SPECIAL PROVISIONS

**** There are two jurisdictions within the project limits; the City of Tumwater and Washington State Department of Transportation (WSDOT). Refer to section 1-04 Scope of the Work for information regarding which sections of these special provisions apply to each jurisdiction. ****

INTRODUCTION TO THE SPECIAL PROVISIONS

(December 10, 2020 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2022 edition, as issued by the Washington State Department of Transportation (WSDOT), the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications") and City of Tumwater standard plans, specifications, and Development Guidelines. The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

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

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

(March 8, 2013 APWA GSP)	APWA General Special Provision
(April 1, 2013 WSDOT GSP)	WSDOT General Special Provision
(May 1, 2013 Tumwater GSP)	Tumwater General Special Provision
****(******)*	Project Specific Special Provision***

Text enclosed with ***text/#*** indicates a Tumwater revision to text or number within a standard GSP.

Also incorporated into the Contract Documents by reference are:

1. *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
2. *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
3. *City of Tumwater Development Guidelines*, current edition

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

General Notes Pertaining to All Work

(November 2019, (******)

Payment

If no bid item is identified in the proposal, all costs for performing the work described herein for the complete project in accordance with the attached Plans, these Special Provisions, and the Standard Specifications shall be considered incidental to and included in the unit contract prices.

Public Convenience and Safety
The Contractor shall provide 48 hours advanced notice to adjacent property owners of impending work, impacts, and interruptions.

Conflicting Special Provisions
The Bidder or Contractor shall request clarification on conflicting Special Provisions prior to bidding on project. After bid, determination of controlling special provision in circumstances of Conflict will be the determination of the Engineer. In most cases, Tumwater Special Provisions will control.

Division 1
General Requirements

DESCRIPTION OF WORK

(March 13, 1995)

This Contract provides for the improvement of *** the I-5/Trosper Road/Capitol Boulevard Reconfiguration Project. Work to be performed will include the furnishing of all labor, materials, services, equipment and incidentals necessary to complete the project. In general the project includes constructing three roundabouts (located at Capitol Boulevard/Trosper Road, Trosper Road/6th Avenue, and 6th Avenue/Interstate 5 NB on and off ramps), constructing 6th Avenue from Lee Street to Trosper Road, reconstruction of Interstate 5 northbound on and off ramps, rebuild of Trosper Road and Capitol Boulevard within the project limits, construction of the Trosper Road Extension, and rebuild of Linda Street. The project will include full roadway reconstruction, new roadway construction, pedestrian facilities, bicycle facilities, street lighting and pedestrian beacon installation, and landscaping and irrigation. Utility work will include stormwater, sanitary sewer, water, joint utility trench for private utilities, and power overhead conversion *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 DEFINITION AND TERMS

1-01.3 Definitions
(January 19, 2022 APWA GSP)

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

Dates

Bid Opening Date
The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date
The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date
The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date
The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

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

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

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

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

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

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

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

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

Contract Documents
See definition for "Contract".

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

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

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

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

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this section and replace it with the following:

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

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

1-02.1(1) Supplement Qualifications Criteria

In addition, the Contracting Agency has established Contracting Agency-specific and/or project-specific supplemental criteria, in accordance with RCW 39.04.350 (3), for determining Bidder responsibility, including the basis for evaluation and the deadline for appealing a determination that a Bidder is not responsible. These criteria are contained in Section 1- 02.14 Option B of these Special Provisions.

1-02.2 Plans and Specifications

(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

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

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

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	***3***	Furnished automatically upon award.
Contract Provisions	***3***	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	***0***	Furnished only upon request.

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

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

1-02.4(1) General

(******)

Supplement this section with the following:

The City has identified potential Stockpiling and Staging areas for the Contractor. These areas are as shown in Appendix F: Stockpiling and Staging.

Prior to stockpiling and staging, the Contractor shall provide the City a record of the existing site conditions. This record shall be completed via video and pictures the site. At the end of the project, the Contractor shall restore all stockpiling and staging areas outside of project improvements to pre-project condition. The Project Engineer will inspect all post staging/stockpiling areas for a final inspection prior to completion of the project. All deficiencies noted will be corrected by the Contractor at their expense.

Any damage to buildings or structures located in identified stockpile and staging areas that are not shown to be removed in the plans or specs shall be protected in place. Any damage done to such buildings or structures shall be repaired at the Contractor's expense.

Should parcels 12834440400 and/or 12834440602 be utilized during the project, the Contractor shall coordinate with the local business on parcel 12834440701 to ensure vehicles can enter and exit the property without impairment. In addition, the Contractor shall provide ten (10) parking stalls for exclusive use by parcel 12834440701. These

parking stalls shall be a minimum of 9'x20' and shall be provided unimpeded egress and ingress throughout the duration of the project.

Additional Stockpiling/Staging Areas:

The Contractor may coordinate/procure additional stockpiling/staging areas to be used on the project. All costs, agreements, and permits required to secure these areas for use during the project will be the sole responsibility of the contractor.

1-02.5 Proposal Forms

(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

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

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

1-02.6 Preparation of Proposal

(December 10, 2020 APWA GSP, Option B)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.

5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace them with the following:

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

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

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

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

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

1-02.7 Bid Deposit

(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

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

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

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

1-02.9 Delivery of Proposal

(******)

Delete this section and replace it with the following:

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

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any "Supplemental Information" (DBE confirmations or GFE documentation) that is received after the time specified above, or received in a location other than that specified in the Call for Bids.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

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

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

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

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

Public Opening of Proposals

Section 1-02.12 is supplemented with the following:

(August 3, 2015)

Date of Opening Bids

The bid opening date for this project is as noted in the Request for Bids.

1-02.13 Irregular Proposals

(October 1, 2020 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;

h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
i. The Bidder fails to submit written confirmation from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
j The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
k. The Bidder fails to submit a DBE Bid Item Breakdown form, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
l. The Bidder fails to submit DBE Trucking Credit Forms, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

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

1-02.14 Disqualification of Bidders

(May 17, 2018 APWA GSP, Option B)

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1-7 listed in this Section.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-7 shall be provided by the Bidder as stated later in this Section.

1. **Delinquent State Taxes**

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

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue, or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. **Federal Debarment**

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

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

3. **Subcontractor Responsibility**

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

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

4. **Claims Against Retainage and Bonds**

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

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

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;

- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. **Public Bidding Crime**

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

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

6. **Termination for Cause / Termination for Default**

A Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

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

7. **Lawsuits**

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

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

As evidence that the Bidder meets the Supplemental Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the supplemental criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the

Supplemental Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low Bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

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

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

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

1-02.15 Pre Award Information

(August 14, 2013 APWA GSP)

Revise this section to read:

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

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,

5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 Award and Execution of Contract

1-03.1 Consideration of Bids

(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

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

1-03.3 Execution of Contract

(January 19, 2022 APWA GSP)

Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Contracting Agency. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Contracting Agency.

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

Within *** 15 *** calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

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

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

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

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

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review

(November 30, 2018 APWA GSP)

Revise this section to read:

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the

county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 Scope of the Work

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

(******)

Revise the second paragraph to read:

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

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Standard Specifications,
6. City of Tumwater Standard Plans or Details and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

Work in City Right-of-Way:
All Work in the City owned right-of-way shall be completed per the plans, standard specifications, and these special provisions unless otherwise noted on the plans.

Work in WSDOT Right-of-Way:
All Work in WSDOT owned right-of-way shall be completed per the plans, standard specifications, and all WSDOT GSPs in these special provisions unless otherwise noted on the plans.

See Appendix G for the WSDOT Construction Agreement. The Contractor shall comply with all requirements set forth in this agreement for work within WSDOT right of Way.

1-04.4 Minor Changes

(January 19, 2022 APWA GSP)

The first two sentences of the last paragraph of Section 1-04.4 are deleted.

1-05 CONTROL OF WORK

1-05.4 Conformity With and Deviations from Plans and Stakes

Supplement this section with the following:

Construction Staking and Survey Work
(January 2021, Tumwater GSP)

Copies of the Contracting Agency provided primary survey control data are available for the bidder's inspection at the office of the Engineer.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of the roadbed, drainage, surfacing, paving, channelization and pavement marking, illumination and signals, guardrails and barriers, and signing. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility.

The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans “DO NOT DISTURB” shall be protected throughout the length of the project or be replaced at the Contractors expense.

Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to allow the survey to be reproduced. **A copy of each day's record shall be provided to the Engineer within three working days after the end of the shift.**

The Contractor shall engage the services of a Professional Land Surveyor who is registered with the State of Washington to oversee, direct and provide adequate equipment and personnel to provide all of the project staking, plan review, calculation of all field stakeout data, project control surveying and project field staking necessary to construct the project in conformance with the Plans, Specifications, Standards, Addendums, and in conformance with standard engineering and surveying practices. The Contractor’s Surveyor shall be able to demonstrate the ability to provide competent, qualified personnel and suitable equipment for the project work required. The Engineer may at any time inspect the Contractor’s Surveyor’s efforts and check as much of the work as is practical. Any errors found will be brought to the Contractor’s attention for corrective action.

The Contractor’s Surveyor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, offset stakes and grades necessary for the development and construction of the project. This will include, but is not limited to, clearing limits, right-of-way, easements, trenches, private and public utilities, roadbed, storm, sewer and water systems, grading, curb and gutter, sidewalks, irrigation, paving, channelization, pavement marking, illumination, traffic signals and systems, guardrails and barriers, and signage.

To establish secondary control network the City will provide the Contractor and Contractor’s Surveyor with primary survey control information which will consist of a minimum of three (3) primary horizontal control points and two (2) vertical control points. The Horizontal Control Datum used to reference the design for this project is the Thurston County High Precision Network NAD 83/11 Datum and Vertical Control Datum used to reference the design for this project is NGVD 29 Vertical Datum.

A Pre-Staking Meeting shall be held prior to the start of any construction staking to address any unresolved questions or concerns by the Contractor and/or the Contractor’s Surveyor. The meeting shall be coordinated by the Contractor.

The City will provide a digital drawing file of the project in AutoCAD format version 2004 or later to the Contractor’s Surveyor for review at least two weeks prior to the pre-staking meeting.

The meeting shall be held with the Engineer, a Contractor representative and the Contractor's Surveyor prior to the commencement of any construction staking.

The Contractor's Surveyor shall provide a written report of his or her findings during the pre-staking meeting expressing any concerns he or she may have as to what was intended by the Engineer, what information might be missing from the Plans or Specifications or clarifications that are necessary for the Surveyor to stake the project.

The Contractor shall provide a list of the personnel, their qualifications, their position and the equipment the Contractor's Surveyor will be providing to do the work in the office and in the field.

The meaning of words and terms used in this provision shall be as listed in "Definitions of Surveying and Associated Terms" current edition, published by the American Congress on Surveying and Mapping and the American Society of Civil Engineers.

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

1. Verify the primary horizontal and vertical control furnished by the Contracting Agency, and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency. The description shall include coordinates and elevations of all secondary control points.

2. Establish, the centerlines of all alignments, by placing hubs, stakes, or marks on centerline or on offsets to centerline at all curve points (PCs, PTs, PCCs, PRC, and PIs) and at points on the alignments spaced no further than 50 feet on tangent and 25 feet in curves or other points as needed.

3. Establish clearing limits, placing stakes at all angle points and at intermediate points not more than 50 feet apart. The clearing and grubbing limits shall be 5 feet beyond the toe of a fill and 10 feet beyond the top of a cut unless otherwise shown in the Plans.

4. Establish grading limits, placing slope stakes at centerline increments not more than 50 feet apart. Establish offset reference to all slope stakes. If Global Positioning Satellite (GPS) Machine Controls are used to provide grade control, then slope stakes may be omitted at the discretion of the Contractor

5. Establish the horizontal and vertical location of all drainage features, placing offset stakes to all drainage structures and to pipes at a horizontal interval not greater than 25 feet.

6. Establish roadbed and surfacing elevations by placing hubs and whiskers (stakes are optional) at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing hubs, whiskers, and stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-foot intervals in intersection radii with a radius less than 10 feet. Transversely, stakes shall be placed at all locations where the roadway slope changes and at additional points such that the transverse spacing of stakes is not more than 12 feet. If GPS Machine Controls

are used to provide grade control, then roadbed and surfacing stakes may be omitted at the discretion of the Contractor. Stakes shall be placed at all locations of change in vertical elevations (PVCs, PVTs, START, FULL, END of Super Transitions) and at any point where the roadway slope or grades change or as needed.

7. Establish intermediate elevation benchmarks as needed to check work throughout the project.

8. Provide references for paving pins at 25-foot intervals or provide simultaneous surveying to establish location and elevation of paving pins as they are being placed.

9. For all other types of construction included in this provision, (including but not limited to channelization and pavement marking, illumination and signals, guardrails and barriers, and signing) provide staking and layout as necessary to adequately locate, construct, and check the specific construction activity.

10. Contractor shall determine if changes are needed to the profiles or roadway sections shown in the Contract Plans in order to achieve proper smoothness and drainage where matching into existing features, such as a smooth transition from new pavement to existing pavement. The Contractor shall submit these changes to the Engineer for review and approval 10 days prior to the beginning of work.

11. It shall be the Contractor’s Surveyor’s responsibility to stake and record the location, by coordinate or centerline station and offset, with elevation as required for all private utilities which are to be relocated as part of the project. Contractor’s Surveyor shall be responsible to coordinate with each utility provider to establish the requirements for each utility.

12. The Contractor’s Surveyor shall be responsible to stake and record any changes or revisions to the Plans.

13. Contractors electing to use Automated Guidance Machine Systems (AGMS) may request electronic, two dimension CAD files in Autocad format. The City of Tumwater will not be responsible for the electronic data provided by the surveyor. Construction plans provided to the contractor shall take precedence over any discrepancies between plan sheets and electronic files. Let the Contractor be aware that the electronic files are not prepared for AGMS use. If the Contractor elects to use the electronic files in such a manner they are responsible to provide the resources to prepare the electronic files for AGMS use at the Contractors expense.

14. The Contractor's Surveyor shall also provide to the City a digital as-built drawing of the project upon completion of construction. The drawing is to be in AutoCAD format, version 2014 or newer. This drawing shall not contain references (xrefs) to external drawings. This as-built drawing shall consist of the following:
    - Any and all construction changes from the Original Contract Plans; as-built over the original construction drawings. .
    - Any unknown existing utility information not included in the Contract Plans.

This digital as-built drawing shall be accompanied with a letter stamped with the Surveyor's seal certifying its accuracy.

The Contractor's Surveyor will also be competent in the technology and knowledgeable of the codes and regulations applicable to land surveying including but not limited to the following:

WAC 196-27A-020 WAC 332-120-030(2) RCW 58.09.130 WAC 332-120-030(3)

15. The Contractor shall be fully responsible for obtaining permits from the Washington State Department of Natural Resources for removing and replacing all survey monumentation that may be affected by construction activity, pursuant to WAC 332-120. Applications must be completed by a Registered Land Surveyor. Applications for permits to remove monuments may be obtained from the Washington State Department of Natural Resources or by contacting their office by telephone at (360) 902-1190.

    Washington State Department of Natural Resources
    Public Land Survey Office

    801 88th Ave. SE, MS 47019, Tumwater, WA 98501-7019

Upon completion of construction, all monuments displaced, removed, or destroyed shall be replaced by a Professional Land Surveyor. The appropriate forms for replacement of said monumentation shall also be the responsibility of the Contractor's Professional Land Surveyor.

16. The Contractor's Surveyor shall also provide to the City a digital as-built drawing of the project upon completion of construction. The drawing is to be in AutoCAD format, version 2014 or newer. This drawing shall not contain references (xrefs) to external drawings. This as-built drawing shall consist of the following:

    a. Any and all construction changes from the Original Contract Plans; as-built over the original construction drawings. The City shall withhold $10,000 from this Bid item until the as-builts are submitted and approved.
    b. Any unknown existing utility information not included in the Contract Plans. This digital as-built drawing shall be accompanied with a letter stamped with the Surveyor's seal certifying its accuracy.

The Contractor shall provide the Contracting Agency copies of any calculations and staking data when requested by the Engineer.

To facilitate the establishment of these lines and elevations, the Contracting Agency will provide the Contractor with primary survey control information consisting of descriptions of two primary control points used for the horizontal and vertical control, and descriptions of two additional primary control points for every additional three miles of project length. Primary control points will be described by reference to the project alignment and the coordinate system and elevation datum utilized by the project. In addition, the Contracting Agency will supply horizontal coordinates for the beginning and ending points and for each Point of Intersection (PI) on each alignment included in the project.

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

	Vertical	Horizontal
Slope stakes	+/-0.10 feet	+/-0.10 feet
Subgrade grade stakes set 0.04 feet below grade	+/-0.01 feet	+/-0.5 feet (parallel to alignment) +/-0.1 feet (normal to alignment)
Stationing on roadway	N/A	+/-0.1 feet
Alignment on roadway	N/A	+/-0.04 feet
Surfacing grade stakes	+/-0.01 feet	+/-0.5 feet (parallel to alignment) +/-0.1 feet (normal to alignment)
Roadway paving pins for surfacing or paving	+/-0.01 feet	+/-0.2 feet (parallel to alignment) +/-0.1 feet (normal to alignment)

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

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

The Contractor shall calculate coordinates for the alignment. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the work. The Contracting Agency will require up to seven calendar days from the date the data is received.

Contract work to be performed using contractor-provided stakes shall not begin until the stakes are approved by the Contracting Agency. Such approval shall not relieve the Contractor of responsibility for the accuracy of the stakes.

Stakes shall be marked in accordance with Standard Plan A10.10. When stakes are needed that are not described in the Plans, then those stakes shall be marked, at no additional cost to the Contracting Agency as ordered by the Engineer.

Payment

Payment will be made for the following bid item when included in the proposal:

"Construction Staking and Survey Work", lump sum.

The lump sum contract price for "Construction Staking and Survey Work" shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work as specified in the construction documents. In general this work will include resetting

survey monuments, locations of existing utility castings, design and construction staking of sidewalk, roadway and curb line improvements; utility structures, casting and appurtenances; and all survey services to stake and lay out the proposed improvements as shown on the Drawings. Payment also includes identifying locations of existing pavement markings within the project limits and proposed channelization spotting/layout of new pavement markings, and the as-built drawings.

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

Supplement this section with the following:

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

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

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

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

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

1-05.11 Final Inspection

Delete this section and replace it with the following:

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

1-05.11(1) Substantial Completion Date

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

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

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

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

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

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

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

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

1-05.11(3) Operational Testing

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

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

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

1-05.13 Superintendents, Labor and Equipment of Contractor

(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.14 Cooperation With Other Contractors

Section 1-05.14 is supplemented with the following:

(March 13, 1995)

Other Contracts Or Other Work

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

***

Puget Sound Energy Electric Undergrounding
Puget Sound Energy gas main relocations
Lumen fiber relocations
Comcast relocations
Wave and AT&T relocations
See new Section 2-13 Private Utility Coordination and Construction for additional information.

***

1-05.15 Method of Serving Notices

(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

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

Add the following new section:

1-05.16 Water and Power

(October 1, 2005 APWA GSP)

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.

1-06 CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior to Use

1-06.1(3) Aggregate Source Approval (ASA) Database

(******)

Section 1-06.1(3) is supplemented with the following:

Regardless of status of the source, whether listed or not listed in the ASA database the source owner may be asked to provide testing results for toxicity in accordance with Section 9-03.21(1).

1-06.6 Recycled Materials

(******)

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

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

Using recycled concrete aggregate and glass shall not be allowed for this project.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.1(2) Health and Safety

Section 1-07.1(2) is supplemented with the following:

(September 27, 2021)
Governor's Proclamation 20-05/21-14

The Contractor, by submitting its Bid, agrees that it will comply with Governor's Proclamations 20-05 as amended and 21-14 as amended, regarding COVID-19 Vaccination Requirements, and that it will require its workers, service providers, subcontractors, suppliers, and their workers to comply as well. Furthermore, prior to starting Work, the Contractor shall provide a Vaccine Declaration form (WSDOT Form #271-050).

The Proclamations are available at: https://www.governor.wa.gov/office-governor/official-actions/proclamations

All costs related to the Governor's Proclamations shall be considered included with or incidental to other Bid items.

1-07.2 State Taxes

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

1-07.2 State Sales Tax

(June 27, 2011 APWA GSP)

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

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

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

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

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

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

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

1-07.2(3) Services

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

1-07.6 Permits and Licenses

Section 1-07.6 is supplemented with the following:

(January 2, 2018)
The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

***

Name of Document	Permitting Agency
NPDES Construction Stormwater General Permit	Department of Ecology

***

1-07.7 Load Limits

Section 1-07.7 is supplemented with the following:

(March 13, 1995)

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

1-07.13 Contractor's Responsibility for Work

1-07.13(4) Repair of Damage

Section 1-07.13(4) is revised to read:

(August 6, 2001)
The Contractor shall promptly repair all damage to either temporary or permanent work as directed by the Engineer. For damage qualifying for relief under Sections 1-07.13(1), 1-07.13(2) or 1-07.13(3), payment will be made in accordance with Section 1-04.4. Payment will be limited to repair of damaged work only. No payment will be made for delay or disruption of work.

1-07.17 Utilities and Similar Facilities

Section 1-07.17 is supplemented with the following:

(April 2, 2007)
Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

Public and private utilities, or their Contractors, will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocation, replacement, or construction will be done during the prosecution of the work for this project. It is anticipated that utility adjustment, relocation, replacement or construction within the project limits will be completed as follows:

*** Contractor shall coordinate with private utilities for all Work related to the overhead conversion and utility relocation as described in Section 2-13. All other utility Work as part of this project will be completed as specified in various Sections of these special provisions.

The Contractor shall complete sidewalk and/or hardscape improvements after utility pole and junction boxes have been relocated.

The Engineer may direct the Contractor to provide additional traffic control for the utility contractors. Such traffic control will be paid according to Specification 1-04.4. ***

Mandatory Utility Pre-construction Meeting:
The Contractor shall coordinate a mandatory utility preconstruction meeting, at least ten (10) days prior to scheduled commencement of construction work, with the Engineer, all affected Subcontractors, and all utility owners and their Contractors prior to beginning any dry utility work. The contractor and all required subcontractors are required to have supervisor level staff at the meeting to represent their respective role. The meeting will be lead by the Contractor with assistance by Engineer.

Contractor to coordinate with Engineer on meeting location to determine if city facilities can be utilized.

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

***Puget Sound Energy Power
James Lengel, O. (425) 449-7472, C. (425) 449-9954***

*** Puget Sound Energy Gas
Anthony Fay, (253) 213-2514***

***Puget Sound Energy Fiber
Chris Mantle, (425) 248-5632***

*** Lumen (CenturyLink)
Dewayne Reicher, (253) 221-0133***

***Comcast
Ted Axtell, (253) 878-2794***

***Astound Broadband
Matt Reid, (425) 559-4394***

***AT&T
Josh Coggins, (253) 209-0260***

***InterCity Transit (Main Contact)
Steve Swan, (360) 705-5834***

***InterCity Transit (Secondary Contact)
Rob Lafontaine (360) 705-5832***

***Washington Department of Transportation (Fiberoptic)
Todd Turner, (360) 705-7694)***

1-07.17(2) Utility Construction, Removal, or Relocation by Others

(******)

Supplement this section with the following:

Puget Sound Energy (PSE) has an existing gas line on Linda Street within the project limits. The Contractor shall coordinate the relocation of the existing gas line with PSE's subcontractor prior to performance of any Work in the vicinity of these improvements. Refer to Section 2-13 for additional information. The Cost to coordinate this Work shall be incidental to "Removal of Structures and Obstructions".

1-07.18 Public Liability and Property Damage Insurance
(******)

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

1-07.18 Insurance

1-07.18(1) General Requirements

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

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

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

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

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

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

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

expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

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

1-07.18(2) Additional Insured

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

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

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

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

1-07.18(3) Subcontractors

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

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

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

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation

provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

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

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

1-07.18(5) Coverages and Limits

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

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

1-07.18(5)A Commercial General Liability

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

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

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

Commercial General Liability insurance shall be written with limits no less than $3,000,000 each occurrence, and, per project, in the aggregate for each period (may be substituted with $2,000,000 Commercial General Liability insurance per occurrence and in the aggregate with a minimum of $1,000,000 Excess or Umbrella Liability insurance per occurrence and in the aggregate as detailed in the APWA GSP Section 1-07.18(5)D included in these Contract Documents.

1-07.18(5)B Automobile Liability

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

Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident.

1-07.18(5)C Workers' Compensation

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

1-07.18(5)D Excess or Umbrella Liability

(January 4, 2016 APWA GSP)

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than ***1*** million each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor's Commercial General and Auto Liability insurance

All entities listed under 1-07.18(2) of these Special Provisions shall be named as additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.

This requirement may be satisfied instead through the Contractor's primary Commercial General and Automobile Liability coverages, or any combination thereof that achieves the overall required limits of insurance.

1-07.23 Public Convenience and Safety

(******)
Section 1-07.23 is supplemented with the following:

The Contractor shall provide 24 hours advance notice to adjacent property owners of impending work, impacts, and interruptions, including access restrictions and utility service interruptions.

The Contractor shall notify/update the City at each weekly construction meeting as to the status of public notifications for the project. Any printed materials submitted to the public

such as flyers and door hangers shall be submitted to the Project Engineer for review and approval prior to distribution. Allow the Project Engineer 24 hours for review and approval.

1-07.23(1) Construction Under Traffic

(******)
Section 1-07.23(1) is supplemented with the following:

Road Closures:

The City anticipates that for rare circumstances during construction, the Contractor may request a full road closure to expidite or complete construction tasks.

If the the Contractor deems a road closure is beneficial to the project, the Contractor shall submit a complete site specific traffic control plan showing the proposed closure, signing plan (including detour signing), and specifications related directly to the closure to the Project Engineer for review.

Road closures will be evaluated on a case by case basis by the Project Engineer and approval will be provided by the Transporation and Engineering Department Director and Engineering Services Manager.

The Contracting Agency does not gurantee approval of requested road closure.

Lane closures are subject to the following restrictions:

***

1. One lane of traffic must remain open in each direction on Capitol Boulevard and Trosper Road during normal working hours;
2. One lane alternate must remain open during any night Work;
3. Lane closures for work that severely affects traffic flow or safety will be required to take place at night or on weekends as determined by the Engineer;
3. Lane closures are not allowed from 6:00 AM to 8:00 AM or 4:00 PM to 6:00 PM
4. Lane closures for paving of intersections will not be allowed between the hours of 6:00 AM and 7:00 PM on weekdays;
5. Alterations in lane closure hours will not be grounds for additional reimbursement.

Additional Noise Mitigation Requirement:
In reference to the Innovative Sleep Center located at 260 Lee Street.

This business is a sleep center facility were patients are seen during the day and sleep at night. The sleep center also conducts daytime sleep studies on Mondays depending upon patient scheduling. For bidding purposes, the contractor shall assume that no work can occur within 100 feet north or south of the sleep center building on Mondays during the day UNLESS the contractor verifies with the sleep center that no sleep studies are being conducted on a specific Monday.

The following additional requirements must be met:

- Contractor shall furnish and install a temporary construction noise barrier/curtain along the east right-of-way line of 6th Avenue that will extend 30 feet north and south of the Innovative Sleep Center building at 260 Lee Street SW (a total of 60 linear feet of temporary construction noise barrier).
- The barrier shall be at least 6 feet in height and shall utilize either noise blankets or other approved media to reduce noise levels. The noise blankets shall reduce noise levels such that the decibel level behind the blankets does not exceed 60dBA. Contractor shall furnish and install all hardware and materials necessary to support the temporary noise barrier/curtain. The structure shall be maintained in good working order until physical completion of the 6th Avenue improvements or such a time that the Contractor will no longer be working in the vicinity of 260 Lee Street SW for the remainder of the project, whichever comes latest. All costs associated with moving, repositioning, or reinstalling the temporary noise barrier to accommodate construction activities shall be at the expense of the Contractor.
- Contractor shall make every effort to turn off construction equipment during prolonged periods of non-use; i.e. long equipment idling in the vicinity of the sleep center building will not be allowed.
- Locate stationary equipment and material stockpiles as far away as practical from 260 Lee Street SW.Limit construction activities 100 feet north and south of 260 Lee Street SW to between 7 a.m. and 10 p.m. whenever practical.

***

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any change in the closure hours.

Lane closures are not allowed on any of the following:

1. A holiday, including 4th of July due to proximity to the parade route.

2. A holiday weekend; holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend. A holiday weekend includes Saturday, Sunday, and the holiday.

3. After *** 11:00AM *** on the day prior to a holiday or holiday weekend, and

4. Before *** 9:00AM *** on the day after the holiday or holiday weekend.

Lane closures within WSDOT Right-of-Way are limited to the following work hours:

	Northbound Off-Ramp		Northbound On-Ramp (from EB Trosper)		Northbound On-Ramp (from WB Trosper)	
	Ramp closure beginning Time	Ramp Reopen time	Ramp closure beginning Time	Ramp Reopen time	Ramp closure beginning Time	Ramp Reopen time
Sunday night – Monday Morning	20:00	5:00	21:00	5:00	20:00	5:00
Monday night -Tuesday Morning	20:00	5:00	21:00	5:00	20:00	5:00
Tuesday night -Wednesday Morning	20:00	5:00	21:00	5:00	20:00	5:00
Wednesday night – Thursday Morning	20:00	5:00	21:00	5:00	20:00	5:00
Thursday night- Friday Morning	20:00	5:00	21:00	5:00	20:00	5:00
Friday night-Saturday Morning	21:00	5:00	22:00	5:00	21:00	5:00
Saturday night – Sunday Morning	20:00	6:00	21:00	6:00	20:00	6:00

Ramp closures for construction of the I-5 on/ramps extended closures have been approved by WSDOT. The Contractor can extend ramp closures from Friday night – Saturday morning, Saturday night- Sunday morning, and Sunday per the hours listed in the table above upon request and approval by WSDOT and the City of Tumwater.

Traffic Control Requirement by Construction Phase:

Reference the Construction Phasing drawings in the Bid Documents for the following construction phasing traffic control requirements and restrictions:

Phase 01 – Cement concrete panel removal and construction of new utilities (Sewer, Storm, Water and Schedule 74 conduits:

This work can be completed at day or nighttime and traffic shall be maintained one lane in each direction during the day time and one lane alternating each way for nighttime work. Traffic control restrictions for phase 01 are required during removal of the concrete, the complete construction of new deep sewer utility, water distribution systems and appurtenances.

Phase 02B and 2C –Phase 02B and 2C can be accomplished during an extended WSDOT ramp closure.

Phase 04 – The existing traffic signal at the intersection of the I-5 on/off ramps and Trosper Road can be removed. Trosper Road traffic can be reduced to one lane in each direction in the northern half while the Contractor can perform work in the southern half. Traffic from the off ramp can use the new 6th Ave and Lee Street intersection to approach downtown.

Phase 05 – Trosper Road traffic can be reduced to one lane in each direction in the southern half while the Contractor can perform the work in the northern half. Traffic from the I-5 off can use the new 6th Ave and Lee Street intersection to approach downtown.

Phase 06 – Capitol Boulevard can be reduced to one lane in each direction in the eastern half while the Contractor can perform the work in the northwestern half. The Traffic signal at the intersection of Capitol Boulevard/Trosper Road can be modified for the traffic patterns.

Phase 07 – Capitol Boulevard traffic can be reduced to one lane in each direction in the eastern half while the Contractor can perform the work in the southwestern half. The traffic signal at the intersection of Capitol Boulevard/Trosper Road can be removed and temporary traffic control shall be installed.

Independence Day Parade: The City holds an annual parade on the 4th of July that requires use of all public facilities in the right of way. The Contractor shall schedule work so the public has full and unrestricted access to all facilities on the "X" Street to Israel Road segment of Capitol Boulevard.

Additional public events that will occur during the contract duration are listed as follows. The Contractor shall schedule construction around the event in their construction look ahead schedule and coordinate with Engineer.

- **State High School Golf Tournament**
  End of May
  Large event with out of area drivers, additional traffic along Capitol near lodging and food.

- **Senior Games**
  Last 2 weeks of July
  Street closure along Linderson (route map attached)
  Large event with out of area drivers, additional traffic along Capitol near lodging and food.

- **Kick in the Grass Soccer Tournament**
  July 22, 23, and 24, 2022
  Large event with out of area drivers, additional traffic along Capitol near lodging and food.

- **Artesian Brewfest**
  August 20, 2022

(******)
Delete item number one starting with "Remove or repair any condition…" and replace it with the following:

1. Remove or repair any condition resulting from the Work that might impede traffic or create a hazard.
   a. The Contractor may use Commercial HMA to repair the road surface after trenching operations in lieu of temporary HMA or cold mix. In such instances, the depth of the Commercial HMA shall be 1 inch. Measurement and payment for Commercial HMA shall be as described under section 5-04 of these project special provisions.

(******)
Delete item number six starting with "Open trenches within the Traveled Way…" and replace it with the following:

6. Open trenches within the Traveled Way or Auxiliary Lane shall have a steel-plate cover placed and anchored over them. The steel plates shall be secured around the perimeter with Plate Locks™ road plate securing system or approved equal. Plate securing systems shall be installed per manufacturer's recommendation. Temporary

HMA or cold-mix wedges around the steel plates shall not be allowed. Wedges or non-asphaltic devices shall be used for leveling as required to eliminate rocking of the plates. Warning signs shall be used to alert motorists of the presence of the steel plates.

1-07.24 Rights of Way

(******)
Delete this section and replace it with the following:

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

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

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

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

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

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

1-08 Prosecution and Progress

Add the following new section:

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(October 10, 2008 APWA GSP)

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

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

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

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

Add the following new section:

1-08.0(2) Hours of Work

(******)

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

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

*** For construction operations on Lee Street (from Linderson to the Lee/Street intersection) and on 6th Avenue (from the Lee/6th intersection to the 6th/Trosper intersection, limit work hours to 8 a.m. to 5 p.m., 7 days a week. Night work is not allowed within this area. ***

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than *** 3 working days *** prior to the day(s) the Contractor is requesting to change the hours.

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

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

1-08.1 Subcontracting
(May 30, 2019 APWA GSP, Option B)

Delete the ninth paragraph, beginning with "On all projects, the Contractor shall certify…".

1-08.3 Progress Schedule

1-08.3(2) Progress Schedule Types

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

Revise the first paragraph to read:

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

Revise the first sentence of the second paragraph to read:

The Contractor shall submit *** 1 *** copies of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the preconstruction conference.

1-08.3(5) Payment

(******)

Replace paragraph three starting with "The lump sum price…" with the following:

> The lump sum price shall be full pay for all costs for furnishing the Type B Progress Schedule, preliminary Type B Progress Schedule, and all Schedule Updates and Weekly Look-Ahead Schedules.

(******)

Replace paragraph seven starting with "No payment will be made for Schedule Updates…" with the following:

> No separate bid item or payment will be made for Schedule Updates. Payment for Work associated with providing Schedule Updates shall be included in the lump sum unit price for the bid item "Type B Progress Schedule." No additional payment shall be allowed for Schedule Updates required by events that are attributed to the actions of the Contracting Agency or due to the Contractors operations.

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

(July 23, 2015 APWA GSP)

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

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

(******)

Add the following new section:

1-08.4(1) Order of Work

Prior to starting construction and issuance of notice to proceed by the City, the Contractor shall furnish the Contracting Agency with a Type B Project Schedule, sequence, and method of proceeding with the work. This schedule shall address all items herein and must be approved by the Contracting Agency prior to commencing any construction operations.

The pedestrian access route shall remain in operation throughout the duration of the project unless temporary access is proposed and approved by the City.

Access to businesses within the project limits shall remain open for the duration of the project.

No additional work shall be done on Capitol Blvd that would impede traffic within the utility construction window including vaults and conduits for each utility.

Joint trench excavation shall be constructed at the rate of approximately 150 feet per day and all trenches shall be closed up at the end of the day unless otherwise approved by the Engineer.

The driveway entrance off of Trosper Road to parcels 12834440602, 12834440400, and 12834440701 near address 211 Trosper Rd SW shall be maintained and shall remain open until the new driveway entrance near 5301 Capitol Blvd SW is completely constructed.

1-08.5 Time for Completion

(January 19, 2022 APWA GSP, Option A)

Revise the third and fourth paragraphs to read:

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

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

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

1. The physical work on the project must be complete; and

2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (per Section 1-07.9(5)).
   b. Material Acceptance Certification Documents
   c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification
   e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
   g. Property owner releases per Section 1-07.24

Section 1-08.5 is supplemented with the following:

(March 13, 1995)
See "Public Works Contract for I-5/Trosper Road/Capitol Boulevard Reconfiguration" section 1.2: Completion Date.

1-08.9 Liquidated Damages
(March 3, 2021 APWA GSP, Option B)

Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and

2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

Liquidated Damages Formula

LD=0.15C/T

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)
C = original Contract amount
T = original time for Physical Completion

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

1-09 Measurement and Payment

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment

(July 23, 2015 APWA GSP, Option 2)

Revise item 4 of the fifth paragraph to read:

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

Supplement the last paragraph with the following:

When requested by the Engineer, the Contractor's representative shall collect the tickets throughout the day and provide them to the Engineer's designated receiver, not later than the end of the shift, for reconciliation. Tickets for loads not verified as delivered will receive no pay.

1-09.2(5) Measurement

(******)

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work. All Contractor incurred costs (i.e. labor, fuel, contractor personnel, etc.) associated with the City's request to complete the scale verification checks shall be paid for by the Contractor.

1-09.3 Scope of Payment

Section 1-09.3 is supplemented with the following:

(August 7, 2017)

Fuel Cost Adjustment

General

The Contracting Agency will make a fuel cost adjustment, either a credit or a payment, for qualifying changes in the index price of on-highway diesel fuel. The adjustment will be applied to partial payments made according to Section 1-09.9.

The adjustment is not a guarantee of full compensation for fuel price changes. Any adjustment provided by this provision shall not obligate the Contracting Agency for any costs due solely to changes in fuel costs beyond the amount adjusted by this provision. The Contracting Agency does not guarantee that fuel will be available at the base fuel cost or monthly fuel cost. No additional adjustment will be made for rates of fuel consumption or actual fuel types that differ from those specified for the purpose of determining the adjustment.

For the purpose of calculating the adjustment, the Base Fuel Cost shall be the ***Weekly*** fuel price from the ***U.S. Energy Information Administration*** website. The website location and directions are as follows:

- http://www.eia.gov/petroleum/gasdiesel/
- On the web page, click on the ***West Coast less California***, listed under the heading ***U.S On-Highway Diesel Fuel Prices*(dollar per gallon)*** at the lower end of the web page***.***
- In the pull down box labeled ***Period*** pull down ***Weekly.***
- Click on the fuel price history found under the column heading ***View History*** for the line ***Diesel (On-Highway***) ***– All Types***.
- On this web page obtain the nearest weekly fuel cost for the Monday occurring three weeks prior to the date that bids are opened. This weekly fuel cost becomes the Base Fuel Cost and is fixed for the duration of the Contract and will be used in calculating all adjustments.

The Monthly Fuel Cost shall be the most recent ***Monthly*** fuel price from the U.S. Energy Information Administration website. The website location and directions are as follows:

- http://www.eia.gov/petroleum/gasdiesel/
- On the web page, click on the ***West Coast less California***, listed under the heading ***U.S On-Highway Diesel Fuel Prices*(dollar per gallon)*** at the lower end of the web page***.***
- In the pull down box labeled ***Period*** pull down ***Monthly.***
- Click on the fuel price history found under the column heading ***View History*** for the line ***Diesel (On-Highway***) ***– All Types***.
- On this web page obtain the most current monthly fuel price.

If the specified index ceases to be available for any reason, the Contracting Agency at its discretion will select and begin using a substitute price source or index to establish the Monthly Fuel Cost.

Measurement

No adjustment will be made if the Monthly Fuel Cost is within 10 percent of the Base Fuel Cost. No adjustment will be made for work performed after the authorized Time for Completion.

If the Monthly Fuel Cost is greater than or equal to 110% of the Base Fuel Cost, then:

Adjustment = (Monthly Fuel Cost – (1.10 x Base Fuel Cost)) x Q

If the Monthly Fuel Cost is less than or equal to 90% of the Base Fuel Cost, then:

Adjustment = (Monthly Fuel Cost – (0.90 x Base Fuel Cost)) x Q

Where Q = Σ ((Fuel Usage Factor for each Eligible Bid Item) x (Quantity paid in the current months progress estimate for each Eligible Bid Item)) for all Eligible Bid Items listed below:

Eligible Bid Item	Fuel Usage Factor
*** Roadway Excavation Incl. Haul ***	*** 0.29 gal/CY ***
*** Gravel Borrow Incl. Haul ***	*** 0.17 gal/TON ***
*** Crushed Surfacing Base Course ***	*** 0.70 gal/TON ***
*** Commercial HMA ***	*** 0.90 gal/TON ***
*** HMA Class ½ In. PG 58H-22 ***	*** 0.90 gal/TON ***
*** HMA Class ½ In. PG 58V-22, Fiber Reinforced***	*** 0.90 gal/TON ***
*** Textured and Pigmented Cement Concrete Truck Apron***	*** 0.25 gal/SY ***

Payment

Payment will be made for the following bid item when included in the bid proposal:

"Fuel Cost Adjustment", by calculation.

To provide a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the Contractor's total bid.

1-09.7 Mobilization

(******)

Supplement this section with the following:

1-09.7(1) Site Office Trailer and Toilet Facilities

The Contractor shall provide a site office trailer and toilet facilities for use starting within one week of the Contractors mobilizing on site and extending until the project is complete.

The location of the facilities shall be approved by the Engineer prior to delivery to the site.

Parking locations shall be marked and egress and ingress to the parking area shall clearly marked or signed. A minimum of two parking stalls shall be made available exclusively for use by City of Tumwater staff and their representatives. These parking locations shall be immediately adjacent to the site office trailer. Use of these stalls shall be uninterrupted with clear and safe access. These stall shall be clearly marked “City of Tumwater Use Only”.

A separate office in the trailer shall be provided for City of Tumwater staff and their representatives. The office shall be furnished with a desk, storage shelf, and three chairs and be large enough to comfortably accommodate all furnishings. This office shall be separated to the main trailer by a lockable door and have a separate access to the outside. This will be needed as the city staff will require continuous access to the office to conduct business.

The Contractor shall provide private washroom facilities adjacent to the trailer for the City of Tumwater staff and their representatives only, complete with flush or chemical type toilet, lavatory and mirror, and maintain a supply of paper towels and toilet tissue. This toilet shall be cleaned and serviced on a once-a-week basis.

The site office trailer shall be weatherproof, plumb to level, piped for potable water, and electrically wired by certified personnel. The power supply shall be capable of providing a minimum of 100 amperages. The trailer shall be furnished with adequate outlets, lighting, air-conditioning, heating, and ventilation. The heating and air-conditioning system shall be capable of maintaining 70°F inside temperature throughout the year.

The Contractor shall maintain the site office trailer in a clean condition, and wash the floors weekly or additionally as required.

The site office trailer shall be, equipped with the following features for use by the City and its Consultants:

a. Electric Lights
b. Adequate Windows
c. Shelving
d. Plan Table
e. Conference Table capable of handling on-site meetings
f. Enough chairs for meetings
g. Cylinder door lock and keys made available to the City and its staff
h. Sanitary facilities
i. Heating and cooling
j. Microwave
k. Printer and Scanner
l. Dedicated high-speed internet service, through DSL, cable or other as accepted by the Engineer.
m. Furnishings and structure shall be in like-new condition.

The Contractor shall be responsible for the installation, subsequent removal and restoration of the site to the satisfaction of the Engineer. If the site office trailer is relocated to another location(s) during the course of the project, the Contractor is responsible for restoration of each site to the satisfaction of the Engineer.

All costs associated with furnishing the structure and toilet facilities, hauling, setup, relocating, cleaning, maintaining, and removing of the site office trailer and toilet facilities – including all furnishings, utility installations and operating costs, and restoration of the site – shall be incidental to the lump sum Contract price of Mobilization.

1-09.9 Payments

(******)
Supplement this section with the following:

Contractor shall provide lump sum breakdowns for all lump sum bid items regardless of cost.

1-09.9 Payments
(January 19, 2022 APWA GSP)

Section 1-09.9 is revised to read:

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

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

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

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

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

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

4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

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

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

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

Failure to perform any of the obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding any payments until compliance is achieved.

Upon completion of all Work and after final inspection (Section 1-05.11), the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification to be signed by the Contractor. The Contractor's signature on such voucher shall be deemed a release of all claims of the Contractor unless a Certified Claim is filed in accordance with the requirements of Section 1-09.11 and is expressly excepted from the Contractor’s certification on the Final Contract Voucher Certification. The date the Contracting Agency signs the Final Contract Voucher Certification constitutes the final acceptance date (Section 1-05.12).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. 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 email with delivery confirmation from the Contracting Agency 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 email with delivery confirmation is received by the Contractor. The date the Contracting Agency unilaterally signs the Final Contract Voucher Certification shall constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction

(November 30, 2018 APWA GSP)

Revise this section to read*:*

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

1-09.13 Claims Resolution

1-09.13(3) Claims $250,000 or Less

(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total $250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-10 Temporary Traffic Control

1-10.2 Traffic Control Management

1-10.2(1) General

Section 1-10.2(1) is supplemented with the following:

(******)

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

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

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778

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

Integrity Safety
13912 NE 20th Ave.
Vancouver WA 98686
(360) 574-6071
https://www.integritysafety.com

US Safety Alliance
(904) 705-5660
https://www.ussafetyalliance.com

- Contractor shall be responsible for scheduling construction work to ensure that United States Post Office service and mail delivery is not impeded during construction. Contractor shall contact U.S. Post Office for delivery routes and times in the areas of construction work and schedule work to accommodate this service.
- Contractor shall be responsible for scheduling construction work to accommodate sanitation services (garbage/recycle pickup) to ensure service is not impeded by construction work. Contractor shall contact local sanitation service for pickup routes and times and schedule work to accommodate this service.
- Vehicles parked along roadways will impede construction operations. Contractor shall place temporary no parking signs stating the dates and times when parking will be prohibited due to construction activities. Contractor shall submit a material submittal of the temporary “No Parking” sign for City approval prior to installation. No parking signs shall be in-place no less than 72 hours prior to construction activities. Contractor shall notify homeowners within the project limits no less than 5 working days prior to construction activities. Contractor to work with the City on acceptable methods of homeowner notification (such as flyers, door hangers, in-person contact).
- InterCity Transit Bus Routes: Contractor shall coordinate with Intercity Transit during construction to inform them of construction activities that could affect transit bus routes through the construction site. InterCity Transit provides bus service north/south along Capitol Boulevard at intervals of 15 minutes. All reasonable accommodation shall be made to maintain priority access through the construction work zone for InterCity Transit buses as needed. Transit bus route maps, schedules, and InterCity Transit contact personal shall be posted in the job trailer. For any bus stop locations within the project limits, the Contractor must notify Intercity Transit 5 working days prior to any work that may affect an

existing bus stop location and work with InterCity transit to identify an alternative bus stop location if required.

- School Bus Routes: Contractor shall contact and coordinate with schools in the area that utilize bus route in and through the construction site. Contractor shall obtain bus route schedules and that information shall be readily available to project supervisors on site. All reasonable accommodation shall be made to maintain priority access through the construction work zone for school bus service. School bus route maps, schedules, and School District contact personal shall be posted in the job trailer.

The Contractor shall be responsible for providing Construction class A signs, detour route signs for construction of the I-5 on/off ramps, PCMS signs, temporary striping and Contractor provided site specific traffic control plans. Contractor is also responsible for providing ADA accessible pedestrian routes through the construction zone to maintain access to business and residents during construction. Contractor shall provide and maintain bike routes through the project site.

Conceptual construction phasing and general traffic control plans have been (included in the construction documents. These phasing and general traffic control plans have been provided for reference only to show the general construction phasing for the project and general traffic control requirements.

For this project, the Contractor must develop site specific traffic control plans prior to work. The site specific traffic control plans shall be prepared per the WSDOT Plan Preparation Manual, WSDOT Work Zone Traffic Control Guidelines, WSDOT Design Manual, MUTCD< and City of Tumwater standards. Plans shall be consistant with current standard of practice for site specific traffic control and MOT (Maintenance of Traffic) plans. Plans shall be clearly legible on 11”x17” prints. Standard traffic control plans can be utilized if applicable to the work being completed.

Site specific traffic control plans shall be submitted to the Engineer a minimum of 10 calander days in advance of the time to commence the Work. The Engineer will review, provide comments, and approve the site specific traffic control plans. Approval of the plans must be obtained before work can begin. All costs associates with preparation of the site specific traffic control plans and any subsequent revisions during the review process shall be borne by the Contractor.

The site specific traffic control plans shall not only address all work zones and standard traffic control devices and signs but shall also address issues such as:

- Conflicting or temporary pavement markingsand temporary striping:
- Maintaining existing operational signs and covering conflicting signs;
- Staging requirements;
- Temporary vertical or horizontal clearance restrictions;
- Temporary work zone illumination for night works;
- Consistency with any existing work hours and noise restrictions;
- Vertical drop-offs;
- Intersection or access control (traffic signals, on/off-ramp approaches);
- Business and residence access during construction;
- Pedestrian and bicycles; and
- Work zone capacity and related mobility impacts.

The site specific traffic control plans shall also include a pedestrian traffic component. Temporary structures may have to be constructed. All such structures, including temporary asphalt ramps, wood-formed ramps, etc. shall meet current Americans with Disabilities Act (ADA) standards. Pedestrians shall be able to get around the Capitol Boulevard / Trosper Road and Capitol Boulevard / Linda Street intersections at all times during construction. The Plan shall also consider how to maintain the pedestrian movement through the intersections. This might entail working on one side of the street and on one corner of the intersection at a time. All costs to maintain pedestrian traffic through the project site shall be considered incidental to the various contract items of work involved.

1-10.2(1)B Traffic Control Supervisor

(******)

Delete the last paragraph and replace with the following:

The Traffic Control Supervisors (TCS) may perform the Work described in Section 1-10.3(1)A Flaggers or in Section 1-10.3(1)B Other Traffic Control Labor, but all Work completed by the TCS shall be compensated under the bid item for "Project Temporary Traffic Control", lump sum. No other compensation shall be made.

1-10.3 Traffic Control Labor, Procedures, and Devices

1-10.3(3) Traffic Control Devices

1-10.3(3)C Portable Changeable Message Sign

(******)

Supplement this section with the following:

The Contractor shall purchase two (2) portable changeable message signs (PCMS) for City ownership. The Contractor shall operate and maintain the City owned PCMS for the duration of the project. The Contractor will be responsible and liable for any and all damage done to PCMSs during the project. At the end of the project, the Contractor shall deliver the two City owned PCMSs to the City's Operations Building with any damage sustained during the project fully repaired. The PCMSs shall be Silent Messenger, full sized message board, supplied by Solar Tech, with vandal proof battery box.

The Solar Tech Silent Messenger shall have the following features:

- Message panel size: 126" x 76" High-Definition 30 x 56 pixels, 2.3" pitch;
- Batteries: Eight (8) 6-volt heavy-duty, deep-cycle (AGM) with anti-theft steel battery frame bolted to trailer with vandal-proof battery box reinforced steel cage;
- Battery Charger: 55 amp output (120 VAC 50/60 Hz Input)
- Solar Array: 330 watts fixed;
- Height: 103" for transportation position and 162" for operating position;
- Remote Communications: Talk to Your Board! Remote access, GPS tracking, and free lifetime cellular service;
- Brakes: Hydraulic surge rated for 5,000 lb capacity;

The Contractor shall place PCMS boards in their approved locations 1 week prior to start of construction. The Contractor shall change the message on a board within four (4) hours of receiving notice from the Engineer.

The Contractor shall register with Washington State Department of Licensing as sole owner of the PCMS boards within 15 days from the date of purchase and obtain legal license plates for the trailers. The Contractor shall transfer ownership to the City of Tumwater at the end of the project when Physical Completion of the project is granted. All paperwork such as title reports (proof of ownership), maintenance records, user's manual, and literature of product information shall be transferred to the City of Tumwater as legal ownership.

1-10.4 Measurement

(******)
Supplement this section with the following:

There will be no specific unit of measurement for the lump sum bid item Temporary Noise Barrier Wall (Blankets).

Temporary pavement marking will be incidental to "Project Temporary Traffic Control". Contractor shall furnish, install, and remove all temporary striping required to maintain traffic during construction operations. Temporary striping shall be in accordance with WSDOT Standard Spec 8-23. Contractor shall install and maintain temporary pavement markings to match existing roadway pavement markings before permanent pavement markings are completed.

Electric message sign will be measured per hour for the time that each electric message sign – including portable changeable message signs and sequential arrow signs – are operating as shown on a traffic control plan.

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

(******)
Section 1-10.4(3) is supplemented with the following:

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

***
"Flaggers", per hour
"Electronic Message Sign", per hour
***

1-10.5 Payment

(******)
Supplement this section with the following:

"Project Temporary Traffic Control", per lump sum.
The lump sum Contract price for "Project Temporary Traffic Control" shall be full compensation for all costs incurred by the Contractor in performing the Contract Work defined in Section 1-10 except for costs compensated by Bid Proposal items inserted through Contract Provisions as described in Section 1-10.4(3) and shall include the following:

a. All costs associated with furnishing, installing, maintaining, and removing Temporary Noise Barrier Wall (Blankets).
b. All costs associated with furnishing, installing, and removing of all temporary striping required to maintain traffic during construction operations shall be incidental to the lump sum Contract price for "Project Temporary Traffic Control".
d. Payment for all Work performed by the Traffic Control Supervisor (TCS) as described in 1-10.2(1)B.

"Electronic Message Sign", per Lump Sum.
The lump sum contract price, when applied to the number of units of measured for this item in accordance with Section 1-10.4, shall be full compensation for all costs incurred by the Contractor in performing the Work described in Sections 1-10.3(3)B and 1-10.3(3)C as specified herein.

Division 2
Earthwork

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

(******)
Supplement this section with the following:

A high visibility fence shall be installed around all trees and vegetation as required by the Engineer prior to beginning work. The Contractor shall be responsible for installing, maintaining, and removing the high visibility fence as required. Disposal of all organic waste shall be by in accordance with Section 2-01.2(2) Disposal Method No. 2 – Waste Site.

The Contractor shall take all precautions necessary to protect the public, property, trees, and natural vegetation from harm. Any damage to utilities or other structures on public right-of-way or private property shall be restored by the Contractor at the Contractor's expense.

2-01.4 Measurement

(******)
Revise this section with the following:

There will be no specific unit of measurement for the lump sum bid item Clearing, grubbing, and roadside cleanup.

2-01.5 Payment

(******)

Revise this section with the following:

“Clearing, Grubbing, and Roadside Cleanup”, per lump sum.

The unit contract price per lump sum for “Clearing, Grubbing, and Roadside Cleanup” shall be full pay for all work describe in this section including “Clearing and Grubbing” and "Roadside Cleanup". The cost to construct "High Visibility Fence" shall be incidental to this bid item.

2-02 Removal of Structures and Obstructions

(******)
Supplement 2-02 with the following new Section:

2-02.2 Video

The Contractor shall provide pre-construction video of the existing conditions for the construction area including all easements, streets, alleys, and driveways within the project area. Further, video shall include existing drainage, driveways, sidewalks, and other frontage improvements. The Contractor shall also provide pre-construction video of the existing conditions of each face of an existing structure (houses, garages, sheds, fences, etc.), within 30 feet of the construction area.

The Contractor shall provide a copy of the video, in high definition DVD format, to the City prior to any construction.

All costs for providing and furnishing the pre-construction video shall be considered incidental to the Bid Item of "Removal of Structures and Obstructions" and no other payment will be allowed.

2-02.3 Construction Requirements

(******)
Supplement this section with the following:

Unless otherwise noted, existing type 1 catch basins and inlets shall be removed entirely. Existing type 2 catch basins, inlets, and sanitary sewer manholes with a depth of less than 8 feet shall be removed entirely. Existing type 2 catch basins, inlets, and sanitary sewer manholes with a depth greater than 8 feet below the surface may be removed to a depth of 8 feet below the surface.

The removal of an existing hydrant assembly shall consist of turning off the gate valve, removing the existing hydrant assembly, valve box and anything else that is within 2’ of the finished grade. Cap or plug the existing tee after the existing hydrant assembly and valve box has been removed. The Contractor shall return the existing fire hydrant assembly to the City. If the existing hydrant is damaged due to the Contractor’s negligence, the Contractor shall replace the hydrant with a new hydrant.

Pedestrian signal heads, vehicular signal heads, pedestrian push button assemblies, and traffic signal and electrical service cabinets (collectively known as Traffic signals standards and equipment), street lights, and street signs shall be salvaged and delivered to the City of Tumwater Maintenance Shop located at 7200 New Market Street SW.

All materials and equipment inside of WSDOT right of way shall be salvaged and delivered to the Washington State Department of Transportation. All costs associated with loading, delivery, and unloading salvaged equipment shall be at the cost of the Contractor. Large pieces of equipment such as signal poles, mast arms, light standards, and luminaire arms shall be delivered to 2120 RW Johnson SW, Tumwater, WA 98501. Small items such as signal cabinets, service cabinets, signal displays, and detection cameras shall be delivered to 7311 31st Ave NE, Lacey, WA 98516. The Contractor shall contact the WSDOT Olympic Region Signal Shop, during normal business hours, at 360-357-2669 three (3) business days prior to delivery to schedule the drop off.

The Contractor shall use due care and caution during removal and transportation of the salvaged material so that no damage occurs to the salvaged material. Any damage caused by the Contractor shall be deducted from the amount due.

Utility conflicts between abandoned utilities and/or utilities to be abandoned in place and proposed utilities will be resolved by cutting and capping the abandoned utility. Such Work will be incidental to the bid item “Removal of structures and Obstructions”.

(******)
The following items plus all materials resulting from incidental work including clearing; grubbing and roadside cleanup shall be removed from the job site, disposed of in a waste site or when noted on the plans, delivered to the City or WSDOT.

***

Pavement	Lane Markings (Buttons, Paint, Plastic, RPM)
Sidewalk	Traffic signal standards and equipment
Driveways	Foundations
Curb and Gutter	Fencing
Catch Basins	Manholes
Storm Sewer Pipe	Culverts
Water Pipe	Fire Hydrants
Water Valve and Fittings	Valve Boxes
Meter Boxes	Silt Fence
Street Lights	Street Signs
Rocks	Noise Barrier Walls
Refuse	Abandoned Utilities

***

The Contractor shall notify property owners/residents prior to all grading, clearing, and fence removal on newly acquired right-of-way a minimum of 3 days before any work.

The Contractor shall provide the temporary fencing immediately upon removal of the existing fence and will maintain the temporary fence until the permanent fence is installed.

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

Supplement this section with the following:

In removing pavement, sidewalks, and curbs, the Contractor shall:

1. Mark all cut lines in the field and have the Engineer approve them prior to commencing cutting operations. The Engineer reserves the right to adjust removal to the nearest construction joint.
2. Make a vertical saw cut between any existing pavement, sidewalk, or curb that is to remain and the portion to be removed.
3. All sawcuts shall be continuous and made with saws designed specifically for this purpose; no skip cutting, wheel cutting, or jack hammering will be allowed unless given prior approval by the Engineer.
4. Replace at no expense to the Contracting Agency any pavement designated to remain that is damaged during the removal of other pavement. All damaged sidewalks and curbs shall be replaced to the nearest existing joint.
5. Haul all broken–up pieces of pavement, sidewalks, and curbs to an off-project disposal site.

All transitions to existing asphalt or cement concrete driveways, parking lots, curb and gutter and walkways shall be vertically sawcut full-depth with straight, uniform edges. Existing asphalt pavement roadway edge may be cut with a wheel, provided the wheel cut is full depth and no damage occurs to the pavement which is to remain. Neither impact tools nor pavement breakers may be used for trench crossing of existing pavement. Trench crossing of existing pavement shall be vertically sawcut.

When sawcutting the existing roadway is needed to widen the road to perform excavation, the Contractor shall take extra precaution to make a neat, uniform cut, and shall sawcut pavement to full depth, regardless of number of passes necessary. Compaction of asphalt near the sawcut is critical and a vertical, neat line sawcut is required. If in the opinion of the Engineer, the cut is not satisfactory due to Contractor's workmanship or equipment, or if the sawcut becomes damaged and irregular, the Contractor shall fix the problem to the satisfaction of the Engineer, at Contractor's expense.

(******)

Supplement 2-02.3 with the following new section:

2-02.3(4) Remove, Relocate, and Dispose

2-02.3(4)A Concrete Pavement

The Contractor shall provide necessary labor, equipment, and materials to remove completely, approximately 1,650 square yard of 7 to 9-inch thick cement concrete pavement with doweled joints on Capitol Blvd between Station CD 304+71 and Station CD 310+28, as shown in the Plans. There is approximately 2 to 4 inches of asphalt overlaying the cement concrete pavement that will be considered as part of this removal item. After removal of cement concrete pavement with asphalt overlay, the void space shall be filled with crushed surfacing base course and 2 inches commercial HMA. The cost for crushed surfacing base course and commercial HMA will be paid under applicable bid items in the Proposal. The commercial HMA will be placed immediately following cement concrete pavement removal so that traffic is not driving on exposed gravel.

2-02.3(4)B Sound Wall

The Contractor shall provide necessary labor, equipment, and materials to remove a portion of approximately 310 square foot of the existing WSDOT sound wall near B 203+42 as shown in the Plans. The wall panels shall be removed to the nearest joint and the wall foundation shall be sawcut and removed to the limits shown in the Plans. Any damages to the wall outside the removal limits shall be repaired by the Contractor to the satisfaction of the Engineer, at the Contractor's expense.

(******)
Supplement 2-02.3 with the following new section:

2-02.3(5) Adjustment of Groundwater Monitoring Wells

The Contractor must contract a licensed well driller to adjust the two existing groundwater monitoring wells located north and south of Linda Street. Contact the Engineer for location of the existing groundwater monitoring wells.

The Contractor or licensed well driller shall send a Notice of Intent (NOI) to the Washington State Department of Ecology (DOE) 72 hours before the work will begin.

The licensed well driller shall follow all requirements of WAC 173-160-381 for the adjustment of the groundwater monitoring wells.

2-02.4 Measurement

(******)
Section 2-02.4 is supplemented with the following:

Removal of concrete pavement will be measured per square yard.

Adjustment of existing groundwater monitoring well will be measured per each.

2-02.5 Payment

(******)
Delete this Section and Replace with the following:

"Removal of Concrete Pavement", square yard.
The unit Contract price per square yard for removal of concrete pavement shall be full compensation for all labor, equipment, and materials necessary to complete the requirements of this section.

“Adjustment of Existing Groundwater Monitoring Well”, per each.
Adjustment of existing groundwater monitoring well shall be full pay for materials, equipment, and labor to adjust the existing groundwater monitoring well casing the finished grade as shown on the plans.

“Removal of Structures and Obstructions”, lump sum.

The lump sum Contract price for Removal of Structures and Obstructions shall include payment for all Work as described in section 2-02.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.3 Construction Requirements

2-03.3(7) Disposal of Surplus Material

2-03.3(7)C Contractor-Provided Disposal Site

(******)
Supplement this section with the following:

The Contracting Agency has not provided a waste site for disposal of excess materials and debris.

2-03.3(14) Embankment Construction

2-03.3(14)C Compacting Earth Embankment

(******)
Replace paragraph one with the following:

This section describes three methods (A, B, and C) for building earth embankments. The Contractor shall be required to compact all embankments in accordance with Method C.

2-03.3(14)D Compaction and Moisture Control Tests

(******)
Supplement this section with the following:

At the request of the City, the Contractor shall allow the City's laboratory technician to be on site for obtaining material samples in a timely manner. Once the test results are confirmed, the Contractor can commence the Work. No adjustment to the contract price or time for delays will be made as a result of the test that doesn't meet the material specification. Compaction test reports shall be mailed directly from the testing laboratory to the City of Tumwater Transportation and Engineering Department.

2-03.4 Measurement

(******)
Supplement this section with the following:

The quantity of the following items to be paid for on this project shall be quantities shown on the bid proposal:

"Roadway Excavation Incl. Haul" shall be measured per cubic yard.

2-03.5 Payment

(******)
Replace paragraph 10 of this section with the following:

"Roadway Excavation Incl. Haul", per cubic yard.
The unit contract price per cubic yard for "Roadway Excavation Incl. Haul" shall be full compensation for all costs incurred for pond excavation and other roadway excavation as shown in the Plans. The bid item shall be full compensation for all labor, equipment, and materials necessary to complete the work as specified herein.

(******)
Supplement Division 2 with the following new section:

2-05 POTHOLING

2-05.1 Description

This Section specifies work requirements for potholing ahead of construction to identify any potential or actual conflicts (horizontal and/or vertical) or other potential or actual physical separation or tolerance issues between the new construction and existing buried facilities.

Potholing shall be for the sole purpose of identifying utility conflicts affecting the alignment of the proposed construction, and for gathering sufficient information to develop a redesign of the proposed construction to resolve the potential conflict. Potholing is not for the purpose of verifying or supplementing pavement markings applied by one-call responders for the Contractor's convenience. Nothing in this specification relieves the Contractor from his responsibilities under RCW 19.122. The relationship between the Contractor and one-call responders representing various utilities is defined in RCW 19.122, and takes precedence over this specification.

The Work shall consist of saw-cutting and removal of existing pavement, excavation to the depth required to expose the conflicting utility including disposal of spoils, shoring, if required, gathering sufficient information about the conflicting utility for avoidance design, backfilling and compacting the excavation and providing a temporary or permanent repair to the surface.

2-05.2 Materials

Materials shall meet the requirements of the following sections:

Crushed Surfacing Base Course for Pothole Backfill	9-03.9(3)

2-05.3 Construction Requirements

2-05.3(1) Preparatory Work

Potholing, as required, shall take place at least five (5) working days ahead of construction. As required by RCW 19.122, Contractor shall contact the Utility Location Request Center (one-call center) (1-800-424-5555 or 811) sufficiently in advance to allow utility locates to be marked in the construction zone prior to potholing. The Engineer, in consultation with the

Contractor and Consultant (if any), shall determine the locations of potholes. The decision of the Engineer with regard to potholing locations is final.

2-05.3(2) Potholing

The Contractor shall pothole at the locations designated by the Engineer. The Contractor may pothole at other locations to comply with RCW 19.122, but such potholing will be considered for the convenience of the Contractor and no payment will be made.

The Contractor shall notify the Engineer at least one (1) working day in advance, each time potholing will occur, as to the date, time and location that potholing will be conducted. Each pothole designated to be investigated by the Engineer shall be at least two (2) feet square. When pavement, sidewalk or curb and gutter at the pothole location is to remain subsequent to construction, it shall be saw-cut full depth regardless of pavement thickness and carefully removed to avoid spalling of the edges of the pothole. Sidewalk and curb and gutter shall be removed to the nearest joint. If spalling occurs, the Contractor shall, prior to pavement patching, saw-cut outside the spalled area to provide a vertical face for the full depth of the pavement patch at no additional cost to the Contracting Agency, and payment will be made only to the original dimensions of the pothole. For pavement that will be ultimately removed by construction of the improvement, the Contractor may select the means for pavement removal, but payment will not be made for pavement removed outside the lines designated by the Engineer.

Excavation shall be by hydro-excavation, using truck-mounted eductor equipment, to a sufficient depth to expose and identify conflicts to the proposed horizontal and vertical alignment of the improvement. Measurements shall be made to the existing conflicting underground facilities in sufficient detail (station and offset from project control line, depth below pavement surface, size and content of pipe) that the exact location can readily be identified in relation to the proposed improvement. Location notes prepared by the Contractor shall be provided to the Engineer within one (1) working day of the potholing. If notes for more than one location are provided at the same time, the Contractor shall prioritize the location notes based on the scheduling needs of his operation.

Each pothole excavated shall be backfilled using Crushed Surfacing Base Course (section 9-03.9(3)). When sand bedding is required by the owner of the exposed pipe, sand meeting the requirements of section 9-03.13, or equivalent, shall be used. Backfill shall be placed and compacted in twelve-inch (12”) maximum lifts to within three feet (3’) of the surface, then six-inch (6”) lifts to the top of subbase. When the pothole is in a paved area, including sidewalks or curb and gutter, to be disturbed by the improvement, each backfill lift shall be compacted to 90 percent of maximum density as specified in section 2-03.3(14)D. Four inches (4”) of cold mix asphalt will be applied as the surface material.

For potholes in paved areas, including sidewalks, curbs and gutters, which will not be disturbed by the improvement, each backfill lift shall be compacted to 95 percent of maximum density as specified in section 2-03.3(14)D. Alternatively, the Engineer may require the excavation to be backfilled with controlled density fill (CDF).

When the pothole is not in a paved area, surface material existing prior to potholing (sod, bark, etc.) shall be replaced in kind at no additional expense to the City.

2-05.3(3) Avoidance Design

Within two (2) working days following the receipt of location notes from the Contractor, the Engineer will determine whether a redesign of the proposed improvement with the highest scheduling priority as determined by the Contractor is required or not. If required, a design to avoid the conflicting underground facility will be provided. Determinations related to other location notes submitted at the same time will follow at one (1) working day intervals until all conflicts from that submittal are resolved. Subsequent submittals of location notes resulting from further potholing shall follow the same pattern, with the pothole location having the highest scheduling priority as determined by the Contractor, being addressed first.

No work other than trenching, dewatering and trench wall stabilization may be performed within twenty feet (20') of a conflicting underground facility location until such time as it has been determined that a redesign is not necessary, or a revised design for that location has been received by the Contractor. If a revised design is required, the work shall proceed on a force account basis. Credits for deleted work shall be determined as set forth in section 1-09.5.

2-05.4 Measurement

Potholing at connections and existing utility crossings will be measured per each.

2-05.5 Payment

For locations approved by the Engineer, payment will be made for the following Bid item when included in the Proposal:

"Potholing at Connections and Existing Utility Crossings", per each

The unit contract price per each for "Potholing at Connections and Existing Utility Crossings" shall be full payment for all labor, materials, equipment and incidentals required to complete the work as directed by the Engineer and as specified herein, including full depth saw-cutting regardless of pavement thickness, removal and disposal of pavement, excavation, including disposal of spoils, shoring, location measurement, backfill, compaction and surface repair, for each potholing module.

No payment will be made for Potholing accomplished by the Contractor in compliance with RCW 19.122. Such Potholing shall be considered incidental to the contract and the costs thereof shall be included as part of, and incidental to, other bid items.

2-09 STRUCTURE EXCAVATION

2-09.1 Description

(******)
Supplement this section with the following:

This work consists of furnishing, utilizing, moving, and maintaining a trench safety system.

2-09.3 Construction Requirements

(******)
Supplement section 2-09.3 with the following:

The Contractor shall comply with all applicable state laws, OSHA, WISHA requirements, and Department of Labor and Industries regulations governing trench excavation and pipe laying.

2-09.4 Measurement

(******)
Supplement section 2-09.4 with the following:

Trench safety system shall be paid for per lump sum regardless of the type, size, and quantity used.

2-09.5 Payment

(******)
Supplement section 2-09.5 with the following:

"Trench Safety System for ___", per lump sum.
The lump sum contract price for "Trench Safety System for ___" shall be full compensation for all labor, tools, equipment, and materials necessary to comply with the requirements stated above.

(******)
Supplement Division 2 with the following new Section:

2-10 DUST CONTROL

2-10.1 Description

This work consists of furnishing and applying Magnesium Chloride solution for dust control as the Engineer requires.

2-10.2 Materials

Magnesium Chloride compound shall be combined with water per the manufacturer's specifications for dust control applications.

2-10.3 Construction Requirements

The Contractor shall apply magnesium chloride solution by means of tank trucks equipped with spray bars. Spray controls shall ensure that the solution flows evenly and in the amounts required by the manufacturer's recommendation and directed by the Engineer.

2-10.4 Measurement

"Dust Control" per MGAL (million gallons), shall be measured by tanks or tank trucks of known capacity or by meters approved by the Engineer. The Contractor shall supply and install any

meters at no expense to the Contracting Agency. It is the Contractor's responsibility to obtain a water source. No source of water has been identified by the Agency.

2-10.5 Payment

"Dust Control", per MGAL.

The unit contract price per MGAL for "Dust Control" shall be full pay for all labor, materials, tools, and equipment necessary to furnish, haul, and apply the magnesium chloride solution.

(******)

Supplement Division 2 with the following new Section:

2-13 PRIVATE UTILITY COORINDATION AND CONSTRUCTION

2-13.1 Description

This project contains both Work that is to be completed by the Contractor and Work that is to be completed by others and will be coordinated by the Contractor. All utility work within the project limits shall be coordinated by the Contractor.

The Contractor's Work includes all Work involved in the creation of a joint utility trench for private utility companies including but not limited to excavation, shoring, laying of conduit, bedding, trench backfill, service trenching, excavation for utility vaults, utility vault foundation and installation, and other private utility appurtenances as shown on the Plans or specified in these specifications. All facilities in the joint utility trench shall be constructed per the Project Plans, PSE Plans, and specifications for each utility purveyor.

A breakdown of the Work involved for each utility is described in the following sections:

2-13.1(1) Puget Sound Energy – Electric

There are two orders of Work in regards to Puget Sound Energy (PSE) – Electric. The first is an overhead conversion which will underground existing overhead power. This Work is referred to as "Schedule 74" or "underground conversion". The second is providing service connections for the illumination and rapid flashing beacons. The second order of Work will be discussed in Section 8-20 of these special provisions and will not be referenced further in this Section.

The Contractor shall note that the Schedule 74 underground conversion Work is being completed in partnership with the City of Tumwater and PSE. Any revisions to the Project Plans must be mutually approved by the City and PSE. The contractor shall formally submit questions/comments regarding the plans via the RFI (request for information) system. The City will then coordinate with PSE for final PSE approval.

This Conversion Project has been designed and will be constructed in accordance with PSE design and construction standards in effect as of the date of this Project Plan. PSE standards applicable to Construction Work to be performed by the Contractor shall be the Construction Plans, specifications, special provisions, and PSE's "Electric Distribution Trench/Duct/Vault Construction Standards, 2013". All relevant PSE standard described in this Section are attached to this Project Plan by this reference. The

Contractor's on-site supervisor shall have all previously referenced documents on-site at all times during construction.

2-13.1(1)A Contractor's Work and Responsibility

The Contractor shall provide PSE personnel full access to the work site during construction of the power distribution system. The Contractor shall work with PSE in good faith throughout the project. Full cooperation between PSE Inspectors and the Contractor's work force shall be maintained at all times during construction.

The Contractor shall not work on ANY energized power system. The Contractor shall notify PSE immediately if work on an energized system is required and coordinate with PSE to have PSE personal complete the required work.

The Contractor shall provide written notice to customers within the Conversion Area in advance of the start of Work for the Conversion Project. The notice will include contact information for both the City and PSE, the expected Conversion Project schedule, anticipation of service interruptions and Work required to be performed by customers. Prior to distribution, the Contractor shall work with the City for final approval of the written notice. The Contractor shall allow the City to have 2 days for review and comments/approval of the written notice. Delivery of public notices shall be completed by the Contractor, under supervision of the City.

PSE allows for other private utilities to string private utility lines on PSE poles. The Contractor shall coordinate the removal and relocation of other private utilities from PSE's poles. It is the Contractor's responsibility to ensure that timely notification, in writing, is provided to affected utility purveyor's of the need to remove or relocate private utiltiies as work progresses. All written communication between utility purveyors and the Contractor shall be forwarded to the City construction administration team.

The Contractor shall provide all surveying for equipment placements, locations, and establish all grade elevations for the Underground Distribution System within the Conversion Area. For installation locations, the Contractor shall stake out grades and hard improvements in the area and then coordinate with the PSE inspector to determine the final locations for trench and equipment installation in the field. It is the Contractors responsibility to provide ALL requested survey services upon request of the PSE inspector during installation.

It is the responsibility of the Contractor to ensure that the installed Underground Distribution System does not conflict with any new utility installations or improvements shown on the construction plans. It is also the Contractor's responsibility to ensure that all surface installations of vaults and equipment do not conflict with any surface mounted improvements.

The Contractor shall provide all necessary excavation, bedding, backfill, off-site disposal, site restoration and coordination for installation of the Underground Distribution System. This includes trenching, backfill, and restoration for cut-over and transfer of existing underground system and service lines from the existing overhead distribution system to the new Underground Distribution System.

Contractor to coordinate private property trenching, excavation and restoration activity with the City and private property owners affected by this Conversion Project. See section 2-13.3(1)A1 Electric Service Conversion for the list of properties requiring service conversions.

Contractor shall provide flagging and traffic control as required for all work performed and for any PSE inspection work that is required to complete work.

Promptly following notice from PSE that the Underground Distribution System has been energized, the Contractor shall provide notice to customers within the Conversion Area informing them of their obligation and responsibility to convert their overhead service lines to underground service lines as provided by state law or to modify existing underground service lines for connection to the Underground Distribution System. The notice shall inform affected customers that their service will be affected for 4 hours and no cost associated with reconnecting the service will be billed to affected customers. The Contractor shall work with affected customers to minimize impact to their business. Affected service are as described in 2-13.1(1)D Affected Service Lines.

Contractor shall provide a secure staging and storage area(s) for duct and vault materials provided by PSE. The Contractor shall be responsible for the security and condition of these materials until they are installed and accepted by PSE or returned to PSE's custody. Unused PSE provided construction material shall be returned to PSE. Materials will be picked up by PSE line crews.

Contractor shall provide all labor and equipment required for the off-loading of PSE duct and vault materials delivered to the job site.

Contractor shall facilitate weekly (or as otherwise agreed by the City and PSE) construction coordination meetings to include all relevant parties participating in the conversion including PSE and it's contractor(s), the City and it's contractor(s), and other utilities.

PROJECT ASBUILTS – The contractor shall provide field as-built survey of all installed underground PSE facilities. Field survey shots are required.

2-13.1(1)B Puget Sound Energy's Work and Responsibility

Following notice from the Contractor, deliver or cause to be delivered all duct and vault materials to the designated staging/storage area(s). Acknowledge delivered quantities and condition of duct and vault materials by signing shipping manifests.

PSE will provide a mandrel to the Contractor to be used in proofing of the duct and vault system. "Proofing" as used herein is defined as verification using a mandrel that the duct and vault system is free and clear of damage, installed to the proper grade and at the proper location and contains a pulling line.

PSE will provide PSE electrical workers to complete duct installation and proofing when such work is performed at or in any energized vault containing energized cables or equipment.

Install (except for ducts and vaults installed by the Contractor) and energize the Underground Distribution System. Provide written notice to the Contractor/City when the Underground Distribution System is energized.

Perform cut-over and transfer of existing Underground Distribution System and existing underground service lines from the overhead distribution system to the new Underground Distribution System where applicable. PSE will notify the City/Contractor for excavation and the affected customers at least two (2) business days prior to installation, transfer, and connection of underground service lines. See section 2-13.3(1)A1 Electric Service Conversion for the list of properties requiring service conversions.

Install and connect replacement underground service lines to single family residences and connect modified and replacement non-residential underground service lines provided by customers within the Conversion Area pursuant to PSE Tariff Schedule 85. See section 2-13.3(1)A1 Electric Service Conversion for the list of properties requiring service conversions.

Remove the existing overhead electric distribution system including, conductors, equipment, down guys, anchors and poles after all service lines to customers within the Conversion Area are connected to the Underground Distribution System and all other utilities have been removed from PSE's poles. Holes left following removal of poles will be filled with crushed rock and compacted in accordance with applicable City standards or specifications.

Provide flagging and traffic control as required for all work performed by PSE (except as may otherwise be reasonably provided by the Contractor during installation of ducts and vaults in conjunction with Contractor performed trenching, excavation, back-fill and restoration).

Attend weekly (or as otherwise agreed by the Contractor and PSE) construction coordination meetings facilitated by the City and its contractor during periods of Conversion Project construction.

PSE will remove the existing overhead electric distribution system from the poles and notify Comcast, Lumen, the Contractor, and the Engineer when they have completed work on their poles. PSE will remove the poles once Comcast and Lumen facilities are removed from the poles.

2-13.1(1)C City of Tumwater's Work and Responsibility

City shall accept delivery of the completed duct and vault system once the new system has been proofed (as described above) by the Contractor and final approval has been provided by the City.

2-13.1(2) Puget Sound Energy – Gas

Puget Sound Energy has a gas line on Linda Street which will be relocated by others. The Contractor shall coordinate the work schedule with the private utility company and provide access to the job site to complete this Work.

The Contractor will not provide traffic control for the relocation of the gas line.

2-13.1(3) Lumen

Lumen has several duct banks and communication facilities within the project limits as shown on the plans which shall be protected in place during Construction.

Lumen has additional existing overhead communications that will be converted to underground in the joint utility trench. Lumen will complete all Work between their service connections and the joint utility trench. The Contractor shall be responsible for installing Lumen conduits in the joint utility trench as shown in the plans. All Work to be completed on the job site by Lumen will be coordinated by the Contractor.

2-13.1(4) AT&T

AT&T facilities are located on the west side of Capitol Boulevard. AT&T will not participate in any service conversions or the joint utility trench. AT&T has no scheduled Work for this project.

2-13.1(5) Astound Broadband

Astound will not be in the joint utility trench. Astound has roughly 200 linear feet of improvements to their existing communications systems located on the east side of Capitol Boulevard. Their construction effort shall be coordinated by the Contractor.

2-13.1(6) Comcast

Comcast has additional existing overhead communications that will be converted to underground in the joint utility trench. All Comcast conduits and vaults shall be installed by the Contractor. All materials for all Work involved in construction of conduits and vaults shall be provided by Comcast.

2-13.1(7) Utility Coordination

The Contracting Agency has made commitments with several jurisdictions, public users, property owners, and private utilities that the Contractor shall incorporate into the schedule for this project. The following specific requirements shall be included in the project schedule:

The Contractor shall prepare the site to resolve any conflicts and relocate any utilities necessary to allow construction of the vault excavation and joint trench.

After the site is prepared the Contractor shall provide a 45 working day utility window

throughout the duration of this project for all the private utilities to be relocated. If a state disaster is declared in the utility's service area, the working days and the utility window will be extended. This work will be completed in four phases that include:

1. New system infrastructure (Vaults and Joint Trench)
2. Conversion to Energize the New System
3. Private Residential and Commercial Conversions
4. Demolish and Remove existing system.

This work is dependent on the following specific tasks to be performed by the Contractor:

The Contractor shall complete an average of 3 vaults or hand-holes per day, and all vaults shall be installed prior to excavation of the joint trench as coordinated with the Engineer.

The Contractor shall maintain 200 lineal feet of trench excavation.

All Electrical Service Conversion conduit and/or conductor shall be completed and extended from the point of connection to the private utility as required.

The existing utilities to be abandoned will be removed after the new system is energized and all electrical service conversions are complete.

The Contractor shall provide sufficient time for the private utilities to construct the new system, energize the new system, convert over to new system, and demolish the old and temporary system(s). The Engineer will track the utility window based on the ability of the private utility contractors to proceed with any specific task based on the conditions above.

Throughout the duration of the utility window, other contractors and/or utilities will be working within the project limits. The Contractor shall schedule all work not to impede other contractors and/or utilities, and work jointly on several specific tasks.

The Contractor shall provide written notice to the Engineer at least ten working days prior to excavation of any phase of the utility conversion. Changes to schedules shall be communicated with the Engineer as soon as they arise.

2-13.2 Materials

Materials shall meet the requirements of the following Sections:

Bank Run Gravel for Trench Backfill	Section 9-03.19
Conduit	Section 9-29.1
Sand Bedding for Joint Utility Trench	

Sand Bedding for Joint Utility Trench shall be free of ice, clay, organic matter or other objectionable material and shall conform to the following standards:

4.1.1 Gradation per ASTM C136:

Sieve Size	Percent Passing by Weight Passing Sieve
3/8”	100
#4	90-100
#50	10-40
#100	3-15
#200	0-7

All materials and workmanship shall comply with National Electrical Code, State of Washington Electrical Code, Tumwater Municipal Code, and Puget Sound Energy requirements.

2-13.2(1) Puget Sound Energy – Electric

2-13.2(1)A Contractor’s Responsibility

Contractor shall provide all materials for the excavation, bedding, and backfill of the joint utility trench.

2-13.2(1)B Puget Sound Energy’s Responsibility

Puget Sound Energy will provide all conduits, couplings, glue, vaults, and pull-boxes required for their relocation. Contractor shall coordinate delivery of these materials to the job site.

2-13.2(2) Lumen

2-13.2(2)A Contractor’s Responsibility

Contractor shall provide all materials for the excavation, bedding, and backfill of the joint utility trench.

2-13.2(2)B Lumen’s Responsibility

Lumen shall provide the Contractor with all conduit required for their relocation. Lumen is responsible for all materials for the excavation, bedding, and backfill of their trench between the joint utility trench and their service connection as well as any vaults required for their connection to existing. The Contractor shall coordinate delivery of all materials required for the Work inside the joint utility trench.

2-13.2(3) Comcast

2-13.2(3)A Contractor’s Responsibility

Contractor shall provide all materials for the excavation, bedding, and backfill of the joint utility trench.

2-13.2(3)B Comcast's Responsibility

Comcast shall provide all conduits, vaults, and pull-boxes required for their relocation. The Contractor shall coordinate delivery of these materials to the job site.

2-13.3 Construction Requirements

The Contractor shall sequence the utility conversion in accordance with 1-08.4(1) Order of Work. It is anticipated that the utility conversion will take place in several phases. For each phase, including work on vault excavation, joint trench, and service trench, the Contractor shall continue this work uninterrupted until all associated work is complete. Any interruption of progress will require additional mobilizations by the private utility companies. Any additional mobilizations shall be considered for the convenience of the Contractor and will be at the Contractor's expense.

The Contractor shall provide secure staging and storage area(s) for duct and vault materials provided by the private utilities.

Construction requirements shall conform to Section 7-08 and PSE requirements. The depth of the typical trench shall be as shown in the plans. Deeper excavation will be required where cuts are planned, or around other existing utilities where necessary. The Contractor shall grade the site as needed and maintain the minimum depth of cover at all times. The Contractor shall maintain all vertical and horizontal sweeps to the standards of each utility.

If any trench or other excavation is 4 feet or more in depth that does not meet the open pit requirements, the Contractor shall provide a trench safety system per Section 2-09 of these special provisions.

Joint trench excavation shall not be more than 150 feet ahead of the pipe laying operation and all trenches shall be closed up at the end of the day unless otherwise approved by the Engineer. The Utility contractors have committed to 150 feet of conduit installation per day provided an open trench is available. The Contractor shall deflect joint trench vertical alignment a minimum of 100 feet prior to and away from a utility crossing conflict. Otherwise, the Contractor shall maintain the minimum cover depth as shown on the Plans and the required bedding depth above and below the joint trench conduits. If fills are planned for the road reconstruction area, the Contractor shall grade the site as needed to maintain the minimum depth of cover at all times.

Vault excavation and backfill shall be completed prior to excavation of the joint trench. The excavation shall be sufficient size to accommodate the vaults. The Contractor shall provide a firm level access adjacent to the vault location from the roadway for the utility contractor to unload and install the vaults. Vaults located in the planter strip will require additional depth to avoid conflicts with proposed conduit and irrigation systems.

The Contractor shall exercise sound construction practices in excavating the trench and maintaining it so that no damage will occur to any foundation, structure, pole line, pipe line, or other facility. If, as a result of the excavation, there is disturbance of the ground that may endanger other property, the Contractor shall immediately take remedial action at no expense to the City. No act, representation or instruction of the Engineer shall in any way relieve the

Contractor from liability for damages or costs that result from trench excavation.

Sand Bedding for Joint Utility Trench shall be placed as shown in the plans and as directed by the Engineer. Native material shall not be used as bedding material for the joint trench.

2-13.3(1) Puget Sound Energy – Electric

The Contractor shall allow PSE to perform Work as scheduled without changes or interruptions caused by other construction activities.

PSE customers within the Conversion Area will experience interruption of electric service during performance of the Construction Work when cutting over and transferring system and customer loads from the overhead distribution system to the Underground Distribution System. Cut-over and transfer work will be performed during the regular working hours specified in Schedule Assumption #2 above except as otherwise provided below. PSE will notify customers at least two (2) business days in advance of scheduled service interruptions.

2-13.3(1)A Contractor's Responsibility

The Contractor shall hold a pre-construction meeting involving all participants in the Conversion Project to review project design, coordination requirements, work sequencing and related premobilization requirements a minimum of ten (10) business days prior to the scheduled commencement of Construction Work.

The Contractor shall provide PSE with written notice to proceed with Construction Work to allow for delivery of PSE materials to the job site and scheduling of PSE's on-site Inspector a minimum of ten (10) business days prior to the scheduled commencement of Construction Work.

The Contractor shall install and proof all ducts and vaults for the Underground Distribution System (excluding work in ducts or vaults containing energized cables or equipment – see PSE Responsibilities in Sections 2-13.1(1)B, 2-13.2(1)B, and 2-13.3(1)B) in accordance with PSE standards and specifications using ducts and vaults provided by PSE.

The Contractor shall provide at least five (5) business days' notice for scheduled delivery of PSE vaults by PSE's vault supplier. Notification to be in writing via email or letter to the appropriate PSE representative.

PSE's Project Manager will accept or reject (with written justification) the duct and vault installation work performed by the Contractor within five (5) business days of the notice of completion from the Contractor. In the event PSE rejects any of the ducts or vaults (with reasonable written justification), the Contractor will perform the necessary remedial work. The Contractor will then re-notify PSE and PSE shall have five (5) business days to accept or reject the remedial work.

It is the Contractors responsibility to ensure that all conduits are installed meeting PSE requirements. Conduit installation must meet conduit bend/radius requirements and be free from debris, burrs, or other obstructions that would cause cable installation using normal cable pulling equipment and methods to be

impractical. If such deficiencies are determined, then the Contractor as their expense shall remedy the defects.

PSE Inspectors will be required to inspect installation of the conduit ducts and vault locations. It will be the responsibility of the Contractor to coordinate directly with PSE to ensure that PSE Inspectors are on-site and ready for inspection when required. Contractor shall make every effort to coordinate work to avoid intermittent inspection of the duct and vault work. Please note that PSE inspectors will be scheduled for full day increments with the assumption of continuous work effort.

It is expected that the Contractor shall make every effort to work continuously on the underground work until all underground conduits and vaults have been installed. Contractor shall avoid “piecemeal” work to more effectively coordinate the scheduling of PSE inspectors to be on-site during construction.

Contractor shall provide a separate construction schedule to the City and PSE for the utility underground and vault installation work. Schedule shall be submitted to the City and PSE for review no less than two weeks prior to the beginning of underground utility installation.

Whenever any pole(s) are required to be temporarily supported (held) due to excavation in proximity to such poles, the Contractor will coordinate with PSE to provide such support. The need to temporarily support such poles shall be determined by PSE, and if required, such support shall be provided by PSE. As used herein, “temporary support” means supporting one or more poles for a continuous working period of ten hours or less.

It will be the responsibility of the contractor to ensure that all handholds, vaults, and other power appurtenances are installed to accommodate finished grade. If PSE is required to adjust (newly installed) and energized vault lids to final grade all costs for labor and materials required for final adjustment will be borne by the Contractor and subject to cost estimates for that work prepared by PSE. Any work to adjust any “existing” energized vaults will be performed by PSE, the Contractor shall not do any work to an energized facility.

Service Trench shall be installed from the joint trench to individual service meters. The Contractor shall provide trenching and backfill for service trenches to the structure directly below existing PSE meters. The route of each trench will be identified in conjunction with PSE and Engineer on an individual basis to minimize impact to private property. The service conductors and conduit shall be installed to the PSE designated point of service, typically a hand hole or transformer at the property line. Conduits and conductors in the service trench shall be included in the bid item for “Electrical Service Conversion”. Other private utilities may install conduit and conductors in the service trench. This work shall be coordinated prior to service trench excavation.

2-13.3(1)A1 Electric Service Conversion

The following commercial properties with existing overhead electrical service shall be converted to underground services:

1. LineX Auto Oufitters, 5403 Capitol Blvd SW, Tumwater, WA
    a. New underground power service handhole will be located adjacent to existing pole with power transformer, at the front of the building. Underground to the new power vault will be performed by Puget Sound Energy.
2. Thompson's Furniture & Gift, 5407 Capitol Blvd SE, Tumwater, WA
    a. (New underground power service handhole will be located adjacent to existing pole with power transformer, at the front of the building. Underground to the new power vault will be performed by Puget Sound Energy.)

The following commercial properties with underground services shall be rerouted to the new point of connection:

1. Dutch Brothers Coffee, 5210 Capitol Blvd SE, Tumwater, WA
    a. Transformer at the northeast corner of Trosper Road and Capitol Boulevard will need to be relocated onto the Dutch Brother Coffee parcel. Work to be completed by Puget Sound Energy)

The Contractor shall convert each property from the existing electrical service to a new underground service. Material replacement and installation shall include, but is not limited to trench excavation, conduits, conductors, meter service, electrical panels, circuit breakers, and other items necessary to complete the conversion to current electrical code. The Contractor shall coordinate with the Engineer, PSE, and the property owner prior to the conversion to minimize impacts or outages to the property owner. Electrical outages shall not exceed more than one hour per building.

The service conductors and conduit shall be installed to the designated point of service, typically a hand hole or transformer, and continue to the new/existing meter base. The Contractor shall use PSE standards for conduit and conductor sizing for each service. Conduit shall be routed from the service trench to the electrical meter vertically along the face of the building.

Restoration shall restore the building to its original condition or better prior to construction. Work shall include all necessary repairs to the building or structure such as repairing roof material, soffits, walls, and siding, due to the required installation or removal of appurtenances. All restoration work on the private property shall be included in the cost to complete the electrical service conversion.

The Contractor shall acquire and pay for all permits required for the electrical conversion. The Contractor shall prepare the PSE applications for service. The City of Tumwater will submit the applications to PSE and pay for the PSE service connection fees.

2-13.3(1)B Puget Sound Energy's Responsibility

There will be a total of two (2) PSE crew mobilizations as follows:

a. mobilization of an underground line crew for installation of underground conductors and equipment; and

b. mobilization of an overhead line crew for removal of the existing overhead facilities. Once mobilized PSE crews will have continuous productive work until all PSE Construction Work is complete.

2-13.4 Measurement

Joint Trench shall be measured per linear foot of trench excavated and backfilled, regardless of the depth of the trench. Measurement shall be along the centerline of the joint trench. All spurs or sweeps necessary shall be incidental to the joint trench. Bedding and backfill will be incidental to the joint trench.

Service Trench shall be measured per linear foot of trench excavation, regardless of the width and depth of the trench. Measurement shall be along the centerline of the service trench from the edge of the joint trench to the service connection, hanholes, and/or vaults.

Vault Excavation shall be measured per cubic yard of the actual dimensions of the vault to be installed.

Electric service conversion will be measured per each converted service per Section 2-13.3(1)A1.

2-13.5 Payment

“Vault Excavation”, per cubic yard.
The cubic yard unit Contract price for “Vault Excavation” shall be full compensation for the excavation and backfill of the vault including required gravel base requirements and coordination with the private utility companies.

“Joint Utility Trench”, per linear foot. “Service Trench”, per linear foot.
The unit Contract price, per linear foot, for the above bid items shall be full compensation for equipment, materials and labor for excavation, bedding, backfilling, hauling and disposing of excess excavated material, and coordination with the private utility companies. All costs with sand bedding and bank run gravel for trench backfill shall be included in the unit contract price per linear foot of Joint Utility Trench and Service Trench.

”Electric Service Conversion”, per each.
The per each unit Contract price for “Electric Service Conversion” shall be full compensation for equipment, materials and labor necessary to convert each property from overhead electrical service to underground electrical service including trench excavation, conduit, conductors, and all restoration work to the property and structure, regardless of the type or condition of the existing building.

“Install Conduits and Vaults”, per lump sum.
The lump sum Contract price for “Install Conduits and Vaults” shall be full compensation for labor, tools, equipment, materials, and incidentals necessary to install conduits and vaults provided by utility owners as shown on the plans.

“City 4 Inch Conduit and Vaults in Joint Utility Trench”, per linear foot.
The unit Contract price per linear foot for “City 4 Inch Conduit and Vaults in Joint Utility Trench” shall be full compensation for furnishing conduits, vaults, fittings, labor, tools,

equipment, materials, and incidentals necessary to excavate and complete the installation of conduits and vaults as shown on the plans. The cost of furnishing conduits, vaults, fittings, bedding material, trench backfill, and other incidentals shall be included in the unit contract price per linear foot of conduit installation.

Division 3
Aggregate Production and Acceptance

3-01 PRODUCTION FROM QUARRY PITS AND SITES

3-01.4 Contractor Furnished Material Sources

(******)

3-01.4(1) Acquisition and Development

Section 3-01.4(1) is supplemented with the following:

No source has been provided for any materials necessary for the completion of this Contract. The Contractor shall be responsible for obtaining all necessary permits in regard to this Contract.

The Contracting Agency and/or its authorized representatives shall have the right of ingress and egress and to enter upon the crusher site at times listed as hours of work in the progress schedule until the completion of this Contract for the purpose of obtaining material samples for testing and observation of material trucking. A different supplier shall be utilized at no cost to the City if this cannot be accommodated.

Division 5
Surface Treatments and Pavements

5-04 Hot Mix Asphalt

(******)

Delete Section 5-04 and amendments, Hot Mix Asphalt and replace it with the following:

5-04.1 Description

FOR ALL WORK DONE WITHIN WSDOT RIGHT-OF-WAY, THE CONTRACTOR SHALL FOLLOW THE WSDOT STANDARD SPECS.

THE REQUIREMENTS IN THESE SPECIAL PROVISIONS DESCRIBED HEREAFTER APPLY TO ALL SURFACING TREATMENTS AND PAVEMENTS WITHIN THE CITY RIGHT-OF-WAY INCLUDING THE PORTION OF ROADWAY ON TROSPER BETWEEN THE OVERPASS AND THE WSDOT TURNBACK LINE (ROUGHLY STA A 96+93 TO STA A 98+83)

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and

the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01
Sand	9-03.1(2)
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 10 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 10 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01. Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

5-04.2(1) How to Get an HMA Mix Design on the QPL

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design – Obtaining Project Approval

No paving shall begin prior to the approval of the mix design by the Engineer.

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

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & sig-nature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.**

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

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL's) appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Processes

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

(******)
Supplement Section 5-04.2 with the following new Section:

5-04.2(3) Fiber Reinforced HMA

Aramid fibers will be added to the HMA mix at a minimum dosage of 2.1 ounces of aramid fibers per (1) ton of asphalt.

Fiber reinforcement shall be provided at a dosage rate not less than 2.1 ounces of pure aramid and 13.9 ounces of Polyolefin (1lb) per ton of asphalt and the product shall have a delivery system that ensures thorough distribution and mixing of fibers with an effective distribution rate of aramid fiber at not less than 90%. Non-aramid fiber blends will not be considered. The City reserves the right to reject any other proposed material. The bidder shall contact the City to inquire about the use of any other proposed material meeting

the requirements within these specifications at least five weekdays prior to submission of bid.

No modifications to the HMA job mix formula are required. Aramid based fiber product data sheet and manufacturer's instructions and general recommendations must be submitted to the Engineer for approval.

Store aramid products in a dry environment and do not allow it to be in contact with moisture.

Aramid fibers shall meet the following properties:

PRODUCT PROPERTIES	UNITS	VALUE
Material		Aramid
Form		Monofilament
Length	In.	0.75 (+/- 10%)
Specific Gravity		1.44
Tensile Strength	Psi	400,000 min.

Polyolefin fibers shall meet the following properties:

PRODUCT PROPERTIES	UNITS	VALUE
Material		Polyolefin
Form		Serrated
Length	In.	0.75 (+/- 10%)
Specific Gravity		0.91

Fiber reinforcing shall be mixed with the asphalt per the fiber manufacturer's instructions. The fiber manufacturer's representative shall be on site during mixing and production. This requirement can be waived if the fiber manufacturer and asphalt producer can supply evidence of the manufacturer's brand of fiber being successfully produced a minimum of three (3) times at the asphalt plant to be used for the project.

Visually observe the reinforced HMA from the plant. Collect a small sample from the discharge chute during the first 50 tons of production. If there are one or more undistributed fiber clips or bundles, adjust mixing operations per manufacturer's recommendations to eliminate fiber bundles. If undistributed fiber clips or bundles cannot be eliminated, cease production until a remedy is identified.

Visually observe the reinforced HMA in the first three (3) trucks and every tenth (10) truck thereafter at the point of discharge. Observation shall include using a shovel or other device. Look for proper distribution of aramid fibers and make mixing adjustments if needed. Remove any observed fiber balls from placed mixture and adjust operations per the manufacturer's recommendation to eliminate future fiber ball development.

5-04.2(3)A Fiber Supply System

Introduce the aramid product as follows:

Batch Plant:

When a batch type plant is used, add the aramid product dosage to the aggregate in the weigh hopper. Increase the batch dry and wet mixing times to ensure the fibers are uniformly distributed prior to the injection of asphalt cement into the mixer.

Drum Plant:

1. Inject fibers through the RAP collar by placing fibers on the RAP belt or by feeding them with an automated dosing/blower tube system. Rate the feeding of fibers with the rate the plant is producing asphalt mix, and add to the mixing drum in a continuous way. If there is any evidence of fiber balls at the discharge chute, increase the mixing time and/or temperature or change the angle of the fiber feeder line to increase dry mixing time.
2. For manual feeding (allowed on Forti-Fi Fiber Reinforcement product only), place fibers on the RAP belt at intervals based on the plant production rate. Fibers should be contained in individual dosage packaging, such as a plastic bag which will quickly melt/dissolve in the drum, to protect the fibers from rain or wind while on the RAP belt and allow quick, accurate feeding by one person.
3. While using a blower tube/automated dosing system, add fibers continuously and in a steady uniform manner. Provide automated proportioning and control delivery within ± 10% of the mass of the fibers required. Perform an equipment calibration to the satisfaction of the fiber manufacturer's representative to show that the fiber is being accurately metered and uniformly distributed into the mix.

Include the following with the blower tube/automated dosing system:

- Low level indicators
- No-flow indicators
- A printout of feed rate status in pounds/minute
- A section of transparent pipe in the fiber supply line for observing consistency of flow or feed.
- Manufacturer's representative's approval of fiber addition system.

Mix the aramid fiber with the heated aggregate and RAP longer, if needed, to allow thorough distribution of aramid fibers at the end of the mixing process and to promote asphalt coating of individual strands of aramid fiber.

5-04.3 Construction Requirements

The Contractor shall install the final lift of asphalt as a single continuous lift. Construction seams are acceptable. There shall be no cuts into the final lift for any Work other than the Work required to raise surface iron to finished grade. Should the Contractor create cuts into the final lift for any other Work, the Contractor shall remove and replace the entire lane for the length of the cut, or 50 linear feet, whichever is greatest.

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55◦F	45◦F
0.10 to .20	45◦F	35◦F
More than 0.20	35◦F	35◦F

5-04.3(2) Paving Under Traffic

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Plants used for the preparation of HMA shall conform to the following requirements:

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.
3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.
4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).
5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:
    a. A mechanical sampling device attached to the HMA plant.
    b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

Delete this section and replace with the following:

Use a material transfer device (MTD) or material transfer vehicle (MTV) to deliver the HMA from the hauling equipment to the paving machine for any lift in (or partially in) the top .30 feet of the pavement unless directed otherwise by the Engineer.

Use of an MTD/V is not required in the following locations:

a. Irregularly shaped and minor areas
b. Within the roundabout

Where an MTD/V is required by the contract, the Engineer may approve paving without an MTD/V, at the request of the Contractor. The Engineer will determine if an equitable adjustment in cost or time is due.

The MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.
2. Shall not be connected to the hauling vehicle or paver.
3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

1. Shall be positively connected to the paver.
2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
3. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
4. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging

across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

(March 2020, Tumwater GSP)

Supplement this section with the following:

All durable pavement markings (plastic, raised pavement markers, etc.) with the exception of painted markings shall be removed from all existing surfaces that are to be paved with HMA prior to paving. All costs associated with this work shall be incidental to "Removal of Structures and Obstructions" and no additional payment will be made.

All surface iron including, but not limited to, manhole frames and covers, valve box covers, catch basin frames and grates, and monument cases and covers shall be lowered prior to pavement planing, except for those catch basins where the frame and grate are integral to the concrete curb and gutter and any private utility structure that cannot be adjusted in which case the Contractor shall jack-hammer and remove the pavement. All costs associated with this work shall be incidental to the various items involved and no additional payment shall be made.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks ¼ inch in width and greater.

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Sand Slurry: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.

In areas where HMA will not be placed, fill the cracks as follows:

1. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
2. Cracks greater than 1 inch in width – fill with sand slurry.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

A. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
B. Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1”	0.35 feet
HMA Class ¾” and HMA Class ½”	
wearing course	0.30 feet
other courses	0.35 feet
HMA Class ⅜”	0.15 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

   For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

   For Aggregates in the mixture:

   a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

   a. **Aggregates** –2 percent for the aggregate passing the 1½″, 1″, ¾″, ½″, ⅜″, and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

   b. **Asphalt Binder Con**tent – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 800 tons, whichever is less except that the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per sublot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of V_a will at the option of the Contracting Agency. If tested, compliance of V_a will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½″, 1″, ¾″, ½″, ⅜″ and No.4 sieves	2

All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)C7 Mixture Nonstatistical Evaluation - Retests

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, V_a. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

5-04.3 (9)D Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or

samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(10) HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core” the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core” the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor’s option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B HMA Compaction – Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738. The compaction test locations will be determined by the Engineer in accordance with WSDOT Test Method T716.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall

be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the

joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified ion the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of

the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or
2. Removal and replacement of the wearing course of HMA, or
3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving planning (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing (Milling) Bituminous Pavement

The planning plan must be approved by the Engineer and a pre planning meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planning submittals.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Paving/Planing Against Obstacles:
There are locations within the project limits where obstacles are adjacent to the planing and HMA installation. Obstacles will be traffic curb, curb and gutter, retaining walls, utilities,

homeowner improvements, etc. The contractor is urged to field visit all construction sites during the bid process to assess means and methods required to complete improvements adjacent to these obstacles. For all locations, the edge of the improvements adjacent to these obstacles shall be cleaned of all debris such as excess asphalt, soil, and vegetation prior to paving operations. It is expected that in some locations hand work will be required to achieve a clean edge, and the contractor shall consider this during bid. No additional payment for this work will be allowed.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor's planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

Pavement repairs, if required, will be reimbursed under applicable bid items. HMA for preleveling, if required, will be tracked as if it is part of the mainline paving with no additional compensation or change in unit price.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

*** *(January 5, 2004)*

The Contractor shall perform the planing operations no more than *** 1 *** calendar days ahead of the time the planed area is to be paved with HMA, unless otherwise allowed by the Engineer in writing provided other provisions in this section are met. ***

*** Generally, HMA work should be completed immediately following planing operations to have the least impact on the travelling public, to eliminate duplicative temporary pavement markings, and to eliminate issues with planing potentially extending to gravel base. However, the City may permit a one day delay if the Contractor chooses for production / work zone constraints. In certain circumstances, the City may waive this requirement subject to prior approval.

All surfaces shall be hard (no exposed surfacing base) prior to opening to traffic.

For any planing operations that will result in traffic travelling on the planed surface prior to paving, the Contractor will be responsible for extra costs associated with duplicative temporary striping, pavement markings, patches due to planing extending into base, or any other related work and costs. ***

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:
    a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions

thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).

b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.
3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.
2. A copy of each intersection's traffic control plan.
3. Haul routes from Supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.
4. Names and locations of HMA Supplier facilities to be used.
5. List of all equipment to be used for paving.
6. List of personnel and associated job classification assigned to each piece of paving equipment.
7. Description (geometric or narrative) of the scheduled sequence of planing and of paving, and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.
8. Names, job titles, and contact information for field, office, and plant supervisory personnel.
9. A copy of the approved Mix Designs.
10. Tonnage of HMA to be placed each day.
11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both Paving Plan and for Planing Plan:
   a. The actual times of starting and ending daily operations.
   b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.

c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other con-tractors who may operate in the Project Site.

d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.

e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.

f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed

g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.

h. Description of how flaggers will be coordinated with the planing, paving, and related operations.

i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.

j. Other items the Engineer deems necessary to address.

2. Paving – additional topics:

a. When to start applying tack and coordinating with paving.

b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.

d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.

e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

(******)

5-04.4 Measurement

Delete this Section and replace with the following:

"Commercial HMA" will be measured by ton. Commercial HMA shall include:

1. HMA used for patches at new curb/sidewalk/ramps, pavement repair, roadway repair, and
2. HMA used for pavement/utility trench repairs (bottom lift and temporary top lift if used),

"Plane Bituminous Asphalt Pavement" will be measured by the square yard.

5-04.5 Payment

(******)
Delete this Section and replace with the following:

"HMA Cl. ½ In. PG 58V-22 Fiber Reinforced", per ton.
The unit Contract price per ton for HMA Cl. ½ In. PG 58V-22 Fiber Reinforced shall be full compensation for all costs, including paving reinforcing fiber, anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

"Plane Bituminous Asphalt Pavement", per square yard.
The unit Contract price per square yard for "Plane Bituminous Asphalt Pavement" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

There is no bid item for "Temporary Pavement Marking", see section 1-10.5.

(January 13, 2021)
Asphalt Cost Price Adjustment
The Contracting Agency will make an Asphalt Cost Price Adjustment, either a credit or a payment, for qualifying changes in the reference cost of asphalt binder. The adjustment will be applied to partial payments made according to Section 1-09.9 for the following bid items when they are included in the proposal:

***
"HMA Cl. ___ PG ___"
"Commercial HMA"
"HMA Cl. ___ PG ___ Fiber Reinforced"
***

The adjustment is not a guarantee of full compensation for changes in the cost of asphalt binder. The Contracting Agency does not guarantee that asphalt binder will be available at the reference cost.

The Contracting Agency will establish asphalt binder reference costs twice each month and post the information on the Agency website at: http://www.wsdot.wa.gov/Business/Construction/EscalationClauses.htm. The reference cost will be determined using posted prices furnished by Poten & Partners, Inc. If the selected price source ceases to be available for any reason, then the Contracting Agency will select a substitute price source to establish the reference cost.

Price adjustments will be calculated one time per month. No price adjustment will be made if the Current Reference Cost is within +/-5% of the Base Cost. Reference costs for projects located in Eastern versus Western Washington shall be selected from the column in the

WSDOT website table labeled “Eastern”, or “Western”, accordingly. The adjustment will be calculated as follows:

If the reference cost is greater than or equal to 105% of the base cost, then
Asphalt Cost Price Adjustment = (Current Reference Cost – (1.05 x Base Cost)) x (Q x 0.056).

If the reference cost is less than or equal to 95% of the base cost, then
Asphalt Cost Price Adjustment = (Current Reference Cost – (0.95 x Base Cost)) x (Q x 0.056).

Where: **Current Reference Cost** is selected from the website table based on the “Date Effective” that immediately precedes the current month’s progress estimate end date. For work completed after all authorized working days are used, the adjustment will be based on the posted reference cost during which contract time was exhausted.

Base Cost is selected from the website table based on the “Date Effective” that immediately precedes the contract bid opening date, and shall be a constant for all monthly adjustments.

Q = total tons of all classes of HMA paid in the current month’s progress payment.

“Asphalt Cost Price Adjustment”, by calculation.
“Asphalt Cost Price Adjustment” will be calculated and paid for as described in this section. For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the total bid by the Contractor.

5-05 Cement Concrete Pavement

5-05.1 Description

(******)
Section 5-05.1 is supplemented with the following:

This Work consists of furnishing and placing pigmented, textured, or textured and pigmented cement concrete truck aprons, medians, and buffer strips on a prepared subgrade or base in accordance with these Specifications and in conformity with the line, grades, thicknesses and typical sections shown in the Plans.

5-05.2 Materials

(******)
Section 5-05.2 is supplemented with the following:

For approval of the Contractor’s mix design, the attainment of the required compressive strength at 28 days will be a minimum of 4000 psi as determined from the results of testing two 6 inch by 12 inch cylinders tested in accordance with WSDOT Test Methods 801 and 811. Once a mix design has been approved, it shall not be varied during the project.

Tie bars and dowel bars for textured and pigmented cement concrete truck aprons shall be constructed in accordance to the plans.

5-05.3 Construction Requirements

(******)
Section 5-05.3 is supplemented with the following:

Concrete Samples (pigmented/textured):
The Contractor shall provide two (2) 4 foot by 4 foot sample panels, that have been cured a minimum seven days, showing the color of cement concrete to the Engineer for acceptance before placing any pigmented cement concrete. These panels shall be poured near the job office trailer and shall be maintained for the duration of the project to be used as a reference. The Engineer may reject at any time any textured and pigmented cement concrete that does not match the sample panels. Any costs to replace rejected textured and pigmented cement concrete shall be borne by the Contractor.

Concrete Curing:
Textured and pigmented cement concrete shall be cured for at least 72 hours. Curing shall be by means of moist burlap or quilted blankets or other approved methods. During the curing period, all traffic, both pedestrian and vehicular, shall be excluded. Vehicular traffic shall be excluded for such additional time as the Engineer may specify. Curing method shall not discolor or mar the textured and pigmented cement concrete. Concrete must not dry out during the curing process. The contractor shall implement whatever means necessary to ensure that concrete moisture is maintained to the satisfaction of the Construction Inspector and Project Engineer. All costs associated with the means to properly cure the concrete shall be borne by the Contractor.

Concrete Pigment/Pattern/Completion:
Concrete shall be pigmented throughout the mix with the base color. Powdered release agent shall then be applied to give desired highlights. Release agents shall be heavy-duty quality suitable for high automobile traffic areas. Concrete shall then be stamped with inconsistencies in the pattern. After a curing period of 4 days, the concrete shall be pressure washed to remove remaining release agent.

Upon initial curing, the Contractor shall use a high-pressure water blaster to clean the surface and allow it to dry.

A weatherproofing concrete sealer and a clear acrylic sealer with moss control shall then be applied to the finished surface of the textured concrete in accordance to the manufacturer's specifications.

Running courses of pattern shall be perpendicular to the Concrete Bands. A mat or stamp shall be used to imprint the pattern into the concrete surface.

Paving Pattern Architectural Style: Brickform

Brickform Stamp: Ashlar Cut Slate
Brickform Color Hardener: Light Gray
Brickform Antique Release: Dark Gray

Brickform Sealer: Brickform Satin-Seal
Satin Finish “Natural-Look” Sealer – 100 VOC

The finish shall be consistent and professional in appearance. All cement concrete that has the finish damaged by rain or protective plastic or which is not of a quality generally expected for this type of work shall be removed and recast at the Contractor’s expense.

Cement concrete joints shall be constructed as detailed in the Plans. Where the sidewalk abuts the curb, the transverse joints shall match the location of the expansion joint in the curb. All utility poles, meter boxes and other obstructions shall have 3/8” expansion joint material placed around them as directed. All sidewalk edges shall have a 1/4” radius.

Concrete shall not be poured against dry forms or dry subgrade.

The Contractor shall provide suitable vibrating finishers for use in finishing concrete sidewalks. The type of vibrator and its method of use shall be subject to the approval of the Owner. All completed work shall be barricaded and protected so as to prevent damage by unauthorized use. All damaged sections shall be removed and replaced at the Contractor's expense.

The textured and pigmented cement concrete hardener, release agent, stamps and sealer are to be applied and used according to the manufacturer’s instructions at the specified rates. The hardener is required to be completed in two applications: the first application at 2/3 the specified rate (40lbs/100sf) and the second application at 1/3 (20lbs/100sf). The release agent is at approximately 3.5lbs/100sf.

All work on stamped concrete shall be in accordance with the various manufacturers’ recommendation.

The areas shall be protected to prevent damage by unauthorized use. Absolutely no splattering and staining on other concrete will be tolerated. Curbing or other materials that are not adequately protected and consequently stained shall be removed and replaced at the Contractor’s expense.

5-05.3(8) Joints

(******)
Section 5-05.3(8) shall be supplemented with the following:

The Contractor shall prepare jointing plans per WSDOT Standard Plans A-40.10 and A-40.15 to submit to the City for review and approval prior to construction of the textured and pigmented cement concrete truck apron. As a rule, joints shall be radial (from the center of the roundabout) or curcular and shall be positioned at equal distances from each other.

5-05.4 Measurement

(******)
Section 5-05.4 is supplemented with the following:

Textured and pigmented cement concrete truck apron will be measured by the square yard.

Textured and pigmented cement concrete median and buffer strip will be measured by the square yard.

5-05.5 Payment

(******)
Section 5-05.5 is supplemented with the following:

"Textured and Pigmented Cement Concrete Truck Apron", per square yard.
The unit Contract price per square yard for "Textured and Pigmented Cement Concrete Truck Apron" shall be full pay for all material, tools, labor, and equipment necessary to install the textured and pigmented cement concrete truck apron as shown on the plans and as specified herein including all material, tools, labor, and equipment necessary to install tie bars, corrosion resistant dowel bars, and expansion joints.

There will be no bid item for "Corrosion Resistant Dowel Bar". All costs associated with "Corrosion Resistant Dowel Bar" as specified in Section 5-05 of the Standard Specifications shall be incidental to "Textured and Pigmented Cement Concrete Truck Apron", per square yard.

"Textured and Pigmented Cement Concrete Median and Buffer Strip", per square yard.
The unit Contract price per square yard for "Textured and Pigmented Cement Concrete Median and Buffer Strip" shall be full pay for all material, labor, and equipment necessary to install textured and pigmented cement concrete medians and buffer strips as shown in the Plans and as described in these Specifications.

Division 7
Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits

7-04 STORM SEWER

7-04.1 Description

(******)
Supplement this section with the following:

This work shall consist of constructing, trash racks, special fittings, joint materials, dewatering, bypass pumping, and testing.

7-04.2 Materials

(******)
Delete the first paragraph of this section and replace with the following:

Pipe used in this project shall meet the requirements of the following sections:

Corrugated Polyethylene Storm Sewer Pipe (HDPE)	9-05.20
Safety Bars	9-05.18
Ductile Iron Pipe (D.I.)	9-30.1(1)

7-04.4 Measurement

(******)
Supplement this section with the following:

Connect to Existing Storm Main will be measured per each location as shown in the Plans.

___ Inch Diameter ___ Storm Sewer Pipe shall be measured per linear foot of ___ Inch Diameter ___ Storm Sewer Pipe installed measured from center of structure to center of structure.

7-04.5 Payment

(******)
Delete this section and replace with the following:

"Connect to Existing Storm Main", per each.
The unit contract price for "Connect to Existing Storm Main" shall be full pay for providing all labor, tools, equipment, fittings, and materials necessary to connect to the existing main. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed. If no such item exists all costs shall be incidental to the project and no additional compensation shall be allowed.

"___ Inch Diameter ___ Storm Sewer Pipe", per linear foot.
The unit contract price per linear foot for "___ Inch Diameter ___ Storm Sewer Pipe", shall be full compensation for all labor, material, and equipment to furnish, place, assemble, and install storm sewer line, complete in place, including all wyes, tees, caps, plugs, trash racks, debris barriers, special fittings, joint materials, commercial concrete, adjustment of inverts to manholes, dewatering, bypass pumping, bedding, backfill, and testing. Further, all excavation, hauling, disposal, compaction, temporary patching and other required earthwork shall be included.

Trash racks required on the end of existing pipes shall be incidental to the overall storm system and new storm sewer pipe identified herein.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.1 Description

(******)
Supplement this section with the following:

Adjustment of manholes and catch basins shall consist of the Work required to adjust existing manholes and catch basins to finished elevation. All existing manholes and catch basin castings within the project limits shall be replaced with new castings supplied by the Contractor as part of this project.

(******)
Supplement this section with the following:

7-05.1(1) STORM WATER TREATMENT VAULT

The Contractor shall furnish all labor, equipment and materials necessary to install the storm water treatment device(s) (SWTD) and appurtenances specified in the Drawings and these specifications.

The manufacturer of the SWTD shall be one that is regularly engaged in the engineering design and production of systems deployed for the treatment of storm water runoff for at least five (5) years and which have a history of successful production, acceptable to the Engineer. In accordance with the Drawings, the SWTD(s) shall be a Vortechs® device manufactured by:

Contech Engineered Solutions LLC
9025 Centre Pointe Drive
West Chester, OH, 45069
Tel: 1 800 338 1122

All components shall be subject to inspection by the engineer at the place of manufacture and/or installation. All components are subject to being rejected or identified for repair if the quality of materials and manufacturing do not comply with the requirements of this specification. Components which have been identified as defective may be subject for repair where final acceptance of the component is contingent on the discretion of the Engineer.

The manufacturer shall guarantee the SWTD components against all manufacturer originated defects in materials or workmanship for a period of twelve (12) months from the date the components are delivered to the owner for installation. The manufacturer shall upon its determination repair, correct or replace any manufacturer originated defects advised in writing to the manufacturer within the referenced warranty period. The use of SWTD components shall be limited to the application for which it was specifically designed.

The SWTD manufacturer shall submit to the Engineer of Record a “Manufacturer’s Performance Certification” certifying that each SWTD is capable of achieving the specified removal efficiencies listed in these specifications. The certification shall be supported by independent third-party research.

No product substitutions shall be accepted unless submitted 10 days prior to project bid date, or as directed by the Engineer of Record. Submissions for substitutions require review and approval by the Engineer of Record, for hydraulic performance, impact to project designs, equivalent treatment performance, and any required project plan and report (hydrology/hydraulic, water quality, stormwater pollution) modifications that would be required by the approving jurisdictions/agencies. Contractor to coordinate with the Engineer of Record any applicable modifications to the project estimates of cost, bonding amount determinations, plan check fees for changes to approved documents, and/or any other regulatory requirements resulting from the product substitution.

7-05.2 Materials

(******)
Supplement this section with the following:

Type 2 Catch Basin and sewer manhole covers shall be heavy duty, gasketed, hinged, metal, non-venting stamped “DRAIN” or “SEWER” as applicable. Mortar shall be used as grout to adjust the cover or grating of a structure to grade. Mortar shall be used to grout joints and openings, or to connect pipes to structures shall be High Strength non-shrink mortar mix. (Jet Set concrete will not be accepted).

The Contractor shall complete the adjustment of new and existing utility structures within five working days after the pavement is completed. The structure shall then be brought to proper grade utilizing the same methods of construction as specified for new construction.

The hot mix asphalt pavement shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of the cast iron frame plus two (2) feet. The base materials and crushed rock shall be removed and Concrete Class 4000 shall be placed so that the entire volume of the excavation is replaced up to 0.30 feet of the finished pavement surface. No additives shall be added to the concrete and no special mixes will be approved by the City.

On the following day the concrete, the edges of the asphalt concrete pavement, and the outer edge of the casting shall be painted with hot asphalt cement. HMA shall then be placed and compacted with hand tampers, plate compactors or patching roller.

The complete patch shall match the existing paved surface for texture, density, and uniformity of grade. The joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before the asphalt cement solidifies.

(******)

Supplement this section with the following new section:

7-05.2(1) Stormwater Treatment Vault

The stormwater treatment system shall include a circular aluminum “swirl chamber” (or “grit chamber”) with a tangential inlet to induce a swirling flow pattern that will accumulate and store settleable solids in a manner and a location that will prevent re-suspension of previously captured particulates.

Housing unit of stormwater treatment device shall be constructed of pre-cast or cast-in-place concrete, no exceptions. Concrete for precast stormwater treatment systems shall conform to ASTM C 857 and C 858 and meet the following additional requirements

The wall thickness shall not be less than 6 inches (152 mm) or as shown on the dimensional drawings. In all cases the wall thickness shall be no less than the minimum thickness necessary to sustain HS20-44 (MS18) loading requirements as determined by a Licensed Professional Engineer.

Sections shall have tongue and groove or ship-lap joints with a butyl mastic sealant conforming to ASTM C 990. Cement shall be Type II Portland cement conforming to ASTM C 150.

All sections shall be cured by an approved method. Sections shall not be shipped until the concrete has attained a compressive strength of 4,000 psi (28 MPa) or until 5 days after fabrication and/or repair, whichever is the longer.

Pipe openings shall be sized to accept pipes of the specified size(s) and material(s), and shall be sealed by the Contractor with a hydraulic cement conforming to ASTM C 595M

Brick or masonry used to build the manhole frame to grade shall conform to ASTM C 32 or ASTM C 139 and shall be installed in conformance with all local requirements.

Casting for manhole frames and covers shall be in accordance with ASTM A48, CL.35B and AASHTO M105.

Internal Components and appurtenances shall conform to the following:

Internal aluminum plate components shall be aluminum alloy 5052-H32 in accordance with ASTM B 209.

Sealant to be utilized at the base of the swirl chamber shall be 60 durometer extruded nitrile butadiene rubber (Buna N) and shall be provided to the concrete precaster for installation.

7-05.3 Construction Requirements

(******)
Supplement this section with the following:

The contractor shall reference new and existing manholes, catch basins, and other structures lying within the limits of the new hot mix asphalt pavement.

Manholes, catch basins, and other structures not in the gutter flowline shall not be adjusted to grade until the pavement is completed, at which time the center of each structure shall be carefully relocated from references previously established by the contractor. The pavement shall be cut in a restricted area and base material removed to permit removal of the cover. The structure shall then be brought to proper grade utilizing the same methods of construction as for the structure itself.

The frame shall be placed on the concrete blocks and wedged up to the desired grade. The hot mix asphalt pavement shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of the cast iron frame plus three (3) feet. The base materials and crushed rock shall be removed and Concrete Class 4000 shall be placed so that the entire volume of the excavation is replaced up to 0.30 feet of the finished pavement surface.

On the following day the concrete, the edges of the asphalt concrete pavement, and the outer edge of the castings shall be painted with hot mix asphalt cement. HMA shall then be placed and compacted with hand tampers, plate compactors or patching rollers.

Mortar shall be used as grout to adjust the cover or grating of a structure to grade. Mortar shall be used to grout joints and openings, or to connect pipes to structures. Mortar shall be High Strength non-shrink mortar mix. Jet Set concrete will not be accepted.

The complete patch shall match the existing paved surface for texture, density, and uniformity of grade. The joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before the asphalt cement solidifies.

(******)
Supplement this section with the following:

The Stormwater Treatment System shall be constructed according to the sizes shown on the Drawings and as specified herein. Install at elevations and locations shown on the Drawings or as otherwise directed by the Engineer.

Place the precast base unit on a granular subbase of minimum thickness of six inches (152 mm) after compaction or of greater thickness and compaction if specified elsewhere. The granular subbase shall be checked for level prior to setting and the precast base section of the trap shall be checked for level at all four corners after it is set. If the slope from any corner to any other corner exceeds 0.5% the base section shall be removed and the granular subbase material re-leveled.

Prior to setting subsequent sections place bitumen sealant in conformance with ASTM C 990-91 along the construction joint in the section that is already in place.

After setting the base and wall or riser sections, prepare to install the swirl chamber (if not installed prior to delivery). Place the butyl mastic sealant vertically on the outside of the swirl chamber starting one inch above the bottom of the swirl chamber and continuing to a height equal to the elevation of the bottom of the upper aperture of the swirl chamber. The butyl mastic sealant should abut the downstream side of the pre-drilled mounting holes that attach the swirl chamber to the long walls of the concrete vault. Next, install the extruded Buna N seal on the bottom edge of the 180 degree downstream section of the swirl chamber by first applying a bead of Sikaflex-1a polyurethane elastomeric sealant into the extruded slot then slide the seal onto the swirl chamber. The extruded seal should extend 3-inches (76 mm) upstream of the mounting holes, toward the inlet end of the vault. Set the swirl chamber into position and keep the seal approximately ½-inch (13 mm) above the floor of the concrete vault. Apply a continuous bead of Sikaflex-1a sealant under the cupped bottom of the seal. Set the circular swirl chamber on the floor of the vault and anchor it by bolting the swirl chamber to the side walls of the concrete vault at the three (3) tangent points and at the inlet tab using HILTI brand stainless steel drop-in wedge anchors or equivalent 3/8-inch (10 mm) diameter by 2-3/4 inch (70 mm) minimum length at heights of approximately three inches (3”) (76 mm) off the floor and at fifteen inch (15”) (381 mm) intervals to approximately the same height of the butyl mastic sealant (at locations of pre-drilled holes in aluminum components). Apply a continuous bead of Sikaflex-1a sealant to the intersection of the inside bottom edge of the extruded seal and the vault floor.

If the oil baffle wall (Baffle A) and flow control wall (Baffle B) are not integrally cast-in to riser/wall sections then the Baffle wall panels shall be placed in the formed keyways or between bolted-in-place angle flanges as provided by the manufacturer. Apply non-shrink grout or Sikaflex-1a sealant to each end of Baffle A and Baffle B at the upstream intersection with the side walls of the concrete vault.

Prior to setting the precast roof section, bitumen sealant equal to ASTM C 990 shall be placed along the top of the oil baffle wall (Baffle A), using more than one layer of mastic if necessary, to a thickness at least 1-inch (25 mm) greater than the nominal gap between the top of the baffle and the roof section. The nominal gap shall be determined either by field measurement or the shop drawings. Do not seal the top of Baffle B unless specified on the shop drawings to do so. After placement of the roof section has compressed the butyl mastic sealant in the gap over Baffle A, finish sealing the gap with an approved non-shrink grout on both sides of the gap using the butyl mastic as a backing material to which to apply the grout. If roof section is "clamshell" or "bathtub" halves, then finish sealing the ends of the Baffle walls by applying non-shrink grout or Sikaflex-1a sealant to each end of Baffle A at the upstream intersection with the side walls of the concrete vault and to each end of Baffle B at the downstream intersection with the side walls of the concrete vault.

After setting the precast roof section of the stormwater treatment system, set precast concrete manhole riser sections, to the height required to bring the cast iron manhole covers to grade, so that the sections are vertical and in true alignment with a ¼-inch (6 mm) maximum tolerance allowed. Backfill in a careful manner, bringing the fill up in 6-inch (152 mm) lifts on all sides. If leaks appear, clean the inside joints and caulk with lead wool to the satisfaction of the Engineer. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of Stormwater Treatment Systems shall conform to ASTM specification C 891 "Standard Practice for Installation of Underground Precast Utility Structures".

Holes made in the concrete sections for handling or other purposes shall be plugged with a non-shrink grout or by using grout in combination with concrete plugs.

Where holes must be cut in the precast sections to accommodate pipes, do all cutting before setting the sections in place to prevent any subsequent jarring which may loosen the mortar joints. The Contractor shall make all pipe connections.

TABLE 2
Stormwater Treatment Device
Storage Capacities

Vortechs Model	Minimum Sump Storage Capacity (yd^3)/(m^3)
1000	**0.7(0.54)**
2000	1.2(0.91)
3000	1.8(1.38)
4000	2.4(1.84)
5000	3.2(2.45)
7000	4.0(3.06)
9000	4.8(3.67)
11000	5.6(4.28)
16000	7.1(5.43)

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

(******)

Supplement Section 7-05.3(1) with the following new section:

7-05.3(1)A Adjust Manhole

All manholes and Type 2 catch basins within the paved area, except those which are called out to be raised to grade, shall be adjusted flush to the new pavement surface. No wood adjustment of any kind will be allowed.

(******)

Supplement Section 7-05.3(1) with the following new section:

7-05.3(1)B Raise Manhole To Grade

Where shown on the plans or where directed by the Engineer, existing manholes and Type 2 catch basins shall be raised to the grade as staked or otherwise designated by the Engineer. The Contractor shall supply and install new manhole rings, frames, and covers as part of raising the manhole to grade. The finished installation shall conform to the detail shown in plans. No wood adjustment of any kind will be allowed.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of $1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

(******)

Supplement Section 7-05.3(1) with the following new section:

7-05.3(1)C Elevate Manhole

Where shown on the plans or where directed by the Engineer, existing manholes and Type 2 catch basins shall be elevated to grade with removal and/or the addition of new precast section(s) as staked or otherwise designated by the Engineer. The Contractor shall supply and install new precast sections with steps, rings, frames, and covers as part of elevate manhole. The finished installation shall conform to the detail shown in plans. No wood adjustment of any kind will be allowed.

(******)

Supplement Section 7-05.3(1) with the following new section:

7-05.3(1)D Raise Catch Basin to Grade

Where shown on the plans or as directed by the Engineer, catch basins shall be raised to the pavement grade or as directed by the Engineer. The Contractor shall remove and replace adjacent curb and gutter as required. Further, the Contractor shall supply and install concrete riser sections, and new frame and grate.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of $1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

(******)
Supplement Section 7-05.3 with the following new section:

7-05.3(5) Catch Basin Assembly

Contractor shall furnish and install East Jordan Iron Works Catch Basin Assembly, or approved equal, on all catch basins and storm sewer manholes unless otherwise indicated on the construction plans. Assemblies must be ductile iron. Where a cover, grate or curb inlet is indicated in the plans, the Contractor shall furnish and install the indicated item. The cost for such cover, grate or curb inlet shall be included in the unit contract price per each for catch basin of various types and sizes.

(******)
Supplement Section 7-05.3 with the following new section:

7-05.3(6) Saddle Manhole w/ Cast-in-Place Base

Connections to existing sanitary sewer mains where no manhole is present shall be accomplished by installing a saddle manhole with a cast-in-place base in accordance with the Contract Plans.

The Contractor shall verify invert elevations prior to construction.

(******)
Supplement Section 7-05.3 with the following new section:

7-05.3(7) Catch Basin Marker

All new and existing catch basins shall be marked with a curb marker provided by the City. The marker is a 4-inch disc which shall be epoxy glued to the top of the curb adjacent to the catch basin grate. The curb marker shall be orientated so that it is readable from the sidewalk. The installation of these markers shall be incidental to the project.

7-05.4 Measurement

(******)
Supplement this section with the following:

"Catch Basin Type 1 With Curb Inlet" will be measure per each.

"Catch Basin Type 2 ___ In. Diam. With Curb Inlet" will be measured per each.

"Connect to Existing Catch Basin" will be measured per each location called out in the plans.

"Catch Basin Type 2 __ In. Diam. With Curb Inlet (Flow Control Facility)" will be measured per each.

"Saddle Catch Basin Type 2 __ In. Diam." will be measured per each.

"Saddle Catch Basin Type 2 __ In. Diam. With Curb Inlet (Oil Control Facility)" will be measured per each.

“Stormwater Treatment Vault” will be measured per lump sum.

7-05.5 Payment

(******)
Supplement this section with the following:

“Adjust Manhole,” per each.
“Adjust Catch Basin”, per each.
“Catch Basin Type 1 With Curb Inlet”, per each
“Catch Basin Type 2 ___ In. Diam. With Curb Inlet”, per each.
”Catch Basin Type 2 ___ In. Diam. With Curb Inlet (Flow Control Facility)”, per each.
“Saddle Catch Basin Type 2 __ In. Diam.”, per each.
“Saddle Catch Basin Type 2 __ In. Diam. With Curb Inlet (Oil Control Facility)”, per each.

The unit contract price per each for Adjust Manhole, Adjust Catch Basin, Catch Basin Type 1 With Curb Inlet, Catch Basin Type 2 ___ In. Diam. With Curb Inlet, Catch Basin Type 2 ___ In. Diam. With Curb Inlet (Flow Control Facility), Saddle Catch Basin Type 2 ___ In. Diam., and Saddle Catch Basin Type 2 ___ In. Diam With Curb Inlet (Oil Control Facility) shall be full pay for furnishing all labor, tools, equipment, and materials required to place the structure including excavation, haul, backfill, testing, and all accessories, such as rings, covers, grates, steps, grate inlets, trash racks, beehive grates and debris cages, removable silt trap tees, GU liners, inside drops, outside drops, flow control device riser, orifice, oil control devices and all other items needed to install the manhole complete in place in accordance with the plans and these specifications in conformity with the lines and grades staked.

“Connect to Existing Catch Basin”, per each.
The unit contract price per each for “Connect to Existing Catch Basin” shall be full pay for furnishing all labor, tools, equipment, and materials required to connect to existing catch basin in place, including core-drill, sand-collars, mortar, concrete, concrete collars, and sealants. Further, all excavation, haul, backfill, testing, and accessories shall be included in this unit contract price. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing manhole or the quantity of pipes connecting to the manhole. Items not specifically identified on the plans but necessary to properly connect to catch basin shall be considered incidental and no other compensation shall be allowed.

“Stormwater Treatment Vault”, per lump sum.
The lump sum Contract price for “Stormwater Treatment Vault” shall be full pay for furnishing all labor, tools, equipment, and materials required to place the structure including excavation, haul, bedding, backfill, testing, and all accessories, such as rings, covers, grates, steps and all other items needed to install the manhole complete in place in accordance with the plans and these specifications in conformity with the lines and grades staked.

7-08 GENERAL PIPE INSTALLATION REQUIREMENT

7-08.1 Description

(******)
This section is revised to read:

This work includes installing culverts, storm sewers, sanitary sewers, and water mains. The contractor shall also follow Section 7-02, 7-04, 7-09 or 7-17 as it applies to the specific kind of Work.

7-08.2 Materials

(******)
Supplement this section with the following:

Controlled Density Fill shall be in accordance with Section 2-09.3(1)E.
Gravel Backfill for Pipe Zone Bedding shall be in accordance with Section 9-03.12(3).
Bank Run Gravel for Trench Backfill shall be in accordance with Section 9-03.19.
Grout shall be in accordance with Section 9-36.5.
Pumpable Lean Concrete shall be in accordance with Section 6-02.3(2).

7-08.3 Construction Requirements

7-08.3(1) Excavation and Preparation of Trench

(******)
Supplement this section with the following:

The contractor shall locate and preserve all existing utilities per RCW 19.122. Utility locations shown on the plans depict the physical features that were visible at the time of the survey. The City of Tumwater is not responsible for the location of underground utilities that are marked or not marked in the field by other utility providers. Utility service laterals are not typically shown on plans or locatable and the contractor shall anticipate such services. The City will locate the meters and the mains. For service laterals, pursuant to RCW 19.122.030, the City will indicate a presence of an un-locatable service lateral and if requested can meet with the contractor or provide copies of available records. The Contractor shall have a crimping tool available during excavation to crimp any broken water services. Before commencing work, the contractor shall coordinate with One-Call services to determine the location of all utilities.

The Contractor shall pothole all apparent conflicts between existing utilities and proposed construction as approved by the Engineer. The Contractor shall notify Engineer of location and approximate time to complete prior to potholing. The Contractor shall notify the Engineer of any conflicts with the existing utilities and proposed work at least 3 days prior to proceeding with work. Potholing of the utilities shall be completed a minimum distance of 100 feet in front of pipe laying operations. No adjustment to the contract price or time will be made if the contractor fails to follow this specification. Potholing for Utility Crossings and Connections shall be performed by the Contractor using vacuum excavation truck or other device approved by the Engineer. If the Contractor potholes prior to approval no compensation shall be made for the potholing.

The Contractor shall deflect pressurized pipe at the joints no greater than the maximum allowable deflection as determined by the pipe or fitting manufacturer to avoid conflicts with crossing utilities. Vertical bends and vertical thrust blocking shall be avoided by deflecting pipe either upwards or downwards prior to the utility crossing.

7-08.3(1)A Trenches

(******)
Section 7-08.3(1)A is supplemented with the following to the fourth paragraph:

No material excavated from trenches shall be piled on the roadway.

7-08.3(3) Backfilling

(******)
Supplement this section with the following:

For backfilling trenches for longitudinal and transverse runs of pipe, the Contractor shall use bank run gravel prior to using controlled density fill (CDF). Native material may be used as trench backfill under approval by the Engineer (material testing of native material may be required and if so will be directed by the Engineer). If the Contractor places CDF prior to approval for such use by the City, no compensation shall be made for the CDF. All backfill material shall be compacted and tested according to Section 2-03.3(14)C Method C of the Standard Specifications.

At the end of each workday the roadway shall be opened to traffic. Trench excavation exposed to traffic shall meet the requirements of Section 1-07.23. All costs associated with meeting the requirements of Section 1-07.23 shall be incidental to the linear foot of pipe installed except for Commercial HMA. Commercial HMA will be compensated under section 5-04. No other compensation will be allowed.

(******)
Section 7-08.3(3) is supplemented with the following new Section:
7-08.3(3)A Controlled Density Fill

The Contractor shall use controlled density fill (CDF) as shown in the Plans or directed by the Engineer.

Controlled Density Fill shall meet the following requirements:

1750# Sand,
1750# Pea Gravel,
230# Water,
141# Portland Cement,
6 ounces Water Reducing Agent per 100 lbs. cement.

The Controlled Density Fill will require 24 hours of cure time, or as directed by the Engineer. Prior to backfill, all appurtenances shall be covered with 11 mills plastic as directed by the Engineer.

(******)
Section 7-08.3(3) is supplemented with the following new section:
7-08.3(3)B Steel Plating for Pipe Trench

The Contractor shall install steel plating over any trench backfilled with CDF. The steel plating shall remain in place until the CDF is fully cured and the trench

pavement repair is complete. This process shall be coordinated so that there will be minimum inconvenience to the public. If there is no bid item for “Steel Plating for Pipe Trench”, then all costs for all labor, materials, and equipment to furnish, place, assemble, install, maintain and remove the steel plates and associated materials shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

(******)

Section 7-08.3 is supplemented with the following new Section:

7-08.3(5) Pipe Abandonment

The Contractor shall abandon pipes where shown on the Plans or directed by the Engineer. For abandonment, removal, handling and disposal of asbestos cement piping, refer to Section 7-09.3(19)C of these Special Provisions. All abandonments shall be done after all new utility mains and service connections are installed unless authorized by the Engineer.

Potholing per Section 2-05 to verify pipe sizes, materials, and required fittings shall be done as directed by the Engineer. Pipe abandonments shall be completed in cooperation with the engineer in order to minimize disruption of utility service to the residents. If water services will be interrupted follow the requirements of 7-09.3(19)B.

The method for abandoning pipes shall be based on the nominal size of the pipe. All abandoned pipes with a nominal diameter of 10 inches or smaller (**Small Pipe**) – with the exception of the abandoned sewer main along Capitol Boulevard – shall be plugged with commercial concrete per section 7-08.3(4) of the Standard Specifications. All abandoned pipes with a nominal diameter of 12 inches or larger (**Large Pipe**) – with the addition of the abandoned sewer main along Capitol Boulevard - shall be filled with pumpable lean concrete or grout.

In instances where the Contractor encounters a small or large pipe (as defined above) that needs to be abandoned per these special provisions – and is not shown in the plans or specifications – the Contractor shall gain approval from the Engineer prior to performing any Work to abandon said small or large pipes. If the Contractor, in such instances, performs Work without approval of the Engineer, no payment will be made for the Work performed.

(******)

Section 7-08.3 is supplemented with the following new Section:

7-08.3(6) Water Main/Sanitary Sewer Service Crossings

Notify the Engineer if the waterline is less than 18 inches above sanitary sewer. The minimum cover as shown on the plans may be reduced as approved by the Engineer to maintain minimum vertical separation.

The Contractor shall install the longest standard length of water pipe so that the joints will fall an equal distance from any sewer crossing. In some cases where minimum separation cannot be maintained, it may be necessary to encase the water main as directed by the Engineer. No concrete shall be installed unless specifically directed by the Engineer.

Costs to cut and place water pipe as specified shall be incidental to the water pipe line and no other pay will be allowed.

(******)
Section 7-08.3 is supplemented with the following new Section:

7-08.3(7) Connections to Existing Mains

The Contractor shall be responsible for determining the scope of work for connection to existing mains.

It shall be the Contractor's responsibility to field verify the location and depth of the existing main and the fittings required in accordance with 7-08.3(1) to make the connections to the existing mains including any pipe abandonment associated with the connections to existing mains. Connect to existing mains shall be completed in cooperation with the engineer in order to minimize disruption of service to the residents. All taps shall be a minimum of 36” away from the bell joint unless otherwise approved by the engineer.

Temporary blow-off assembly required for temporary or permanent release of air, chlorination or flushing purposes shall be provided by the Contractor as a part of the connection to existing main.

Payment for "Connect to Existing __In. Diam. Water Main” will only be paid for the locations and quantities called out on the plans or as directed by the Engineer. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed.

(******)
Section 7-08.3 is supplemented with the following new Section:

7-08.3(8) Detectable Marking Tape

All pipeline installed under this contract will be identified by a continuous color coded tracer marker. For pressure lines it shall be buried 12 inches to 18 inches below finished grade, and for sewer lines it shall be buried 24 inches to 30 inches below finished grade. The marker shall be imprinted every 30 to 40 inches in permanent black ink indicating the type of line buried below and shall also have the word “Caution” prominently shown.

The tracer marker shall be plastic non-biodegradable and have a metallic core or backing which can be detected by a standard metal detector.

In addition to the detectable marking tape, a U.S.E coated 12 gauge tracer wire shall be taped to all mains and service lines. The wire shall be brought up and tied to all valves and meter boxes. The tracer wire shall be looped up into all valve boxes per the plans. A low voltage grease-type splice kits, or better shall be used on all tracer wire connection points. After the wire nut is used to connect the wire together an overhand knot shall be tied just outside the connection to prevent it from coming apart. All service and mainline tracer wires shall be properly connected. A tracer wire magnesium anode shall be installed at all dead ends of the tracer / locate system. On long stretches of pipe anodes may be required at a minimum spacing of 1000’. The anode type shall be Copperhead Anode Part# ANO-14, 1.5# x 1.315”Dx18.5”L or approved equal. When connecting a new main or a new service to an existing main, the new tracer wire shall be connected

to the existing tracer wire if available.

Special high strength locate wire may be required for directional drilling where the wire is allowed to be pulled in with the pipe or conduit. High strength wire shall be Neptco Trace-Safe 1800 lb. strength or approved equal and shall be connected with the wire manufacturer's connections.

Continuity or locate testing of the wire will be done by the City. The contractor shall give 72 hours notice for continuity testing by the City. The testing shall be conducted prior to paving or final restoration of landscape areas. The locating device will be connected to the tracer wire at any or all Gate Valves and Services and tracer wire shall transmit an acceptable signal strength as determined by the City for a minimum of 300 feet. Contractor will locate and repair any failed connections.
The wire shall be furnished and installed by the Contractor.

Color coding of tape and wire shall be as follows:

a) Water – Blue
b) Sewer – Green
c) Irrigation/Reclaimed – Purple
d) Electrical conduits – Red
e) Communication Conduits – Orange

Installation of the pipeline tracer marker and 12 gauge coated copper wire is considered incidental to the construction of the pipe and conduits and no additional compensation will be allowed.

(******)
Section 7-08.3 is supplemented with the following new Section:

7-08.3(9) Concrete Thrust Blocking

Install thrust blocking at bends, tees, dead ends, and crosses and as shown in the plans and as directed by the Engineer. Thrust Blocking shall be commercial concrete poured against undisturbed earth. An 11 mil plastic barrier shall be placed between all thrust blocks and fittings. The calculations for thrust blocking are as follows:

Thrust at fittings in pounds at 225 pounds per square inch of water pressure.
Installation of thrust blocking is considered incidental to the construction of the pipe and no additional compensation shall be allowed.

Pipe Diameter	90° Bend	45° Bend	22-1/2° Bend	11-1/4° Bend	Dead End or Tee
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700
14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300
18"	72,000	39,000	19,900	10,000	51,000

SAFE SOIL BEARING LOADS:

Soil	Pounds per Square Foot
Muck, Peat	0,000
Soft clay	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000

Ecology blocks may be used for thrust blocking if approved by the Engineer.

7-08.4 Measurement

(******)
Supplement this section with the following:

Abandon small pipe will be measured per each.

Abandon large pipe will be measured by the cubic yard for the quantity of material placed.

"Controlled Density Fill" will be measured by the cubic yard for the quantity of material placed.

"Connect to Existing ___ In. Diam. Water Main" will be measured per each location called out in the plans.

"Connect to Existing Storm Sewer Main" will be measured per each location called out in the plans.

"Connect to Existing Sanitary Sewer Main" will be measured per each location called out in the plans.

7-08.5 Payment

(******)
Supplement this section with the following:

The cost for "Gravel Backfill for Pipe Zone Bedding" and "Bank Run Gravel for Trench Backfill" shall be included in the unit contract price per linear foot of pipe installed and no additional compensation shall be allowed.

There will be no additional compensation made for the removal and wasting of trench excavation that is unsuitable for backfill.

“Abandon Small Pipe”, per each.
The unit Contract price per each for “Abandon Small Pipe” shall be full pay for providing all labor, tools, equipment and materials necessary to abandon the specified piping including the plug material.

“Abandon Large Pipe”, per cubic yard.
The unit Contract price per cubic yard for “Abandon Large Pipe” shall be full pay for all labor, tools, equipment, and materials necessary to abandon the pipe.

“Controlled Density Fill”, per cubic yard.

“Connect to Existing ___ In. Diam. Water Main”, per each.
The unit contract price for "Connect to Existing ___ In. Diam. Water Main" shall be full pay for providing all labor, tools, equipment, and materials necessary to connect to the existing main including potholing to find the existing wate rmain and dewatering. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed. If no such item exists all costs shall be incidental to the project and no additional compensation shall be allowed.

“Connect to Existing Storm Sewer Main”, per each.
The unit contract price for “Connect to Existing Storm Sewer Main” shall be full pay for providing all labor, tools, equipment, and materials necessary to connect to the existing storm main including any dewatering. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed. If no such item exists all costs shall be incidental to the project and no additional compensation shall be allowed.

“Connect to Existing Sanitary Sewer Main”, per each.
The unit contract price for “Connect to Existing Force Main” shall be full pay for providing all labor, tools, equipment, and materials necessary to connect to the existing sanitary sewer main including any dewatering. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed. If no such item exists all costs shall be incidental to the project and no additional compensation shall be allowed.

7-09 WATER MAINS

7-09.2 Materials

(******)
Supplement this section with the following:

All water main pipes shall be ductile iron pipe conforming to AWWA C 151 Standard Thickness Class 52 and have a cement mortar lining conforming to AWWA C 104.

Where restrained joint pipe is specifically identified on the plans, Ductile iron pipe, use restrained joint pipe with “Field Lok” type gaskets rated to 350 p.s.i. and tested in accordance

with ANSI/AWWA C111/A21.11, TR Flex as furnished by U.S. Pipe , Piranha as furnished by Romac, or Gripper Gasket LLC.

PE Pipe: All 2 inch and smaller diameter pipe shall be NSF Approved, PE3408 blue polyethylene pipe manufactured from virgin materials. Pipe shall meet the following specifications:

- •ANSI/AWWA C901
- •ASTM D1248, ASTM D 3350, ASTM D 2239, ASTM D 3035 and ASTM D 2737,
- •Pressure Class 200, SIDR - 7(Standard Inside Dimension Ration-Pressure Rated),
- •Cell classification 345464C,

All PE pipe shall be manufactured by Interstate Plastics, Philips Driscopipe, Eagle Pacific, Superlon Plastics, U.S. Poly or approved equal.

All fittings for ductile iron pipe shall be ductile iron compact fittings conforming to AWWA C 153 or conforming to AWWA C 110 and C 111. All shall be cement mortar lined conforming to AWWA C 104. Plain end fittings shall be ductile iron if mechanical joint retainer glands are installed on the plain ends. All fittings shall be flanged or mechanical joint.

Fittings with restrained joints shall be mechanical joint fittings with a mechanical joint restraint device. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG, Ford Uni-Flange Series 1400, Romac Industries, Inc., U.S. Gripper, or approved equal.

All pipe shall be new and in good condition with no visible signs of UV damage, fading or other defects.

7-09.3 Construction Requirements

7-09.3(19) Connections

7-09.3(19)B Maintaining Service

(******)
Supplement this section with the following:

> Where existing water services must be interrupted, the Contractor shall notify the Engineer as to the date, time and duration of the interruption, a minimum of 72 hours (3 working days) prior to the interruption. The Contractor shall field verify pipe diameter and fittings prior to requesting a service interruption. The City will notify customers involved or affected by the water service interruption. The Contractor shall make every effort to schedule water main construction with a minimum interruption of water service. Water service cannot be interrupted before 9:00 am.

(******)
Section 7-09.3(19) is supplemented with the following new Section:

7-09.3(19)C Asbestos Cement Water Main

Cutting, tapping, connecting to, or abandoning an Asbestos Cement Water Main shall be in accordance with the rules and regulations set forth by the Washington State Department of Labor and Industries, and as directed by the Engineer. All costs of complying with current regulations shall be included in the unit contract price for "Connect to Existing Water Main", "Abandon Small Pipe", and "Abandon Large Pipe" as applicable.

7-09.3(19)C1 Remove Asbestos Cement Water Pipe

The Contractor shall remove asbestos cement (AC) water pipe from the site as shown in the Plans. Costs for removal of any fittings and appurtenances attached to the AC pipe shall be incidental to the pay item "Remove Asbestos Cement Water Pipe". State certified hazardous removal specialists or sub-contractor must be hired to perform the removal. The Contractor shall notify Department of Labor and Industries and the Olympic Air Pollution Control Authority and acquire all required permits, and shall coordinate with the Engineer, prior to beginning the removal work. It shall be the Contractor's responsibility to furnish all necessary safety equipment and protective clothing and to protect the adjacent environment in accordance with applicable environmental and safety laws and regulations. Removed pipe, conduits and debris shall be properly handled, transported, and disposed. The Contractor shall submit to the Engineer documentation from certified hazard disposal site showing the chain of custody where asbestos cement pipe is disposed.
Abandon Asbestos Cement Water Pipe

Prior to performance of any contract work, the Contractor shall obtain all permits from, and provide notification to, the Washington State Department of Labor and Industries, the U.S. EPA, the local air pollution control agency, and other permitting and regulatory agencies with jurisdiction over the work involving asbestos as the law requires.

Prior to commencing asbestos related work, the Contractor shall provide the Engineer with written verification of approvals and notifications that have been given and/or obtained from the required jurisdictional agencies, and the Contractor's schedule for all work involving asbestos removal. The schedule shall include the sequencing and scheduling of asbestos related work, and coordination with subcontractors. The Contractor shall notify the Engineer when all approvals have been received and notifications have been made, as required by the agencies involved.

The Contractor shall ensure the safety of all workers, visitors to the site, and the general public in accordance with all applicable laws, rules, and regulations.

The Contractor shall designate a Washington State Certified Asbestos Supervisor (CAS) to personally supervise the asbestos removal and to ensure that the handling and removal of asbestos is accomplished by certified asbestos workers, pursuant to Washington State Department of Labor and Industries standards. The Contractor shall ensure that the removal and

disposal of asbestos meets the requirements of EPA regulation 40 CFR Part 61, local health department regulations, and all other applicable regulations.

7-09.3(24) Disinfection of Water Mains

(******)
Replace paragraph one with the following:

The Contractor shall provide extra safeguards to prevent contamination, rocks, sand or foreign matter from accumulating in the pipe.

Unless otherwise approved by the Engineer, the method for disinfecting water mains shall be by dry Calcium Hypochlorite conforming to ANSI/AWWA B300 and NSF/ANSI 61 as defined in Section 7-09.3(24)D of the WSDOT Standard Specifications and AWWA C651-14 Sec. 4.1.3 and Sec. 4.3. If adhesives are used to secure chlorine tablets to the pipe interior, they must meet the requirements of NSF/ANSI 61 and AWWA C651-14 Sec. 4.3.3.

Pipe and fittings used in connections to existing mains shall be less than one pipe length (generally less than 20 ft), and spray disinfected, swabbed or immersed for disinfection as per AWWA C651-14 Sec. 4.10 and 4.11 (1% chlorine solution).

Bacteriological testing shall be done by the City per AWWA C651-14 Sec. 5.1 Option A or B. Option B may not be able to be used if the pressure in the line is too low to allow the sample tap to run continuously for 15 minutes without opening the system valve. Bacteriological testing must be scheduled with the Engineer at least 3 days in advance and cannot be done on Fridays. Results are typically provided within four (4) working days but may take up to (7) working days. If the samples fail to produce acceptable results, the main shall be re-chlorinated by the continuous-feed or slug method until satisfactory results are obtained per AWWA C651-14.

The Contractor shall flush the new main. Flushing mains shall require the assistance of City utility personnel and shall be coordinated with the Engineer 3 working days in advance.

7-09.3(24)A Flushing

Modify this section by deleting the first sentence of the fourth paragraph and replacing it with the following:

> The Contractor shall be responsible for disposal of treated water flushed from mains and shall neutralize the wastewater for protection of aquatic life in the receiving water and their associated surface and ground water tributaries, before disposal into any natural drainage channel, i.e., receiving water, waters of the State, including wetlands.

7-09.4 Measurement

(******)
Supplement this section with the following:

___ in. diam. ductile iron pipe class 52 for water main will be measured per linear foot.

Blowoff Assembly will be measured per each.

Remove Asbestos Cement Water Pipe will be measured per linear foot.

7-09.5 Payment

(******)
Supplement this section with the following:

"___ In. Diam. Ductile Iron Pipe Class 52 for Water Main", per linear foot.
The per linear foot unit contract price for "___ In. Diam. Ductile Iron Pipe Class 52 for Water Main" shall be full pay for furnishing all labor, materials, tools and equipment, necessary to install the water main, complete in-place, including but not limited to pipe, couplings, adaptors, crosses, tees, bends, reducers, caps, plugs, restrained joint fittings, bend markers, and other fittings not specifically identified on the plans. Further, all excavation, pipe bedding, trench backfilling, compacting, temporary patching, formed thrust blocking, testing, flushing, temporary blow-offs, and disinfecting shall also be included in the unit contract price. Items not specifically identified on the plans but necessary to properly install the water main shall be considered incidental to the water main and no other compensation shall be allowed.

"Blowoff Assembly", per each.
The unit contract price per each for "Blowoff Assembly" shall be full pay for furnishing all labor, materials, tools and equipment, necessary to the cap on the new water main, thread and install required valves, valves boxes, brass pipe, bends, couplings and other fittings not specifically called out on the plans.

"Remove Asbestos Cement Water Pipe", per linear foot.
The unit contract price per linear foot for "Remove Asbestos Cement Water Pipe" shall be full pay for disposal, certified labor, materials, tools, equipment, including safety and protective equipment to protect labor necessary to remove, transport, and dispose of asbestos cement water pipe, fitting and appurtenances to an approved disposal site. The cost of all permits required for the removal and disposal of this material is included in this bid item.

7-12 VALVES FOR WATER MAINS

7-12.1 Description
(June 2022, Tumwater GSP)

Supplement this section with the following:

Adjustment of valve boxes will include adjustment of the following valve boxes:

- *** City Water ***
- *** Private Gas ***

All existing *** City Water *** castings will be returned to the City and replaced with new castings supplied by the Contractor as part of this project. The Engineer will determine which

castings will be fully replaced and where the new castings will be installed. If any existing gas valve boxes are damaged beyond reuse, PSE will supply the new material.

7-12.2 Materials

(******)
Supplement this section with the following:

All valves shall be non-rising stem, resilient wedge gate valves conforming to AWWA C515 unless otherwise specified and shall be American AVK, Clow, EJ Flowmaster, Kennedy, M & H, Mueller, Waterous Series 2500. The minimum cover over the valve, measured from the valve operator nut to finished grade, shall be 20 inches. Gate valves 14 inches and larger that are unable to provide 20 inches of cover over the valve shall be factory equipped with a bevel gear actuator for horizontal installation as directed by the engineer. The bevel gear actuator shall be rated for buried installations.

Butterfly valves shall meet all the requirements of AWWA C504 Class 150B and shall be Allis Chalmers, Kennedy, Linseal III, M&H, Mueller, Pratt Groundhog.

Valves shall be bolted to the tee and the cross with flanged ends. Joint materials for flanges shall be 1/8 inch thick one piece, cloth inserted rubber gaskets conforming to AWWA C107-78.

Bolts for all flanged and mechanical joints shall be high strength, low alloy steel bolts only, meeting the current provisions of American National Standard ANSI/AWWA C111/A 21.11 for rubber gasket joints for cast iron or ductile iron pipe and fittings.

Valve boxes shall be East Jordan Iron Works #248 or Olympic Foundry VB-950, 6-3/4 inch OD with recessed handle type iron cover marked "WATER."

Tapping sleeves shall be stainless steel with ductile iron flange and shall be Romac "SST" or approved equal.

Two inch air and vacuum release valve shall be a two inch ARI D-040. Fiberglass enclosure shall be Vent Guard Model No. AVG1824, Beige in color, manufactured by Hot Box, Inc. (800) 736-0238. An insulation pouch shall be placed over the air release assembly. The 18” x 24” insulation pouch shall be beige in color with the opening on the 18” side, and manufactured by DeKorra Products LLC

Valve insertions shall be Romac InsertaValve or Hydra-Stop Insta-Valve Plus and be completed by an experienced installer.

7-12.3 Construction Requirements

(June 2022, Tumwater GSP)

Supplement this section with the following:

The Contractor shall complete the adjustment of new and existing utility structures within five working days after the pavement is completed. The structure shall then be brought to proper grade utilizing the same methods of construction as specified for new construction.

The hot mix asphalt pavement shall be cut and removed to a neat circle, the diameter of which shall be equal to the outside diameter of the cast iron frame plus two (2) feet. The base materials and crushed rock shall be removed and Concrete Class 4000 shall be placed so that the entire volume of the excavation is replaced up to 0.30 feet of the finished pavement surface. No additives shall be added to the concrete and no special mixes will be approved by the City.

On the following day the concrete, the edges of the asphalt concrete pavement, and the outer edge of the casting shall be painted with hot asphalt cement. HMA shall then be placed and compacted with hand tampers, plate compactors or patching roller.

The complete patch shall match the existing paved surface for texture, density, and uniformity of grade. The joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before the asphalt cement solidifies.

(******)
Section 7-12.3 is supplemented with the following new Section:

7-12.3(2) Adjust Valve Box to Grade

Where shown on the plans or where directed by the Engineer, existing valve boxes shall be raised to the grade as staked or otherwise designated by the Engineer. The Contractor shall supply and install new valve boxes and covers as part of raising valve boxes to grade. The finished installation shall conform to the detail shown in plans.

All new and existing valve boxes located in any unpaved area shall have a concrete pad poured or placed entirely around each valve box. The pad shall be a minimum of 36 inches by 36 inches for each valve box. The concrete shall be commercial concrete or better with a minimum thickness of 8 inches.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of $1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

7-12.4 Measurement

(******)
Supplement this section with the following:

Adjust valve box will be measured per each.

___ inch gate valve will be measured per each.

7-12.5 Payment

(******)
Supplement this section with the following:

"Adjust Valve Box," per each.

"___ Inch Gate Valve," per each.

The payment for the various items specified above shall be full pay for furnishing all labor, materials, tools, and equipment necessary to install the unit complete in place on the water main, including trenching, concrete pads and concrete or asphalt restoration of adjacent areas, disinfecting, testing, blocking of valve, valve box and marker post.

7-14 HYDRANTS

7-14.2 Materials

(******)
Supplement this section with the following:

Fire hydrants shall be Waterous Pacer, Mueller Centurion, M & H Reliant Style 929, Kennedy K-81, or EJIW 5CD250 conforming to AWWA C 502. The valve opening shall be 5 1/4-inch diameter. Hydrants shall be mechanical joint, 4-1/2 feet standard bury with two 2-1/2 inch outlets and one pumper port, and shall have a 1.25-inch pentagonal operating nut (counter clockwise opening). All hydrants shall be outfitted with a 4-1/2" NST by 5" Storz adapter with cap.

Some locations may require other than the 4-1/2 feet standard bury. Contractor shall be responsible for determining actual required bury and provide proper standpipe height.

7-14.3(1) Setting Hydrants

(******)
Supplement this section with the following:

A 6 foot wide cleared area, centered along the pipe, shall extend from the edge of pavement to 3 foot past the new hydrant, not to exceed the right-of-way line. The clearing may include trimming of trees and shrubs to an overhead height of 10 feet as directed by the Engineer. Upon completion of fire hydrant installation, the cleared area shall be graded and restored as directed by the Engineer.

7-14.4 Measurement

(******)
Supplement this section with the following:

Fire hydrant assembly will be measured per each.

7-14.5 Payment

(******)
Supplement this section with the following:

"Fire Hydrant Assembly", per each.

The unit Contract price per each for "Fire Hydrant Assembly" shall also include, but not be limited to, trench excavation and backfill, gravel backfill, fill and grading 3' around hydrant and between hydrant and edge of roadway, painting, extensions, fittings, ductile iron spool, Storz adapter, Megalug restraining joints, and blue hydrant marker as shown in the Plans and specified herein.

7-15 SERVICE CONNECTIONS

7-15.2 Materials

(******)
Supplement this section with the following:

Service pipe from the main to the new meter (meter setter) shall be the appropriate size shown in the table below.

Meter Size	Service Pipe Diameter
3/4" Single Meter	1"
1"	1"
1-1/2"	2"
2"	2"

One and one-half and two inch diameter service lines shall be NSF Approved, PE3408 blue polyethylene pipe manufactured from virgin materials. Pipe shall meet the following specifications:

- ANSI/AWWA C901
- ASTM D1248, ASTM D 3350, ASTM D 2239, ASTM D 3035 and ASTM D 2737,
- Pressure Class 200, SIDR - 7(Standard Inside Dimension Ration-Pressure Rated),
- Cell classification 345464C,

Pipe shall be manufactured by Interstate Plastics, Philips Driscopipe, Eagle Pacific, Superlon Plastics, U.S. Poly or approved equal.

Service pipe from the new 5/8" meter to the old 5/8" meter location shall be minimum 1" diameter polyethylene plastic pipe minimum pressure Class 200. Service pipe greater than 100 ft. in length from new meter to old meter location shall be 1-1/2" diameter until it is connected to existing service line. The Contractor shall identify the diameter of the existing service line to remain in-place at the old meter location and provide the required fittings necessary for the transition.

Stainless steel inserts shall be used with all pack joint fittings. Further, all bushings, reducers, nipples, couplings, adaptors, and fittings required to make service connections shall be all

brass conforming to AWWA C800 manufactured by Ford or approved equal.

Meter setters shall be all copper, Ball valve style with locking wing and check valve. The Contractor shall remove and reinstall the existing meter in the new setter after testing of new water main and service line. The Contractor shall use care in removing and reinstalling the existing meter. All fittings and meters shall be kept clean and free of dirt or foreign material and sprayed with a light bleach / chlorine solution prior to installation. Services shall be flushed at the customer hose bib after final meter installation to clear the service line, remove air and to verify good flow. All costs for replacing a broken meter due to the Contractor's neglect shall be borne by the Contractor.

7-15.3 Construction Requirements

(******)
Supplement this section with the following:

The Contractor shall locate and verify the size and type of existing services. The approximate locations of the existing services are shown on the Plans. Existing services may be located on private property, close to buildings, in backyards, or other complex construction locations. The Contractor shall notify private property owners 24 hours prior to any scheduled water outage. In addition, the Contractor shall knock on the door of the house affected one hour before the outage and notify the homeowner of the outage. Disruption of existing services shall be minimized.

Service line from the new water main to the new meter setter, including the new meter setter, shall be bedded with imported service line bedding. The service line from the new meter setter to the connection to the existing service line shall be bedded with suitable native material as directed by the Engineer.

The Contractor shall take special care with the work on private property. The Contractor shall verify with the Engineer and/or Property Owner final service line route that will minimize damage to landscaping or improvements, and restore all damaged items to a condition equal to or better than the original condition. For service lines crossing under sidewalks, driveways, or landscaped areas, the Contractor shall layout new service line routes prior to excavation for approval by the Engineer. Service line routes should minimize removal of asphalt, concrete, and mature landscaping.

(******)
Supplement section 7-15.3 with the following new section:

7-15.3(2) Connection To New Water Main

Service lines between the new water main and the existing service line past the existing meter setter shall be installed prior to testing and disinfecting the new water main. Disinfect fittings and pipe prior to installation.

Installation/replacement of a service to a new water main shall include the following:

a. install new service line to new meter setter and box,
b. install new service line from new meter setter to existing meter service,
c. verify each individual existing water service is disconnected,

d. remove old service to include; meter, meter box, setter, and any associated appurtenances,
e. reinstall existing meter in new meter setter,
f. connect new service line to existing service line on the property side of the old service (no jumpers will be allowed at existing setters).
g. coordinate with the customer to flush the service line at the customer's outside faucet and verify all faucets are functioning

If after abandoning the old water main(s) it is determined that a customer is without water and a service was not shown on the plans at that particular location, the Contractor shall within 24 hours install a new service connection as directed by the Engineer.

(******)
Supplement section 7-15.3 with the following new section:

7-15.3(3) Connection To Existing Water Mains

Disinfect fittings and pipe prior to installation. Connection of a service to an existing water main shall include the following:

a. locate, excavate, and connect to the existing water main,
b. install new service (with or without meters as identified on the plans),
c. verify each individual existing water service is disconnected (unless meter credit is noted),
d. remove old service to include; meter, meter box, setter, and any associated appurtenances (unless meter credit is noted),
e. install a service line from the new service to the existing service line on the property side of the old service (unless meter credit is noted).

If after abandoning the old water main(s) it is determined that a customer is without water and a service was not shown on the plans at that particular location, the Contractor shall within 24 hours install a new service connection as directed by the Engineer.

(******)
Supplement section 7-15.3 with the following new section:

7-15.3(5) Repair of Existing Water Service

If while pushing or excavating, an existing service line is broke. The Contractor shall follow the course of action as stated below:

a. Immediately call or notify the Engineer
b. Crimp service line if possible,
c. If needed, assist the Engineer or City of Tumwater Water repair crew to throttle down the water main,
d. Disinfect all fittings and pipe prior to installation. Excavate and repair broken service line while under the direct supervision of the Engineer or wait for assistance from the City of Tumwater Water repair crew,
e. Flush repaired service line at setter with the assistance of the Engineer until water flow becomes clean, inspect and flush setter and meter, reconnect old service line to meter setter (if applicable) and resume service to residence. Flush hose bib at residence or building until air is removed and water runs clear.

(******)
Supplement section 7-15.3 with the following new section:

7-15.3(6) Private Irrigation and Electrical Systems Testing and Repair

The Contractor shall operationally test existing irrigation and landscape electrical systems prior to construction at individual residences. If it is found through the baseline tests that an existing system does not operate correctly, the Contractor shall demonstrate the discrepancy to the Engineer and the problem(s) will be documented. The Contractor shall take precaution to avoid cutting or breaking of lines and services during service line installation. If a line is cut or broke, the Contractor shall immediately repair and test the system prior to continuing on with other service line installations.

Upon completion of the service line installation, the Contractor shall once again test the existing systems and compare to the baseline tests conducted prior to work within the yard. Any discrepancies between the baseline test and the final tests shall be repaired prior to continuing on with other service line installations.

The Contractor shall adjust the setter, water meter, and meter box to finished grade as shown on the plans or where directed by the Engineer.

7-15.4 Measurement

(******)
Supplement this section with the following:

___" service connection will be measured per each. The size of the service connection referenced in this Section corresponds to the size of the meter setter as shown in the Plans.

Reducing pressure backflow assembly relocation will be measured per each.

7-15.5 Payment

(******)
Supplement this section with the following:

"___"Service Connection", per each.
The unit contract price per each for ___" Service Connection shall be full compensation for all labor, material, and equipment to furnish and install the meter service(s) complete including, but not be limited to, service saddle, tapping the pipe, corporation stops, service lines, meter setter or tandem setter, pressure reducing valve(s), meter box, and all miscellaneous couplings, fittings, and adapters to install the service lines and to connect to the existing reduced pressure backflow assembly (RPBA) or service line to the building. Furthermore, pushing, boring, or directional drilling of new service line including encasement, repair of broken utility and service lines, and lawn and landscape restoration per service installation is included.

All existing RPBA's downstream of the newly installed service connections shall be flushed and tested to ensure their functionality. The cost to provide all labor, materials, and equipment to flush and to test the RPBA's is included into the unit contract price per each for "___" Service Connection". No additional compensation shall be allowed.

Progress payment of 50% shall be allowed once service line(s) is installed up to existing meter setter(s) and water main and service lines are flushed and tested. Complete and final payment shall be allowed once residence(s) has full use of new system and repair of lawn and landscaping is completed.

For purposes of payment, there will be no distinction made for the difficulty of disconnecting the old meter and reconnecting to the new meter or the length of service line required for each new meter service.

"Reducing Pressure Backflow Assembly Relocation", per each.
The unit contract price per each for Reducing Pressure Backflow Assembly Relocation (RPBA) shall be full pay for furnishing all labor, materials, tools, and equipment necessary to relocate the RPBA to new location and reconnect to existing service line or irrigation line. The cost also include necessary fittings and materials to complete the relocation of the RPBA and testing to assure that it is complete and works. Furthermore; repair of broken utility and service lines, and lawn and landscape restoration per service installation is included in the unit contract price of Reducing Pressure Backflow Assembly Relocation.

7-17 SANITARY SEWERS

7-17.1 Description

(******)
Supplement this section with the following:

Various transition couplings, flanged coupling adapters, transition couplings with follower flanges and gaskets, and other miscellaneous couplings and fittings may be required for performance under this project.

It shall be the Contractor's responsibility to determine what specific couplings, adapters, and fittings that will be used to make connections shown on the plans. The Engineer has shown specific existing material types, and nominal sizes using the best information available. The Engineer has not determined the specific dimensions of existing materials.

7-17.2 Materials

(******)
Delete this section and replace with the following:

All sanitary sewer pipe shall have flexible gasketed joints unless otherwise specified.

Gravity Sewer Pipe - Pipe used for gravity sewer shall meet the requirements of WSDOT Section 9-05.12(1) Solid Wall PVC Sanitary Sewer Pipe. All pipe shall be white or green in color.

All pipe shall be clearly marked with type, class, and thickness. Lettering shall be legible and permanent under normal conditions of handling and storage.

7-17.3 Construction Requirements

7-17.3(2) Cleaning and Testing

7-17.3(2)A General

(******)
The first sentence shall be deleted and replaced with the following:

All pipe installed shall be tested in accordance with WSDOT Section 7-09.3(23).

All sanitary sewer pipe, including laterals, shall be high-velocity cleaned and televised prior to paving or substantial completion, whichever is sooner. Hydrant flushing lines is not an acceptable method of cleaning. If rocks or other debris are found in manholes, the Contractor shall re-clean the sewer pipe.

7-17.3(2)H Television Inspection

(******)
Delete this section and replace with the following:

The television inspection shall be completed with a CCTV color camera recorded in standard DVD format. CCTV inspection crawler shall be equipped with a flow depth indicator, such as a 1-inch steel bar or ball, to measure the magnitude of pipe vertical fluctuation. If multiple television inspections of the same pipe are required, they shall be completed in the same direction each time.

Television inspection shall meet related Pipeline Assessment and Certification Program (PACP) codes developed by NASSCO, Inc. Television inspection of pipelines shall be performed by experienced personnel trained in identifying structural and operational defects, obstacles and service connections by closed circuit color television. Personnel shall be PACP-trained and certified field technicians.

The Contractor shall supply one paper copy and one electronic copy of the pipe inspection form for each pipe reach televised. Two copies of electronic video files shall be provided in DVD format. The Contractor shall submit DVDs and written reports for review within three (3) working days after line televising.

Acceptance of the line will be made after the television inspection DVD has been reviewed and approved by the Engineer.

The cost incurred in making all television inspections shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

7-17.4 Measurement

(******)
Section 7-17.4 is supplemented with the following:

___ in. diam. Solid wall PVC sanitary sewer pipe will be measured per linear foot.

Sewer Manhole ___ In. Diam. will be measured per each.

Side Sewer Stubout and Connection to Existing Sewer Line will be measured per each.

Side Sewer Stubout will be measured per each.

Saddle Sewer Manhole ___ In. Diam. to Connect to Existing Pipe will be measured per each.
Connect to Existing Sanitary Sewer Manhole will be measured per each.

7-17.5 Payment

(******)
Section 7-17.5 is supplemented with the following:

"___ In. Diam. Solid Wall PVC Sanitary Sewer Pipe", per linear foot.
The per linear foot unit contract for "___ In. Diam. Solid Wall PVC Sanitary Sewer Pipe", shall be full compensation for all labor, material, and equipment to furnish, place, assemble, and install sewer line, complete in place, including all wyes, tees, caps, plugs, clean outs, special fittings, joint materials, commercial concrete, bend markers, adjustment of inverts to manholes, dewatering, bypass pumping, cleaning, televising inspection and testing. Further, all excavation, hauling, disposal, pipe bedding, trench backfill materials, compaction, temporary patching and other required earthwork shall be included in the unit contract price per linear foot of pipe installed.

“Sewer Manhole __In. Diam.”, per each.
“Side Sewer Stubout and Connection to Existing Sewer Line”, per each.
”Side Sewer Stubout”, per each.

The unit contract price per each for Sewer Manhole __ In. Diam., Side Sewer Stubout and Connection to Existing Sewer Line, and Side Sewer Stubout shall be full pay for furnishing all labor, materials, tools, and equipment, necessary or incidental to furnishing and installing the unit complete in place on the sewer main, including trenching, excavation, bedding for structures, pipe bedding, trench backfill materials, compaction, and temporary patching, but not be limited to, service saddle, tapping the pipe, service lines, setters, boxes, and all miscellaneous couplings, fittings, and adapters to install the service lines and connect to the existing service, jointing, testing, wyes, and other items necessary for the unit to be installed complete in-place. For purposes of payment, there will be no distinction made for the difficulty of disconnecting the old service and reconnecting to the new service or the length of service line required for each new service as shown on the Plans and specified herein.

“Saddle Sewer Manhole __In. Diam to Connect to Existing Pipe”, per each.
The unit contract price per each for “Saddle Sewer Manhole __In. Diam to Connect to Existing Pipe” shall be full pay for furnishing all labor, tools, equipment, and materials required to install the sewer manhole and connect to existing pipe in place, including but not be limited to concrete, joints, concrete collars and sealants. Further, all excavation, haul, backfill, testing, accessories, and removal of manholes shall be included in the unit contract price. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing sewer system or the quantity of connecting pipes or other materials needed.

Items not specifically identified on the plans but necessary to properly connect to system shall be considered incidental and no additional compensation shall be allowed.

"Connect to Existing Sanitary Sewer Manhole", per each.
The unit contract price per each for "Connect to Existing Sanitary Sewer Manhole" shall be full pay for furnishing all labor, tools, equipment, and materials required to connect to existing sanitary sewer manhole in place, including core-drill, sand-collars, mortar, concrete, concrete collars, and sealants. Further, all excavation, haul, backfill, testing, and accessories shall be included in this unit contract price. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing manhole or the quantity of pipes connecting to the manhole. Items not specifically identified on the plans but necessary to properly connect to sanitary sewer manhole shall be considered incidental and no additional compensation shall be allowed.

(******)
Supplement Division 7 with the following new Section:

7-23 SANITARY SEWER BYPASS PUMPING

7-23.1 General

The Contractor is required to furnish all materials, labor, equipment, power, and maintenance, etc. to implement a temporary pumping system for the purpose of diverting the existing sanitary sewer flow around the work area as needed for the duration of the project. The bypass system as supplied by the contractor shall meet the requirements of all codes and regulatory agencies having jurisdiction, these general specifications and the technical specifications.

The design, installation, and operation of the temporary pumping system shall be the Contractor's responsibility. The Contractor shall employ the services of a subcontractor who can demonstrate to the engineer that he specializes in the design and operation of temporary bypass pumping systems. The subcontractor shall provide at least five (5) references of projects of a similar size and complexity as this project performed by his firm within the past five years.

7-23.1(1) Bypass Pumping Plan

The Contractor shall submit a detailed description of the proposed pumping system and the bypass pumping contractor's references for review and approval at the pre-construction conference. A separate pre-bypass pumping meeting will be conducted within 4 weeks of submittal of the bypass pumping plan and at minimum 2 weeks prior to the bypass pumping, at which time the Contracting Agency will notify the Contractor of any deficiencies or corrections that are required. Re-submittal of the corrected bypass pumping plan is required. Provided the corrected bypass pumping plan is satisfactory, an additional pre-bypass pumping meeting will not be required.

The Contractor shall submit to the Contracting Agency detailed plans and descriptions outlining all provisions and precautions to be taken by the Contractor regarding handling of existing wastewater flows. This plan must be specific and complete, including such items as schedules, locations, elevations, capacities of equipment, materials, and all

other incidental items necessary and/or required to ensure proper protection of the facilities, including protection of the access and bypass pumping locations from damage due to the discharge flows, and compliance with the requirements and conditions specified in these Contract Documents. Work on or abandonment of the gravity sanitary sewer system shall not begin until all provisions and requirements have been approved by the Contracting Agency.

The bypass pumping plan shall include but not be limited to the following details:

1. Staging areas for pumps
2. Sewer plugging method and types of plugs
3. Size and location of manholes or access points for suction and discharge hose or piping
4. Calculations for selection of bypass pumping pipe size
5. Number, size, material, location and method of installation of suction piping
6. Number, size, material, method of installation and location of installation of discharge piping
7. Bypass pump sizes, capacity, solids handling capacity and number of each size to be on site and power requirements
8. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range) shall be submitted
9. Standby power generator size, location (if used)
10. Downstream discharge plan
11. Method of protecting discharge manholes or structures from erosion and damage
12. Thrust and restraint block sizes and locations
13. Sections showing suction and discharge pipe depth, embedment, select fill and special backfill
14. Method of noise control for each pump and/or generator
15. Any temporary pipe supports and anchoring requirements
16. Design plans and computation for access to bypass pumping locations indicated on the drawings
17. Schedule for installation of and maintenance of bypass pumping lines
18. List of spare parts and support equipment to be maintained on site
19. Secondary containment type and size, and plan for deployment
20. Methods for monitoring and assuring equipment is operating per plan
21. Alarm Response Plan which shall include contacting City of Tumwater Shop
22. Contingency plan for spill, leak, or other discharge

7-23.2 Materials

All pumps used shall be fully automatic self-priming units that do not require the use of foot valves or vacuum pumps in the priming system. The pumps may be electric or diesel powered. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of effluent flows. Pumps shall be capable of pumping solids with a nominal spherical dimension of three (3) inches without clogging.

The Contractor shall provide the necessary stop/start controls for each pump.

The Contractor shall include one stand-by pump of each size to be maintained on site. Back up pumps shall be online, isolated from the primary pumping system by a valve.

The pumps shall be contained inside a temporary portable secondary containment structure(s) to contain any fuel or sewage that may spill during the normal course of operation.

Discharge Piping – In order to prevent the accidental spillage of flows, all discharge systems shall be temporarily constructed of rigid pipe with positive, restrained joints. Under no circumstances will “irrigation” type piping or glued PVC pipe be allowed. Discharge hose will only be allowed in short sections and by specific permission from the Engineer.

Noise levels of equipment shall meet Washington State noise level requirements. Contractor shall make the necessary provisions to control the noise of the temporary pumping equipment such that the noise generated by the equipment is limited to 55 dBA during the day (7 AM to 10 PM) and 45 dBA at night (10 PM to 7 AM) at property lines. Depending on the pumping equipment that is used, meeting this requirement may require the use of sound attenuating enclosures as well as other provisions and measures.

7-23.3 Construction Requirements

7-23.3(1) Design Requirements

Bypass pumping systems shall have sufficient capacity to pump a peak flow of 750 GPM. The Contractor shall provide all pipeline plugs, pumps of adequate size to handle peak flow, and temporary discharge piping to ensure that the total flow of the gravity collection system can be safely diverted around the project area. Bypass pumping systems will be required to be operated 24 hours per day.

Temporary sewer bypass systems shall be designed by a registered Professional Engineer in the State of Washington. Engineer shall have demonstrated experience in the design of pumping systems of comparable size and complexity.

The Contractor shall have adequate standby equipment available and ready for immediate operation and use in the event of an emergency or breakdown. One standby pump for each size pump utilized shall be installed at the mainline flow bypassing locations, ready for use in the event of primary pump failure.

Bypass pumping system shall be capable of bypassing the flow around the work area and be sized to handle any amount of flow up to full available flow as defined by the Contracting Agency into the work area as necessary for satisfactory performances of work.

The Contractor shall make all arrangements for bypass pumping during the time when the gravity sewer main is shut down for any reason. System shall overcome any existing force main pressure on discharge.

7-23.3(2) Performance Requirements

It is essential to the operation of the existing system being bypassed that no interruptions in the flow occur throughout the duration of the project. To this end, the Contractor shall provide, maintain, and operate all temporary facilities such as dams, plugs, pumping equipment (both primary and back-up units as required), conduits, all necessary power, and all other labor and equipment necessary to intercept the incoming flow before it reaches the point where it would interfere with his work, carry it past the work area and return it to the existing wastewater collection system downstream of his work.

The design, installation and operation of the temporary pumping system shall be the Contractor's responsibility. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction. It shall be the responsibility of the Contractor to schedule and perform the work in a manner that does not cause or contribute to incidents of overflows, releases or spills of sewage from the sanitary sewer system or the bypass pumping operation.

The Contractor shall provide all necessary means to safely convey the sewage past the work area. The Contractor will not be permitted to stop or impede the main flows under any circumstances.

The Contractor shall divert the flow around the work area in a manner that will not cause damage to, or surcharging of Contracting Agency's system and will protect public and private property from damage and flooding.

During all bypass pumping operations, the Contractor shall protect the Contracting Agency's system (Pumping Station, Conveyance System, etc.) as applicable from damage inflicted by any equipment. The Contractor shall be responsible for all physical damage to the Contracting Agency's system caused by human or mechanical failure.

The Contractor shall protect water resources, wetlands, and other natural resources.

7-23.3(3) Field Quality Control and Maintenance

7-23.3(3)A Tests

The Contractor shall perform leakage and pressure tests of the bypass pumping discharge piping using clean water prior to the actual operation. The Engineer shall be given three working days notice prior to testing.

7-23.3(3)B Inspection

Contractor shall inspect the bypass pumping system on a continuous basis to ensure the system is working correctly. Contractor shall monitor pump power source fuel levels and make arrangements for timely refueling as needed.

7-23.3(3)C Maintenance Service

Contractor shall ensure the temporary pumping system is properly maintained and a responsible operator shall be on hand at all times when pumps are operating.

7-23.3(3)D Extra Materials

Spare parts for pumps and piping shall be kept on site as required by the bypass pumping plan. Adequate hoisting equipment for each pump and accessories shall be maintained on the site.

7-23.3(4) Spills

Contractor is fully responsible for any damage that may result from an inadequate or improper installation, maintenance or operation, or failure of any kind of the sewer bypass pumping system.

In the event of a spill, the Contractor shall contact the LOTT Spill Reporting Group at (360) 528- 5700.

Spills or leaks of sewage to surface waters or drainage courses is prohibited. In the event of sewage spills, the Contractor shall immediately take whatever actions are deemed necessary to stop and remedy the results of the spill. Should the Contractor not take immediate action, the Owner will be entitled to take whatever actions are deemed necessary to stop, contain, and decontaminate a spill, at the Contractor's expense.

Costs incurred by the Contractor or Owner, including penalties imposed on the Owner as a result of any sewage spill caused by the Contractor, its employees, or subcontractors, shall be borne in full by the Contractor, including legal fees and other expenses to the Contractor or Owner resulting directly or indirectly from the spill.

7-23.3(5) Installation and Removal

Contractor is responsible for locating any existing utilities in the area selected for the bypass pipelines. The Contractor shall locate bypass pipelines to minimize any disturbance to project execution and shall obtain approval of the pipeline locations from the Contracting Agency as noted in the bypass pumping plan. All costs associated with relocating utilities and obtaining all approvals shall be paid by the Contractor.

If the system has to be drained to effect the work, such as for a cut-over or connection, Contractor shall provide the necessary temporary pumping and/or storage equipment to drain or remove the sewage from the excavation and/or system.

The Contractor shall remove manhole sections or make connections to the existing conveyance system and construct temporary bypass pumping structures only at the access location indicated on the Plans and is required to provide adequate suction conduit.

Plugging or blocking of flows shall incorporate a primary and secondary plugging device. When plugging or blocking is no longer needed for performance and acceptance or work, it is to be removed in a manner that permits the sewage flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream.

When working inside a manhole or wet well, the Contractor shall exercise caution and comply with OSHA requirements when working in the presence of sewer gases, combustible or oxygen- deficient atmospheres, and confined spaces.

The temporary bypass pump discharge pipeline shall be located off streets and sidewalks and on shoulders of the roads where possible without causing delay to the project. When the bypass pipeline crosses local streets and private driveways that are in service, the Contractor shall employ traffic rated crossing devices or place the bypass pipelines in trenches and cover with temporary pavement. Upon completion of the bypass pumping operations, and after receipt of written permission from the Contracting Agency, the Contractor shall remove all the bypass pumping system piping, restore all property to pre-construction condition, and restore all pavement. The Contractor is responsible for obtaining any approvals for placement of the temporary pipeline from the Contracting Agency.

7-23.4 Measurement

No unit of measurement shall apply to the lump sum price for “Bypass Pumping”.

7-23.5 Payment

Payment will be made in accordance with Section 1-04.1, for the following bid item that is included in the proposal.

“Bypass Pumping”, lump sum.

The unit contract price per lump sum for “Bypass Pumping” shall be full pay for all labor, materials, and equipment to furnish, place, assemble, install and operate the bypass pumping system complete in place, including pumps, piping, valves, control systems, generators, permits, testing, wyes, tees, special fittings, joint materials, operators and all other work to provide and operate a complete and operating bypass pumping system. Further, all labor, equipment, and materials required for decommissioning, disassembly and removal from the site shall be included.

DIVISION 8
MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3 Construction Requirements

(******)
Rename 8-01.3(2) to the following:
8-01.3(2) Seeding, Fertilizing, and Mulching

(******)
Supplement this section with the following:

The Contractor shall provide water or irrigation to all seeded areas as often as conditions dictate depending on weather and soil conditions. Water will be provided as described

in Section 2-07.

8-01.3(2)A Preparation For Application

(******)
Supplement this section with the following:

All landscaped areas in the Plans shall be cultivated to the requirements in this section.

(******)
Rename 8-01.3(2)B to the Following:
8-01.3(2)B Seeding And Fertilizing

(******)
Supplement this section with the following:

Seed and fertilizer shall only be sown by Method 1 as approved by the Engineer. Seed shall be broadcast with approved hydraulic seeding equipment, in combination with wood cellulose fiber mulch, soil stabilizer and fertilizer distributed uniformly over designated areas. Half of seed shall be sown with sower moving in one direction, the other half with sower moving at right angles to first sowing. Hydroseeding operator shall remove all seed mulch in its entirety from adjoining paving, structures and plants.

8-01.3(9) Sediment Control Barriers

8-01.3(9)A Fencing

8-01.3(9)A2 Silt Fence

(******)
Supplement this section with the following:

If the Engineer determines that site conditions dictate additional silt fence throughout the duration of the project, the Contractor shall immediately install additional silt fence as directed by the Engineer.

8-01.4 Measurement

(******)
Supplement this section with the following:

All items required for erosion control shall be included in the lump sum bid item "Erosion/Water Pollution Control" unless a specific bid item is included in the proposal.

8-01.4(2) Bid Items

(******)
Delete paragraph 2 and replace with the following:

No specific unit of measure shall apply to the lump sum item “ESC Lead”.

8-01.5 Payment

8-01.5(2) Item Bids

(******)
Replace this section with the following:

No specific unit of measure shall apply to the “High Visibility Fence”. The cost of “High Visibility Fence” shall in included in the lump sum contract price of “Clearing and Grubbing” bid item.

“ESC Lead”, per lump sum.
The lump sum Contract price for “ESC Lead” shall be full compensation for all labor, material, tools, and equipment necessary to meet the requirements of Section 8-01.3(1)B to include conduct site inspections, stormwater sampling, report preparation, report submittal, lab work, and personnel certification.

The Contractor shall receive payment of 60 percent of the unit contract price, per acre, upon the completion of the initial hydroseeding. Payment shall be increased to 100 percent of the unit contract price, per acre, upon the point where the first mowing is required, as determined by the Engineer. All partial payments shall be limited to the actual area of weed free healthy vigorous growth.

Partial payments shall not constitute acceptance of the area, nor shall the ownership or title transfer to the Contracting Agency. Areas found not acceptable at any stage shall be rejected and replaced at the Contractor’s expense. Previous partial payments made for areas rejected will be deducted from future payments due the Contractor.

“Erosion/Water Pollution Control”, lump sum.
The lump sum Contract price for “Erosion/Water Pollution Control” shall be full compensation for all labor, material, and equipment necessary to implement, install, maintain and remove all erosion and water pollution control items including removal and disposal of sediment, stabilization and rehabilitation of soil disturbed by these activities, and any additional Work deemed necessary by the Engineer to control erosion and water pollution. The requirements for the ESC Lead shall also be included in this lump sum bid item if no bid item is included in the proposal. The Contractor shall bear full responsibility for erosion/water pollution control in all sources of material, disposal sites, and haul roads.

8-02 Roadside Restoration

8-02.2 Materials

(******)
Supplement this section with the following:

The Contractor shall submit soil analysis from a soils testing laboratory to the Engineer. Indicate source(s) and obtain the Engineer’s approval before hauling to the site or placement.

Materials shall meet the requirements of the following publication:

American Standard for Nursery Stock, ANSI Z60.1-2004, American Nursery and Landscape Association.

Plant varieties shall be as specified in the plant material list and be true to botanical name as listed in the latest edition of “Standardized Plant Names” as adopted by American Joint Committee of Horticulture Nomenclature.

Plants shall be nursery-grown unless otherwise indicated. Plants are required to be from stock acclimated to project site environmental conditions, having been consistently cultivated and grown under site conditions. No cold storage plants will be permitted. Grafted trees shall be done within 3 inches of ground level. Plant material conditions shall meet the following requirements:

Be fresh, well foliated, in prime condition when in leaf and exhibiting normal habit of growth. Have all leaders and buds intact, free of disease, injury, insects, insect eggs, larvae and indications of strawberry root weevil.

Be free of seeds; weeds, weed roots and other such contaminants.

The Contractor shall notify the Engineer 3 days prior to delivery of any plants. The Engineer will approve all plants before unloading. Any plants that are rejected shall be removed from the project site immediately and replaced with acceptable plants.

Ball and burlapped (B&B) stock is required to have a natural ball sufficient to ensure survival and healthy growth.

Bare root (BR) material is required to have sufficient, intact root systems to ensure survival and healthy growth.

Container-grown plants are required to have sufficient growth to hold the earth intact when removed from containers, but shall not be root-bound.

Geotextile root control system shall be NDS Root Barrier Panel Model No. EP-2450 or Engineer approved equal.

Landscape boulders shall be High Cascade Weathered Granite with moss or lichen present on surface shall have no scarring. Individual boulder dimensions shall range from a minimum of 3 feet in height or width to 10 feet in height or width. Boulders shall match the color of adjoining boulders in each grouping to the greatest extent possible.

Contractor shall provide boulders from one of the following recognized stone industry suppliers or an Engineer approved equal source:

Columbia Granite LLC in Rainier, WA
Marenakos Rock Center in Issaquah, WA
Rock Mountain Products in Redmond, WA

Alternate supplier must be experienced in supplying, lifting, palletizing, shipping and unloading landscape boulders of the sizes and weights as shown in the Plans.

Contractor shall furnish digital color photos of each boulder. Photographs shall be taken from different viewpoints for review and approval by Engineer prior to onsite boulder source selection.

8-02.3 Construction Requirements

8-02.3(3) Weed and Pest Control

8-02.3(3)B Planting and Lawn Area Weed Control

(******)
Supplement this section with the following:

Prior to clearing and site preparation for planting, the Contractor shall identify the locations of poison oak and ivy within the project limits. These plants shall be sprayed with an herbicide specifically designed to eradicate these plants. All safety standards and regulations to work with poison oak shall be followed.

8-02.3(4) Topsoil

(******)
Supplement this section with the following:

The Contractor shall thoroughly scarify the subgrade by tilling, disking or harrowing after the subgrade elevation has been established as indicated on the Plans.

In the central island of the roundabout the Contractor shall scarify the existing subgrade a minimum of 24 inches deep to break up the base material of the existing road prior to installation of the topsoil.

Prior to placement of topsoil, the Engineer shall approve native or imported material. If the Contractor furnishes and places Topsoil Type A in the roadside planting areas without prior approval, it shall be done at the Contractor's expense. Final grading shall include raking, floating, dragging, and rolling to remove all surface irregularities and to provide a firm, smooth surface with positive drainage. Imported topsoil shall not be placed more than 3 days prior to permanent seeding.

The Engineer reserves the right to randomly sample and test the imported topsoil as it is placed. Test results shall be compared to the requirements of Section 9-14. If it is determined the topsoil does not meet requirements, the Contractor shall be required to remove the topsoil quantity as determined by the Engineer and replace it at the Contractor's expense.

The Contractor may take samples of the topsoil to be removed for testing. If soil samples from areas to be removed are shown to meet the requirements, the Engineer may adjust the quantity to be removed as represented by the passing samples. All costs incurred by the Contractor to test topsoil shall be borne by the Contractor and no additional

compensation will be allowed.

8-02.3(4)A Topsoil Type A

(******)
Supplement this section with the following:

The Engineer will approve topsoil prior to procurement and placement. Topsoil Type A shall meet all requirements of Special Provision 9-14.1(1).

Topsoil shall be placed at 12” depth in all tree, shrub, groundcover, and planter strips, 18” depth at roundabout center island (18” depth from the top of curb), and 3” in areas to be hydroseeded or sodded as shown in the Plans and as specified herein.

Within the roundabout island, the Contractor shall excavate to the subgrade of the roadway and thoroughly scarify the subgrade by tilling, disking or harrowing. The intent is to utilize topsoil completely within the roundabout island.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

(******)
Section 8-02.3(5) is supplemented with the following:

Planting area preparation will be required in all landscaped areas as shown on the Plans. Planting area preparation shall include removal of existing vegetation, construction debris, all visible rocks or other detrimental material from planter strips located within the project limits before adding soil amendments to the imported topsoil for the roadside planting areas, uniformly tilling the soil amendments into the top 8”-12” of soil, using a rototiller or similar machine, grading the blended soils, and then thoroughly watering down.

Identify existing trees that are to be removed, that were not removed during roadway construction, prior to starting planting. Obtain approval to remove existing trees from Engineer. Contractor to provide, install and maintain tree protection throughout project duration.

All planting area preparation shall be conducted under favorable weather conditions only. Soil shall not be worked when excessively dry or wet. Engineer reserves the right to stop any work taking place when conditions are considered detrimental to soil structure or plant growth.

All planting areas shall be weed free and approved by the Engineer before starting rototilling (with soil amendments distributed over designated surface areas) and after rototilling has been completed. All beds shall then be approved by the Engineer for fine grading, before starting any planting operations.

All planting surface areas shall be left with a firm, uniform surface, free of weeds and undulations or other irregularities. Remove all rocks, clods, and debris from all planting surfaces, unless otherwise specified on the plans or directed by the Engineer.

Preliminary grading shall be done in such a manner as to anticipate the finished grades after placement of topsoil, soil amendments and bark mulch (if specified). Excess soil shall be removed or redistributed before application of soil mix, fertilizer, and mulch. Where soil is to be replaced by plants and mulch, allowance shall be made so that when finish grading has begun, there shall be no deficiency in the specified depth of mulched planting beds.

The Contractor shall bear final responsibility for proper surface drainage of the site and the features thereon. Any discrepancy in the drawings or specifications, obstructions on the site, or prior work done by another party which the Contractor feels precludes establishing proper drainage, shall be brought immediately to the attention of the Engineer in writing for correction or relief of said responsibility.

8-02.3(7) Layout of Planting, Lawn and Seeding Areas

(******)
Delete this section and replace with the following:

All location layout and staking will be the responsibility of the Contractor.

Tree and plant locations shown shall be considered approximate unless otherwise noted or shown with specific distance. Tree locations may be adjusted, with prior Engineer approval, so that the tree does not interfere with sightline requirements, street signs, irrigation, overhead utilities, or any other apparatuses such as utilities.

Do not locate or plant any tree within 15 feet of a streetlight. Do not locate or plant any tree within 3 feet of a utility vault, 2.5 feet of back-of-sidewalks or back-of-curbs, and 15 feet of a fire hydrant.

In mixed planting areas, trees shall be planted first, followed by the larger shrubs, low shrubs, and then groundcover material.

The Contractor shall layout all trees and plants in the approximate location for approval by the Engineer. All coordination shall be done with the Engineer.

8-02.3(8) Planting

(******)
Supplement this section with the following:

The Contractor shall make required field adjustments as directed by the Engineer without additional cost and to avoid obstructions. Plants not properly planted or temporarily heeled-in will be rejected and shall be removed from the site.

Maintenance shall begin following the installation of each plant and shall continue until project acceptance. Work includes, but is not limited to, watering, weeding, cultivating, tightening, and repairing guys, removal of dead materials, resetting plants to proper grades or upright positions and other operations necessary to ensure proper growth and survival of all plant material.

If it is discovered that Common horsetail (Equisetum Arvense) has been imported with plant material, the Contractor shall remove the tree or shrub in its entirety including the rootball and surrounding soil, and replace the tree or shrub in-kind.

Before excavation, plants to be installed shall be placed as indicated on Planting Plan. The Engineer shall check locations of all plants in the field and shall indicate the exact position before actual planting operation proceeds.

Set trees and shrubs in center of pits, plumb and straight. Plant at such a level that after settlement, the crown of the plant will be slightly above finish grade.

Set plants in backfill mixture to such depth that the top of the plant ball will be slightly above finished grade. Backfill the remainder of the hole and soak thoroughly. Water the backfill until saturated to the full depth of the hole.

A mound of earth shall be formed as directed around each tree and shrub so as to produce a shallow basin to retain water, the diameter to exceed the diameter of the root spread at planting. Plants shall be watered in place during and after backfilling.

Prune plants only at time of planting and according to standard horticultural practice to preserve the natural character of the plant. All pruning shall be done under supervision of Engineer.

Remove all dead wood, suckers, and broken or badly bruised branches, unless plants are deemed to be unacceptable and rejected by the Engineer. Use only clean, sharp tools.

Immediately after planting operations are complete, all planting beds and plant pits shall be dressed off so as to achieve a neat and presentable appearance. Planting operations shall be identical for all plants to be planted. Refer to Plans, specifications and directions from Engineer.

If applicable, Contractor shall plant trees, shrubs, and groundcover material in non-irrigated areas between October 1, and January 31.

Plant bare root and live cutting material during winter dormancy (November 30 and February 1) unless otherwise directed by the Engineer. Install live cuttings the same day as harvest or cutting from parent material.

Notify the Engineer a minimum of 48-hours before beginning any roadside planting-related work.

8-02.3(9) Seeding, Fertilizing, and Mulching

(******)
Supplement this section with the following:

Fertilizer shall be applied over the surface of plant basin at indicated rates. Install fertilizer tablets as specified. Fertilizer shall meet all requirements of Special Provision

9-14.3.

All trees shall have an application of beneficial mycorrhizal fungi applied at time of planting in accordance with the manufacturer's recommendations.

8-02.3(11) Mulch

8-02.3(11)B Bark or Woodchip Mulch

(******)
Supplement this section with the following:

Bark mulch shall be a pathogen-free medium-grind Hemlock or Douglas Fir bark mulch. The Contractor shall submit a sample to the Engineer for approval prior to use.

Wood cellulose fiber mulch shall be applied at a rate of 2000 pounds per acre. Straw Mulch will not be permitted.

8-02.3(13) Plant Establishment

(******)
Delete paragraph two and replace with the following:

When the Proposal includes the bid item "Landscaping Plants", that bid item includes one year of plant establishment Work. The first year of plant establishment shall begin immediately upon written notification from the Engineer of the completion of initial planting for the project. The first-year plant establishment period shall be a minimum 12 month period. The first-year plant establishment shall be extended an amount equal to any periods where the Contractor does not comply with the plant establishment requirements and plan.

(******)
Supplement Section 8-02.3(13) paragraph five with the following:

There is no irrigation system inside of WSDOT right-of-way. The Contractor shall provide water to guarantee plant establishment. All cost associated to securing plant establishment within WSDOT right-of-way shall be incidental to the bid item "Landscaping Plants". No additional compensation shall be allowed. If temporary irrigation systems used inside of WSDOT right-of-way, it shall be removed at the end of the first-year plant establishment period. Payment to remove temporary irrigation systems shall be incidental to "Landscaping Plants".

(******)
Supplement Section 8-02.3 with the following new Section:

8-02.3(17) Placing Landscape Boulders

Contractor shall stake all locations and sizes of Boulders to be installed for review by Engineer prior to installation. Contractor shall rough position boulders at excavated locations shown on the Plans for approval of positioning by Engineer at time of

installation. At all times, lift Boulders from pallets and place using slings to prevent marring of the rocks by equipment. Boulders shall be set to remain stable and in place after placement. One third of the Boulder depth shall be buried. Finish grade surrounding the boulders shall be fine graded to near line so that dips, ponding and erosion will not occur.

8-02.4 Measurement

(******)
Supplement this section with the following:

Topsoil, compost and mulch will be measured by the cubic yard.

Tree stakes, fertilizer, headers, planting area preparation, planting area weed control, and tree protection will be incidental to the “unit costs” of landscaping plants as specified.

No specific unit of measurement shall apply to the lump sum item for Landscaping Plants.

No specific unit of measurement shall apply to the lump sum item for Landscape Boulders.

No specific unit of measurement shall apply to the lump sum item for seeding, fertilizing, and mulching.

Compost amended vegetated filter strip will be measured by the square yard.

8-02.5 Payment

(******)
Supplement bid item “Landscaping Plants”, per lump sum in this section with the following:

The lump sum Contract price for “Landscaping Plants” shall be full compensation for all Work to perform as specified within the planting area for weed control and planting area preparation, planting, cleanup, and water necessary to complete planting operations as specified to the end of first year plant establishment.

In general, as the plants that include establishment are obtained, propagated, and grown, partial payments will be made as follows after inspection by the Engineer:

Payment of 5 percent of the lump sum Contract price when all plant materials have been contracted, propagated, and are growing under nursery conditions. The Contractor shall provide the Engineer with certification that all plant material has been procured or contracted for delivery to the project for planting within the time limits of the project. The certification shall state the location, quantity, and size of all material.

Payment will be increased to 15 percent of the lump sum Contract price upon completion of all initial weed control and planting area preparation Work.

Payment will be increased to 60 percent of the lump sum Contract price for all contracted plant material in a designated unit area when planted.

Payment will be increased to 70 percent of the lump sum Contract price for all contracted plant material at the completion of the initial planting.

Payment will be increased to the appropriate percentage upon reaching the following plant establishment milestones:

June 30th	80 percent
September 30th	90 percent
Completion of first-year plant establishment or after all replacement plants have been installed, whichever is later	100 percent

Plant establishment milestones are achieved when planting areas meet conditions described in 8-02.3(13).

(******)

Supplement this section with the following:

”Landscape Boulders”, per lump sum.

The Lump Sum contract price for "Landscape Boulders" shall be full pay for furnishing all labor, equipment, and materials necessary to complete the Works as shown in the Plans and as specified herein.

Excavation for the roadside planting areas will be considered incidental to the bid item for topsoil placement.

The following bid items shall be full pay for furnishing all labor, materials, tools and equipment, necessary to scarify the subgrade, install, till, rake, remove debris such as rocks and organic material and shape the material as shown in the plans:

“Topsoil Type A”, per cubic yard,
“Bark or Wood Chip Mulch” per cubic yard.

“Seeding, Fertilizing, and Mulching”, per lump sum.

The lump sum Contract price for "Seeding, Fertilizing, and Mulching", shall be full compensation for all labor, material, tools and equipment necessary to place, protect, irrigate and maintain all items as specified.

“Compost Amended Vegetated Filter Strip”, square yard.

The unit Contract price per square yard for “Compost Amended Vegetated Filter Strip” shall be full compensation for all labor, material, and equipment necessary to construct the compost amended vegetated filter strip including the loose crushed surfacing base course level spreader as shown in the plans.

8-03 IRRIGATION SYSTEMS

8-03.1 Description

(******)

Section 8-03.1 is supplemented with the following:

An irrigation system shall be provided for the planter strip areas.

All irrigation systems located within the public right-of-way shall be designed by a State of Washington registered landscape architect or City approved firm. Parts lists shall be submitted with each project.

Prior to submitting the design, the contractor/engineer/landscape architect shall hire an independent Certified Landscape Irrigation Auditor, as certified by The Irrigation Association, to review and approve the proposed design.

After the irrigation system is installed, the Contractor shall provide an irrigation audit to be performed on the new system by an independent Certified Landscape Irrigation Auditor (CLIA), as certified by the Irrigation Association, prior to final field observation by the Engineer. The CLIA shall test for proper coverage as determined by the Landscape Irrigation Auditor Handbook, most recent edition. The CLIA shall provide written certification that the irrigation system installed provides proper coverage as provided in the handbook.

Irrigation systems shall be installed with approved backflow prevention.

The irrigation system shall be installed after the area has been properly prepared. The pipe trenches shall be no wider than is necessary to lay the pipe or install equipment.

The Contractor shall be responsible for excavating and backfilling the trench for the irrigation service line. The City will provide all materials and labor to make the connection to the main and install the service line.

8-03.2 Materials

(******)
Section 8-03.2 is supplemented with the following:

As a means of keeping the City's parts inventory to a minimum and maintenance personnel familiarized and knowledgeable about product operation, the following is a list of approved products to be used on all jobs in which the City will be responsible for maintenance and operations.

Pop Up Spray Heads	Toro precision spray nozzles to be installed on Hunter PRO 6" pop up spray heads in lawn and 12" pop up in planter areas.
Gear Driven Rotary Heads	Hunter I-Series Rotors with check valve on all heads
Pipe and Fittings	Schedule 40 PVC, purple pipe, compound Type 1, Grade 1 or Type 1, Grade 2 conforming to ASTM D1784 specifications
Remote Control Valve & Master Valve	Hunter ICV flow control valve installed with isolation ball valve and double union. A master valve shall be installed directly after the DCVA. Use Spears DBY Dri-Splice wire connectors when connecting to control wire.
Quick Coupling Valves	Hunter 1" Quick Coupler with locking cap and anti-rotating wings to be installed at point of connection and at the

	furthest valve at the far end of the main line and to be installed on prefabricated O-Ring PVC Swing Joints
Double Check Backflow	ZURN Wilkins Model 950XLT
Flow Sensing Device	Hunter FLOW-SYNC to be installed with master control valve • Wiring between flow sensor and irrigation controller shall be twisted pair direct burial 2-conductor shielded 12 AWG or larger stranded copper wire with appropriate ratings for distance of run. Wire shall be a single run with no splices. • Master control valve shall be the same valve as the remote control valve • Rain sensor and flow sensor
Automatic Controller (for City owned and maintained systems)	ACC2 Decoder outdoor controller with plastic pedestal
Valve Boxes	• NDS Pro Series • Boxes shall be sized accordingly • With security bolt on lid
Shut-Off Valves	• Zurn Wilkins 2” 850XL Full Port Bronze Ball Valve

8-03.3 Construction Requirements

8-03.3(2) Excavation

(******)
Section 8-03.3(2) is supplemented with the following:

All soil shall be prepared as specified prior to trenching. Trenches shall be no wider at any point than is necessary to lay pipe or install equipment. Trench bottoms shall be of relatively smooth sand four (4”) inches below and six (6”) inches above the pipe.

Detectable marking tape shall be placed in the trench six (6”) inches directly above, parallel to, and along the entire length of all nonmetallic water line and nonmetallic conduit. The width and depth of the tape shall be as recommended by the manufacturer or the City.

8-03.3(3) Piping

(******)
Section 8-03.3(3) is supplemented with the following:

All irrigation lines shall be purple in color. The irrigation main line is the line containing the supply usually situated between the irrigation meter and the irrigation control valves. The irrigation lateral lines are the lines between the irrigation control valves and the connections to the irrigation heads.

All water lines shall be a minimum of 18 inches below finished grade as measured from the top of the pipe. Where possible, mains and laterals or section piping shall be placed in the same trench.

All irrigation lines to be installed under existing pavement or areas to be paved, shall be installed within a minimum four (4”) inch diameter or twice the diameter of the encased pipe. The casing shall be steel casing (minimum Schedule 40) or C900 Class 200 PVC pipe. The irrigation casing shall extend a minimum of two (2”) feet beyond the structure under which casing is being jacked or bored.

U.S.E. 12 gauge blue coated copper wire shall be wrapped around all mains.
Valve boxes shall be installed flush to grade outside of play and high vehicular and pedestrian traffic areas.

Valve boxes shall have filter fabric underlayment installed at the bottom to prevent rodent intrusion and sediment build-up.

Valve boxes shall be supported with bricks or concrete blocks as approved by the City to prevent settlement.

8-03.3(4) Jointing

(******)
Section 8-03.3(4) is supplemented with the following:

During construction, pipe ends shall be plugged or capped to prevent entry of dirt, rocks, or other debris.

PVC pipe, couplings and fittings shall be handled and installed with care and in accordance with the manufacturer’s recommendation. For gasketed connections, the outside of the PVC pipe shall be chamfered to a minimum of 1/16 inch at approximately 22 degrees. For all other connections, pipe and fittings shall be joined by solvent welding, using primer first. Solvents used must penetrate the surface of both pipe and fittings which will result in complete fusion at the joint. The solvent and cement shall be of a type recommended by the pipe manufacturer.
Threaded PVC joints shall be assembled using Teflon tape as recommended by the pipe manufacturer.

On plastic to metal connections, work the metal connection first. Use a non-hardening compound on threaded connections. Connections between metal and plastic are to be threaded utilizing female threaded PVC adapters with a threaded schedule 80 PVC nipple only.

8-03.3(5) Installation

(******)
Section 8-03.3(5) is supplemented with the following:

The controller shall be located where shown on the Plans.

All control wires shall be labeled at the controller, splice boxes and at the valves in the field.

Wiring between the automatic controller and the automatic valves shall be Type THHW and placed in conduit and may share a common neutral. A minimum of two spare #14 UF yellow wires shall be installed from the controller to the furthest valve in each direction, looping through each control valve box. There shall be a three (3') foot loop left in each control valve box. Separate control conductors shall be run from the automatic controller to each valve. When more than one automatic controller is required, a separate common neutral shall be provided for each controller and the automatic valve which it controls. Wire shall be installed adjacent to or beneath the irrigation pipe. When necessary to run wire separate from the irrigation pipe, the wire shall be bundled and placed under detectable marking tape. When lateral pipe lines have less than 18 inches of cover, wire (in conduit) shall be installed below the pipe at a minimum depth of 18 inches from finished grade.

Wiring placed under pavement and walls or through walls, shall be placed in irrigation casing. See Section 8-03.3(3).

Splices will be permitted only at junction boxes, valve boxes, or at control equipment. A minimum of three (3') feet (coiled) of excess conductor wire shall be left at all splices and terminal and control valves to facilitate inspection and future splicing.

8-03.3(7) Flushing and Testing

(******)
Section 8-03.3(7) is supplemented with the following:

All main supply lines shall receive two fully open flushings to remove debris that may have entered the line during construction. The first flushing shall be completed prior to installing valves or testing.

All lateral lines shall receive one full-open flushing prior to placement of drip lines, emitters, and drain valves. Note: drain valves on main lines are not recommended. Quick couplers shall be installed on the downstream side at the cross connection device and at each terminus of the main line from the cross connection device. The flushing shall be of sufficient duration to remove any dirt and debris that may have entered the lateral lines during construction.

All gauges used for testing water pressure shall be certified correct by an independent testing laboratory immediately prior to use on the project. Gauges shall be retested when ordered by the Inspector/Engineer.

Automatic controllers shall be tested by actual operation for a period of two weeks under normal operating conditions. Should adjustments be required, the Contractor shall do so according to the manufacturer's recommendation or under the City's direction until the operation is satisfactory to the City.

All main lines shall be purged of air and tested with a minimum static water pressure of 150 psi for 60 minutes without introduction of additional service or pumping pressure. Testing shall be done with one pressure gauge installed on the line in a location determined by the City Inspector. Lines which show loss of pressure exceeding 5 psi after 60 minutes will be rejected.

All lateral lines shall be purged of air and tested in place at operating line pressure with a pressure gauge and with all fittings capped or plugged. The operating line pressure shall be maintained for 30 minutes with valves closed and without introduction of additional pressure. Lines which show leaks or loss of pressure exceeding 5 psi at the end of specified test period will be rejected.

The Contractor shall correct rejected installations and retest for leaks as specified herein.

8-03.3(9) Backfill

(******)
Section 8-03.3(9) is supplemented with the following:

Backfill shall not be started until all piping has been inspected, tested and approved by the City Inspector, after which backfilling shall be completed as soon as possible. All backfill material placed within six (6") inches of the pipe shall be free of rocks, roots, or other objectionable material which might cut or otherwise damage the pipe. Backfill from the bottom of the trench to approximately six (6") inches above the pipe shall be by continuous compacting in a manner that will not damage pipe or wiring and shall proceed evenly on both sides of the pipe. The remainder of the backfill shall be thoroughly compacted, except that heavy equipment shall not be used within 18 inches of any pipe. The top six (6") inches of the backfill shall be of topsoil material.

8-03.3(10) As Built Plans

(******)
Section 8-03.3(10) is supplemented with the following:

As-built drawings in both hard copy and electronic form shall be required. The as-built drawing shall be completed, signed and stamped by the Landscape Architect. The Contractor is responsible for furnishing the City with electronic files on CD ROM, both in PDF print (plot) format and in a format compatible with Auto-CAD release 2004 or newer. Drawings shall be in TCHPN (Thurston County High Precision Network) horizontal datum; provide individual drawings independent of x-refs. Include all non-standard font files and plot files.

8-03.3(11) System Operation

(******)
Section 8-03.3(11) is supplemented with the following:

The irrigation system (main) shall be completely installed, tested and operable prior to planting unless otherwise specified in the Plans or as approved by the City. The Contractor shall be responsible for all maintenance, repair, and testing, inspecting and automatic operation of the system until all work is considered complete as determined by the final inspection.

8-03.5 Payment

(******)
The third through eighth paragraphs of Section 8-03.5 are deleted and replaced with the following:

The unit Contract price per lump sum for Irrigation System shall be full pay for all costs for furnishing and installing the irrigation system equipment and components where indicated and as detailed in the Plans and these Special Provisions, including excavation and backfill, backflow preventer and box, valves, piping, all electrical connections, controller and cabinet, fittings, as-built, testing, and all other appurtenances shown on the Plans, and as Specified herein.

The design of the irrigation system shall be included in the lump sum Bid Item.

The excavation and backfill for the irrigation service line shall be included in the lump sum Bid Item.

The following Bid Item is included in the Proposal:

"Irrigation System", per lump sum

8-04 CURBS, GUTTERS, AND SPILLWAYS

8-04.4 Measurement

(******)
Supplement this section with the following:

Roundabout curb and gutter type __ will be measured by the linear foot.

8-04.5 Payment

(******)
Supplement this section with the following:

"Roundabout Curb and Gutter Type __" per linear foot.

8-12 Chain Link Fence and Wire Fence

8-12.1 Description

(******)
Supplement this Section with the following:

This work shall consist of provided all labor, materials, and equipment necessary to construct a four foot tall WSDOT Type 4 black vinyl coated chain link fence with top rail on the north side of Trosper Road between approximately Sta 97+25 to Sta 99+62, and at the back of sidewalk adjacent to the Dutch Brothers Coffee drive thru aisle as shown in the Plans.

8-12.3 Construction Requirements

(******)

Supplement this Section with the following:

The fence shall be constructed in accordance with Sections 8-12 and 9-16.1 of the Standard Specifications. Posts and top rails shall be round. Post spacing shall be six feet maximum.

The cement concrete curb along the back of sidewalk shall be commercial concrete and include galvanized steel sleeves and expansion joints as detailed in the Plans.

8-12.4 Measurement

(******)
Supplement this Section with the following:

Chain link fence type 4 will be measured by the linear foot.

Coated chain link fence type 3 will be measured by the linear foot.

(******)
Replace paragraph two with the following:

There will be no measurement for end, gate, corner, pull posts for chain link fence. All Work associated with furnishing and installing end, gate, corner, pull posts for chain link fence as described in Section 8-12 shall be incidental to the installation of the chain link fence.

8-12.5 Payment

(******)
Supplement this Section with the following:

"Chain Link Fence Type 4", per linear foot.

"Coated Chain Link Fence Type 3", per linear foot.

If not bid item exists for "End, Gate, Corner, and Pull Post for Chain Link Fence Type ___" then all costs associated with this item shall be incidental to "Chain Link Fence Type 4" and "Coated Chain Link Fence Type 3".

8-14 Cement Concrete Sidewalks
(August 2016, Tumwater GSP)

8-14.1 Description

Supplement this Section with the following:

Cement concrete sidewalks and ramps shall be constructed in accordance with Section 8-14 and relevant parts of Section 6-02, as shown in the Plans, and these Provisions as amended herein. Cement concrete pads for luminaires and j-boxes, sidewalk ramps/ pedestrian curbs, and detectable warning surface shall be considered as part of the sidewalk.

8-14.3 Construction Requirements

Replace the first paragraph with the following:

The concrete in sidewalks and curb ramps shall be air entrained concrete Class 4000.

Supplement this Section with the following:

The finish shall be consistent and professional in appearance. All cement concrete that has the finish damaged by rain or protective plastic or which is not of a quality generally expected for this type of work, shall be removed and recast at the Contractor's expense.

Sidewalk joints shall be constructed as detailed in the Plans. Where the sidewalk abuts the curb, the transverse joints shall match the location of the expansion joint in the curb. All utility poles, meter boxes and other obstructions shall have ⅜" expansion joint material placed around them as directed. All sidewalk edges shall have a ¼" radius. Concrete shall not be poured against dry forms or dry subgrade.

All sidewalk areas shall be brushed in a transverse direction with a stiff bristle broom as shown in the Standard Plans.

The Contractor shall provide suitable vibrating finishers for use in finishing concrete sidewalks. The type of vibrator and its method of use shall be subject to the approval of the City. All completed work shall be barricaded and protected so as to prevent damage by unauthorized use. All damaged sections shall be removed and replaced at the Contractor's expense.

Prior to the placement of any cement concrete the Contractor shall obtain approval from the Project Inspector.

(January 7, 2019)
Timing Restrictions

Curb ramps shall be constructed on one leg of the intersection at a time. The curb ramps shall be completed and open to traffic within five calendar days before construction can begin on another leg of the intersection unless otherwise allowed by the Engineer.

Unless otherwise allowed by the Engineer, the five calendar day time restriction begins when an existing curb ramp for the quadrant or traffic island/median is closed to pedestrian use and ends when the quadrant or traffic island/median is fully functional and open for pedestrian access.

(January 7, 2019)
Layout and Conformance to Grades

Using the information provided in the Contract documents, the Contractor shall lay out, grade, and form each new curb ramp, sidewalk, and curb and gutter.

8-14.4 Measurement

Replace this Section with the following:

Cement Conc. Sidewalk and Curb Ramps will be measured by the square yard of finished surface and will include the surface area of the sidewalk, driveways, curb ramps, detectable warning surfaces (truncated domes), and cement concrete pads for luminaires and j-boxes.

8-14.5 Payment

Replace this Section with the following:

"Cement Conc. Sidewalk and Curb Ramps", per square yard.
The unit Contract price for "Cement Conc. Sidewalk and Curb Ramps" shall be full payment for all costs for equipment, labor and materials, including, but not limited to, saw cutting, excavation and grading if required for crushed surfacing top coarse or sand, furnishing and installing crushed surfacing top coarse or sand, compaction, form work, cement concrete, finishing, rolling, curing, ramps, curb ramps, pedestrian curbs, pads, and detectable warning surface. When a bid item for "Roadside Restoration" is included in the Proposal, restoration of areas disturbed by construction to a condition consistent with the pre-construction conditions is excluded from this. No extra payment shall be made for forming and finishing curb ramps/pedestrian curbs.

(******)

8-19 Vacant

Replace this Section with the following:

8-19 Monument

8-19.1 Description

This Work Consists of furnishing and placing survey control points, in accordance with the Standard Plans and these Specifications, in conformity with the lines and locations shown in the Plans or as staked.

8-19.2 Materials

Materials shall meet the following requirements:

Concrete	6-02
Monument Cap	8-19.2(1)
Crushed Surfacing	9-03.9(3)

8-19.2(1) Monument Cap

The monument cap shall be domed brass, aluminum, or other non-ferrous metal. The monument cap shall be a minimum of 2" in diameter.

8-19.3 Construction Requirements

The monument shall be installed in accordance to the Standard Detail for "Surface Monument in Pavement", as provided in the Appendices of these Specifications, where existing monumentation is impacted by Work for this project.

Most of the existing monuments to be impacted by the Work should have approximate locations marked in the Plans, but there may be some that are not, Contractor is to verify.

The Contractor shall be fully responsible for obtaining permits from the Washington State Department of Natural Resources for removing and replacing all survey monumentation that may be affected by construction activity, pursuant to WAC 332-120. Applications must be completed by a Registered Land Surveyor. Applications for permits to remove monuments may be obtained from the Washington State Department of Natural Resources or by contacting their office by telephone at (360) 902-1190.

Washington State Department of Natural Resources
Public Land Survey Office
801 88th AVE SE,
MS 47019
Tumwater, Washington 98501-7019

Upon Completion of construction, all monuments displaced, removed, or destroyed shall be replaced by a Professional Land Surveyor. Preparation and completion of the appropriate forms for replacement of said monument shall also be the responsibility of the Contractor's Professional Land Surveyor.

8-19.4 Measurement

"Survey Monument", per each for each restored monument.

8-19.5 Payment

"Survey Monument", per each.

The unit price shall include all materials, supplies, labor, equipment, surveying, reconnaissance work, paperwork and traffic control to determine which monuments will be impacted and incidentals to complete the work as detailed in these Specifications, Appendices, and the Plans. Payment will not be made until all documentation is received.

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL

8-20.1 Description

(******)
Supplement this section with the following:

The work includes furnishing and installing all materials necessary to provide:

1. Installation of a new City owned street light system
2. Installation of a new WSDOT owned light system

3. Installation of a pedestrian Rectangular Rapid Flashing Beacon System at the intersection of Capitol Blvd SE and Trosper Rd SW
4. Installation of a pedestrian Rectangular Rapid Flashing Beacon System at the intersection of 6th Ave SW and Trosper Rd SW

The work involves, but shall not be limited to, the supply, testing and installation of the following:

1. Luminaires, Poles, and Foundations
2. Electrical Service Cabinets and Foundations
3. RRFB System Equipment
4. Junction Boxes
5. Conduit and Wire

All items installed as part of the WSDOT illumination system are shown and labeled so on the Plans.

Removal of existing lighting systems and traffic signals is included in Section 2-02 of these Special Provisions.

8-20.1(2) Industry Codes and Standards

(******)
Supplement this section with the following:

National Electrical Safety Code (NESC)
PO Box 1331, 445 Hoes Lane
Piscataway, New Jersey

8-20.1(3) Permitting and Inspections

(******)
Supplement this section with the following:

The Contractor shall obtain the required electrical permit(s) from the Washington State Department of Labor and Industries. All costs to obtain the permit and comply with its requirements shall be incidental to the project and no other compensation will be allowed.

(******)
Create the following new section:

8-20.1(4) Rectangular Rapid Flashing Beacon

This work shall consist of furnishing, installing J-boxes with non-slip lids, 1½ -inch conduit, electrical wire, circuit breaker, Rectangular Rapid Flashing Beacon (RRFB) System, RRFB signal poles, foundations, signs, and slicing new wires to connect to electrical service milbank in the location as shown in the Plans and as specified herein.

8-20.2 Materials

(******)

Supplement this section with the following:

All materials necessary for the completion of the project shall be purchased and furnished by the Contractor unless otherwise specified herein.

The owner reserves the right to inspect the manufacturing process of all materials. Final inspection and acceptance of the installed materials will not be given until final installation and testing has been completed on the systems. Approval to install materials and equipment must be obtained from the owner at the job site before installation.

The Contractor shall warranty all electrical and mechanical equipment described in this section for satisfactory in service operation for one year following project acceptance. Warranty shall include troubleshooting, labor, materials and all other costs to bring the equipment to a satisfactory level of service. Normal maintenance is not included in the warranty.

(******)
Section 8-02.2 is supplemented with the following new Section:

8-20.2(2) City of Tumwater Standard Decorative Luminaire Pole Assembly

Pole: The lighting pole shall be formed from tubes conforming to ASTM A595 process, and have a constant linear taper of 0.14 in/ft. The tube's seam will have a smooth full length longitudinal high frequency resistance weld and will have no visual appearance. The flutes shall terminate approximately 6" from the base plate connection to increase the product's fatigue life. The post shall have two reinforced handholes – one located in the base and the other one (for the receptacle) located 14 ft from the base.

Receptacle: Holophane Model No. FGIUS RAL6004SDCR

Clamshell Base: North Yorkshire cast iron, 24" diameter.

Main Luminaire Arm: Holophane, West Liberty Cast Aluminum Cross arm for pendent mounted luminaires with West Liberty Arm Fitter.

Single Arm/Material: WLC96/1 (mate to Boardwalk Luminaire Teardrop Style).

Double Arm/Material: WLC96/2 (mate with Boardwalk Luminaire Teardrop Style).

Main Luminaire Arm Fitter: Holophane, West Liberty Arm Fitter; WLLF/200/CA/CC

Pedestrian Luminaire Arm: Holophane, CCA Arm, Cleveland Decorative Crossarm.

Single Arm/Material: Aluminum

All materials and finishes shall be CIS/CC (Standard Holophane paint process with Drylac color RAL6004SDCR in gloss finish.

(******)
Section 8-02.2 is Supplemented with the following new Section:

8-20.2(3) City of Tumwater Standard Decorative Roadway Luminaire

Main Luminaire: Holophane, Esplanade Utility Tear Drop LED 3. Decorative outdoor.

Ordering Information: ESL3 P35S 30k AS TDC SG 3 S

Pedestrian Luminaire: From Holophane – WFCL2 P20 30k MVOLT FC3 RAL6004SDCR SK

All materials and finishes shall be CIS/CC (Standard Holophane paint process with Drylac color RAL6004SDCR in gloss finish.

(******)

Section 8-02.2 is supplemented with the following new Section:

8-20.2(4) Rectangular Rapid Flashing Beacon System

System shall be purchased as a packaged unit for each roundabout as shown in the Plans. Permanent signs attached to system shall meet requirements of Section 8-21. The RRFB System shall be fully compliant with FHWA Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (IA-21). The systems shall also be compliant with the most current MUTCD guidelines and standards along with the following requirements:

The Rectangular Rapid Flashing Beacon (RRFB) system shall be **Tapco** brand. The system shall consist of the following:

a. AC Power option
b. Double sided, 12 volt RRFB light bars (with universal mounting kit)
c. Bulldog Pushbutton with locator tone, two tone audible activation confirmation, and a red LED visual confirmation light

8-20.2(4)A RAPID FLASHING BAR

Beacons shall have LED bulbs that have the ability to be highly visible from a minimum of 1,000 feet in advance of the crosswalk during the day. LED shall be rated for a minimum of 15 years with a minimum run time of 100,000 hours. They shall be recessed in the flash bar with an additional polycarbonate shield for vandal resistance. Light configuration shall provide lights on both ends of the bar for notification to pedestrians entering the crosswalk from either side. The following RRFB's shall be bi-directional: Center of splitter islands or medians of the roundabouts as shown in the Plans.

Flash bar housing shall be constructed from a single piece of a minimum of 1/8th inch thick structural aluminum, providing durability and corrosion resistance. The flash bar shall allow directional rotation-enabling light to be aimed toward oncoming traffic. There shall be no exposed screws.

The flash pattern, activation duration and/or activation schedule shall be determined by the system controller. The system controller shall automatically adjust beacon brightness as outside light levels change between day and night, being brighter

during the day and dimming at night. The level of brightness during different conditions shall be programmable through the controller.

8-20.2(4)B CONTROLLER

The controller unit shall be housed in a NEMA 3R or greater rated, pole mounted, aluminum cabinet with stainless steel hinge. The controller cabinet shall be 19”H x 10”W x 6”D plus or minus 1 inch for all dimensions.

The controller unit shall be capable of both solar-powered and AC-powered options. The operating electrical power for AC-powered controller systems shall be 120V. Solar-powered controller systems shall be designed with a solar panel and backup battery source capable of running the system for at least 15 days without sunlight.

System Notification Capable, Remote Data Available - Usage data regarding activation times and dates shall be accessible via direct connection to the controller. Activation and activity logs shall be downloadable and printable.

All system configuration changes shall be done through a direct connection to the controller. The system controller shall offer optional manual system configuration via dials within the controller cabinet. Configuration options shall allow for variation of system flash durations from 1 to 60 seconds.

The controller shall support wireless communication across the roadway or for advance warning flashers using spread spectrum radio frequency, thus eliminating the need for cable trenching. Range shall be at least 500 feet. Up to 10 optional RF channels shall be available to allow multiple systems to operate within close proximity of each other.

System shall support online configuration changes such that if MUTCD guidelines call for a new flash pattern, system can be upgraded within days.

The system shall be capable of logging all activations for a given period with a time stamp.

The system shall record notifications of low battery voltage levels.

Poles and Foundations for RRFB shall be as noted in the Plans.

All conduit used for roadway crossings, including bends and elbows, shall be rigid steel.

Conduit used for utility pole risers shall be PVC, Schedule 80. All other conduit, including bends and elbows, shall be PVC, Schedule 40.

Permanent signs attached to the system shall meet the requirements of Section 8-21.

All accessible pedestrian features shall comply to the latest FHWA requirements.

8-20.2(4)C Guarantees and Warranties

The Contractor shall provide RRFB Systems from a manufacture that offers, as a customary trade practice in the connection with the purchase of any equipment, materials, or items incorporated into the project, a minimum two year guarantee or warranty on the controller cabinet and associated appurtenances, batteries and solar panel. The Contractor shall furnish to the Contracting Agency a written guarantee or warranty from the manufacturer.

(******)

Section 8-02.2 is supplemented with the following new Section:

8-20.2(5) City of Tumwater Electrical Service Cabinet

The City owned service cabinet shall be Milbank Commercial Service Panel, Catalog Number CP3B12119ASP058, 200 AMP, 120/240 volt, 24 circuits service cabinet or equivalent.

The service cabinet shall mount on a concrete base with anchor bolts fastening to the base of the cabinet.

The service cabinet shall, at a minimum, be provided as follows:

a. 5 JAW 200 amp meter base
b. Metered 200 amp, 2 pole, main breaker (240V)
c. Breakers per Pane Schedule on the Plans
d. Two (2) lighting contactors with 120 volt coils
e. Photo-eye, photo-eye socket and illumination control wiring
f. On-Off-Test, three position control bypass switch

There shall be space within the cabinet for the future addition of additional contactors. Each service cabinet door shall be equipped with a three-point latch and provisions for a padlock.

The photocell shall be mounted inside the service cabinet. The photocell eye will be oriented to a window provided in the side of the cabinet. The photocell shall conform to the requirements of Section 9-29.11(2) of the Standard Specifications.

A three-wire electrical service shall be used at 120/240 volts, single phase, 60 Hz AC between the power supply and the service cabinet. The non-fused power shall enter the service cabinet through a separate conduit. The illumination components shall be connected to the 240 volt, 60 hertz power. The traffic signal components shall be connected to one of the 120 volt, 60 hertz elements.

The service cabinet shall be shipped and delivered to the job site in a protective covering with suitable dunnage to prevent damage to the exterior finish.

The Contractor shall have the service inspected by the Washington State Department of Labor and Industries and shall provide the coordination with the power company to have the service installed.

8-20.3 Construction Requirements

8-20.3(1) General

(******)
Supplement this section with the following:

Product Handling
All equipment shall be handled and protected in such a way to prevent damage. Damaged equipment, if any, shall be repaired or replaced by the Contractor to the satisfaction of the Engineer at no additional cost to the Owner.

Existing Conditions
Before beginning any excavation work for foundations, vaults, junction boxes or conduit runs, the Contractor shall confirm that the location proposed on the Contract Plans does not conflict with utility location markings placed on the surface by the various utility companies. If a conflict is identified, the following process shall be used to resolve the conflict:

1. Contact the Engineer and determine if there is an alternative location for the foundation, junction box, vault or conduit trench.
2. If an adequate alternate location is not obvious for the underground work, select a location that may be acceptable and pothole to determine the exact location of other utilities. Potholing must be approved by the Engineer.
3. If an adequate alternate alignment still cannot be identified following potholing operations, the pothole area should be restored and work in the area should stop until a new design can be developed.

The Contractor shall not attempt to adjust the location of an existing utility unless specifically agreed to by the utility owner.

8-20.3(4) Foundations

(******)
Supplement this section with the following:

Where foundations for poles are located within the new sidewalk area, each foundation shall be constructed in a single pour to the bottom of the new sidewalk elevation. The sidewalk shall be constructed in a separate pour. Where no sidewalk is present, the foundation elevation shall be set in the field by the Engineer.

Location of all concrete foundations shall be approved by the Engineer prior to excavation.

After a curing period of 2 weeks, or as directed by the Engineer, the Contractor may install the poles on the new foundations.

8-20.3(5) Conduit

8-20.3(5)A General

(******)
Supplement this section with the following:

Conduits shall be capped during construction using manufactured seals to prevent entrance of water and debris.

All conduit installed underground shall have polyethylene Underground Hazard Marking Tape, 6 inches wide, red, legend “Caution-Electric Line Buried Below,” placed approximately 12 inches above the conduit.

All trenches that contain only empty spare PVC conduit shall have a stranded orange USE locate wire installed with the PVC conduit as described in Section 8-20.3(5) of the Standard Specifications for innerduct installations. A 12 AWG wire shall be used as locate wire for all conduits.

8-20.3(5)B Conduit Type

(******)
Supplement this section with the following:

All conduit used for roadway crossings, including bends and elbows, shall be rigid steel.

8-20.3(8) Wiring

(******)
Supplement this section with the following:

Pull tape shall meet the requirements of Section 9-29.1(10). Pull string may not be used.

(******)
Section 8-20.3 is supplemented with the following new Section:

8-20.3(19) Removal of Existing Equipment

WSDOT Illumination and Traffic Signal Systems
Where specified on the Plans, existing WSDOT illumination and signal equipment shall be removed.

WSDOT electrical items to be salvaged:

- Traffic signal controller cabinet and contents
- Traffic signal standards and mast arms
- Luminaire poles, arms and LED fixtures

All other electrical items, unless determined by the engineer in the field otherwise, shall become the property of the Contractor and shall be removed from the project site in accordance with Section 2-02.3 of these special provisions.

Items to be salvaged shall be removed and delivered undamaged to WSDOT. The contractor shall contact WSDOT Representative five (5) working days prior to the delivery. The Contractor shall unload all equipment and materials at the Yard in a location designated by WSDOT staff.

Any existing equipment and material for salvage that is damaged during removal or delivery shall be compensated for by the Contractor to the satisfaction of WSDOT.

City Illumination and Traffic Signal Systems

Where specified on the Plans, existing City illumination and signal equipment shall be removed.

City electrical items to be salvaged:

- Traffic signal controller cabinet and contents
- Electrical service cabinet
- Traffic signal standards and mast arms
- Luminaire poles, arms and LED fixtures
- Traffic signal emergency vehicle pre-emption equipment (Opticom, strobe and bell)
- APS pedestrian pushbuttons
- Video detection cameras
- Pedestrian signal heads and mounting hardware
- LED street light fixtures

All other electrical items, unless determined by the engineer in the field otherwise, shall become the property of the Contractor and shall be removed from the project site in accordance with Section 2-02.3 of these special provisions.

Items to be salvaged shall be removed and delivered undamaged to the City's maintenance yard (located at 7200 New Market St. SW, Tumwater, WA 98501). The contractor shall contact City Engineer five (5) working days prior to the delivery. The Contractor shall unload all equipment and materials at the Yard in a location designated by City staff.

Any existing equipment and material for salvage that is damaged during removal or delivery shall be compensated for by the Contractor to the satisfaction of the City.

(******)

Section 8-02.3 is supplemented with the following new Section:

8-20.3(20) Rectangular Rapid Flashing Beacon System

All RRFB shall be programmed with the timing for each crossing as shown in the Plans.

Locator tone shall be provided for each pushbutton.

Audible confirmation message "Yellow lights are flashing" shall be spoken twice.

8-20.4 Measurement

(******)

This section is revised to read:

When shown as lump sum in the Plans or in the proposal as “Illumination System - _____, Complete” or “RRFB System at _____, Complete,” no specific unit of measurement will apply, but measurement will be for the sum total of all items for a complete and functional system to be furnished and installed.

Surface restoration (regardless of surfacing type) for areas disturbed by activities associated with installing equipment per this Section and not otherwise called out for replacement or in excess of the limits shown in the Plans, shall be included in the respective lump sum price and no additional measurement shall be made.

All potholing associated with the bid items herein shall be considered included in the bid items included in this section and no additional compensation will be made.

Restoration of facilities destroyed or damaged during construction shall be considered incidental to the bid items included in this section and no additional compensation will be made.

Coordination of service connections with Puget Sound Energy and any necessary permits and fees associated with the service connections shall be considered incidental to the bid items included herein and no additional compensation will be made.

Coordination of luminaire installation with WSDOT and any necessary permits and fees associated with construction of the illumination system in WSDOT right-of-way shall be considered incidental to the bid items included herein and no additional compensation will be made.

Use of a vacuum truck for excavation, including potholing associated with installation of equipment specified herein, shall be considered included in the bid items included herein and no additional compensation will be made.

Temporary lighting, if provided to accommodate the Contractor’s operations, shall be included in the lump sum price for the respective Illumination System and no additional compensation shall be made.

Temporary traffic signal system modifications to accommodate construction phasing is included in the lump sum price for Project Temporary Traffic Control (1-10) and no additional compensation will be made.

Removal of existing street lighting and traffic signal equipment is included in the lump sum price for Removal of Structures and Obstructions (2-02) and no additional compensation will be made.

Installation of conduit, wiring, and modifications to the existing City of Tumwater sign lighting shall be included in the “Illumination System – City of Tumwater, Complete” bid item and no additional measurement shall be made.

Installation of conduit and wiring for the City irrigation cabinet the intersection of 6th Ave SW and Trosper Rd SW shall be included in the “City Illumination System, Complete” bid item

and no additional measurement shall be made. All other associated works shall be per Irrigation Systems (8-03) of these Special Provisions.

8-20.5 Payment

(******)
Supplement this section with the following:

"Illumination System – City of Tumwater, Complete", lump sum

"Illumination System - WSDOT, Complete", lump sum

"RRFB System at Trosper Rd & 6th Ave SW, Complete", lump sum

"RRFB System at Trosper Rd & Capitol Blvd, Complete", lump sum

The lump sum Contract price for "Illumination System _____, Complete" in the Proposal shall be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to the complete installation of the illumination system including but not limited to luminaire poles and arms, LED luminaires, foundations, electrical service cabinet, conduit, wiring, junction boxes, adjusting junction boxes to grade, excavation, backfilling, restoring facilities destroyed or damaged during construction, testing, as-built plans and all other components necessary to make a complete system.

The lump sum Contract price for "RRFB System at _____, Complete" in the Proposal shall be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to the complete installation of the RRFB system including but not limited to RRFB system, push buttons, signs, poles, foundations, conduit, wiring, junction boxes, excavation, backfilling, restoring facilities destroyed or damaged during construction, testing, as-built plans and all other components necessary to make a complete system.

END OF SECTION

8-21 PERMANENT SIGNING

8-21.2 Materials

Roadside Sign Structures

Section 9-06.16 is supplemented with the following:

(January 3, 2011)
Perforated Steel Square Sign Post System
Where noted in the Plans, steel sign post systems shall be square, pre-punched galvanized steel tubing, that are NCHRP 350 Test Level 3 Certified and FHWA approved. The steel sign post system shall include all anchor sleeves, and other hardware required for a complete sign installation.

System Acceptance
Systems listed in the current QPL will be accepted per the QPL approval code. Systems not listed in the QPL will be accepted based on a Supplier's Certificate of Compliance. The Supplier's Certificate of Compliance will be a contract specific letter from the supplier stating the system is NCHRP 350 Test Level 3 compliant.

Hardware

Section 9-28.11 is supplemented with the following:

(August 3, 2015)
Locknuts shown in the Plans specifying a locknut or locknut with nylon insert shall conform to one of the following:

1. ANCO Pin Locknut, with stainless steel locking pin, as manufactured by Lok-Mor, Inc.

2. Tri-lock Locknut, as manufactured by Lok-Mor, Inc.

3. Grade DH or 2H hex or heavy hex nuts conforming to one of the ASTM material specifications in the Locknut category of the Hardware table of this Section may be modified by installing a nylon insert washer. A minimum of 60-percent of the original number of threads shall meet the requirements of the applicable ASTM material specification after insertion of the nylon insert washer.

4. Hex or heavy hex nuts conforming to one of the ASTM material specifications in the Locknut category of the Hardware table of this Section may be modified by adding one of the following products to a minimum of one-half of the internal threads of the nut and the entire exterior top surface of the nut:

    a. Nylok Blue Torq-Patch Locknut.

    b. Nylok Precote 30.

    c. ND Patch 360 Ring Patch.

    The nuts with any of the three listed products are permitted for a single use only and shall have a maximum of two nut widths of thread extending beyond the nut after installation.

The alternatives to locknuts specified in Standard Plans G-90.20, G-90.30, and J-75.41 are deleted and replaced with the four options specified above.

Sign Support Structures

Section 9-28.14 is supplemented with the following:

(September 8, 2020)
Manufacturers for Steel Roadside Sign Supports
The Standard Plans lists several steel sign support types. These supports are patented devices and many are sole-source. All of the sign support types listed below are acceptable when shown in the Plans.

Steel Sign Support Type	Manufacturer
Type TP-A & TP-B	Transpo Industries, Inc.
Type PL, PL-T & PL-U	Northwest Pipe Co.
Type AS	Transpo Industries, Inc.
Type AP	Transpo Industries, Inc.
Type ST 1, ST 2, ST 3, & ST 4	Ultimate Highway Solutions, Inc., Allied Tube & Conduit Corp. (Mechanical Division), Trinity Highway Products, LLC.
Type SB-1, SB-2, & SB-3	Ultimate Highway Solutions, Inc., Xcessories Squared Development and Manufacturing Incorporated, Trinity Highway Products, LLC.

8-22 Pavement Marking

8-22.3 Construction Requirements

(August 2016, Tumwater GSP)

8-22.3(1) Preliminary Spotting

Delete the first sentence and add the following:

> All referencing and layout of channelization shall be completed by the Contractor and reviewed by the City. The City may provide assistance with initial layout where questions arise. The Contractor shall reference existing striping prior to work where necessary. In general, unless otherwise noted on the plans, pavement marking impacted by the new improvements will be replaced with the existing channelization layout.

8-22.4 Measurement

The fourth and fifth paragraphs of Section 8-22.4 are revised to read:

(January 10, 2022)
Wide dotted circulating lane line, wide solid lane line, strong lane line, wide edge line, wide lane line, wide broken lane line, double wide lane line, wide dotted lane line, and wide dotted extension line will be measured by the completed linear foot as “Painted Wide Line”, “Plastic Wide Line”, “Profiled Plastic Wide Line”, Profiled Embossed Wide Line”, or “Grooved Plastic Wide Line”.

The measurement for “Painted Wide Line”, “Plastic Wide Line”, “Profiled Plastic Wide Line”, “Profiled Embossed Wide Line”, or “Grooved Plastic Wide Line” will be based on the total

length of each 8-inch wide line installed. No deduction will be made for the unmarked area when the marking includes a broken or dotted line.

8-22.5 Payment

(August 2016, Tumwater GSP)

Section 8-22.5 shall be amended by the following:

Delete all removal pay items. Removal of existing pavement markings and lines located outside of planing areas will be incidental to other items of work.

There is no bid item for "Plastic Bicycle Lane Symbol" in the project. The cost to furnish all labor, material, equipment, and incidentals to install the "Plastic Bicycle Lane Symbol" will be paid under bid item "Plastic Traffic Arrow", per each.

DIVISION 9
MATERIALS

9-03 AGGREGATES

9-03.11 Streambed Aggregates

9-03.11(4) Landscape Boulder

(******)
Section 9-03.11(4) is supplemented with the following:

Boulders shall be "Columbia Granite" as available from Black Lake Landscape Supply, Tumwater WA (360-951-0999) or approved equal.

9-03.14 Select Borrow

9-03.14(1) Gravel Borrow

(******)
Section 9-03.14(1) is supplemented with the following:

Select granular fill must consist of well-graded sand and gravel or crushed rock with a maximum particle size of 6 inches and less than 5 percent fines by weight based on the minus ¾-inch fraction.

9-03.14(2) Select Borrow

(******)
Section 9-03.14(2) is supplemented with the following:

9-03.14 (Borrow) is suitable for use as select granular fill, provided that the fines content is less than 5 percent (based on the minus ¾-inch fraction).

9-03.21 Recycled Material

9-03.21(1) General Requirements

9-03.21(1)E Table on Maximum Allowable percent (By Weight) of Recycled Material
(November 2019, Tumwater GSP)

Revise the table as follows:

Revise allowable recycled material for items related to 9-03.8, 9-03.9, 9-03.12, and 9-03.13 to zero (0). Use of recycled material for all other items is at the discretion of the Engineer. Bids shall be based on processed mineral aggregate not previously incorporated into other work.

9-14 EROSION CONTROL AND ROADSIDE PLANTING

9-14.1 Materials Submittals and Acceptance

9-14.1(1) Topsoil Type A

(******)
Section 9-14.1(1) Topsoil Type A shall be supplemented by the following:

Topsoil Type A shall be composed of a three way winter mix consisting of:

2 parts	Soil
2 parts	Compost
3 parts	Sand

Soil shall be classified as gravelly sand, well-graded sand, poorly graded sand, or silty sand.

Compost shall be a weed free well decomposed, humus-like material derived from the decomposition of grass clippings, leaves, branches, wood, and other organic materials. Compost shall be produced at a permitted solid waste composting facility (Composts containing shavings, cedar sawdust, or straw will not be permitted.

Sand shall consist of 100 percent passing the 3/8 inch sieve, minimum 95 percent passing the #4 sieve, and maximum of 5 percent passing the #100 sieve.

Topsoil shall meet the following requirements:

Screen Size (approximate particle size)	5/8” maximum
Maturity measure (C:N ratio)	30:1
Total Nitrogen	0.5% minimum
PH range	5.5-8.0
Foreign matter by dry weight	1% maximum

The Contractor shall provide a sample of the topsoil and a laboratory analysis with recommendations from the laboratory for desired additives for the Engineers approval. The Contractor shall incorporate any additives recommended by the laboratory.

9-14.2 Seed

(******)
Section 9-14.2 is supplemented with the following:

There shall be two different types of mixes used on this project and all shall be certified. The list of approved seed varieties are shown in the tables below. They shall be applied at the given rates.

Woody Seed Mix shall be applied at 50 lbs. per acre:

Kind and Variety of Seed	Percent By Weight
Oregon Grape	20%
Bearberry	20%
Salal	15%
West Cascade Wildflower Mix	45%

West Cascade Wildflower Mix shall be supplied Silver Falls Seed Company or approved equal. Lawn Mix shall be applied at 200 lbs per acre:

Kind and Variety of Seed	Percent By Weight	Minimum Pure Seed	Minimum Germination	Maximum Weed Seed
Equal Mix 3-Perennial Ryegrasses	60%	98%	90%	0.5%
One Chewing Fine Fescue	20%	98%	90%	0.5%
One Creeping Red Fescue	20%	98%	90%	0.5%

PERENNIAL RYEGRASSES

Hawkeye	Catalina II	Gator 3	Kokomo
Admire	All Star 2	Applaud	Mach 1
SR 4420	Amazing	Repell III	SR 4220
Brightstar SLT	Pentium	Grand Slam	Pennant II
Manhattan 4	Brightstar II	Cathedral II	Charger II
Elfkin	Inspire	Line Drive	Pinnacle II
Pizzazz	Promise	Seville II	Terradyne

FINE FESCUES

Creeping Red

Salsa	Cindy	Jasper	Salem
Flyer			

Chewing

Tiffany	Shadow II	Treazure E	Longfellow
Weekend	Tamara	Enjoy	Victory
Bridgeport	Shadow W/Endo	Proformer	Southport
Bargreen	Jamestown II		

9-14.3 Fertilizer

(******)

Section 9-14.3 is supplemented with the following:

Fertilizer shall be 1 pound nitrogen from ammonium sulfate, 0.5 pound water insoluble organic nitrogen, 2 pounds of phosphorous, and 2 pounds of potassium per 1,000 square feet, or a 10-20-20 turf fertilizer mix at 435 pounds per acre with 60 pounds of water insoluble organic nitrogen per acre.

Fertilizer for Trees and Shrubs shall be granular, tablet, or spikes applied at a rate recommended by the manufacturer for the size of the plant or as directed by the Engineer. Fertilizer shall be a 20-10-5 plant mix with 7% water soluble organic nitrogen and 13% water insoluble organic nitrogen or as approved by the Engineer. All trees shall have an application of beneficial mycorrhizal fungi applied at time of planting in accordance with the manufacturer's recommendations. Mycorrhizal fungi shall be ROOTS' Transplant 1-Step by Verdicon, Inc. or approved equal.

9-29 ILLUMINATION, SIGNALS, ELECTRICAL

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

(September 3, 2019 WSDOT GSP)

Section 9-29.2 is supplemented with the following:

Slip-Resistant Surfacing for Junction boxes, Cable Vaults, and Pull Boxes

Where slip-resistant junction boxes, cable vaults, or pull boxes are required, each box or vault shall have slip-resistant surfacing material applied to the steel lid and frame of the box or vault. Where the exposed portion of the frame is ½ inch wide or less, slip-resistant surfacing material may be omitted from that portion of the frame.

Slip-resistant surfacing material shall be identified with a permanent marking on the underside of each box or vault lid where it is applied. The permanent marking shall be formed with a mild steel weld bead, with a line thickness of at least 1/8 inch. The marking shall include a two character identification code for the type of material used and the year of manufacture or application. The following materials are approved for application as slip-resistant material, and shall use the associated identification codes:

1. Harsco Industrial IKG, Mebac #1 – Steel: **M1**

2. W.S. Molnar Co., SlipNOT Grade 3 – Coarse: **S3**

3. Thermion, SafTrax TH604 Grade #1 – Course: **T1**

9-33 Geosynthetic Properties

9-23.2(1) Geotextile Properties

In locations where extra excavation is required due to unsuitable soils, Construction Geotextile for Soil Stabilization shall be placed above suitable compacted subgrade as determined by the Engineer, prior to installation of Select Borrow fill soil. Construction Geotextile for Soil Stabilization shall meet the requirements of Table 3 in Section 9-23.2(1).

END OF SECTION

Appendices
(January 2, 2012)

The following appendices are attached and made a part of this contract:

*** APPENDIX A:
Washington State Prevailing Wages

APPENDIX B:
Stormwater Pollution Prevention Plan (SWPPP).
***

(January 10, 2022)
Standard Plans

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01, effective September 13, 2021, is made a part of this contract.

The Standard Plans are revised as follows:

B-90.40
Valve Detail – DELETED

C-8
DELETED

C-8A
DELETED

C-20.10
Note 1: “Refer to Standard Plan C-1b and C-20.11 for additional details not shown on this plan.” is revised to read: “Refer to Standard Plan C-1b for additional details not shown on this plan.”

C-60.10
Sheet 1, ADD Note: NOTE: STEEL WELDED WIRE REINFORCEMENT DEFORMED FOR CONCRETE MAY BE SUBSTITUTED FOR REINFORCING STEEL IN ACCORDANCE WITH STANDARD SPECIFICATION, SECTION 6-10.3

Sheet 2, New Note 5: The connecting pin may be fabricated with a forged head as shown on Standard Plan C-60.15."

C-60.80
DELETED

C-85.16
DELETED

C-85.20
DELETED

D-10.10
Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.15
Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.30
Wall Type 5 may be used in all cases.

D-10.35
Wall Type 6 may be used in all cases.

D-10.40
Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.45
Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the revisions stated in the 11/3/15 Bridge Design memorandum.

D-15.10
STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.20
STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.30
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

G-90.11
DELETED

G-90.40
DELETED

J-10.16
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.17
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.18
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-20.26
Add Note 1, “1. One accessible pedestrian pushbutton station per pedestrian pushbutton post.”

J-20.16
View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10
Sheet 1, Elevation View, Round Concrete Foundation Detail, callout – “ANCHOR BOLTS ~ ¾” (IN) x 30” (IN) FULL THREAD ~ THREE REQ’D. PER ASSEMBLY” IS REVISED TO READ: “ANCHOR BOLTS ~ ¾” (IN) x 30” (IN) FULL THREAD ~ FOUR REQ’D. PER ASSEMBLY”
Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR.. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.
Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.
Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.
Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.

Detail F, callout, “Heavy Hex Clamping Bolt (TYP.) ~ 3/4” (IN) Diam. Torque Clamping Bolts (see Note 3)” is revised to read; “Heavy Hex Clamping Bolt (TYP.) ~ 3/4” (IN) Diam. Torque Clamping Bolts (see Note 1)”
Detail F, callout, “3/4” (IN) x 2’ – 6” Anchor Bolt (TYP.) ~ Four Required (See Note 4)” is revised to read; “3/4” (IN) x 2’ – 6” Anchor Bolt (TYP.) ~ Three Required (See Note 2)”

J-21.15
Partial View, callout, was – LOCK NIPPLE ~ 1 ½” DIAM., is revised to read; CHASE NIPPLE ~ 1 ½” (IN) DIAM.

J-21.16
Detail A, callout, was – LOCKNIPPLE, is revised to read; CHASE NIPPLE

J-22.15
Ramp Meter Signal Standard, elevation, dimension 4’ - 6” is revised to read; 6’-0”
(2x) Detail A, callout, was – LOCK NIPPLE ~ 1 ½” DIAM. is revised to read; CHASE NIPPLE ~ 1 ½” (IN) DIAM.

J-40.10
Sheet 2 of 2, Detail F, callout, “12 – 13 x 1 ½” S.S. PENTA HEAD BOLT AND 12” S. S. FLAT WASHER” is revised to read; “12 – 13 x 1 ½” S.S. PENTA HEAD BOLT AND 1/2” (IN) S. S. FLAT WASHER”

J-40.36
Note 1, second sentence; ”Finish shall be # 2B for backbox and # 4 for the cover.” Is revised to read; ”Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-40.37
Note 1, second sentence; ”Finish shall be # 2B for backbox and # 4 for the cover.” Is revised to read; ”Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-75.20
Key Notes, note 16, second bullet point, was: “1/2” (IN) x 0.45” (IN) Stainless Steel Bands”, add the following to the end of the note: “Alternate: Stainless steel cable with stainless steel ends, nuts, bolts, and washers may be used in place of stainless steel bands and associated hardware.”

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-10.10-00.....8/7/07	A-30.35-00.....10/12/07	A-50.10-01……..8/17/21
A-10.20-00.....10/5/07	A-40.00-00.....8/11/09	A-50.40-01……..8/17/21
A-10.30-00.....10/5/07	A-40.10-04.....7/31/19	A-60.10-03.....12/23/14
A-20.10-00.....8/31/07	A-40.15-00.....8/11/09	A-60.20-03.....12/23/14
A-30.10-00.....11/8/07	A-40.20-04.....1/18/17	A-60.30-01.....6/28/18
A-30.30-01.....6/16/11	A-40.50-02.....12/23/14	A-60.40-00.....8/31/07

B-5.20-03.....9/9/20
B-5.40-02.....1/26/17
B-5.60-02.....1/26/17
B-10.20-02.....3/2/18
B-10.40-02.....8/17/21
B-10.70-02……8/17/21
B-15.20-01.....2/7/12
B-15.40-01.....2/7/12
B-15.60-02.....1/26/17
B-20.20-02.....3/16/12
B-20.40-04.....2/27/18
B-20.60-03.....3/15/12
B-25.20-02.....2/27/18
B-25.60-02.....2/27/18
B-30.05-00……..9/9/20
B-30.10-03.....2/27/18
B-30.15-00……..2/27/18
B-30.20-04.....2/27/18
B-30.30-03.....2/27/18
B-30.40-03.....2/27/18
B-30.50-03.....2/27/18
B-30.60-00……..9/9/20
B-30.70-04.....2/27/18
B-30.80-01.....2/27/18
B-30.90-02.....1/26/17
B-35.20-00.....6/8/06
B-35.40-00.....6/8/06
B-40.20-00.....6/1/06
B-40.40-02.....1/26/17
B-45.20-01.....7/11/17
B-45.40-01.....7/21/17
B-50.20-00.....6/1/06
B-55.20-03.....8/17/21
B-60.20-02.....9/9/20
B-60.40-01.....2/27/18
B-65.20-01.....4/26/12
B-65.40-00.....6/1/06
B-70.20-00.....6/1/06
B-70.60-01.....1/26/17
B-75.20-03.....8/17/21
B-75.50-01.....6/10/08
B-75.60-00.....6/8/06
B-80.20-00.....6/8/06
B-80.40-00.....6/1/06
B-85.10-01.....6/10/08
B-85.20-00.....6/1/06
B-85.30-00.....6/1/06
B-85.40-00.....6/8/06
B-85.50-01.....6/10/08
B-90.10-00…….6/8/06
B-90.20-00.....6/8/06
B-90.30-00.....6/8/06
B-90.40-01.....1/26/17
B-90.50-00.....6/8/06
B-95.20-02.....8/17/21
B-95.40-01.....6/28/18

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C-1.....9/9/20
C-1b.....9/9/20
C-1d.....10/31/03
C-2c.....8/12/19
C-4f.....8/12/19
C-6a.....10/14/09
C-7.....6/16/11
C-7a.....6/16/11
C-8.....2/10/09
C-8a.....7/25/97
C-20.10-07.....8/20/21
C-20.14-04.....8/12/19
C-20.15-02.....6/11/14
C-20.18-03.....8/12/19
C-20.40-08.....8/20/21
C-20.41-03.....8/20/21
C-20.42-05.....7/14/15
C-20.45.02.....8/12/19
C-22.16-07.....9/16/20
C-22.40-08.....9/16/20
C-22.45-05.....9/16/20
C-23.60-04.....7/21/17
C.24.10-02.....8/12/19
C-25.20-07.....8/20/21
C-25.22-06.....8/20/21
C-25.26-05.....8/20/21
C-25.30-01…….8/20/21
C-25.80-05.....8/12/19
C-60.10-01…….9/24/20
C-60.15-00……..8/17/21
C-60.20-00……9/24/20
C-60.30-01……8/17/21
C-60.40-00……..8/17/21
C-60.45-00……..8/17/21
C-60.50-00……..8/17/21
C-60.60-00……..8/17/21
C-60.70-00……9/24/20
C-60.80-00……..8/17/21
C-70.15-00……..8/17/21
C-70.10-03.....8/20/21
C-75.10-02.....9/16/20
C-75.20-03.....8/20/21
C-75.30-03.....8/20/21
C-80.10-02.....9/16/20
C-80.20-01.....6/11/14
C-80.30-02.....8/20/21
C-80.40-01.....6/11/14
C-85.10-00.....4/8/12
C-85.11-01.....9/16/20
C-85.15-02.....8/27/21
C-85-18-02.....8/20/21

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D-2.04-00.....11/10/05
D-2.06-01.....1/6/09
D-2.08-00.....11/10/05
D-2.32-00.....11/10/05
D-2.34-01.....1/6/09
D-2.36-03.....6/11/14
D-2.46-02……8/13/21
D-2.60-00.....11/10/05
D-2.62-00.....11/10/05
D-2.64-01.....1/6/09
D-2.66-00.....11/10/05
D-2.80-00.....11/10/05
D-2.84-00.....11/10/05
D-2.88-00.....11/10/05
D-2.92-00.....11/10/05
D-3.09-00.....5/17/12
D-3.10-01……5/29/13
D-3.11-03……6/11/14
D-3.15-02……6/10/13
D-3.16-02……5/29/13
D-3.17-02……5/9/16
D-4.....12/11/98
D-10.10-01.....12/2/08
D-10.15-01.....12/2/08
D-10.20-01.....8/7/19
D-10.25-01.....8/7/19
D-10.30-00.....7/8/08
D-10.35-00.....7/8/08
D-10.40-01.....12/2/08
D-10.45-01.....12/2/08

D-2.68-00.....11/10/05
D-6.....6/19/98

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E-1.....2/21/07
E-2.....5/29/98
E-4.....8/27/03
E-4a.....8/27/03

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F-10.12-04.....9/24/20
F-10.16-00.....12/20/06
F-10.18-02.....9/24/20
F-10.40-04.....9/24/20
F-10.42-00.....1/23/07
F-10.62-02.....4/22/14
F-10.64-03.....4/22/14
F-30.10-04.....9/25/20
F-40.12-03.....6/29/16
F-40.14-03.....6/29/16
F-40.15-04.....9/25/20
F-40.16-03.....6/29/16
F-45.10-03.....8/13/21
F-80.10-04.....7/15/16

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G-10.10-00.....9/20/07
G-20.10-03.....8/20/21
G-22.10-04.....6/28/18
G-24.10-00.....11/8/07
G-24.20-01.....2/7/12
G-24.30-02.....6/28/18
G-24.40-07.....6/28/18
G-24.50-05.....8/7/19
G-24.60-05.....6/28/18
G-25.10-05.....9/16/20
G-26.10-00……7/31/19
G-30.10-04.....6/23/15
G-50.10-03.....6/28/18
G-90.10-03……7/11/17
G-90.20-05……7/11/17
G-90.30-04……7/11/17
G-95.10-02.....6/28/18
G-95.20-03.....6/28/18
G-95.30-03.....6/28/18

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H-10.10-00.....7/3/08
H-10.15-00.....7/3/08
H-30.10-00.....10/12/07
H-32.10-00.....9/20/07
H-60.10-01.....7/3/08
H-60.20-01.....7/3/08
H-70.10-02.....8/17/21
H-70.20-02.....8/17/21

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I-10.10-01.....8/11/09
I-30.10-02.....3/22/13
I-30.15-02.....3/22/13
I-30.16-01.....7/11/19
I-30.17-01.....6/12/19
I-30.20-00.....9/20/07
I-30.30-02.....6/12/19
I-30.40-02.....6/12/19
I-30.60-02.....6/12/19
I-40.10-00.....9/20/07
I-40.20-00.....9/20/07
I-50.20-01.....6/10/13
I-60.10-01.....6/10/13
I-60.20-01.....6/10/13
I-80.10-02.....7/15/16

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J-10.....7/18/97
J-10.10-04……9/16/20
J-10.12-00……9/16/20
J-10.14-00……9/16/20
J-10.15-01.....6/11/14
J-10.16-02……8/18/21
J-10.17-02……8/18/21
J-10.18-02……8/18/21
J-10.20-04……8/18/21
J-10.21-02……8/18/21
J-10.22-02.....8/18/21
J-10.25-00……7/11/17
J-12.15-00……6/28/18
J-12.16-00……6/28/18
J-15.10-01.....6/11/14
J-15.15-02……7/10/15
J-20.10-04.....7/31/19
J-20.11-03.....7/31/19
J-20.15-03.....6/30/14
J-28.40-02.....6/11/14
J-28.42-01.....6/11/14
J-28.43-01.....6/28/18
J-28.45-03.....7/21/16
J-28.50-03.....7/21/16
J-28.60-03.....8/27/21
J-28.70-03.....7/21/17
J-29.10-01.....7/21/16
J-29.15-01.....7/21/16
J-29.16-02.....7/21/16
J-30.10-00……6/18/15
J-40.05-00……7/21/16
J-40.10-04……4/28/16
J-40.20-03……4/28/16
J-40.30-04……4/28/16
J-40.35-01……5/29/13
J-40.36-02……7/21/17
J-40.37-02……7/21/17
J-40.38-01.....5/20/13
J-60.13-00…….6/16/10
J-60.14-01……7/31/19
J-75.10-02……7/10/15
J-75.20-01……7/10/15
J-75.30-02…….7/10/15
J-75.41-01……6/29/16
J-75.45-02……6/1/16
J-80.10-01……8/18/21
J-80.12-00……8/18/21
J-80.15-00……6/28/18
J-81.10-02……8/18/21
J-81.12-00……9/3/21
J-86.10-00……6/28/18
J-90.10-03…….6/28/18
J-90.20-03…….6/28/18
J-90.21-02……6/28/18
J-90.50-00……6/28/18

J-20.16-02.....6/30/14
J-20.20-02.....5/20/13
J-20.26-01.....7/12/12
J-21.10-04.....6/30/14
J-21.15-01.....6/10/13
J-21.16-01.....6/10/13
J-21.17-01.....6/10/13
J-21.20-01.....6/10/13
J-22.15-02.....7/10/15
J-22.16-03.....7/10/15
J-26.10-03…..7/21/16
J-26.15-01…..5/17/12
J-26.20-01…..6/28/18
J-27.10-01…..7/21/16
J-27.15-00…..3/15/12
J-28.10-02.....8/7/19
J-28.22-00.....8/07/07
J-28.24-02.....9/16/20
J-28.26-01.....12/02/08
J-28.30-03.....6/11/14
J-40.39-00……5/20/13
J-40.40-02……7/31/19
J-45.36-00……7/21/17
J-50.05-00……7/21/17
J-50.10-01…….7/31/19
J-50.11-02…….7/31/19
J-50.12-02…….8/7/19
J-50.13-00…….8/22/19
J-50.15-01…….7/21/17
J-50.16-01…….3/22/13
J-50.18-00…….8/7/19
J-50.19-00…….8/7/19
J-50.20-00…….6/3/11
J-50.25-00…….6/3/11
J-50.30-00…….6/3/11
J-60.05-01…….7/21/16
J-60.11-00…....5/20/13
J-60.12-00…....5/20/13

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K-70.20-01.....6/1/16
K-80.10-02.....9/25/20
K-80.20-00.....12/20/06
K-80.32-00……8/17/21
K-80.34-00……8/17/21
K-80.35-01.....9/16/20
K-80.37-01.....9/16/20

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L-10.10-02.....6/21/12
L-20.10-03.....7/14/15
L-30.10-02.....6/11/14
L-40.15-01.....6/16/11
L-40.20-02.....6/21/12
L-70.10-01.....5/21/08
L-70.20-01.....5/21/08

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M-1.20-04.....9/25/20
M-1.40-03.....9/25/20
M-1.60-03.....9/25/20
M-1.80-03.....6/3/11
M-2.20-03.....7/10/15
M-2.21-00……..7/10/15
M-3.10-04.....9/25/20
M-3.20-03.....9/25/20
M-3.30-04.....9/25/20
M-3.40-04.....9/25/20
M-3.50-03.....9/25/20
M-5.10-03.....9/25/20
M-7.50-01.....1/30/07
M-9.50-02.....6/24/14
M-9.60-00……..2/10/09
M-11.10-03.....8/7/19
M-12.10-02……9/25/20
M-15.10-01.....2/6/07
M-17.10-02.....7/3/08
M-20.10-03.....9/25/20
M-20.20-02.....4/20/15
M-20.30-04.....2/29/16
M-20.40-03.....6/24/14
M-20.50-02.....6/3/11
M-24.20-02.....4/20/15
M-24.40-02.....4/20/15
M-24.60-04.....6/24/14
M-24.65-00……7/11/17
M-24.66-00……7/11/17
M-40.10-03.....6/24/14
M-40.20-00.....10/12/07
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M-65.10-03.....8/17/21
M-80.10-01.....6/3/11
M-80.20-00.....6/10/08
M-80.30-00.....6/10/08

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