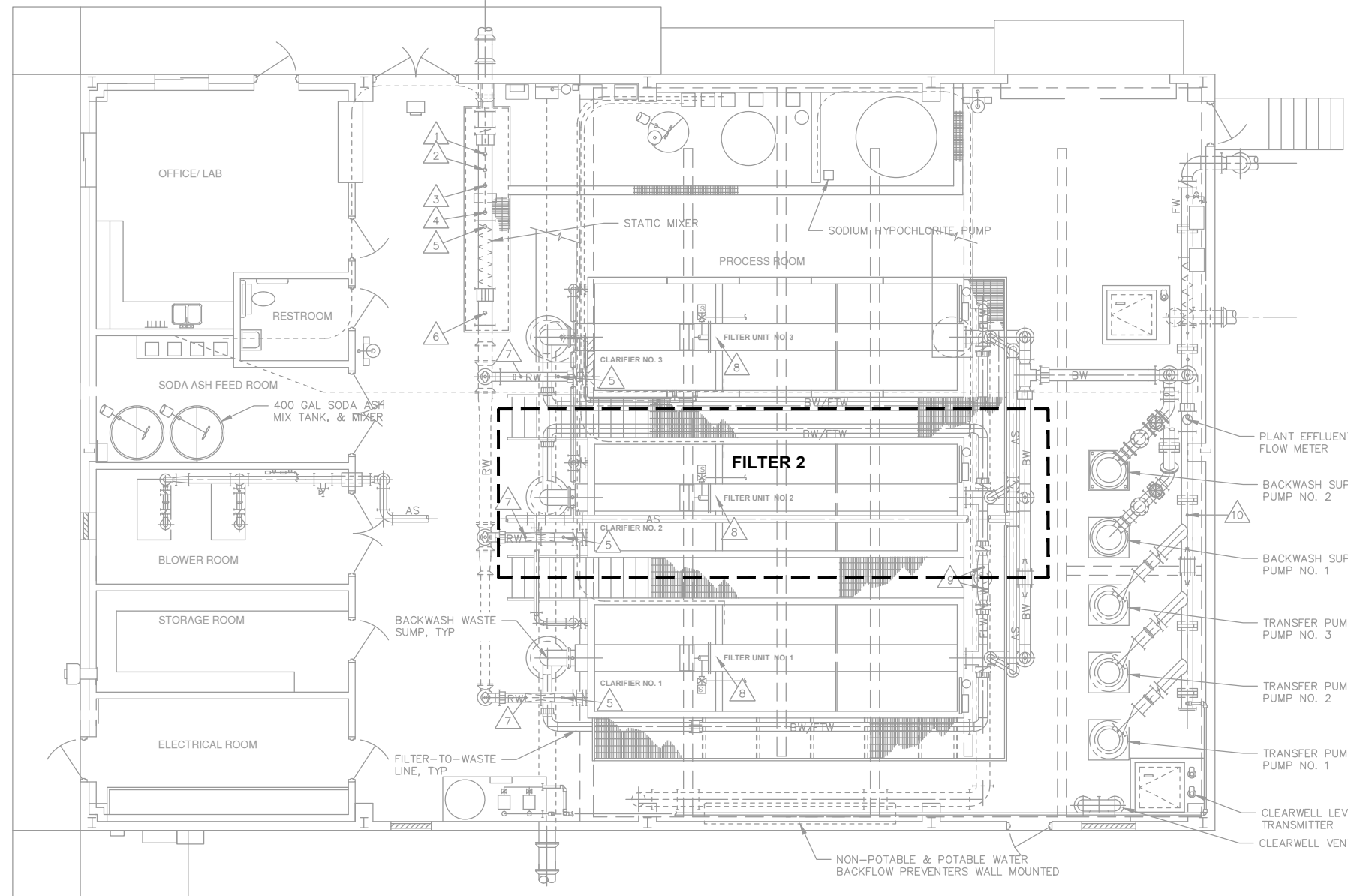
CITY OF WOODLAND
FILTER 2
RESTORATION AND MEDIA REPLACEMENT

No.	DATE	REVISION

ISSUED FOR: PRELIMINARY, NOT FOR CONSTRUCTION
 ISSUE DATE: AUG 22
 APPROVED BY: _____
 CHECKED BY: RLP
 DRAWN BY: CRC
 DESIGNER: _____
 G & O JOB NO.: 21248
 FILE: M-1 FILTER BUILDING PLAN & CONSTRUCTION LIMITS DWG.



FILTER BUILDING PLAN AND CONSTRUCTION LIMITS



NOTES

1. THE CONSTRUCTION LIMITS SHOWN ON THIS FIGURE MAY BE UTILIZED BY THE CONTRACTOR TO STAGE EQUIPMENT, STORE PAINT AND BLAST MATERIALS, AND CONSTRUCT FILTER CONTAINMENT. ALL OTHER AREAS WITHIN THE WTP MUST REMAIN ACCESSIBLE AT ALL TIMES. CONTRACTOR STAGING AREAS ARE AVAILABLE OUTSIDE THE WTP BUILDING TO THE EAST AND SOUTH OF THE BUILDING.

PROJECT SCOPE OF WORK

- A. RECOATING OF INTERIOR AND EXTERIOR FILTER 3, INCLUDING CONTAINMENT.
- B. REPLACEMENT OF FILTER AND CLARIFIER MEDIA.
- C. STRUCTURAL REPAIR, AS NECESSARY, AND AS PRE-APPROVED BY THE ENGINEER.
- D. INSTALLATION OF FILTER UNDERDRAINS, ABSORPTION CLARIFIER WATER AND AIR PIPING, AND SACRIFICIAL ANODES.
- E. REMOVAL, CLEANING, AND REINSTALLATION OF CLARIFIER SCREENS.
- F. RESTORATION OF ALL SURFACES DISTURBED BY CONSTRUCTION ACTIVITIES.
- G. TESTING, COMMISSIONING, AND TRAINING AS SPECIFIED.

LEGEND

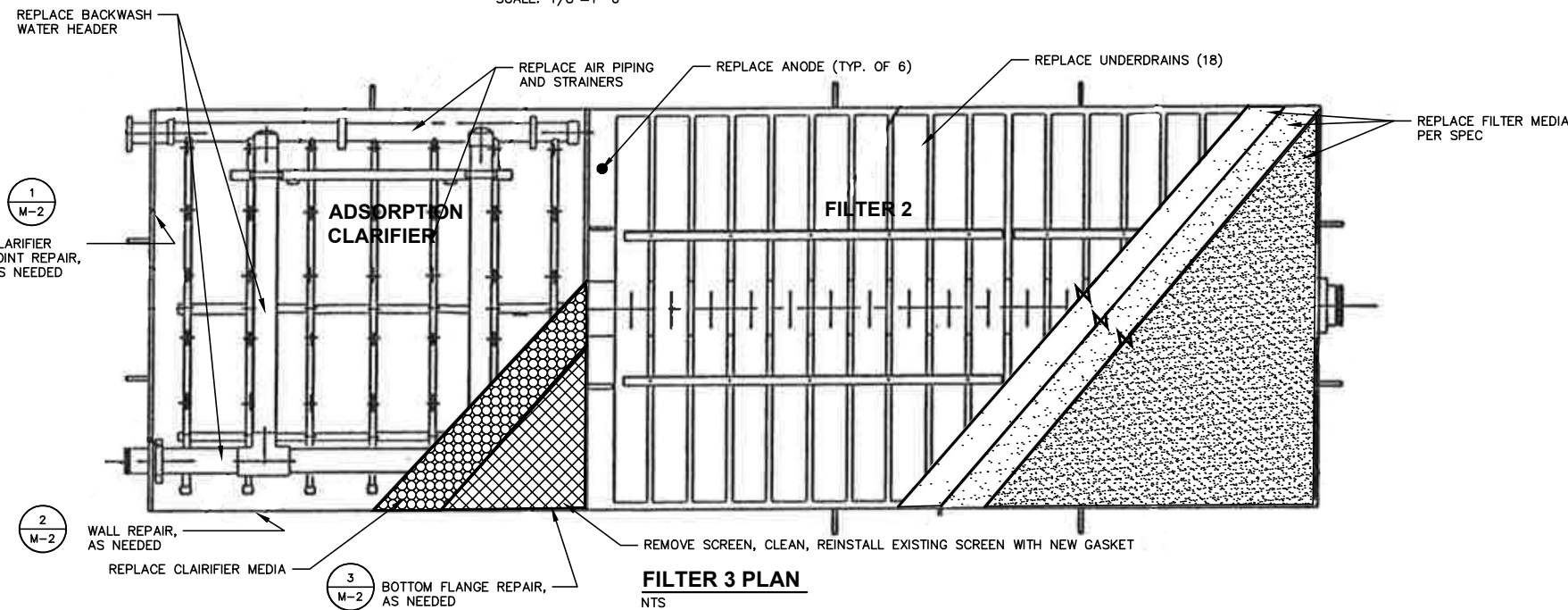
- ▲ 1 = RAW WATER SAMPLE TAP
- ▲ 2 = PRE SODA ASH INJECTION POINT
- ▲ 3 = PRE CHLORINE INJECTION POINT
- ▲ 4 = COAGULANT POLYMER INJECTION POINT
- ▲ 5 = SPARE INJECTION POINT
- ▲ 6 = COAGULATED WATER SAMPLE POINT
- ▲ 7 = OPTIONAL FILTER-AID INJECTION POINT
- ▲ 8 = FILTER-AID APPLICATION POINT
- ▲ 9 = POST CHLORINE INJECTION POINT
- ▲ 10 = POST SODA ASH INJECTION POINT

— CHEMICAL FEED LINES / TUBING

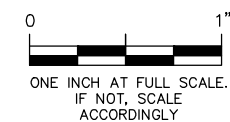
--- CONSTRUCTION LIMITS

FILTER BUILDING PLAN AND CONSTRUCTION LIMITS

SCALE: 1/8"=1'-0"

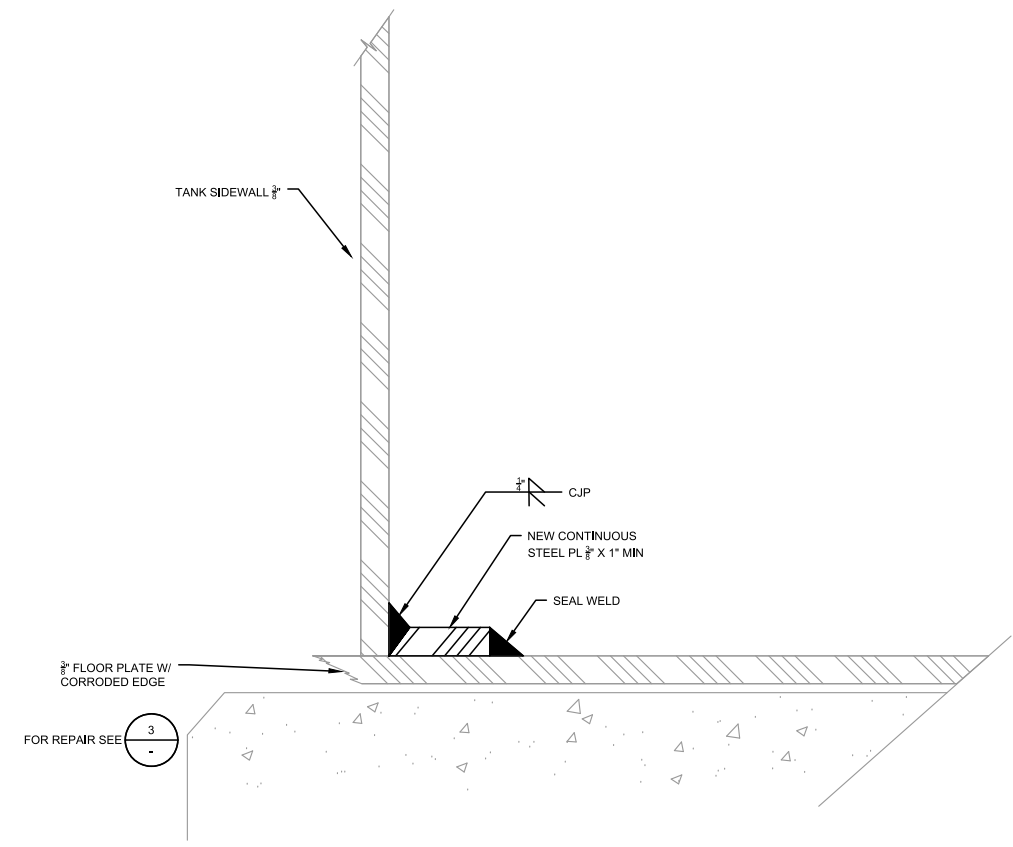


FILTER 3 PLAN
NTS

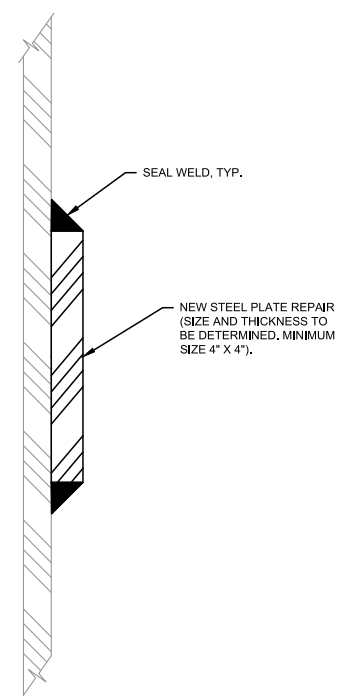


M:\WOODLAND\21248.00 - Filter 2 Restoration and Media Replacement Project\01 Design\PLANS\Mechanical\M-1 FILTER BUILDING PLAN & CONSTRUCTION LIMITS.dwg, 8/17/2022 5:13 PM, CAITLIN CALLEGARI

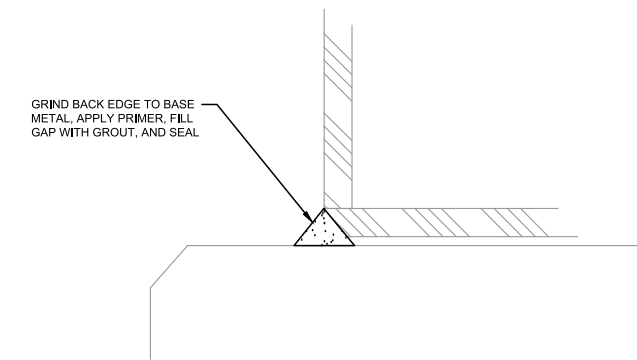
M:\WOODLAND\21248.00 - Filter 2 Restoration and Media Replacement Project\01 Design\PLANSET\Mechanical\M-2 REPAIR DETAIL FOR BOTTOM OF PLATE.dwg, 8/15/2022 5:05 PM, CAITLIN CALLEGARI



1 CLARIFIER JOINT REPAIR
M-1 NTS



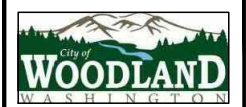
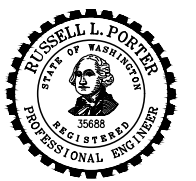
2 WALL REPAIR
M-1 NTS



3 BOTTOM FLANGE REPAIR
M-1 NTS

NOTES

EXTENT OF ALL STRUCTURAL REPAIRS TO BE DETERMINED AFTER INITIAL BLASTING. EXTENT OF ALL STRUCTURAL REPAIRS TO BE DETERMINED AND APPROVED BY ENGINEER.



CITY OF WOODLAND
FILTER 2 RESTORATION AND MEDIA REPLACEMENT

No.	DATE	REVISION
ISSUED FOR: PRELIMINARY, NOT FOR CONSTRUCTION		
ISSUE DATE: AUG 22		
APPROVED BY:		
CHECKED BY:	RLP	
DRAWN BY:	CRC	
DESIGNER:		
G & O JOB NO.:	21248	
FILE:	M-2 REPAIR DETAIL FOR BOTTOM OF PLATE.DWG	



REPAIR DETAIL FOR BOTTOM PLATE OF FILTER TANK