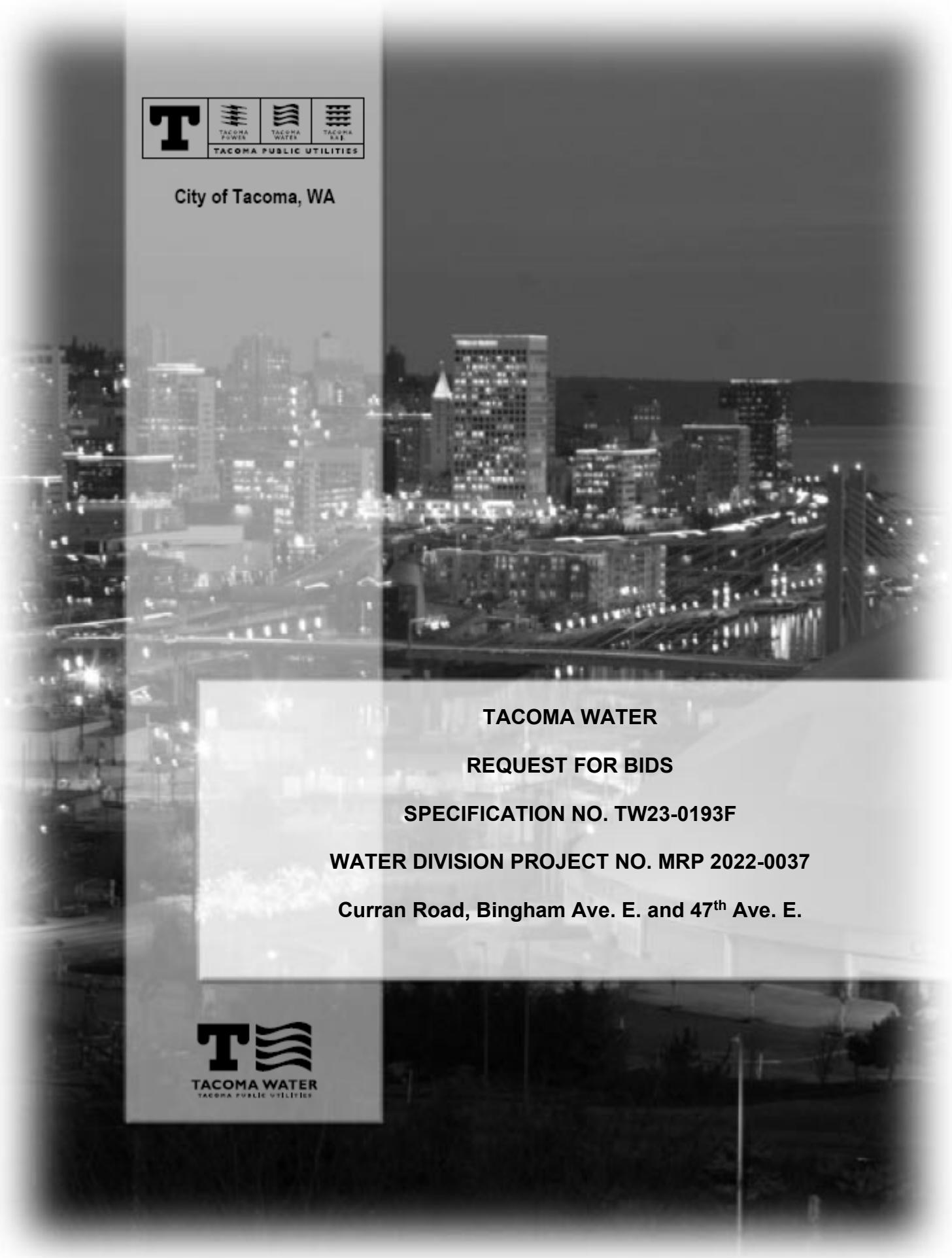


TACOMA WATER

REQUEST FOR BIDS

SPECIFICATION NO. TW23-0193F

WATER DIVISION PROJECT NO. MRP 2022-0037

Curran Road, Bingham Ave. E. and 47th Ave. E.

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
TACOMA WATER

CONSTRUCTING WATER MAINS
in accordance with approved plans for

WATER MAIN REPLACEMENT PROJECT NO. MRP 2022-0037

CURRAN ROAD-BINGHAM AVE. E. AND 47TH AVE. E.

SPEC. NO.: TW23-0193F

08/15/2024

Troy Saghafi, P.E.
Tacoma Water
Tacoma Public Utilities
MRP 2022-0037

City of Tacoma
Public Utilities - Water Division

REQUEST FOR BIDS TW23-0193F
MRP 2022-0037, Curran Rd, Bingham Ave. E. and 47th Ave. E.

Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, December 10, 2024

Submittals must be received by the City's Procurement and Payables Division by 11:00 a.m. Pacific Time.

For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email server, as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals. Include the specification number in the subject line of your email. Your submittal must be sent as an attachment, links to your electronic submittal will not be accepted.

For in person submittals, the City of Tacoma will designate the time of receipt recorded by the timestamp located at the lobby security desk, as the official time of receipt. Include the specification number on the outside of the sealed envelope. Late submittals will be returned unopened and rejected as non-responsive.

Submittal Delivery: Sealed submittals will be received as follows:

By Email:	**In Person:**
sendbid@cityoftacoma.org Maximum email size, including attachments: 35 MB. Multiple emails may be sent for each submittal. **Note:** Email may pass through multiple servers before arriving at its destination. Please allow sufficient time for email delivery of submittals. Timely electronic delivery is at the risk of the supplier.	Tacoma Public Utilities Administration Building North, Main Floor, Lobby Security Desk 3628 South 35th Street Tacoma, WA 98409 Monday – Friday 8:00 am to 4:30 pm

Bid Opening: Submittals must be received by the City's Procurement and Payables Division prior to 11:00 a.m. Pacific Time. Sealed submittals in response to a RFB will be opened Tuesday's at 11:15 AM by a purchasing representative and read aloud during a public bid opening held at the Tacoma Public Utilities Administrative Building North, 3628 S. 35th Street, Tacoma, WA 98409, conference room M-1, located on the main floor. They will also be held virtually Tuesday's at 11:15 AM. Attend a Zoom meeting via this link or call 1 (253) 215 8782 using meeting ID # 884 0268 0573, passcode # 070737.

Submittals in response to an RFP, RFQ or RFI will be recorded as received, but not read at bid opening. As soon as possible, after 1:00 PM, on the day of submittal deadline, preliminary results will be posted to www.TacomaPurchasing.org.

If you believe your submittal was sent timely and was not read at bid opening, please contact sendbid@cityoftacoma.org immediately.

Solicitation Documents: An electronic copy of the complete solicitation documents may be viewed and obtained at the City's plan distribution service provider, ARC, 632 Broadway, Tacoma, WA, or by going to http://www.e-arc.com/location/tacoma. Prospective bidders will be required to pay reproduction costs. A list of vendors registered for this solicitation is also available at their website.

Pre-Proposal Meeting: A pre-proposal meeting will not be held. Questions may be submitted to Brandon Snow by email to bsnow@cityoftacoma.org no later than by 3:00pm, PST, December 5th, 2024.

Project Scope: Install 4220' of 8" Ductile Iron Water Main, Fittings, and Hydrants.

Estimate: $ 1,170,279.00

Paid Sick Leave: The City of Tacoma requires all employers to provide paid sick leave in accordance with Washington State law.

Americans with Disabilities Act (ADA Information: The City of Tacoma, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. Specification materials can be made available in an alternate format by emailing the contact listed below in the *Additional Information* section.

Title VI Information: "The City of Tacoma" in accordance with provisions of Title VI of the Civil Rights Act of 1964, (78 Stat. 252, 42 U.S.C. sections 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration of award.

Additional Information: Requests for information regarding the specifications may be obtained by contacting Brandon Snow by email to bsnow@cityoftacoma.org.

Protest Policy: City of Tacoma protest policy, located at www.tacomapurchasing.org, specifies procedures for protests submitted prior to and after submittal deadline.

Meeting sites are accessible to persons with disabilities. Reasonable accommodations for persons with disabilities can be arranged with 48 hours advance notice by calling 253-502-8468.

SPECIFICATION CONTENTS

This Specification contains the following:

Cover Sheet
Engineer Cover Sheet
Request for Bids
Specification Contents List
Special Notice to All Bidders
Prevailing Wage Rate Notice

Section 1 – Bid Proposal Documents
- **1.1 – Signature Page**
- **1.2 – Bid Proposal**
- **1.3 – Bid Bond**
- **1.4 – State Responsibility Form**
- **1.5 – Certificate of Compliance with Wage Payments**
- **1.6 – Record of Prior Contracts**
- **1.7 – Subcontractor List**
- **1.8 – EIC Utilization Form**

Section 2 – Post Award Documentation
- **2.1 – Sample City of Tacoma Contract**
- **2.2 – City of Tacoma Insurance Requirements**
- **2.3 – Performance Bond**
- **2.4 – Payment Bond**
- **2.5 – Final Contact Verification**
- **2.6 – Subcontractor Verification**
- **2.7 – General Release Form**

Section 3 – LEAP and EIC Requirements
- **3.1 – LEAP Requirements**
- **3.2 – EIC Requirements**

Section 4 – Project Special Provisions
- **4.1 – Book Amendments**
- **4.2 – Special Provisions**

Section 5 – General Provisions
- **5.1 – City of Tacoma General Provisions**

Attachments
- **MRP-2022-0037 Signed Drawings**
- **Pierce County ROW permit**
- **City of Tacoma 17-56-1 Standard Plans**
- **Pierce County Standard Plans**

CITY OF TACOMA
FINANCE/PURCHASING DIVISION

SPECIAL NOTICE TO BIDDERS

Public works and improvement projects for the City of Tacoma are subject to Washington state law and Tacoma Municipal Code, including, but not limited to the following:

I. STATE OF WASHINGTON

A. RESPONSIBILITY CRITERIA – STATE OF WASHINGTON

In order to be considered a responsible bidder the bidder must meet the following mandatory state responsibility criteria contained in RCW 39.04.350:

1. Have a current certificate of registration as a contractor in compliance with chapters 18.27 RCW, 18.106 RCW, 70.87 RCW, 19.28 RCW, which must have been in effect **at the time of bid submittal**;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable:
   a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
   b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
   c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW and;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).
5. Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW and must designate a person or persons to be trained on these requirements. The training must be provided by the department of labor and industries or by a training provider whose curriculum is approved by the department. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this subsection.

B. RECIPROCAL PREFERENCE FOR RESIDENT CONTRACTORS:

Effective March 30, 2012, RCW 39.04.380 imposes a reciprocal preference for resident contractors. Any bid received from a non-resident contractor from a state that provides an in-state percentage bidding preference is subject application of a comparable percentage disadvantage.

A non-resident contractor from a state that provides an in-state percentage bidding preference means a contractor that:

1. Is from a state that provides a percentage bid preference to its resident contractors bidding on public works projects, and
2. Does not have a physical office located in Washington at the time of bidding on the City of Tacoma public works project.

The state of residence for a non-resident contractor is the state in which the contractor was incorporated, or if not a corporation, the state in which the contractor's business entity was formed.

The City of Tacoma will evaluate all non-resident contractors for an out of state bidder preference. If the state of the non-resident contractor provides an in state contractor preference, a comparable percentage disadvantage will be applied to the non-resident contractor's bid prior to contract award. The responsive and lowest and best responsible bidder after application of any non-resident disadvantage will be awarded the contract.

The reciprocal preference evaluation does not apply to public works procured pursuant to RCW 39.04.155, RCW 39.04.280, federally funded competitive solicitations where such agencies prohibit the application of bid preferences, or any other procurement exempt from competitive bidding.

Bidders must provide the City of Tacoma with their state of incorporation or the state in which the business entity was formed and include whether the bidder has a physical office located in Washington.

The bidder shall submit documentation demonstrating compliance with above criteria on the enclosed State Responsibility and Reciprocal Bidder Information form.

C. SUBCONTRACTOR RESPONSIBILITY

1. The Contractor shall include the language of this subcontractor responsibility section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. The requirements of this section apply to all subcontractors regardless of tier.

2. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

    a. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

    b. Have a current Washington Unified Business Identifier (UBI) number;

    c. If applicable, have:

    a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
    b. A Washington Employment Security Department number, as required in Title 50 RCW;
    c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
    d. An electrical contractor license, if required by Chapter 19.28 RCW;
    e. An elevator contractor license, if required by Chapter 70.87 RCW and;

3. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).

II. CITY OF TACOMA

A. SUPPLEMENTAL RESPONSIBILITY CRITERIA – CITY OF TACOMA:

In order to be considered a responsible bidder, the prospective bidder shall have all of the following qualifications set forth in Tacoma Municipal Code 1.06.262:

1. Adequate financial resources or the ability to secure such resources;
2. The necessary experience, stability, organization and technical qualifications to perform the proposed contract;
3. The ability to comply with the required performance schedule, taking into consideration all existing business commitments;
4. A satisfactory record of performance, integrity, judgment and skills; and
5. Be otherwise qualified and eligible to receive an award under applicable laws and regulations.
    a. Bidder Responsibility. Bidders shall not be in violation of 39.04.350 RCW Bidder Responsibility Criteria - Supplemental Criteria.

In addition to the mandatory bidder responsibility criteria listed immediately above, the City may, in addition to price, consider any or all of the following criteria contained in Tacoma Municipal Code Chapter 1.06.262 in determining bidder responsibility:

1. The ability, capacity, experience, stability, technical qualifications and skill of the respondent to perform the contract;
2. Whether the respondent can perform the contract within the time specified, without delay or interference;
3. Integrity, reputation, character, judgment, experience, and efficiency of the respondents, including past compliance with the City's Ethics Code;
4. Quality of performance of previous contracts;
5. Previous and existing compliance with laws and ordinances relating to contracts or services;
6. Sufficiency of the respondent's financial resources;
7. Quality, availability, and adaptability of the supplies, purchased services or public works to the particular use required;
8. Ability of the respondent to provide future maintenance and service on a timely basis;
9. Payment terms and prompt pay discounts;
10. The number and scope of conditions attached to the submittal;
11. Compliance with all applicable City requirements, including but not limited to the City's Ethics Code and its Equity in Contracting and Local Employment and Apprenticeship Training programs;
12. Other qualification criteria set forth in the specification or advertisement that the appropriate department or division head determines to be in the best interests of the City.

The City may require bidders to furnish information, sworn or certified to be true, to demonstrate compliance with the City responsibility criteria set forth above. If the city manager or director of utilities is not satisfied with the sufficiency of the information provided, or if the prospective respondent does not substantially meet all responsibility requirements, any submittal from such respondent must be disregarded.

B. ADDITIONAL SUPPLEMENTAL CRITERIA – NOT APPLICABLE

C. MODIFICATIONS TO SUPPLEMENTAL CRITERIA

Potential bidders may request modifications to the City's **supplemental criteria** by submitting a written request to the Purchasing Division via email to bids@cityoftacoma.org no later than 5:00 p.m. Pacific Time, three days prior to the submittal deadline. Please include the Specification No. and Title when submitting such requests. Requests must include justification for why certain criteria should be modified. Requests received after this date and time will not be considered.

The City will respond to a timely submitted request prior to the bid opening date. Changes to the supplemental criteria, if warranted, will be issued by addendum to the solicitation documents and posted to the City's website for the attention of all prospective bidders.

D. DETERMINATION OF BIDDER RESPONSIBILITY

If the City determines the bidder does not meet the criteria above and is therefore not a responsible bidder, the City shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees, the bidder may appeal the determination in a manner consistent with the City's Protest Policy. Appeals are coordinated by the Purchasing Division heard by the Procurement and Payables Division manager for contracts less than or equal to $500,000 and by Contracts and Awards Board for contracts greater than $500,000.

PREVAILING WAGE RATES

This project requires prevailing wages under 39.12 RCW. Any worker, laborer, or mechanic employed in the performance of any part of the work shall be paid not less than the applicable prevailing rate of wage.

The project site is located in Pierce County.

The effective date for prevailing wages on this project will be the **submittal deadline** with these exceptions:

a. If the project is not awarded within six months of the submittal deadline, the award date is the effective date.
b. If the project is not awarded pursuant to a competitive solicitation, the date the contract is executed is the effective date.
c. Janitorial contracts follow WAC 296-127-023.

Except for janitorial contracts, these rates shall apply for the duration of the contract unless otherwise noted in the solicitation.

Look up prevailing rates of pay, benefits, and overtime codes from this link:
https://secure.lni.wa.gov/wagelookup/

REQUIRED FILINGS

The contractor and all subcontractors covered under 39.12 RCW shall submit to the Department of Labor and Industries (L&I) for work provided under this contract:

1. A Statement of Intent to Pay Prevailing Wages must be filed with and approved by L&I upon award of contract.

2. An Affidavit of Wages Paid must be filed with and approved by L&I upon job completion.

Payments cannot be released by the City until verification of these filings are received by the engineer. Additional information regarding these filings can be obtained by calling the Department of Labor & Industries, Prevailing Wage at 360-902-5335, https://www.lni.wa.gov/ or by visiting their MY L&I account.

Section 1

Bid Proposal Documents

(Submission of Section 1 documents represents a full and complete bid submittal package.)

SIGNATURE PAGE

CITY OF TACOMA
Public Utilities / Water Division

All submittals must be in ink or typewritten, executed by a duly authorized officer or representative of the bidding/proposing entity, and received and time stamped as directed in the **Request for Bids page near the beginning of the specification**. If the bidder/proposer is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

REQUEST FOR BIDS SPECIFICATION NO. TW23-0193F
MRP 2022-0037, Curran Rd, Bingham Ave. E. and 47th Ave. E.

The undersigned bidder/proposer hereby agrees to execute the proposed contract and furnish all materials, labor, tools, equipment and all other facilities and services in accordance with these specifications.

The bidder/proposer agrees, by submitting a bid/proposal under these specifications, that in the event any litigation should arise concerning the submission of bids/proposals or the award of contract under this specification, Request for Bids, Request for Proposals or Request for Qualifications, the venue of such action or litigation shall be in the Superior Court of the State of Washington, in and for the County of Pierce.

Non-Collusion Declaration

The undersigned bidder/proposer hereby certifies under penalty of perjury that this bid/proposal is genuine and not a sham or collusive bid/proposal, or made in the interests or on behalf of any person or entity not herein named; and that said bidder/proposer has not directly or indirectly induced or solicited any contractor or supplier on the above work to put in a sham bid/proposal or any person or entity to refrain from submitting a bid/proposal; and that said bidder/proposer has not, in any manner, sought by collusion to secure to itself an advantage over any other contractor(s) or person(s).

_____
Bidder/Proposer's Registered Name

_____
Address

_____
City, State, Zip

_____
Authorized Signatory E-Mail Address

_____
E.I.No. / Federal Social Security Number Used on Quarterly Federal Tax Return, U.S. Treasury Dept. Form 941

_____
E-Mail Address for Communications

_____ _____
Signature of Person Authorized to Enter into Contracts for Bidder/Proposer — Date

_____
Printed Name and Title

_____
(Area Code) Telephone Number / Fax Number

_____
State Business License Number
in WA, also known as UBI (Unified Business Identifier) Number

_____
State Contractor's License Number
(See Ch. 18.27, R.C.W.)

Addendum acknowledgement #1_____ #2_____ #3_____ #4_____ #5_____

THIS PAGE MUST BE SIGNED AND RETURNED WITH SUBMITTAL.

BID PROPOSAL **Bidder_____**

Specification No. TW23-0193F

Water Main Replacement Project 2022-0037

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1	Mobilization (1-09.7)	1	LS	$	
2	Project Temporary Traffic Control (1-10)	1	LS	$	$
3	Removal/Disposal of existing asphalt, concrete sidewalk/curbing & concrete pavement. Includes all thicknesses and combinations (2-02.3(3))	1477	SY	$	$
4	Temporary HMA Class ½" PG58-22, 2-inch minimum depth, installed & removed (5-04 & 9-03.8)	1407	SY	$	$
5	HMA Cl ½" PG58-22 pavement for permanent trench patch (5-04 & 9-03.8)-6" in Depth	794	TN	$	$
6	Crushed Surfacing Top Course for trench backfill as directed by the Inspector (7-09.5 & 9-03.9(3))	3684	TN	$	$
7	Crushed Surfacing Top Course for street restoration as directed by the Inspector (7-09.5 & 9-03.9(3))	40	TN	$	$
8	Topsoil Type A (8-02 & 9-14.1(1))	80	CY	$	$
9	Storm, Sanitary, Side Sewer Restoration (7-04,7-09.5, 7-17, & 7-18)	1	EA	$	$
10	Trench Excavation & Disposal (7-09.3(7) & 7-09.5)	2463	CY	$	$
11	Trench Shoring (7-09.3(7) & 7-09.5)	4220	LF	$	$
12	8-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 & 9-30.1(1))	4546	LF	$	$
13	6-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 & 9-30.1(1))	77	LF	$	$
14	4-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 & 9-30.1(1))	10	LF	$	$
15	8-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))	1	EA	$	$

BID PROPOSAL **Bidder_____**

Specification No. TW23-0193F

Water Main Replacement Project 2022-0037

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
16	8-inch x 6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))	6	EA	$	$
17	8-inch x 6-inch Ductile Iron Reducer, 2-B, M.J., w/ anchor, installed (7-05.9 & 9-30.2(1))	1	EA	$	$
18	8-inch x 4-inch Ductile Iron Reducer, 2-B, M.J., w/ anchor, installed (7-05.9 & 9-30.2(1))	1	EA	$	$
19	8-inch Ductile Iron Ell, M.J., 22 1/2°, installed. (7-09, & 9-30.2(1))	2	EA	$	$
20	8-inch Ductile Iron Ell, M.J., 45°, installed. (7-09, & 9-30.2(1))	4	EA	$	$
21	8-inch Ductile Iron Solid Sleeve (Long Pattern) M.J., installed. (7-09.5, & 9-30.2(1))	1	EA	$	$
22	4-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, A.C. to D.I., installed (7-09.3(19)A, 7-09.5 & 9-30.2(7))	1	EA	$	$
23	8-inch Ductile Iron Cap, M.J., tapped 2", installed and removed (9-30.2(1) & 7-09.5)	3	EA	$	$
24	8-inch Ductile Iron Cap, M.J., tapped 2", installed (7-09.5 & 9-30.2(1))	1	EA	$	$
25	8-inch Ductile Iron Plug, M.J., installed (7-09.5 & 9-30.2(1))	1	EA	$	$
26	2-inch Blow-Off Assembly, installed (Dwg. 17-56-1) (7-09.3(22) &7-09.5)	2	EA	$	$
27	Temporary 2-inch Blow-Off Assembly, installed and removed (Dwg. 17-56-1) (7-09.3(22) & 7-09.5)	3	EA	$	$
28	8-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	5	EA	$	$
29	6-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 & 9-30.2(6))	24	EA	$	$
30	Concrete Thrust Anchor, installed. (7-09.3(21) & 7-09.5)	8	EA	$	$
31	Temporary Concrete Thrust Anchor, installed and removed (7-09.3(21) & 7-09.5)	3	EA	$	$
32	Trench Compaction Test (as directed by the Inspector) (7-09.3(11) & 7-09.5)	84	EA	$	$
33	Test Holes (7-09.3(6) & 7-09.5)	1	LS	$	$
34	8-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 & 9.30.3)	9	EA	$	$

BID PROPOSAL **Bidder_____**

Specification No. TW23-0193F

Water Main Replacement Project 2022-0037

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
35	6-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 & 9.30.3)	6	EA	$	$
36	6-inch Hydrant, M.J., 4.0-ft bury, with 4-inch Tacoma Standard Threads & 5-inch Quick Coupling (7-14 & 9-30.5(2))	1	EA	$	$
37	6-inch Hydrant, M.J., 4.5-ft bury, with 4-inch Tacoma Standard Threads & 5-inch Quick Coupling (7-14 & 9-30.5(2))	3	EA	$	$
38	6-inch Hydrant, M.J., 5.0-ft bury, with 4-inch Tacoma Standard Threads & 5-inch Quick Coupling (7-14 & 9-30.5(2))	2	EA	$	$
39	Removal and disposal of abandoned DI pipe all sizes (7-09.3)	5	LF	$	$
40	Removal and disposal of abandoned AC pipe all sizes (7-09.3)	10	LF	$	$
41	Asbestos cement Pipe removal and disposal plan (7-09.5)	1	LS	$	$
42	Street cleaning with Self-propelled Pickup and Vacuum Street Sweeper Equipment. (8-01.3(8))	46	HR	$	$
43	Traffic Lane Markings (8-22)	1	LS	$	$
44	Stormwater Pollution Prevention Plan-SWPPP (8-01.3(1)A))	1	LS	$	$
45	SPCC Plan (1-07.15(1))	1	LS	$	$
46	Erosion and Sediment Control Specialist (8-01)	1	LS	$	$
47	Force Account - Erosion/Water Pollution Control (1-09.6 & 8-01)	1	EST	$ 10,000.00	$ -
48	Force Account (1-09.6)	1	EST	$ 60,000.00	$ -

SUB-TOTAL					$
10.1% SALES TAX					$
TOTAL OF BID					$

Currenet Edition of WSDOT Standard specifications M41-10 referenced as guide in parenthesis ( ).

Herewith find deposit in the form of a cashier's check in the amount of $_____ which amount is not less than 5-percent of the total bid.

SIGN HERE_____

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the City of Tacoma, as Obligee, in the penal sum of _____ _____ dollars, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for

according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20_____.

PRINCIPAL: SURETY:

_____ _____

_____ _____

_____, 20_____

Received return of deposit in the sum of $ _____

_____

Specification No. _____

Name of Bidder: _____

State Responsibility and Reciprocal Bid Preference Information

Certificate of registration as a contractor (Must be in effect at the time of bid submittal):	Number: _____ Effective Date: _____ Expiration Date: _____
Current Washington Unified Business Identifier (UBI) Number:	Number: _____
Do you have industrial insurance (workers' compensation) Coverage nor your employees working in Washington?	☐ Yes ☐ No ☐ Not Applicable
Washington Employment Security Department Number	Number: _____ ☐ Not Applicable
Washington Department of Revenue state excise tax Registration number:	Number: _____ ☐ Not Applicable
Have you been disqualified from bidding any public works contracts under RCW 39.06.010 or 39.12.065(3)?	☐ Yes ☐ No If yes, provide an explanation of your disqualification on a separate page.
Do you have a physical office located in the state of Washington?	☐ Yes ☐ No
If incorporated, in what state were you incorporated?	State: _____ ☐ Not Incorporated
If not incorporated, in what state was your business entity formed?	State: _____
Have you completed the training required by RCW 39.04.350, or are you on the list of exempt businesses maintained by the Department of Labor and Industries?	☐ Yes ☐ No

Revised: 07/20/2007, 04/12/2012, 06/21/2019

City of Tacoma

Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date November 19, 2024, that the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

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

Bidder

Signature of Authorized Official*

Printed Name

Title

Date | City | State

Check One:

Individual ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

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

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

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

RECORD OF PRIOR CONTRACTS

NAME _____ **ADDRESS**_____

Type of Work _____ **Specification No.** _____

Beginning Date	Completion Date	Contract With	Contact Person Phone #	Amount of Contract

Remarks: _____

List of Subcontractor Categories of Work

Project Name _____

Subcontractor(s) that are proposed to perform the work of heating, ventilation and air conditioning, and/or plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW must be listed below. **This information must be submitted with the bid proposal or within one hour of the published bid submittal time via email to sendbid@cityoftacoma.org.**

Subcontractor(s) that are proposed to perform the work of structural steel installation and/or rebar installation must be listed below. **This information must be submitted with the bid proposal or within forty-eight hours of the published bid submittal time via email to sendbid@cityoftacoma.org.**

Failure to list subcontractors or naming more than one subcontractor to perform the same work will result in your bid being non-responsive. Contractors self-performing must list themselves below. The work to be performed is to be listed below the subcontractor(s) name.

Subcontractor Name _____
Work to be Performed _____
_____
_____
_____

Subcontractor Name _____
Work to be Performed _____
_____
_____
_____

Subcontractor Name _____
Work to be Performed _____
_____
_____
_____

Subcontractor Name _____
Work to be Performed _____
_____
_____
_____

Subcontractor Name _____
Work to be Performed _____
_____
_____
_____

EQUITY IN CONTRACTING (EIC) UTILIZATION FORM

STOP! READ Instructions to Bidders/Proposers for completing EIC Utilization Form.

Failure to complete all sections of this form according to the instructions provided or failure to submit this form shall render the bid or proposal non-responsive. (If necessary, use additional forms to list the requirements of Columns A-D). City reserves the right to make minor, non-material corrections to completed Forms, such as to correct obvious data entry errors. No corrections will be made that alter the proposed Certified Business participation percentages and dollar amounts.

Please note: Certified Businesses MUST be certified at time of or prior to bid opening.

1.Bidder Name:			
2.Project Title:		**3.SPEC #:**	
4.Base Bid – No Sales Tax (Must match Bid Proposal amount)	**$**		

Column A. Certified Business Name	Column B. Business Cert. Type			Column C. Bid Item(s) Number(s) performed by the Certified Business(es)	Column D. Subcontract Amount If Material supplier, only 20% of the subcontract amount can be counted towards the EIC Requirements
	MBE	WBE	SBE/DBE		
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role Subcontractor ☐ Material Supplier (20%) ☐	
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%)☐	
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%) ☐	
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%) ☐	

*** For EIC Requirements on this Project, refer to *EIC Requirements (EIC Reqs) Memo in the Bid Package**

EQUITY IN CONTRACTING (EIC) UTILIZATION FORM

STOP! READ Instructions to Bidders/Proposers for completing EIC Utilization Form.

Failure to complete all sections of this form according to the instructions provided or failure to submit this form shall render the bid or proposal non-responsive. (If necessary, use additional forms to list the requirements of Columns A-D). City reserves the right to make minor, non-material corrections to completed Forms, such as to correct obvious data entry errors. No corrections will be made that alter the proposed Certified Business participation percentages and dollar amounts.

Please note: Certified Businesses MUST be certified at time of or prior to bid opening.

Example of a COMPLETED EIC UTILIZATION FORM

Initial Information:

1.Bidder Name:	ABC Construction, Inc.		
2.Project Title:	Downtown Restoration and Street Maintenance Project	**3.SPEC #:**	PW23-0011F
4.Base Bid – No Sales Tax (Must match Bid Proposal amount)	$359, 670. 00		

Column A. Certified Business Name	Column B. Business Cert. Type			Column C. Bid Item(s) Number(s) performed by the Certified Business(es)	Column D. Subcontract Amount If Material supplier, only 20% of the subcontract amount can be counted towards the EIC Requirements
	MBE	WBE	SBE/DBE		
Traffic ABC Representative Name & Contact # below: **Beth Bell – (253) 555-3333**	☒	☐	☒	**Bid Item #4- Pedestrian Traffic Control** What is the Certified Firm Project Role? Subcontractor ☒ Material Supplier (20%) ☐	**$30,000**
Survey 101, Inc. Representative Name & Contact # below: **John Doe – (253) 111-2233**	☒	☒	☐	**Bid Item #1 – Roadway Surveying** What is the Certified Firm Project Role? Subcontractor ☒ Material Supplier (20%) ☐	**$9,500.00**
Hello Manufacturer Representative Name & Contact # below: **Sam Jam – (253) 555-7899**	☒	☐	☒	**Bid Item #66- Green Durable Product** What is the Certified Firm Project Role? Subcontractor ☐ Material Supplier (20%) ☒	**$10,000** (In this example, Total subcontract amount is $10,000- Only 20% of total will be applied towards *EIC Reqs)
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%) ☐	

* **For EIC Requirements on this Project, refer to *EIC Requirements (EIC Reqs) Memo in the Bid Package**

INSTRUCTIONS TO BIDDERS FOR COMPLETING THE EQUITY IN CONTRACTING (EIC) UTILIZATION FORM

Complete Initial Information Section:

1. Enter Bidder firm name
2. Enter Project Title as it appears on the Specification
3. Enter Spec # as it appears on the Specification
4. State the Base Bid, which is the Bidder's bid amount, plus any alternates, additives, and deductive selected by the City. Do not include sales tax.

Complete Column "A": List all Certified Businesses with whom you will execute a subcontract if you are the successful Bidder. Provide a contact person for the Certified Business and the contact phone number.

Complete Column "B": State if the identified Certified Business is certified as an MBE, WBE, and/or SBE/DBE. **Note**: One Certified Business may count towards multiple requirements; check all applicable certifications

Complete Column "C": Specify the role of each listed Certified Business by checking Subcontractor or Material Supplier. **Note:** Each role counts differently towards EIC Utilization Requirements.

- Subcontractor: 100% of subcontract amount counts towards the EIC Utilization Requirement
- Material Supplier: 20% of supply expenditure amount counts towards the EIC Utilization Requirement
- **EXAMPLE** Material cost = $100,000 equates to ($100,000 X 20%) = $20,000 to be applied towards the EIC Requirements

Provide a description of the scope of work, services, or materials/supplies planned to be provided by each listed Certified Business. **Note:** The work description for each Certified Business listed on the EIC Utilization form must match the Certified Business's OMWBE Profile. This ensures that the Certified Business is able to perform the work scope or role for which they have been listed.

Complete Column "D": Enter the subcontract amount for each Certified Business listed. This amount is the price that Bidder and Certified Business have agreed upon **prior to submittal**.

ADDITIONAL IMPORTANT INSTRUCTIONS:

- Bidders must contact and solicit bids from Certified Businesses prior to listing them on the EIC Utilization Form. EIC staff will contact all listed Certified Businesses to verify that they have been contacted by Bidder regarding participation and subcontract amounts prior to being listed on this form. If the listed Certified Businesses have not been contacted prior to being listed on this form, Bidders will be deemed non-responsive.
- Include the completed EIC Utilization form with bid submittal. Incomplete, incorrect, or missing forms will render a bid nonresponsive.
- If awarded the Contract from the Specification bidders must execute subcontracts or supply agreements with Certified Businesses listed on the EIC Utilization Form. Failure to enter into an agreement with the Certified Businesses listed in Column A for at least the corresponding dollar amount listed in Column D, may result in penalties authorized by the Tacoma Municipal Code (TMC) 1.07.110.

Section 2

Post Award Documentation

(For Reference Only)

CONTRACT

This Contract is made and entered into effective as of [INSERT EFFECTIVE DATE Contract date should match date of award letter and month should be formally spelled out] ("Effective Date") by and between the City of Tacoma, a Municipal Corporation of the State of Washington ("City"), and [INSERT supplier name as it appears in Ariba, including dbas or trade names] ("Contractor").

That in consideration of the mutual promises and obligations hereinafter set forth the Parties hereto agree as follows:

I. Contractor shall fully execute and diligently and completely perform all work and provide all services and deliverables described herein and in the items listed below each of which are fully incorporated herein and which collectively are referred to as "Contract Documents":

1. Specification No. [INSERT Spec Number] and [Spec Title] together with all authorized addenda.
2. Contractor's submittal dated [Enter Submittal Date] submitted in response to Specification No. [Spec Number] and [Spec Title].
3. Describe with specific detail and list separately any other documents that will make up the contract (fee schedule, work schedule, authorized personnel, agreed upon exceptions, Exhibits etc.) or any other additional items mutually intended to be binding upon the parties.

[If there are no additional contract documents listed in #3 highlighted in the box above, delete the above highlighted sentence, and delete all of Section III below]

II. If federal funds will be used to fund, pay or reimburse all or a portion of the services or deliverables provided under the Contract, the terms and conditions set forth at Addendum A are incorporated into and made part of this Contract and CONTRACTOR will comply with all applicable provisions of Addendum A and with all applicable federal laws, regulations, executive orders, policies, procedures, and directives in the performance of this Contract.

If CONTRACTOR's receipt of federal funds under this Contract is as a sub-recipient, a fully completed Addendum B, "Sub-recipient Information and Requirements" is incorporated into and made part of this Contract.

If this Contract is funded in whole or in part by any Federally-assisted program of the U.S. Department of Transportation, the requirements of Appendices A and E of the USDOT Title VI Assurances, set forth in Addendum C are incorporated into and made part of this Contract.

III. In the event of a conflict or inconsistency between the terms and conditions contained in this document entitled Contract and any terms and conditions contained the above referenced Contract Documents the following order of precedence applies with the first listed item being the most controlling and the last listed item the least controlling:

1. Contract, inclusive of Addenda A and B and Insurance Requirements.
2. List remaining Contract Documents in applicable controlling order.

[If the only contract documents are the specification and submittal and insurance requirement **and no exceptions are taken in the submittal**, Section III should be deleted]

IV. The Contract terminates on [INSERT Termination Date], and may be renewed for [Renewal Term] [Complete as needed and as stated in the specification]

V. The total price to be paid by City for Contractor's full and complete performance hereunder, including during any authorized renewal terms, may not exceed:
$[INSERT TOTAL COMPENSATION NOT TO EXCEED AMOUNT], plus any applicable taxes. [If Contract is being used as Citywide, no NTE, but individual purchases of $500k or more need governing body approval]

VI. Contractor agrees to accept as full payment hereunder the amounts specified herein and in Contract Documents, and the City agrees to make payments at the times and in the manner and upon the terms

and conditions specified. Except as may be otherwise provided herein or in Contract Documents Contractor shall provide and bear the expense of all equipment, work and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work and providing the services and deliverables required by this Contract.

VII. The City's preferred method of payment is by ePayables (Payment Plus), followed by credit card (aka procurement card), then Electronic Funds Transfer (EFT) by Automated Clearing House (ACH), then check or other cash equivalent. CONTRACTOR may be required to have the capability of accepting the City's ePayables or credit card methods of payment. The City, in its sole discretion, will determine the method of payment for this Contract.

VIII. Failure by City to identify a deficiency in the insurance documentation provided by Contractor or failure of City to demand verification of coverage or compliance by Contractor with the insurance requirements contained in the Contract Documents shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

IX. Contractor shall comply with all federal, state, municipal, and/or local laws and regulations in the performance of all terms and conditions of the Contract. Contractor shall be solely responsible for all violations of the law from any cause in connection with its performance of work under the Contract.

X. Contractor and for its heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the requirements contained herein and in Contract Documents.

It is further provided that no liability shall attach to City by reason of entering into this Contract, except as expressly provided herein.

IN WITNESS WHEREOF, the Parties hereto have accepted and executed this Contract, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable. The undersigned Contractor representative, by signature below, represents and warrants they are duly authorized to execute this legally binding Contract for and on behalf of Contractor and further represents and warrants that Contractor is not suspended, debarred, or otherwise disqualified under federal, state, or local law from participating in this Contract.

CITY OF TACOMA:	CONTRACTOR:
Signature:	Signature:
Name:	Name:
Title:	Title:

(City of Tacoma use only - blank lines are intentional)

Director of Finance: _____

Deputy/City Attorney (approved as to form): _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

ADDENDUM A
FEDERAL FUNDING

1. **Termination for Breach**
   CITY may terminate this Contract in the event of any material breach of any of the terms and conditions of this Contract if CONTRACTOR's breach continues in effect after written notice of breach and 30 days to cure such breach and fails to cure such breach.

2. **Prevailing Wages**
   A. If federal, state, local, or any applicable law requires CONTRACTOR to pay prevailing wages in connection with this Contract, and CONTRACTOR is so notified by the CITY, then CONTRACTOR shall pay applicable prevailing wages and otherwise comply with the Washington State Prevailing Wage Act (RCW 39.12) in the performance of this Contract.

   B. If applicable, a Schedule of Prevailing Wage Rates and/or the current prevailing wage determination made by the Secretary of Labor for the locality or localities where the Contract will be performed is made of part of the Contract by this reference. If prevailing wages apply to the Contract, CONTRACTOR and its subcontractors shall:

      i. Be bound by and perform all transactions regarding the Contract relating to prevailing wages and the usual fringe benefits in compliance with the provisions of Chapter 39.12 RCW, as amended, the Washington State Prevailing Wage Act and/or the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable, including the federal requirement to pay wages not less than once a week.

      ii. Ensure that no worker, laborer or mechanic employed in the performance of any part of the Contract shall be paid less than the prevailing rate of wage specified on that Schedule and/or specified in a wage determination made by the Secretary of Labor (unless specifically preempted by federal law, the higher of the Washington state prevailing wage or federal Davis-Bacon rate of wage must be paid.

      iii. Immediately upon award of the Contract, contact the Department of Labor and Industries, Prevailing Wages section, Olympia, Washington and/or the federal Department of Labor, to obtain full information, forms and procedures relating to these matters. Per such procedures, a Statement of Intent to Pay Prevailing Wages and/or other or additional documentation required by applicable federal law, must be submitted by CONTRACTOR and its subcontractors to the CITY, in the manner requested by the CITY, prior to any payment by the CITY hereunder, and an Affidavit of Wages Paid and/or other or additional documentation required by federal law must be received or verified by the CITY prior to final Contract payment.

3. **COPELAND ANTI-KICKBACK ACT**
   For Contracts subject to Davis Bacon Act the following clauses will be incorporated into the Contract:

   A. CONTRACTOR shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this Contract.

B. CONTRACTOR or subcontractor shall insert in any subcontracts the clause above and such other clauses federal agencies may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these Contract clauses.

C. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

4. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Contract, CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. If the CONTRACTOR does over $10,000 in business a year that is funded, paid or reimbursed with federal funds, CONTRACTOR will take specific and affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

A. Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

B. CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

C. CONTRACTOR will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

D. CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

E. CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

F. In the event of CONTRACTOR's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the CONTRACTOR may be declared ineligible for further federally funded contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. CONTRACTOR will include the portion of the sentence immediately preceding paragraph (A) and the provisions of paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. CONTRACTOR will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

5. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

A. Overtime requirements. Neither CONTRACTOR or subcontractor contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (3)(A) of this section the CONTRACTOR and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such CONTRACTOR and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (3)(A) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (3)(A) of this section.

C. Withholding for unpaid wages and liquidated damages. The CITY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the CONTRACTOR or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such CONTRACTOR or sub-contractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (3)(B) of this section.

D. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (3)(A) through (D) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime CONTRACTOR shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (3)(A) through (D) of this section.

6. CLEAN AIR ACT

A. CONTRACTOR agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

B. CONTRACTOR agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

CONTRACTOR agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal funds.

7. FEDERAL WATER POLLUTION CONTROL ACT

A. CONTRACTOR agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

B. CONTRACTOR agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the appropriate federal agency.

C. CONTRACTOR agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal funding.

8. DEBARMENT AND SUSPENSION

A. This Contract is a Covered Transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the CONTRACTOR is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

B. CONTRACTOR must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000,

subpart C, and must include a requirement to comply with these regulations in any lower tier Covered Transaction it enters into.

C. This certification is a material representation of fact relied upon by the CITY. If it is later determined that the CONTRACTOR did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to CITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

D. CONTRACTOR agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C throughout the period of this Contract and to include a provision requiring such compliance in its lower tier covered transactions.

9. **CONTRACTOR** shall be required to comply with 2 CFR part 25, and obtain a unique entity identifier and/or be registered in the federal System for Award Management as appropriate.

10. BYRD ANTI-LOBBYING AMENDMENT

A. Contractors who apply or bid for an award of $100,000 or more shall file the required certification with CITY. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the CITY.

B. If applicable, CONTRACTOR's certification required by Appendix A to 44 CFR Part 18 contained at Addendum A-1 to this Contract is incorporated into this Contract.

11. PROCUREMENT OF RECOVERED MATERIALS

A. In the performance of this Contract, CONTRACTOR shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

i. Competitively within a timeframe providing for compliance with the contract performance schedule;

ii. Meeting contract performance requirements; or

iii. At a reasonable price.

B. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive- procurement-guideline-cpg-program.

C. CONTRACTOR also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

ADDENDUM A-1

APPENDIX A to 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Supplier, by Contract signature, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap.38, Administrative Remedies for
False Claims and Statements, apply to this certification and disclosure, if any.

ADDENDUM B—Sub-recipient information and requirements

Pursuant to 2 CFR 200.332(a)(1) Federal Award Identification

(i) **Agency Name (must match the name associated with its unique entity identifier)**		(ii) **Unique Entity Identifier** *(i.e., DUNS)*	**City of Tacoma Number for This Agreement**
(iii) **Federal Award Identification Number (FAIN)**	(iv) **Federal Award Date**	(v) **Federal Period of Performance Start and End Date**	(vi) **Federal Budget Period Start and End Date**
(vii) **Amount of Federal Funds *Obligated* to the agency *by this action*:** $	(viii) **Total Amount of Federal Funds *Obligated* to the agency**	(ix) **Total Amount of the Federal Award *Committed* to the agency** $	
(x) **Federal Award Project Description:**			
(xi) **Federal Awarding Agency:**	**Pass-Through Entity:** City of Tacoma	**Awarding Official Name and Contact Information:**	
(xii) **Assistance Listing Number and Name (the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listing number at time of disbursement)**			(xiii) **Identification of Whether the Award is R&D**
(xiv) **Indirect Cost Rate for the Federal Award**	**Award Payment Method (lump sum payment or reimbursement)**		

ADDENDUM C
Appendices A and E of the USDOT Title VI Assurances

APPENDIX A

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor ") agrees as follows:

1. **Compliance with Regulations**: The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, (***Title of Modal Operating Administration***), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination**: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment**: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor 's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports**: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the (***Title of Modal Operating Administration***) to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the (***Title of Modal Operating Administration***), as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance**: In the event of a Contractor 's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the (**Title of Modal Operating Administration**) may determine to be appropriate, including, but not limited to:

   a. withholding payments to the Contractor under the Contract until the Contractor complies; and/or
   b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions**: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the (***Title of Modal Operating Administration***) may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a Contractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor ") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and Contractor s, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

CITY OF TACOMA
INSURANCE REQUIREMENTS FOR CONTRACTS

This Insurance Requirements shall serve as an attachment and/or exhibit form to the Contract. The Agency entering a Contract with City of Tacoma, whether designated as a Supplier, Contractor, Vendor, Proposer, Bidder, Respondent, Seller, Merchant, Service Provider, or otherwise referred to as "Contractor".

1. GENERAL REQUIREMENTS

The following General Requirements apply to Contractor and to Subcontractor(s) performing services and/or activities pursuant to the terms of this Contract. Contractor acknowledges and agrees to the following insurance requirements:

1.1. Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the City of Tacoma.

1.2. Contractor shall keep in force during the entire term of the Contract, at no expense to the City of Tacoma, the insurance coverage and limits of liability listed below and for Thirty (30) calendar days after completion of all work required by the Contract, unless otherwise provided herein.

1.3. Liability insurance policies, except for Professional Liability and Workers' Compensation, shall:

- 1.3.1. Name the City of Tacoma and its officers, elected officials, employees, and agents as **additional insured**
- 1.3.2. Be considered primary and non-contributory for all claims with any insurance or self-insurance or limits of liability maintained by the City of Tacoma
- 1.3.3. Contain a "Waiver of Subrogation" clause in favor of City of Tacoma
- 1.3.4. Include a "Separation of Insureds" clause that applies coverage separately to each insured and additional insured
- 1.3.5. Name the "City of Tacoma" on certificates of insurance and endorsements and not a specific person or department
- 1.3.6. Be for both ongoing and completed operations using Insurance Services Office (ISO) form CG 20 10 04 13 and CG 20 37 04 13 or the equivalent
- 1.3.7. Be satisfied by a single primary limit or by a combination of a primary policy and a separate excess umbrella

1.4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements below. Verification of coverage shall include:

- 1.4.1. An ACORD certificate or equivalent
- 1.4.2. Copies of requested endorsements

1.5. Contractor shall provide to City of Tacoma Procurement & Payable Division, prior to the execution of the Contract, Certificate(s) of Insurance and endorsements from the insurer certifying the coverage of all insurance required herein. Contract or Permit number and the City of Tacoma Department must be shown on the Certificate of Insurance.

1.6. A renewal Certificate of Insurance shall be provided electronically prior to coverage expiration via email sent annually to coi@cityoftacoma.org.

1.7. Contractor shall send a notice of cancellation or non-renewal of this required insurance within Thirty (30) calendar days to coi@cityoftacoma.org.

1.8. “Claims-Made” coverages, except for pollution coverage, shall be maintained for a minimum of three years following the expiration or earlier termination of the Contract. Pollution coverage shall be maintained for six years following the expiration of the Contract. The retroactive date shall be prior to or coincident with the effective date of the Contract.

1.9. Each insurance policy must be written by companies licensed or authorized (or issued as surplus line by Washington surplus line broker) in the State of Washington pursuant to RCW 48 with an (A-) VII or higher in the A.M. Best key rating guide.

1.10. Contractor shall not allow any insurance to be cancelled, voided, suspended, or reduced in coverage/limits, or lapse during any term of this Contract. Otherwise, it shall constitute a material breach of the Contract.

1.11. Contractor shall be responsible for the payment of all premiums, deductibles and self-insured retentions, and shall indemnify and hold the City of Tacoma harmless to the extent such a deductible or self-insured retained limit may apply to the City of Tacoma as an additional insured. Any deductible or self-insured retained limits in excess of Twenty Five Thousand Dollars ($25,000) must be disclosed and approved by City of Tacoma Risk Manager and shown on the Certificate of Insurance.

1.12. City of Tacoma reserves the right to review insurance requirements during any term of the Contract and to require that Contractor make reasonable adjustments when the scope of services changes.

1.13. All costs for insurance are included in the initial Contract and no additional payment will be made by City of Tacoma to Contractor.

1.14. Insurance coverages specified in this Contract are not intended and will not be interpreted to limit the responsibility or liability of Contractor or Subcontractor(s).

1.15. Failure by City of Tacoma to identify a deficiency in the insurance documentation or to verify coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor’s obligation to maintain such insurance.

1.16. If Contractor is a government agency or self-insured for any of the above insurance requirements, Contractor shall be liable for any self-insured retention or deductible portion of any claim for which insurance is required. A certification of self-insurance shall be attached and incorporated by reference and shall constitute compliance with this Section.

2. SUBCONTRACTORS

It is Contractor's responsibility to ensure that each subcontractor obtain and maintain adequate liability insurance coverage that applies to the service provided. Contractor shall provide evidence of such insurance upon City of Tacoma's request. Failure of any subcontractor to comply with insurance requirements does not limit Contractor's liability or responsibility.

3. REQUIRED INSURANCE AND LIMITS

The insurance policies shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve Contractor from liability in excess of such limits.

3.1 Commercial General Liability Insurance

Contractor shall maintain Commercial General Liability Insurance policy with limits not less than One Million Dollars ($1,000,000) each occurrence and Two Million Dollars ($2,000,000) annual aggregate. This policy shall be written on ISO form CG 00 01 04 13 or its equivalent and shall include product liability especially when a Contract is solely for purchasing supplies. It includes Products and Completed Operations for three years following the completion of work related to performing construction services. It shall be endorsed to include: A per project aggregate policy limit (using ISO form CG 25 03 05 09 or equivalent endorsement)

3.2 Commercial (Business) Automobile Liability Insurance

Contractor shall maintain Commercial Automobile Liability policy with limits not less than One Million Dollars ($1,000,000) each accident for bodily injury and property damage and bodily injury and property damage coverage for owned (if any), non-owned, hired, or leased vehicles. Commercial Automobile Liability Insurance shall be written using ISO form CA 00 01 or equivalent. Contractor must also maintain MCS 90 and CA 99 48 endorsements or equivalent if "Pollutants" are to be transported unless in-transit Pollution coverage is covered under required Contractor's Pollution Liability Insurance.

3.3 Workers' Compensation

Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington, as well as any other similar coverage required for this work by applicable federal laws of other states. Contractor must comply with their domicile State Industrial Insurance laws if it is outside the State of Washington.

3.4 Employers' Liability Insurance

Contractor shall maintain Employers' Liability coverage with limits not less than One Million Dollars ($1,000,000) each employee, One Million Dollars ($1,000,000) each accident, and One Million Dollars ($1,000,000) policy limit.

3.5 Excess or Umbrella Liability Insurance

Contractor shall provide Excess or Umbrella Liability Insurance with limits not less than Three Million Dollars ($3,000,000) per occurrence and in the aggregate. This coverage shall apply, at a minimum, in excess of primary underlying Commercial General Liability, Employer's Liability, Pollution Liability, Marine General Liability, Protection and Indemnity, and Automobile Liability if required herein.

3.6 Pollution Liability Insurance

Contractor shall maintain Pollution Liability or Environmental Liability Insurance with limits not less than One Million Dollars ($1,000,000) each occurrence and Two Million Dollars ($2,000,000) in the aggregate. Coverage shall include investigation and defense costs for bodily injury and property damage, loss of use of damaged or destroyed property, Natural Resource Damage, and Hazardous Substance Removal. Such coverage shall provide both on-site and off-site cleanup costs, cover gradual and sudden pollution, and include in its scope of coverage the City of Tacoma damage claims for loss arising out of Contractor's work.

3.7 Installation Floater Insurance

Contractor shall maintain during the term of the Contract, at its own expense, Installation Floater Insurance covering Contractor's labor, materials, and equipment to be used for completion of the work performed under this Contract against all risks of direct physical loss, excluding earthquake and flood, for an amount equal to the full amount of the Contract improvements.

3.8 Other Insurance

Other insurance may be deemed appropriate to cover risks and exposures related to the scope of work or changes to the scope of work required by City of Tacoma. The costs of such necessary and appropriate Insurance coverage shall be borne by Contractor.

PERFORMANCE BOND
TO THE CITY OF TACOMA

Resolution No. [Enter Reso # Here]
Bond No.

That we, the undersigned, [Supplier Name]

as principal, and _____

as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of $[dollar value], plus any applicable tax , for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. TW23-0193F

Specification Title: MRP 2022-0037, Curran Rd, Bingham Ave. E. and 47th Ave. E.

Contract No. [Enter Contract # Here]

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

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

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

If the City shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgement, shall pay all costs and attorney's fees incurred by the City in enforcement of its rights hereunder. Venue for any action arising out of in in connection with this bond shall be in Pierce County, Washington.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

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

Principal: [Supplier name]

_____

By: _____

Surety:

_____

By: _____

Agent's Name: _____

Agent's Address: _____

[

PAYMENT BOND
TO THE CITY OF TACOMA

Resolution No. [Enter Reso # Here]
Bond No.

That we, the undersigned, [Supplier name]
as principal, and _____
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of,
$[dollar value], plus any applicable taxes , for the payment whereof Contractor and Surety bind themselves,
their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. TW23-0193F

Specification Title: MRP 2022-0037, Curran Rd, Bingham Ave. E. and 47th Ave. E.

Contract No. [Enter Contract # Here]

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

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

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

No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the City, and where required, the Contractor, in accordance with RCW 39.08.030.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.

If any claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the City as a result of such suit. Venue for any action arising out of or in connection with this bond shall be in Pierce County, WA.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of “Surety Companies Acceptable in Federal Bonds” as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

One original bond shall be executed and be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed power of attorney for the office executing on behalf of the surety.

Principal: [Supplier name]

_____

By: _____

Surety:

_____

By: _____

Agent's Name: _____

Agent's Address: _____

City of Tacoma Memorandum

Final Contract Verification

Contractor	Project Manager	Fax Number	
Street Address			
City	State	Zip	Date Sent
Specification Number (If applicable)	SAP Contract Number		
Project Name			
Final Amount $			

Please review the final payment amount listed above. The final contract amounts are:

Amount of Contract	$
Additions	$
Reductions	$
Retainage Held	$
Sales Tax	$
Total Final Amount	$

If acceptable, please sign below and fax to (253) 502-8694, and mail to Tacoma Water – Distribution Engineering. Contact this office to correct any discrepancies within five (5) business days of receipt.

Contractor's Certification

I, the undersigned, having first been duly sworn, certify that I am authorized to sign for the claimant; that in connection with the work performed and to the best of my knowledge no loan, gratuity or gift in any form whatsoever has been extended to any employee of the City of Tacoma nor have I rented or purchased any equipment or materials from any employee of the City of Tacoma.

I further certify that the attached final estimate is a true and correct statement showing all the monies due me from the City of Tacoma for work performed and material furnished under the above referenced SAP contract; that I have carefully examined said pre-final estimate and understand the same and that I hereby release the City of Tacoma from any and all claims of whatsoever nature which I may have, arising out of the performance of said contract, which are not set forth in said estimate.

X _____

Contractor Authorized Signature Required

_____

Type or Print Signature Name Date

City of Tacoma Memorandum

Subcontractor Verification

The Department of Labor and Industries requires a list of all subcontractors used to complete this contract, Contract Number .

Please list Subcontractors below:

Subcontractor's Name	UBI Number

X _____
Contractor Authorized Signature Required

_____
Type or Print Signature Name Date

City of Tacoma

City of Tacoma Contract No.: _____ Specification No.: _____

General Release to the City of Tacoma

The undersigned, named as the Contractor in a certain agreement between contractor name and the City of Tacoma, dated _____, 20___, hereby releases the City of Tacoma, its departmental officers, employees, and agents, from any and all claim or claims known or unknown, in any manner whatsoever, arising out of, or in connection with, or relating to said contract, excepting only the equity of the undersigned in the amount now retained by the City of Tacoma under said contract, to-wit: the sum of $_____.

Signed on this _____ day of _____, 20__.

_____
Contractor Name

_____
Contractor Authorized Signature

_____
Title

_____
Type or Print Signature Name

Section 3

Local Employment and Apprenticeship

(LEAP)

and
Equity in Contracting (EIC)

Requirements

City of Tacoma
Community and Economic Development Department
LEAP Office
747 Market Street, Room 900
Tacoma, WA 98402
(253) 591-5590
leap@cityoftacoma.org

LEAP
LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM
ABBREVIATED PROGRAM REQUIREMENTS

LEAP is a mandatory City of Tacoma program adopted to provide employment opportunities for City of Tacoma residents and residents of Economically Distressed Areas of the Tacoma Public Utilities Service Area. Based on the dollar amounts of projects, it requires Prime Contractors performing qualifying public works projects or service contracts ensure that a percentage of the total labor hours worked on the project are performed by LEAP-Qualified local employees and/or LEAP-Qualified apprentices approved by the Washington State Apprenticeship Council (SAC), residents of Tacoma, residents of surrounding Economically Distressed Areas, and/or TPU Service Areas (as outlined below). Compliance may be met through any combination LEAP-Qualified employees.

Prime Contractors may obtain further information by contacting the City of Tacoma's LEAP Coordinator, Deborah Trevorrow, at (253) 591-5590 or leap@cityoftacoma.org. The LEAP Coordinator can assist contractors in the recruitment of qualified entry-level workers to work on City of Tacoma Public Works projects. The LEAP Office is in the Tacoma Municipal Building, 747 Market Street, Rm 900.

LEAP PROGRAM REQUIREMENTS:

1. LOCAL EMPLOYMENT Requirement: The Prime Contractor is required to ensure that 15 percent of the total Labor Hours worked on the project are performed by residents of the City of Tacoma or Economically Distressed ZIP Codes for the following projects:

   a) Civil Projects over $250,000
   b) Building Projects over $750,000

2. APPRENTICE Requirement: The Contractor is required to ensure that an additional 15 percent of the total Labor Hours worked on any project over $1,000,000 are performed by Apprentices who are residents of the Tacoma Public Utilities Service Area. This is in addition to the Local Employment Goal.

3. SUBCONTRACTOR NOTIFICATION: Prime Contractors shall notify all Subcontractors of the LEAP Program requirement(s). Subcontractor labor hours may be utilized towards achievement of the LEAP Requirements. Owner/Operator hours may be used for the Local Employment Requirement.

4. **FAILURE TO MEET LEAP UTILIZATION REQUIREMENT: Contractors shall be assessed an amount for each hour that is not achieved. The amount per hour shall be based on the percent of the requirement that is met. All rounding shall be done down to the nearest whole percent. The amount per hour that shall be assessed.**

Percent of Requirements Met	Assessment per unmet hour
100%	$ 0.00
90% - 99%	$ 12.00
75% to 89%	$ 20.00
50% to 74%	$ 30.00
1% to 49%	$ 45.00
0%	$60.00

LEAP DOCUMENT SUBMITTALS:**

1. *LEAP EMPLOYEE VERIFICATION FORM*: upon request, the Contractor must provide the LEAP Office with a form for every person whom the contractor thinks will assist with attaining credit towards meeting the LEAP Utilization Requirements with at least one piece of verifying documentation. The LEAP Office staff will respond regarding whether or not the employee is LEAP-Qualified.

2. *WEEKLY CERTIFIED PAYROLL*: In LCP Tracker: the Prime and Subcontractors must submit weekly Certified Payrolls that include, employee name, address, social security number, craft/trade, class, hours worked on this job, rate of pay, and gross wages paid including benefits for this job.

3. *DEPARTMENT OF LABOR & INDUSTRIES (L&I)*: The Prime must enter the project in the L&I project site under the 'Tacoma, City of' account and notify the LEAP Office when this has been completed.

***WITHHOLDING PROGRESS PAYMENTS*: The LEAP Coordinator may withhold progress payments for failure to follow the above-outlined procedures

City of Tacoma
LEAP Office
747 Market Street, Room 900
Tacoma, WA 98402
(253) 591-5590 or leap@cityoftacoma.org

LEAP

Documents and Submittal Schedule

In the attached packet, you will find the LEAP documentation and forms that are required to be submitted by the Prime and Sub Contractors.

- **LEAP Abbreviated Program Requirements**: brief overview of LEAP Program requirements
- **LEAP Employee Verification Form**: to be submitted, **upon request**, for each employee who may be a LEAP-qualified employee
- **Tacoma Public Utilities Service Area Map and List, Economically Distressed ZIP Codes Map and List**: for your reference on LEAP-qualified zoning areas

In addition, the City of Tacoma will also require from the Prime Contractor and all its Subcontractors:

- **Weekly Certified Payrolls and No Work Performed Statements**: to be submitted via LCP Tracker weekly, biweekly or monthly.
- **Statement of Intent to Pay Prevailing Wages**: to be submitted prior to commencing work
- **Affidavit of Wages Paid**: to be submitted upon completion of each contractor's work
- **Document Verification**: provide required information when requested from LEAP Office

Please submit above documents as instructed by the LEAP Coordinator.

If you have any questions or request further information, please feel free to contact the City of Tacoma's LEAP Program at (253) 591-5590 or leap@cityoftacoma.org

CHAPTER 1.90
LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM

Sections:
1.90.010 Purpose.
1.90.020 Scope.
1.90.030 Definitions.
1.90.040 LEAP Requirements.
1.90.050 *Repealed.*
1.90.060 Effect of program on prime contractor/subcontractor relationship.
1.90.070 Apprentice utilization requirements – Bidding and contractual documents.
1.90.080 Enforcement.
1.90.090 Compliance with applicable law.
1.90.100 Review and reporting.
1.90.105 Authority
1.90.110 Interpretation.

1.90.010 Purpose.

The purpose of this Chapter is to establish a means of providing for the development of a trained and capable workforce possessing the skills necessary to fully participate in the construction trades.

(Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.020 Scope.

The provisions of this Chapter shall apply to all Public Works or Improvements and Service Contracts related to Public Works or Improvements funded in whole or in part with City funds or funds which the City expends or administers in accordance with the terms of a grant.

(Ord. 28970 Ex. A; passed Jun. 11, 2024: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.030 Definitions.

As used in this chapter, the following terms shall have the following meanings:

1.90.030.A

"Apprentice" shall mean a person enrolled in a course of training specific to a particular construction trade or craft, which training shall be approved by the Washington State Apprenticeship and Training Council established pursuant to RCW 49.04.010.

1.90.030.B

"Building Projects" shall mean all Public Works or Improvements having an Estimated Cost greater than $750,000.00, and for which a building permit must be issued pursuant to Chapter 1 of the current edition of the state building code (Uniform Building Code).

1.90.030.C

"City" shall mean all divisions and departments of the City of Tacoma, and all affiliated agencies, provided, however, that the Tacoma Community Redevelopment Authority shall not be included within this definition.

"Civil Projects" shall mean all Public Works or Improvements that are not defined as a "Building Project," provided that those projects having an Estimated Cost of less than $250,000.00 shall not be included in this definition.

"Contractor or Service Provider" means a person, corporation, partnership, or joint venture entering a contract with the City to construct a Public Work or Improvement or provide a service related to a Public Work or Improvement.

1.90.030.D

"Director" shall mean the Director of Community and Economic Development, or the Director's Designee.

1.90.030.E

"Economically Distressed ZIP Codes"* shall mean ZIP codes in the Tacoma Public Utilities Service Area that meet two out of three (2/3) of the criteria of:

1. High concentrations of residents living under 200% of the federal poverty line in terms of persons per acre (69th percentile)

2. High concentrations of unemployed people in terms of persons per acre (45th percentile)

3. High concentrations of people 25 years or older without a college degree in terms of persons per acre (75th percentile).

(*Current ZIP Codes are available on the Local Employment and Apprenticeship Program web page.)

"Electrical Utility" and "Water Utility" shall mean, respectively, the Light Division of the Department of Public Utilities of the City of Tacoma, and shall include the electrical services of that Division, and the Water Division of the Department of Public Utilities of the City of Tacoma.

"Estimated Cost" shall mean the anticipated cost of a Public Work or Improvement or related Service Contract, as determined by the City, based upon the expected costs of materials, supplies, equipment, and labor, but excluding taxes and contingency funds.

"Existing Employee" shall mean an employee whom the Contractor or Service Provider can demonstrate was actively employed by the Contractor or Service Provider for at least 1000 hours in the calendar year prior to bid opening plus one month following bid opening, and who was performing work in the construction trades.

1.90.030.L

"Labor Hours" shall mean the actual number of hours worked by workers receiving an hourly wage who are employed on the site of a Public Work or Improvement or related Service Contract, and who are subject to state or federal prevailing wage requirements. The term "Labor Hours" shall include hours performed by workers employed by the Contractor or Service Provider and all Subcontractors and shall include additional hours worked as a result of a contract or project adjustment or pursuant to an agreed upon change order. The term "Labor Hours" shall not include hours worked by workers who are not subject to the prevailing wage requirements set forth in either RCW 39.12 or the Davis-Bacon Act - 40 U.S.C. 276 (a).

"LEAP Coordinator" shall mean the City of Tacoma staff member who administers LEAP.

"LEAP Program" or "Program" shall mean the City of Tacoma's Local Employment and Apprenticeship Training Program, as described in this chapter.

"LEAP Regulations" or "Regulations" shall mean the rules and practices established in this document.

"LEAP Utilization Plan" shall mean the document submitted by the Contractor to the LEAP Coordinator which outlines how the associated LEAP requirements will be met.

1.90.030.P

"Priority Hire Resident" shall mean any resident within the Economically Distressed ZIP Codes.

"Project Engineer" shall mean the City employee who directly supervises the engineering or administration of a particular construction project subject to this chapter.

"Public Work or Improvement" shall have the same meaning as provided in Section 39.04.010 RCW, as that Section may now exist or hereafter be amended.

1.90.030.R

"Resident of Tacoma" shall mean any person who continues to occupy a dwelling within the boundaries of the City of Tacoma, has a present intent to continue residency within the boundaries of the City, and who demonstrates the genuineness of that intent by producing evidence that the person's presence is more than merely transitory in nature.

1.90.030.S

"Service Area - Electrical" or "Electrical Service Area" shall mean that area served with retail sales by the Electrical Utility of the City of Tacoma at the time a bid is published by the Electrical Utility for a Public Work or Improvement or related Service Contract to be performed primarily for the Electrical Utility.

"Service Area - Water" or "Water Service Area" shall mean that area served with retail sales by the Water Utility of the City of Tacoma at the time a bid is published by the Water Utility for a Public Work or Improvement or related Service Contract to be performed primarily for the Water Utility.

"Service Contract" shall mean all City contracts relating to a Public Work or Improvement which utilize labor at a City site and which are not within the exceptions to nor defined as "Building Projects" or "Civil Projects."

"Subcontractor" means a person, corporation, partnership, or joint venture that has contracted with the Contractor or Service Provider to perform all or part of the work to construct a Public Work or Improvement or related Service Contract by a Contractor.

1.90.030.T

"Tacoma Public Utilities" means the City of Tacoma, Department of Public Utilities.

"Tacoma Public Utilities Service Area" shall mean every ZIP code listed by Tacoma Public Utilities as an area that either receives services or maintains infrastructure to provide services.

1.90.030.W

"Washington State Labor and Industries Prevailing Wage" shall mean the hourly wage, usual benefits and overtime, paid in the largest city in each county, to the majority of workers, laborers, and mechanics. Prevailing wages are established, by the Department of Labor & Industries, for each trade and occupation employed in the performance of public work. They are established separately for each county and are reflective of local wage conditions.

(Ord. 28970 Ex. A; passed Jun. 11, 2024: Ord. 28520 Ex. A; passed Jul. 17, 2018: Ord. 28147 Ex. B; passed May 7, 2013: Ord. 28110 Ex. C; passed Dec. 4, 2012: Ord. 27815 Ex. A; passed Jun. 30, 2009: Ord. 27368 § 1; passed Jun. 21, 2005: Ord. 26698 § 1; passed Sept. 12, 2000: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.040 LEAP Requirements.

A. Utilization Requirements.

1. All Contractors constructing Civil Projects or Building Projects, and all Service Providers involved with the construction of a Public Work or Improvement, shall ensure that at least 15 percent of the total Labor Hours worked on the Project are performed by persons having their residence within the boundaries of the City of Tacoma or Economically Distressed ZIP Codes, whether or not any such person is an Apprentice.

a. The thresholds for this section shall be $250,000.00 for Civil Projects and $750,000.00 for Building Projects.

2. Fifteen percent (15%) of the Total Labor Hours on contracts above one-million dollars ($1,000,000.00) shall have work performed by Apprentices who are residents of the Tacoma Public Utilities Service Area consistent with RCW 39.04.320(1)(a), subject to waiver based on exceptions as specified in RCW 39.04.320(2)(a), (b), and (c).

3. Labor Hours performed by non-residents of the State of Washington will be deducted from a project's total Labor Hours for purposes of determining compliance with the requirements of this chapter.

4. All Contractors and Service Providers shall submit a LEAP Utilization Plan as provided for in the regulations adopted under this chapter, and shall meet with the LEAP Coordinator to review said Plan prior to being issued a Notice to Proceed. Failure to submit a LEAP Utilization Plan may be grounds for the City to withhold remittance of a progress payment until such Plan is received from the responsible Contractor or Provider. A meeting with the LEAP Coordinator prior to issuance of a Notice to Proceed shall be excused only when the LEAP Coordinator is unavailable to meet prior to the scheduled date for issuance of the Notice to Proceed and the Contractor and the LEAP Coordinator have otherwise scheduled a meeting for the coordinator to review the Contractor's or Provider's plan.

The Contractor or Service Provider shall be responsible for meeting the LEAP utilization goal requirements of the contract, including all amendments and change orders thereto, and shall be responsible for overall compliance for all hours worked by Subcontractors. To the extent possible, the Contractor or Service Provider shall recruit Apprentices from multiple trades or crafts.

B. Failure to Meet Utilization Requirements.

1. Contracts for the construction of Building projects or Civil projects and Service Contracts shall provide that Contractors or Service Providers failing to meet the LEAP utilization requirements shall be assessed an amount for each hour that is not

achieved. The amount per hour shall be based on the extent the Contractor or Service Provider met its requirements. The amount per hour that shall be assessed shall be as follows:

Percent of Requirements Met	Assessment per unmet hour
100%	$ 0.00
90% - 99%	$ 12.00
75% to 89%	$ 20.00
50% to 74%	$ 30.00
1% to 49%	$ 45.00
0%	$60.00

When determining the percent of requirements that are met, all rounding shall be down to the nearest whole percent. No penalty shall be waived by the City unless it is determined by the Director to be in the best interests of the City, which determination shall be made after consultation with the LEAP Coordinator.

2. Deposit of Assessments. All assessments imposed pursuant to this section shall be deposited into a separate account and utilized to support the City's pre-apprenticeship and training programs. The policies and regulations adopted by the City Manager and Director of Utilities pursuant to this chapter shall address issues pertaining to a Contractor's existing workforce. Contributions need not be made for Labor Hours that have been adjusted in accordance with Section 1.90.040(E).

C. LEAP Reports.

Notwithstanding the provisions of TMC 1.90.100, the LEAP Coordinator shall, not less than annually, publish a LEAP report setting forth Contractor compliance with this chapter. Said report shall include information on all contracts and all Contractors to which this chapter applies, and shall detail the level and nature of LEAP participation by contract and by Contractor, The LEAP Coordinator's LEAP report may include such other information as may be helpful to assuring fair and accurate representation of the contracts, Contractors or projects covered in the report. The LEAP Coordinator's LEAP reports may be considered by the Board of Contracts and Awards in its determinations as to bidder responsibility.

D. LEAP Requirement Adjustments.

1. LEAP utilization requirements may be adjusted prior to bid opening and/or as a result of a contract amendment or change order on a Building Project, Civil Project, or Service Contract.

a. If LEAP utilization requirements are adjusted prior to bid opening, they shall be set forth in the bid or Request For Proposal advertisement and specification documents or in an addendum timely provided to prospective bidders, provided that such adjustment shall be based upon a finding by the Project Engineer that the reasonable and necessary requirements of the contract render LEAP utilization unfeasible at the required levels. The Director shall concur with the Project Engineer's finding, provided that should the Project Engineer and the Director fail to reach agreement on the Project Engineer's finding, then in that circumstance the matter shall be referred to the City Manager or the Director of Utilities, as appropriate, for ultimate resolution. Notwithstanding any other provision of this chapter to the contrary, the decision of the City Manager or the Director of Utilities with regard to LEAP requirement adjustments may not be appealed.

b. If LEAP utilization requirements are adjusted due to contract amendment or change order, the amount of adjustment shall be consistent with the utilization requirements set forth in this chapter and shall be determined pursuant to regulations adopted pursuant to this chapter for administration of LEAP utilization requirement adjustments.

2. The methodology of determining the appropriate adjustments to LEAP utilization requirements shall be determined in consultation with the LEAP Advisory Committee, established pursuant to this ordinance for so long as the LEAP Advisory Committee remains in existence.

3. LEAP utilization requirements shall not apply to those portions of a project that are funded by sources other than (a) City funds, or (b) funds which the City expends or administers in accordance with the terms of a grant to the City, provided that the Project Engineer shall notify the LEAP Coordinator of such non-application prior to bid advertisement. For the purposes of this paragraph, credits extended by another entity for the purpose of providing project funding shall not be considered to be City funds.

E. Utilization - Electrical Projects Outside Electrical Service Area.

Civil Projects or Building Projects that are constructed primarily for the benefit or use by the City's Electrical Utility, which are wholly situated outside the Electrical Service Area, and for which the estimated cost is less than $1,000,000.00, are exempt from the requirements of this chapter.

F. Utilization - Water Projects Outside Water Service Area.

Civil Projects or Building Projects that are constructed primarily for the benefit or use by the City's water utility, which are wholly situated outside the Water Service Area, and for which the estimated cost is less than $1,000,000.00 are exempt from the requirements of this chapter.

G. Utilization - Projects Outside Tacoma Public Utilities Service Area.

Civil Projects or Building Projects that are constructed primarily for the benefit or use by Tacoma Public Utilities, which are wholly situated outside the retail service area of the Tacoma Public Utilities Service Area, and for which the estimated cost is less than $1,000,000.00 are exempt from the requirements of this chapter. Projects wholly situated outside the Tacoma Public Utilities Service Area, and for which the estimated cost is more than $1,000,000.00, shall be exempt from 15% utilization requirement specified in subsection A1. of this section. The 15% utilization requirement specified in subsection A2. of this section may be met if project work is performed by Apprentices who are enrolled in a course of training specific to a particular construction trade or craft, provided such training has been approved by the Washington State Apprenticeship and Training Council in accordance with Chapter 49.04, RCW.

H. Emergency.

This chapter shall not apply in the event of an Emergency. For the purposes of this section, an "Emergency" means unforeseen circumstances beyond the control of the City that either: (a) present a real, immediate threat to the proper performance of essential functions; or (b) will likely result in material loss or damage to property, bodily injury, or loss of life if immediate action is not taken.

I. Conflict with State or Federal Requirements.

If any part of this chapter is found to be in conflict with federal or state requirements which are a prescribed condition to the allocation of federal or state funds to the City, then the conflicting part of this chapter is inoperative solely to the extent of the conflict and with respect to the City departments directly affected. This provision does not affect the operation of the remainder of this chapter. Administrative rules or regulations adopted under this chapter shall meet federal and state requirements which are a necessary condition to the receipt of federal or state funds by the City.

(Ord. 28970 Ex. A; passed Jun. 11, 2024: Ord. 28520 Ex. A; passed Jul. 17, 2018: Ord. 28147 Ex. B; passed May 7, 2013: Ord. 27815 Ex. A; passed Jun. 30, 2009: Ord. 27368 § 2; passed Jun. 21, 2005: Ord. 26992 § 1; passed Oct. 15, 2002: Ord. 26698 § 2; passed Sept. 12, 2000: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.050 *Repealed by Ord. 27368.* Good faith efforts.

(Ord. 27368 § 3; passed Jun. 21, 2005: Ord. 26698 § 3; passed Sept. 12, 2000: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.060 Effect of program on prime contractor/service provider - subcontractor relationship.

The LEAP Program shall not be construed so as to modify or interfere with any relationship between any Contractor or Service Provider and Subcontractor. The LEAP Program shall not grant the City any authority to control the manner or method of accomplishing any construction work that is additional to any authority retained by the City in a Public Works contract.

(Ord. 26698 § 4; passed Sept. 12, 2000: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.070 Apprentice utilization requirements – Bidding and contractual documents.

All packages of bid documents for every Building Project and every Civil Project shall incorporate provisions satisfactory to the City Attorney so as to allow enforcement of the provisions contained in this Chapter. Such contractual provisions may include liquidated damages, calculated to reimburse the City for the Contractor's breach of these performance requirements, which shall be published with the City's call for bids.

(Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.080 Enforcement.

A. The LEAP Coordinator shall review the Contractor's or Service Provider's and all Subcontractor's employment practices during the performance of the work for compliance with LEAP Program requirements. On-site visits may be conducted as necessary to verify compliance with the requirements of the LEAP Program. The Contractor, Service Provider, or Subcontractors shall not deny to the City the right to interview its employees, provided that the LEAP Coordinator shall make reasonable efforts to coordinate employee interviews with employers.

B. Any knowing failure or refusal to cooperate in compliance monitoring may disqualify the defaulting Contractor, Service Provider, or Subcontractor from eligibility for other City contracts.

C. The making of any material misrepresentation may disqualify the defaulting Contractor, Service Provider, or Subcontractor from eligibility for other City contracts.

D. Any action by the City, its officers and employees, under the provisions of this Chapter may be reviewed by the Hearing Examiner upon written application of the party so affected. Application shall be made within twenty (20) days of the date of the action upon which the appeal is based, and provided to the City by certified mail or by personal service. Any action taken by the Hearing Examiner may be appealed pursuant to Hearing Examiner code, TMC Chapter 1.23.

(Ord. 28970 Ex. A; passed Jun. 11, 2024: Ord. 26698 § 5; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.090 Compliance with applicable law.

Nothing in this Chapter shall excuse a Prime Contractor, Service Provider, or Subcontractor from complying with all relevant federal, state, and local laws.

(Ord. 26698 § 6; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.100 Review and reporting.

The City Manager and Director of Utilities shall review the Program on or before January 1, 2000, and every two (2) years thereafter, and shall report to the City Council and Public Utility Board the Manager's and LEAP Coordinator's findings, conclusions, and recommendations as to the continued need for the Program, and any revisions thereto that should be considered by the Council and Board.

(Ord. 28970 Ex. A; passed Jun. 11, 2024: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.105 Authority.

The City Manager and the Director of Utilities shall have authority to jointly adopt policies and regulations consistent with this chapter to implement the LEAP program.

(Ord. 26698 § 7; passed Sept. 12, 2000: Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.110 Interpretation.

This Chapter shall not be interpreted or construed so as to conflict with any state or federal law, nor shall this Chapter be enforced such that enforcement results in the violation of any applicable judicial order.

(Ord. 26301 § 1; passed Oct. 6, 1998)

LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP)

The LEAP office enforces post-award mandatory requirements. Bidders do not have to submit any information in the bid submittal package to be in compliance with LEAP.

Post-award:

- ***Provide information to the LEAP Office (see LEAP contact information below).*** Provide the name and email address of the person(s) who will oversee LEAP utilization and payrolls.
- ***LEAP Employee Verification.*** Proof of residency may be requested for employees who may be LEAP-Qualified and may be able to help meet the LEAP Requirements.
- ***All certified payrolls***. Prime contractor is responsible for ensuring their, and their subcontractors', payrolls are submitted via LCP Tracker. By submitting payrolls in LCP Tracker before the Labor & Industry's website, you can reduce data entry.

The City of Tacoma's LEAP office enforces varying workforce utilization requirements on City projects based on certain monetary thresholds and project locations.

Local Employment Utilization Requirement - the Prime Contractor performing a qualifying public work or improvement must ensure that 15 percent of the total labor hours worked on the project are performed by journey or apprentice level craft workers who are residents of the City of Tacoma or Economically Distressed Zip Codes.

Apprenticeship Utilization Requirement – the Prime Contractor performing a qualifying public work or improvement must ensure that 15 percent of the total labor hours worked on the project are performed by apprentices who are residents of the Tacoma Public Utilities Service Area.

***Exceptions:** If the project is located outside of the retail service area of the Tacoma Public Utilities Service Area, then Apprentices may come from the county in which the work is performed.

This project is subject to the:

1. **15% Local Employment Utilization Requirement**
2. **15% Apprentice Utilization Requirement**

LEAP staff can assist contractors in identifying qualified City of Tacoma residents, Economically Distressed Area residents, and Apprentices. Contractors may obtain further information by contacting the City's LEAP Office at (253) 591-5590. The LEAP Office is located in the Tacoma Municipal Building, 747 Market Street, Room 900, Tacoma, WA 98402. www.cityoftacoma.org/leap

Revised 02-2022 DT

City of Tacoma LEAP Office
747 Market Street, Room 900
Tacoma, WA 98402
(253) 591-5590 or leap@cityoftacoma.org
www.cityoftacoma.org/leap

LEAP EMPLOYEE VERIFICATION FORM

Submit upon request from LEAP Office

Contractor/Sub:_____ Specification Number:_____

Project Description:_____

Employee Name:_____ Craft:_____

Ethnic Group (*optional*): ☐ Asian/Pac Isl. ☐ Black ☐ Hispanic ☐ Native American ☐ White ☐ Other

Gender (*optional*): ☐ MALE ☐ FEMALE

Complete Physical Address (No PO Boxes):_____

City:_____ State:_____ Zip:_____Telephone:_____ Date of Hire:_____

Apprenticeship County:_____ Apprentice Registration I.D. *(if applicable):*_____

Age:_____ Copy of DD-214:_____

*********Please fill out entire form for tracking LEAP performance*********

LEAP qualified employee categories: (check all that apply and provide evidence for each check)

_____ a. Resident (journey level or certified apprentice) within the geographic boundaries of the City of Tacoma

_____ b. Resident (journey level or certified apprentice) within Economically Distressed ZIP Codes of the Tacoma Public Utilities Service Area

_____ c. WA State Approved Apprentice living in the Tacoma Public Utilities Service Area (Only valid for projects over $1,000,000)

_____ d. WA State Approved Apprentice *(Only valid for contracts where 100% of work is performed outside of Pierce County)

Signature of Employee:_____ Date:_____

Contractor Representative:_____ Date:_____

LEAP EMPLOYEE VERIFICATION FORM

To be Completed by Contractor or Subcontractor

Please attach a legible copy of one or more of the following document(s) showing the address of residence as proof of local (Tacoma) and/or Economically Distressed Area and/or TPU Service Areas residency. For youth, see first line and for veteran status, see second line.

.....

_____ Driver's License with current address

_____ Utility Bill/Phone Bill/Cell Bill/Cable Bill with current address

_____ Copy of current tax form W-4

_____ Rental Agreement/Lease (residential)

_____ Computer Printout From Other Government Agencies

_____ Property Tax Records

_____ Apprentice Registration I.D.

_____ Food Stamp Award Letter

_____ Housing Authority Verification

_____ Insurance Policy (Residence/Auto)

*Any of the above must have a complete physical address verified by the www.govme.org website.

No PO Boxes

Contractor Representative:_____ Date:_____

Title:_____

LOCAL EMPLOYEE REQUIREMENT ONLY

City of Tacoma

(Journeyman AND Apprentice)

98402	98418
98403	98421
98404	98422
98405	98444
98406	98445
98407	98465
98408	98466
98409	98467

Check addresses here:

https://tacoma.maps.arcgis.com/apps/webappviewer/index.html?id=38107f6b096a4b8280c0d9b8a05bc7eb

LOCAL EMPLOYEE REQUIREMENT ONLY

Economically Distressed Areas

(Journeyman AND Apprentice)

Zip Code	200% Pov	Unemployed	25+ College	Area
98002	Y		Y	Auburn
98304	Y		Y	Ashford/Rainier
98323	Y	Y	Y	Carbonado
98328	Y		Y	Eatonville
98330	Y		Y	Elbe
98336	Y		Y	Glenoma
98349	Y	Y		Lakebay
98355		Y	Y	Mineral
98356	Y	Y	Y	Morton
98377	Y	Y	Y	Randle
98385		Y	Y	South Prairie
98402	Y	Y		Downtown
98403	Y	Y		Stadium/St. Helens
98404	Y	Y		Eastside
98405	Y	Y		Hilltop/Central
98408	Y		Y	South End
98409	Y	Y		South Tacoma
98418	Y		Y	Lincoln/South End
98421	Y	Y	Y	Port
98439	Y	Y		McChord AFB
98444	Y	Y		Parkland
98445	Y		Y	Midland
98499	Y	Y		Lakewood
98520	Y	Y	Y	Aberdeen
98528	Y		Y	Belfair
98533		Y	Y	Cinebar
98546	Y	Y	Y	Grapeview
98548	Y	Y	Y	Hoodsport
98563	Y	Y	Y	Montesano
98564	Y	Y	Y	Mossyrock
98575	Y		Y	Quinault
98580	Y		Y	Roy
98582	Y		Y	Salkum
98584	Y		Y	Shelton
98591	Y		Y	Toledo
98592		Y	Y	Union
98925	Y		Y	Easton

ONLY FOR APPRENTICE UTILIZATION REQUIREMENT
Tacoma Public Utilities Infrastructure and Service Area (Apprentices)

98001	Auburn
98002	Auburn
98003	Federal Way
98010	Black Diamond
98022	Enumclaw
98023	Federal Way
98030	Kent
98032	Kent
98038	Maple Valley
98042	Kent
98045	North Bend
98051	Ravensdale
98070	Vashon
98092	Auburn
98198	Seattle
98304	Ashford
98321	Buckley
98323	Carbonado
98327	DuPont
98328	Eatonville
98329	Gig Harbor
98330	Elbe
98332	Gig Harbor
98333	Fox Island
98335	Gig Harbor
98336	Glenoma
98338	Graham
98349	Lakebay
98354	Milton
98355	Mineral

98356	Morton
98360	Orting
98371	Puyallup
98372	Puyallup
98373	Puyallup
98374	Puyallup
98375	Puyallup
98377	Randle
98385	South Prairie
98387	Spanaway
98388	Spanaway
98390	Sumner
98391	Bonney
98402	Tacoma
98403	Tacoma
98404	Tacoma
98405	Tacoma
98406	Tacoma
98407	Tacoma
98408	Tacoma
98409	Tacoma
98416	UPS
98418	Tacoma
98421	Tacoma
98422	Tacoma
98424	Tacoma
98430	Camp Murray
98433	Tacoma
98438	McChord
98439	Lakewood

98443	Tacoma
98444	Tacoma
98445	Tacoma
98446	Tacoma
98447	PLU
98465	Tacoma
98466	Tacoma
98467	University Place
98498	Lakewood
98499	Lakewood
98520	Aberdeen
98524	Allyn
98528	Belfair
98533	Cinebar
98546	Grapeview
98548	Hoodsport
98555	Lilliwaup
98563	Montesano
98564	Mossyrock
98575	Quinault
98580	Roy
98582	Salkum
98584	Shelton
98585	Silver Creek
98591	Toledo
98592	Union
98597	Yelm
98925	Easton

EQUITY IN CONTRACTING (EIC) REQUIREMENTS MEMO

CCD/EIC: WTR-00560-15-01
Date of Record: 10/24/2024
Project Spec#: TW23-0193F
Project Title: MRP 2022-0037

EQUITY IN CONTRACTING REQUIREMENTS

Minority Business Enterprise Requirement	Women Business Enterprise Requirement	Small Business Enterprise Requirement
20%	**16%**	**20%**

All bidders must complete and submit with their bid the EIC Utilization form contained in the bid submittal package.

A list of EIC-eligible companies is available at **www.omwbe.wa.gov**[1]

IMPORTANT NOTE:
It is the bidder's responsibility to ensure that the subcontractor(s) listed on the EIC Utilization Form are currently certified by the State of Washington's Office of Minority and Women Business Enterprises (OMWBE) at the time of bid opening. This may be verified by contacting the EIC Office at (253) 344-6632 between 8 AM and 5 PM, Monday through Friday or the OMWBE Office at (866) 208-1064. Please refer to the City of Tacoma EIC code.

MATERIAL MISSTATEMENTS CONCERNING COMPLETED ACTIONS BY THE BIDDER IN ANY SWORN STATEMENT OR FAILURE TO MEET COMMITMENTS AS INDICATED ON THE EIC UTILIZATION FORM MAY RENDER THE BIDDER IN DEFAULT OF CITY ORDINANCE 1.07

[1] For the OMWBE list, be sure to look for businesses in King, Kitsap, Lewis, Mason, Pierce, Snohomish, Thurston, or any counties adjacent to the county in which the work is performed per 1.07.050(2)(b-c). Contact the EIC Office if you have any questions.

City of Tacoma
Community & Economic Development
747 Market Street, Rm 900
Tacoma WA 98402

CITY OF TACOMA EQUITY IN CONTRACTING (EIC) PROGRAM

Bidders Special Instructions

As part of the City of Tacoma's ongoing work to address past disparities and to increase the City's contracting with and utilization of historically underutilized businesses, the Equity in Contracting (EIC) Program places requirements on City contracts for utilization of businesses certified by the Washington State Office of Minority and Women's Business Enterprise (OMWBE) and approved by the Equity in Contracting Program ("Certified Businesses"). The EIC Program also provides guidance and technical assistance to Certified Businesses who are interested in providing supplies, services and public works to the City of Tacoma.

The EIC Program requirements are contained in Tacoma Municipal Code Chapter 1.07.

Contractors bidding on City of Tacoma projects are required to meet the stated EIC requirements. Bids will be evaluated on an individual basis to determine EIC compliance. **A contractor who fails to meet the stated EIC requirements will be considered non-responsible.** Bidders are also subject to the City's Equal Employment Opportunity policies prohibiting discrimination.

The stated EIC requirements may be met by the contractor or by identified subcontractors. All EIC Requirements may be met by using MBEs, WBEs, DBEs or SBEs from the OMWBE certified list (OMWBE website). It is the bidder's responsibility to ensure that their firm or identified subcontractors are certified by OMWBE and approved by the City of Tacoma EIC Program **at the time of bid submittal**. Business certification may be verified by contacting the EIC Office*.

For the OMWBE list, be sure to look for businesses in Pierce, King, Lewis, Mason, Grays Harbor, Thurston, or any counties adjacent to the county in which the work is performed per 1.07.050(2)(b-c). Contact the EIC Office if you have any questions.*

The Equity in Contracting (EIC) forms included in these bid documents must be fully completed (including attachments) and included with bid submittals. Failure to include the required forms will result in the submittal being rejected as nonresponsive.

Post-Award Important Information

For all contracts that have requirements related to the EIC policy, the City of Tacoma is utilizing a cloud-based software system:

B2Gnow - Contractors and subcontractors must report payment information in the B2Gnow System on a monthly basis. The EIC Staff will monitor/audit that retainage is paid by the prime contractor to the subcontractor(s) within 10 [working] days after the subcontractors' work is satisfactorily completed. This will be monitored/audited using the B2Gnow System.

The system is monitored/audited by EIC staff to ensure contract compliance, proactively identify potential issues, and track contract progress.

***EIC STAFF Contact Information**

For questions regarding Certifications, EIC Compliance and B2GNow support, contact EIC Staff:

- **Call EIC Office** at (253) 591-5630 or (253) 591-5826
- **Email EIC Office** at EICOffice@cityoftacoma.org

EQUITY IN CONTRACTING (EIC) UTILIZATION FORM

STOP! READ Instructions to Bidders/Proposers for completing EIC Utilization Form.

Failure to complete all sections of this form according to the instructions provided or failure to submit this form shall render the bid or proposal non-responsive. (If necessary, use additional forms to list the requirements of Columns A-D). City reserves the right to make minor, non-material corrections to completed Forms, such as to correct obvious data entry errors. No corrections will be made that alter the proposed Certified Business participation percentages and dollar amounts.

Please note: Certified Businesses MUST be certified at time of or prior to bid opening.

1.Bidder Name:			
2.Project Title:		**3.SPEC #:**	
4.Base Bid – No Sales Tax (Must match Bid Proposal amount)	**$**		

Column A. Certified Business Name	Column B. Business Cert. Type			Column C. Bid Item(s) Number(s) performed by the Certified Business(es)	Column D. Subcontract Amount If Material supplier, only 20% of the subcontract amount can be counted towards the EIC Requirements
	MBE	WBE	SBE/DBE		
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role Subcontractor ☐ Material Supplier (20%) ☐	
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%)☐	
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%) ☐	
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%) ☐	

*** For EIC Requirements on this Project, refer to *EIC Requirements (EIC Reqs) Memo in the Bid Package**

EQUITY IN CONTRACTING (EIC) UTILIZATION FORM

STOP! READ Instructions to Bidders/Proposers for completing EIC Utilization Form.

Failure to complete all sections of this form according to the instructions provided or failure to submit this form shall render the bid or proposal non-responsive. (If necessary, use additional forms to list the requirements of Columns A-D). City reserves the right to make minor, non-material corrections to completed Forms, such as to correct obvious data entry errors. No corrections will be made that alter the proposed Certified Business participation percentages and dollar amounts.

Please note: Certified Businesses MUST be certified at time of or prior to bid opening.

Example of a COMPLETED EIC UTILIZATION FORM

Initial Information:

1.Bidder Name:	ABC Construction, Inc.		
2.Project Title:	Downtown Restoration and Street Maintenance Project	**3.SPEC #:**	PW23-0011F
4.Base Bid – No Sales Tax (Must match Bid Proposal amount)	$359, 670. 00		

Column A. Certified Business Name	Column B. Business Cert. Type			Column C. Bid Item(s) Number(s) performed by the Certified Business(es)	Column D. Subcontract Amount If Material supplier, only 20% of the subcontract amount can be counted towards the EIC Requirements
	MBE	WBE	SBE/DBE		
Traffic ABC Representative Name & Contact # below: **Beth Bell – (253) 555-3333**	☒	☐	☒	**Bid Item #4- Pedestrian Traffic Control** What is the Certified Firm Project Role? Subcontractor ☒ Material Supplier (20%) ☐	**$30,000**
Survey 101, Inc. Representative Name & Contact # below: **John Doe – (253) 111-2233**	☒	☒	☐	**Bid Item #1 – Roadway Surveying** What is the Certified Firm Project Role? Subcontractor ☒ Material Supplier (20%) ☐	**$9,500.00**
Hello Manufacturer Representative Name & Contact # below: **Sam Jam – (253) 555-7899**	☒	☐	☒	**Bid Item #66- Green Durable Product** What is the Certified Firm Project Role? Subcontractor ☐ Material Supplier (20%) ☒	**$10,000** (In this example, Total subcontract amount is $10,000- Only 20% of total will be applied towards *EIC Reqs)
Representative Name & Contact # below:	☐	☐	☐	What is the Certified Firm Project Role: Subcontractor ☐ Material Supplier (20%) ☐	

* **For EIC Requirements on this Project, refer to *EIC Requirements (EIC Reqs) Memo in the Bid Package**

INSTRUCTIONS TO BIDDERS FOR COMPLETING THE EQUITY IN CONTRACTING (EIC) UTILIZATION FORM

Complete Initial Information Section:

1. Enter Bidder firm name
2. Enter Project Title as it appears on the Specification
3. Enter Spec # as it appears on the Specification
4. State the Base Bid, which is the Bidder's bid amount, plus any alternates, additives, and deductive selected by the City. Do not include sales tax.

Complete Column "A": List all Certified Businesses with whom you will execute a subcontract if you are the successful Bidder. Provide a contact person for the Certified Business and the contact phone number.

Complete Column "B": State if the identified Certified Business is certified as an MBE, WBE, and/or SBE/DBE. **Note**: One Certified Business may count towards multiple requirements; check all applicable certifications

Complete Column "C": Specify the role of each listed Certified Business by checking Subcontractor or Material Supplier. **Note:** Each role counts differently towards EIC Utilization Requirements.

- Subcontractor: 100% of subcontract amount counts towards the EIC Utilization Requirement
- Material Supplier: 20% of supply expenditure amount counts towards the EIC Utilization Requirement
- **EXAMPLE** Material cost = $100,000 equates to ($100,000 X 20%) = $20,000 to be applied towards the EIC Requirements

Provide a description of the scope of work, services, or materials/supplies planned to be provided by each listed Certified Business. **Note:** The work description for each Certified Business listed on the EIC Utilization form must match the Certified Business's OMWBE Profile. This ensures that the Certified Business is able to perform the work scope or role for which they have been listed.

Complete Column "D": Enter the subcontract amount for each Certified Business listed. This amount is the price that Bidder and Certified Business have agreed upon **prior to submittal**.

ADDITIONAL IMPORTANT INSTRUCTIONS:

- Bidders must contact and solicit bids from Certified Businesses prior to listing them on the EIC Utilization Form. EIC staff will contact all listed Certified Businesses to verify that they have been contacted by Bidder regarding participation and subcontract amounts prior to being listed on this form. If the listed Certified Businesses have not been contacted prior to being listed on this form, Bidders will be deemed non-responsive.
- Include the completed EIC Utilization form with bid submittal. Incomplete, incorrect, or missing forms will render a bid nonresponsive.
- If awarded the Contract from the Specification bidders must execute subcontracts or supply agreements with Certified Businesses listed on the EIC Utilization Form. Failure to enter into an agreement with the Certified Businesses listed in Column A for at least the corresponding dollar amount listed in Column D, may result in penalties authorized by the Tacoma Municipal Code (TMC) 1.07.110.

CITY OF TACOMA

EQUITY IN CONTRACTING (EIC) PROGRAM REGULATIONS

Contents

I. Introduction 3

II. Objectives, Applicability and Overall Annual EIC Goal 3

III. Definitions 4

IV. Exemptions or Exceptions to EIC Program Requirements 6

A. Contracts that are not competitively solicited by the City of Tacoma. 6

1. Emergency 6

2. Sole Source 7

3. Not Practicable to Bid 7

4. Direct Solicitation and Negotiation 7

5. Government or Cooperative Purchasing. 7

B. Lack of Certified Businesses 7

C. Public Works and Improvement Projects with a Value of $150,000 or Less 8

D. Documentation of Granted Exceptions 8

V. EIC Requirements for Contracts for Public Work 8

A. EIC Pre-Award Process 8

1. EIC Contract Requirements Set 8

B. EIC Bid Review Process 9

1. Review for Bidder Responsiveness 9

2. Review for Bidder Responsibility 10

3. Self-Performing Bidders 10

4. EIC Recommendation 10

VI. Post-Bid EIC Waiver Requests Process 10

VII. EIC Contract Monitoring and Compliance 11

A. Coordination between Project Delivery Team and Program 11

B. Utilization of B2Gnow System 11

C. B2Gnow Monitoring 12

D. Contractor Request for Certified Business Termination and Substitution 12

VIII. NON-COMPLIANCE: FINDING OF VIOLATION AND PENALTIES 15

A. Circumstances for finding a Contractor in Violation 15

B. Contractor Non-Compliance, Finding of Violation and Enforcement 16

IX. EIC Project Closeout Process 18

X. Certified Business Complaint Process 18

I. Introduction

Tacoma Municipal Code (TMC) Chapter 1.07 authorizes the City of Tacoma's Equity in Contracting (EIC) Program (Program) to address the historical underutilization and lack of participation of small, women and minority owned businesses in City contracts for supplies, services, and public works. TMC 1.07.040 authorizes the Community and Economic Development Department (CEDD) Director to adopt these administrative EIC Program Regulations (Regulations).

For questions, observations or recommendations related to these Regulations, please contact the EIC office at (253) 591-5826 or by email at EICoffice@cityoftacoma.org.

II. Objectives, Applicability and Overall Annual EIC Goal

The purpose of the EIC Program and of these Regulations is to advance the policy set forth in TMC 1.07.010: to "facilitate a substantial procurement, education, and mentorship program designed to promote equitable participation by historically underutilized businesses in the provision of supplies, services, and public works to the City." These Regulations are intended to aid and guide City staff, Certified Businesses, Contractors and Suppliers and other stakeholders, to ensure the Program is implemented clearly and consistently and to encourage, facilitate and assist the participation of Certified Businesses in City of Tacoma contracts.

The current annual EIC goal is 20%, which was reached by utilizing the City of Tacoma's most recent disparity study to determine the level of Certified Business participation in City Contracts expected in the absence of persistent effects of discrimination. The dollar value of all contracts awarded to or performed by Certified Businesses shall be counted toward the annual EIC goal. The EIC goal may be updated or changed in alignment with future disparity studies.

Currently the EIC Program is requiring participation by Certified Businesses only on contracts for public works. The Program is intended to apply to all City contracts for supplies, services, and public works (other than those contracts subject to exemption, exception, or waiver) and these Regulations will be updated as the City develops specific requirements and processes for Certified Business participation in contracts for supplies and services.

III. Definitions

Terms used in these Regulations shall have the following meanings unless defined differently in Tacoma Municipal Code Chapter 1.07, in which case the definition contained in TMC controls

"B2Gnow" is the system utilized by the City of Tacoma Equity in Contracting (EIC) Staff to track payments to Contractors and all Subcontractors on all Public Works and Improvements projects including Equity in Contracting (EIC) Requirements.

"Bid" means an offer submitted by a Respondent to furnish Supplies, Services, and/or Public Works in conformity with the Specifications and any other written terms and conditions included in a City request for such offer.

"Bidder" means an entity or individual who submits a Bid, Proposal or Quote. See also "Respondent."

"Certified Business" means an entity that has been certified as a Disadvantaged Business Enterprise ("DBE"), Small Business Enterprise ("SBE"), Minority Business Enterprise ("MBE"), Women Business Enterprise ("WBE"), or Minority and Women's Business Enterprise ("MWBE") by the Washington State Office of Minority and Women's Business Enterprise.

"City" means all Departments, Divisions, and agencies of the City of Tacoma.

"Change Order" means a reduction or change to the contracted scope of work potentially affecting the Equity in Contracting Requirements initially set on a project.

"Contract" means any type of legally binding agreement regardless of form or title that governs the terms and conditions for procurement and performance of Public Works and Improvements and/or Non-Public Works and Improvements, Supplies and Services.

"Contractor" or "Supplier" or "Bidder" means any Person that presents a Submittal to the City, enters into a Contract with the City, and/or performs all or any part of a Contract awarded by the City, for the provision of Public Works, or Non-Public Works and Improvements, Supplies or Services.

"Disparity Study" is a study that determines whether a government entity, either in the past or currently, engages in exclusionary practices in the solicitation and award of contracts to small, minority, women-owned, and disadvantaged business enterprises. The primary goal of the study is to assess, quantify, and evaluate the prevalence, significance (degree and weight) and scope of discrimination in the marketplace.

"Exception" or "Exemption" means the limited circumstances in which EIC Requirements do not apply or will not be applied to a Contract.

"EIC Manager" is the individual authorized by TMC to administer the Equity in Contracting Program.

"EIC Requirements" or **"Contract Requirements"** are the specified Requirements for Certified Business participation applied to a Contract using the EIC Requirements Setting Methodology.

"EIC Requirement Setting Methodology" is as defined in Appendix No. 1 to these Regulations.

"EIC Staff" means Equity in Contracting Program staff.

"Exception Request" means a request that no EIC requirements be applied to a Contract. See Appendix No. 3 to these Regulations.

"Goal" means the annual level of participation by Certified Businesses in City Contracts as established in The Tacoma Municipal Code TMC 1.07.020G, the Program Regulations, or as necessary to comply with applicable federal and state nondiscrimination laws and regulations.

"LCPtracker" is the system used by the Local Employment and Apprenticeship Program (LEAP) Staff to monitor compliance with LEAP workforce utilization requirements and prevailing wage law.

"Non-Public Works and Improvements" means procurement of and contracting for Supplies and/or Services not solicited as Public Works.

"Notice of physical completion" means all physical work is done and the contractor has left the site. However, there may still be some outstanding paperwork or documentation remaining.

"Notice of substantial completion" means all physical work is complete except for punch list items. Only minor incidental work remains, such as minor corrections or repairs.

"Person" means individuals, companies, corporations, partnerships, associations, cooperatives, any other legally recognized business entity, legal representative, trustee, or receivers.

"Program Manager" means the individual appointed by the City's Community and Economic Development Director to administer the Program and these Regulations.

"Program Regulations" or "Regulations" means these Regulations.

"Project Delivery Team" refers to the City of Tacoma personnel working on the project from the Department or Division awarding and administering the Contract.

"Proposal" means a written offer to furnish Supplies or Services in response to a Request for Proposals. This term may be further defined in the Purchasing Policy Manual and/or in competitive solicitations issued by the City.

"Public Works (or "Public Works and Improvements)" means all work, construction, alteration, repair, or improvement other than ordinary maintenance, executed at the cost of the City, or that is by law a lien or charge on any property therein, as is defined in RCW Chapter 39.04 and as may be hereinafter amended. This term includes all Supplies, materials, tools, and equipment to be furnished in accordance with the Contract for such work, construction, alteration, repair, or improvement.

"Responsive or Responsible Bidder" is as defined within the City of Tacoma Purchasing Policy.

"Quote" means a competitively solicited written offer to furnish Supplies or Services by a method of procurement that is less formalized than a Bid or a Proposal.

"Respondent" means any entity or Person that provides a Submittal in response to a Request for Bids, Request for Proposals, Request for Qualifications, Request for Quotes or other request for information, as such terms are defined in TMC Chapter 1.06 and in Purchasing Policy and Procedures.

"Requirements" means the level of required participation by Certified Businesses in City Contracts as established by TMC Chapter 1.07, the Program Regulations, or as necessary to comply with applicable federal and state nondiscrimination laws and regulations.

"Services" means non-Public Works and Improvements services and includes professional services, personal services, and purchased services, as such terms are defined in Chapter 1.06. TMC and in Purchasing Policy and Procedures.

"Specification" means the document and any subsequent addenda, including terms and conditions that describes the physical or functional characteristics, or the nature of the required Supplies, Services, or Public Works; commonly referred to as the Bid document or Bid Specification.

"Submittal" means Bids, Proposals, Quotes, Qualifications, or other information submitted in response to Requests for Bids, Requests for Proposals, Requests for Qualifications, Requests for Quotations, or other City requests for information, as such terms are defined in Chapter1.06 TMC and in Purchasing Policy and Procedures.

"Supplies" means materials, supplies, and other products that are procured and contracted for by the City.

"Tacoma Public Utilities Service Area" means any ZIP code in which Tacoma Public Utilities maintains infrastructure or provides retail services.

"Undue hardship" means an action that places a significant burden on a business.

"Waiver", with regards to the Post-Bid EIC Waiver Process, means a discretionary decision made by the City after Bids are received that EIC Requirements, in whole or in part, will not be applied to a Contract or Contracts.

IV. Exemptions or Exceptions to EIC Program Requirements

A. Contracts that are not competitively solicited by the City of Tacoma.

No EIC Requirements will apply to contracts awarded in the manners listed below. These contracts are exempt from EIC Requirements, and no Exception Request is needed to be completed:

1. Emergency (TMC 1.06.257.C). Situations where breakage or loss of equipment has or is about to interrupt necessary services, where public health or safety may be jeopardized, or when required by regulatory agency, or state law. If the supplies, services, or public works must be provided with such immediacy that neither the City nor the contractor can comply with the EIC Requirements, none will be applied. Such emergency will be deemed

documented whenever a waiver of competitive solicitation for emergency situations is authorized under Tacoma Municipal Code Chapter 1.06.257 or as may be hereinafter amended.

2. Sole Source **(**TMC 1.06.257.A and 1.06.258). If the supplies, services, or public works are available from only one feasible source, and subcontracting possibilities do not reasonably exist as documented by the Department or Division awarding the Contract. Such circumstance is documented by the approval of the Procurement and Payables Division Manager or delegee and for Contracts where the estimated cost is over $500,000 (excluding sales tax) by the approval of the Contracts and Awards (C&A) Board.

3. Not Practicable to Bid (TMC 1.06.257.B). An immediate and important need for proposed construction, installation, repair, materials, supplies, equipment, or services where the delay that would result from following competitive solicitation process would cause financial loss to the City or an interruption of vital services to the public. Such circumstance is documented by the approval of the Procurement and Payables Division Manager or delegee and for Contracts where the estimated cost is over $500,000 (excluding sales tax) by the approval of the C&A Board.

4. Direct Solicitation and Negotiation (1.06.256.B). Contracts for Professional or Personal Services, excluding architectural and engineering services. When City Manager or Director of Utilities or their delegees determine use of direct solicitation and negotiation process to be in the best interests of the City no EIC requirements will be applied to the resulting contract.

5. Government or Cooperative Purchasing.
The Contract is the result of a federal, state, or inter-local government purchasing agreement and the use of such agreement in lieu of a bid solicitation conducted by the City is in accordance with TMC Chapter 1.06 and Purchasing Policy and Procedures.

B. Lack of Certified Businesses

If it is determined there are an insufficient number of Certified Businesses to perform the work scopes listed in the Contract, no EIC Requirement will be applied. The process for requesting and approving an exception for lack of Certified Businesses is as follows:

1. If after Program review of a project using the established EIC Requirement setting methodology, it is determined by EIC Staff that there will be an insufficient number (3 or less) of Certified Business available to meet the requirement, EIC Staff sends an Exception Request to EIC Manager for review and approval.

2. If, after EIC Staff has set EIC Requirements on a project, the Project Delivery Team determines that additional information justifies an exception for lack of Certified Business, the Project Delivery Team sends an Exception Request via email to the EIC Team who will then forward it to the EIC Program Manager with necessary project background information for final review and approval.

C. Public Works and Improvement Projects with a Value of $150,000 or Less

EIC Requirements will not be set on public works and improvement projects with an engineer's estimate value of $150,000 or less. However, EIC Staff will collaborate with the Project Delivery Team to proactively outreach to Certified Businesses and provide technical assistance to encourage participation.

D. Documentation of Granted Exceptions

All exceptions must be documented in the Program's reporting and goal spreadsheet database. Analysis will be done by the EIC Manager to understand what measures the City can take to ensure that exceptions to the EIC Requirements occur only when necessary.

V. EIC Requirements for Contracts for Public Work

All City contracts for Public Work – except for projects with an engineer's estimate value of $150,000 or less – are subject to EIC Requirements. In no case will EIC Requirements exceed a total of 20 percent (20%) of the Engineer's estimate. If a contract is federally funded, any federal program supersedes the Equity in Contracting Program and these regulations.

A. EIC Pre-Award Process

1. EIC Contract Requirements Set

Using the EIC Requirements Setting Methodology contained in Appendix No. 1 to these Regulations, EIC Staff will set requirements for the use of Certified Businesses using two potential options.

Option 1: EIC Staff applies three (3) separate requirements (MBE, WBE, SBE) in accordance with the EIC Requirements Setting Methodology. Each stated Requirement must be fulfilled by using the specified category of Certified Business.

Option 2: If after setting the EIC Requirements, reviewing the OMWBE directory, and discussing with the Project Delivery Team, it is determined that fulfilling each requirement separately might present undue hardship for contractors, EIC staff will apply an overall EIC Requirement. The overall EIC Requirement is the sum of the 3 separate requirements initially established as a result of using the EIC Requirement Setting Methodology. Under Option 2 Bidders can use any combination of MBEs, WBEs, SBEs or DBEs to fulfill the overall EIC Requirement.

Staff guidance for determining if an overall EIC Requirement Option 2 is appropriate can be found in Appendix No. 2 to these Regulations.

After utilizing Option 1 or Option 2 to set the EIC Requirements, EIC staff will send an EIC Memo to the Project Delivery Team informing of the EIC Requirements for the project.

B. EIC Bid Review Process

Contracts for Public Work must be awarded to the lowest responsive and responsible Bidder. EIC Program Staff conducts a review of Submittals for EIC compliance.

1. Review for Bidder Responsiveness

i. Bids must list Certified Businesses. If a listed business is not certified with OMWBE as of the date of bid opening the bid will be recommended to be rejected as non-responsive.
ii. All sections of the EIC Utilization form located in Appendix No. 3 to these Regulations must be completed according to the stated instructions and the properly completed form must be included with bid submittal.
iii. Submittals that do not include a properly completed EIC Utilization form will be recommended by EIC Staff to be rejected as non-responsive bids. To be considered "completed", the required forms must be filled out with all the information required to be provided. No fields should be left incomplete or designated N/A or otherwise lacking a required response. EIC Staff reserves the right to make minor non-material corrections to the form, such as to correct obvious data entry errors. No corrections will be made that alter the proposed Certified Business participation percentages and dollar amounts.
iv. The work description for each Certified Business listed on the EIC Utilization form must match the Certified Business's OMWBE Profile. This ensures that the Certified Business is able to complete the work scope or role for which they have been listed.
v. Bidder must contact and solicit bids from Certified Businesses prior to listing them on the EIC Utilization Form and prior to bid submittal. EIC Staff will contact all listed Certified Businesses. If a listed Certified Business has not been contacted by the Bidder prior to being listed, the bid will be rejected as non-responsive.

2. Review for Bidder Responsibility

i. The EIC Utilization Form must demonstrate that the bidder has obtained enough EIC participation to meet or exceed the EIC Requirements for that contract. Submittals that do not meet or exceed the stated requirements will be recommended to be rejected as non-responsible bids.

3. Self-Performing Bidders

Bidders who are themselves Certified Businesses can meet the EIC requirements by self-performance. When a Certified Business is the prime bidder, an adjustment may be made to the EIC Requirements. In such cases, the self-performing Certified Business can be found to be a responsible bidder even if the bid did not satisfy all three stated EIC Requirements (SBE, MBE and WBE). For example, if a bidder is certified as an MBE and an SBE, the WBE Requirements may be deemed waived since the Contractor's self-performance as an MBE and an SBE achieves the total Requirement.

4. EIC Recommendation

i. If the apparent low bidder is deemed non-responsive or non-responsible, EIC Staff will review the next lowest bidder's submittal.

ii. Once EIC Staff has reviewed the EIC portion of the submittal, a bid review memo is sent to the Project Delivery Team to notify them of the status of the apparent low bidder and will include any recommendation to reject submittals as non-responsive or non-responsible.

VI. Post-Bid EIC Waiver Requests Process

Per TMC 1.07.060 (C), if, after receipt of submittals but prior to Contract award, it is determined that due to unforeseen circumstances (which may be demonstrated by bidder(s) failure to meet the stated Requirements) waiver of the stated EIC Requirements in whole or in part for the project is in the best interest of the City, the Director or Superintendent of the Project Delivery Team may request the stated EIC Requirements be waived in full or in part.

The waiver request must be made using the EIC Waiver Request Form shown in Appendix No. 4 to these Regulations and initiated by the applicable Director or Superintendent of the Project Delivery Team. The form is then forwarded to the Procurement and Payables Division Manager for review and signature,

followed by the City Manager or the Director of Utilities for review and signature. EIC Staff notifies the Project Team of the decision made.

If the Waiver Request is approved by the City Manager or Utilities Director, any new EIC Requirements will be equal to the EIC Utilization percentage listed on the successful bidder's EIC Utilization form (which could be zero).

If the Waiver Request is not approved by the City Manager or Utilities Director, the Project Delivery Team must re-bid the project or award to the next lowest bidder who has satisfied the stated EIC Requirements.

In all instances where a Waiver is approved by the City Manager or Utilities Director, analysis will be done by the EIC Manager to understand what measures the City can take to ensure that waivers of the EIC requirements are granted only when absolutely necessary.

VII. EIC Contract Monitoring and Compliance

All contracts will be monitored by the Program to ensure compliance with the stated EIC Requirements throughout the term of the Contract including as follows:

A. Coordination between Project Delivery Team and Program

During the term of the contract, the Project Delivery Team will include EIC Staff in the pre-bid, pre-construction, and progress meetings. Additionally, the Project Delivery Staff will send Contract & Award (C&A) Letters, Notice to Proceed and Notice of Physical Completion to EIC Staff.

B. Utilization of B2Gnow System

1. Once EIC Staff receives the Notice to Proceed, the Project is created in B2Gnow.
2. Once the Project has been created in B2Gnow by EIC Staff, a letter is automatically sent from B2Gnow to the Contractor and all Certified Businesses included in the project to notify them of the new project and what is expected of them in the B2Gnow System.
3. Contractors must utilize B2GNow by entering their monthly payment reports in the system. EIC Staff tracks EIC utilization by ensuring all payment reports are entered monthly by the Project Delivery Team and the Contractor and payments are confirmed by the Subcontractors.

C. B2Gnow Monitoring

1. Prompt Payment

For the full lifecycle of the project, on a monthly basis, EIC Staff must ensure the following actions have occurred in the B2Gnow system:

a. The Department/Division in charge of the contract has entered payment submitted to the Contractor.
b. The Contractor has entered payments submitted to all Certified Businesses.
c. The Certified Businesses have confirmed prompt receipt of payments from the Contractor for work performed. In compliance with the WA State Legislature Revised Code of WA (RCW) 39.04.250 (1) *, EIC Staff will verify that subcontractors are paid no later than 10 days after the Prime receives payment from the City of Tacoma Department/Division in charge of the contract.

*RCW 39.04.250 (1) "When payment is received by a contractor or subcontractor for work performed on a public work, the contractor or subcontractor shall pay to any subcontractor not later than ten days after the receipt of the payment, amounts allowed the contractor on account of the work performed by the subcontractor, to the extent of each subcontractor's interest therein.

2. If the above actions have not taken place or if there are any discrepancies in the system, EIC Staff will reach out to the parties involved via a notice generated from the B2Gnow System, via email or via phone call to address any discrepancies. Any notes related to the projects will be entered in the B2Gnow system.
3. For support using B2GNow, please contact EIC Staff at (253) 591-5826 or email at EICoffice@cityoftacoma.org.

D. Contractor Request for Certified Business Termination and Substitution

A Contractor's noncompliance by failure to utilize a Certified Business required by the Contract can be excused if Contractor has properly requested to terminate, reduce, or substitute the participation of a Certified Business on an awarded Contract and such request has been approved by the EIC Program consistent with TMC 1.07.080 A. The process for termination and substitution request and approval is initiated by the Contractor following the instructions outlined in the EIC Certified Business Termination and Substitution Form located in Appendix No. 5 to these Regulations.

Upon receipt of the completed EIC Certified Business Termination and Substitution Form, the Project Delivery Team will forward the request to EIC Staff along with supporting documentation received from the Contractor.

1. **EIC Staff will proceed with the following steps:**
   a. Review the request, including any response or objection from the Certified Business, to determine if the grounds for termination (or substitution) contained in TMC 1.07.080 A 1 (Certified Business refusal to execute necessary agreements with Contractor, Certified Business defaults on agreements with Contractor or other reasonable excuse) and the process required by these Regulations have been satisfied. EIC staff review will utilize the criteria for reasonable excuse contained in these Regulations.

   b. Contact the Certified Business(es) proposed to be terminated as well as the Certified Business(es) proposed to be substituted.

   c. If Contractor has indicated on the Certified Business Termination and Substitution Form that it does not have a substitution plan, EIC staff will review the Contractor's explanation for not proposing a substitute Certified Business according to the criteria in TMC 1.07.080 A 2. Where it is shown by Contractor that no other Certified Business is available as a substitute and that failure to secure participation by the Certified Business identified in the solicitation is not the fault of the Contractor, EIC staff will approve substitution with a non-Certified Business; provided, that, the substitution does not increase the dollar amount of the bid.

   d. If EIC staff determines that the process has been followed and that one or more of the grounds in TMC 1.07.080 have been satisfied to allow termination and substitution, the Contractor will be notified of the approval.

   e. Contractor has 3 business days of receipt of the approved termination request to confirm to EIC Staff that it has substituted with another Certified Business, or with a non-Certified Business if the EIC Program has approved.

If the Termination and Substitution Request submitted by the Contractor is denied, the Contractor must utilize the Certified Business on the project as initially listed on the EIC Utilization form or be found in noncompliance.

2. **Reasonable justifications for Termination**
   For purpose of the EIC Program, reasonable justifications for termination are included in this list below but not limited to:

   a. The listed Certified Business refuses or fails to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that reasonable excuse does not exist if the failure of the Certified Business to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor.
   b. Failure or refusal of the Certified Business to perform work for reasons other than contract term or pricing disputes.

c. The listed Certified Business fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements.
d. The listed Certified Business is ineligible to work on City of Tacoma projects because of suspension or debarment.
e. The listed Certified Business voluntarily withdraws from the project and provides The City of Tacoma written notice of its withdrawal.
f. Death or disability of the principal of the Certified Business rendering it unable to perform the work.
g. Dissolution of the Certified Business.
h. A change in scope of the contract requested by the City which removes the work scope for the Certified Business from the project.
i. The Certified Business does not execute an offered contract that reflects the terms and pricing agreed upon as a condition of participation in the project. The Contractor must provide evidence that the Certified Business failed to execute a contract offered which reflected such agreements, after the Certified Business was given adequate time to execute the offered contract.

3. Decertification

When a Certified Business is "decertified" by OMWBE the participation of that Certified Business shall continue to count as EIC participation so long as the subcontract with the Certified Business was executed prior to the effective date of decertification.

If the Certified Business did not have an executed contract with the Contractor at effective date of decertification, the Contractor must demonstrate to the satisfaction of the Project Delivery team and to the EIC Program that it has substituted a different Certified Business.

VIII. NON-COMPLIANCE: FINDING OF VIOLATION AND PENALTIES

A. Circumstances for finding a Contractor in Violation

The following circumstances, if found by the EIC Program Manager, are grounds for a determination by the Community and Economic Development Department (CEDD) Director of Contractor violation and a recommendation by the CED Director to the City Manager or the Director of Utilities that a penalty be imposed consistent with TMC 1.07.010:

1. A Contractor's failure to utilize a Certified Business required by an awarded Contract (unless the Certified Business participation is properly terminated or substituted by application of the process contained in these Regulations) for at least the corresponding dollar amount listed on the submitted EIC Utilization Form.

2. A Contractor's failure to utilize the B2Gnow system in the manner required by these Regulations. Before a violation will be found for Contractor's failure to utilize B2Gnow the following process steps will be taken:

    a. If a Contractor does not report payment in the B2Gnow system within the first 2 months of the start of the project, EIC Staff will give the Contractor a verbal notice, followed by an email offering assistance with B2Gnow if needed.

    b. If in the third month following the start of the project Contractor still does not report payment in the B2Gnow system EIC Staff will send a second notice via email with a copy to the Project Delivery Team.

    c. If the Contractor has failed to report payment in the B2Gnow system within 14 days of the second notice, a third notice will be sent with a copy to the Project Delivery Team.

    d. If after three notices, Contractor fails to report payment in the B2Gnow system, EIC Staff will notify the Project Delivery Team that the EIC Staff intends to recommend to the City Manager or Utilities Director that a violation be found, and a penalty imposed.

3. A Contractor's failure to pay their subcontractor within 10 days after receipt of payment per RCW 39.04.250 (1)

    i. If a contractor fails to pay their subcontractor within 10 days, EIC Staff will send 3 notices (via email).

ii. If after three notices Contractor fails to pay their subcontractor, EIC Staff will notify the Project Delivery Team that the EIC Staff intends to recommend to the City Manager or Utilities Director that a violation be found, and a penalty imposed.

B. Contractor Non-Compliance, Finding of Violation and Enforcement

If the EIC Program Manager, in collaboration with the Project Delivery Team, determines a Contractor is non-compliant with the EIC Requirements of the Contract or any other requirements contained in TMC Chapter 1.07 or these Regulations and therefore in violation of the EIC Program requirements, the following process for enforcement will be followed:

1. EIC Staff will send a Notice of Violation to the Contractor via USPS Certified Mail®, with a courtesy copy sent to Contractor via email and with a copy to the Project Delivery Team. The Notice of Violation will specify the non-compliance that is the basis for the finding of violation and will state the City's intent to exercise all applicable remedies, including penalties authorized by TMC 1.07.110.

2. The Notice of Violation will specify that the Contractor can appeal the finding of Violation to the Hearing Examiner pursuant to Chapter 1.23 TMC and will state that, unless appealed or remedied, each specified violation becomes final on the 10th business day from the day the Notice has been received by the Contractor.

3. The Notice of Violation will inform the Contractor that the Violation may be remedied, and no penalty will be sought, if, within 10 business days of the date of the Notice of Violation, the Contractor achieves compliance or submits a plan to achieve compliance and receives EIC Staff approval of the plan. A document for guidance on how to achieve compliance can be located in Appendix No. 6 to these Regulations.

4. Compliance plans shall be submitted to EIC Staff and reviewed by EIC Staff and the Project Delivery Team. EIC Staff will recommend valid compliance plans to the CEDD Director for approval.

5. If the Contractor does not respond to the notice by achieving compliance or by appealing the violation within 10 days or if Contractor's timely submitted compliance plan is not approved, the EIC Program Manager in collaboration with the CEDD Director and the Project Delivery Team will request the City Manager or Director of Utilities to impose one or more of the following penalties contained in TMC 1.07.110 A.

    a. Publish notice of the contractor's noncompliance on the City of Tacoma Equity in Contracting webpage.
    b. Cancel, terminate, or suspend the contractor's contract, or portion thereof.
    c. Withhold funds due contractor until compliance is achieved; and/or

d. Disqualification of eligibility for future contract awards by the City (debarment) per Section 1.06.279 TMC.
e. Other appropriate recommended penalty

6. Approval of City Manager or Director of Utilities to Impose Penalties

a. The EIC Program Manager and CEDD Director will utilize the Prime Contractor Sanction Request Form found in Appendix No. 6 to these Regulations to inform the City Manager or the Director of Utilities that a Notice of Violation has become final (not appealed, not remedied by compliance or an approved compliance plan) and request the City Manager or Director of Utilities to approve the recommended penalty authorized by TMC 1.07.110 and/or to impose any different or additional appropriate penalty.
b. If the request for penalty is approved, the EIC Staff will notify the Contractor and the Project Delivery Team of the imposition of the penalty by sending the Prime Contractor Notice of Violation form contained in Appendix No. 7 to these Regulations to the Contractor by US Mail and with a courtesy copy sent by email. The Notice of Penalty form will inform the Contractor that the stated penalty becomes effective on the tenth business day following receipt of the Notice of Penalty unless Contractor appeals the penalty to the Hearing Examiner pursuant to Chapter 1.23 TMC or achieves compliance.

7. Publication of Contractor's Non-Compliance

If the penalty of publication of notice of Contractor's noncompliance (TMC 1.07.110 A 2) is imposed, the non-compliant Contractor's firm name and the nature of the violation will be posted on the City of Tacoma Equity in Contracting Program website Equity in Contracting – City of Tacoma.

8. Cancellation of Penalty upon approved Contractor's Correction of Violation

a. A Contractor has 10 business days from receipt of a Notice of Penalty to achieve compliance or submit a plan to achieve compliance. EIC Staff in consultation with the Project Delivery Team will determine if compliance is achieved or if the compliance plan is recommended for approval by the CEDD Director.

b. If it is determined that the Contractor has come into compliance with the EIC Requirements, or has an approved plan to achieve compliance, the penalty may be cancelled at the discretion of the CEDD Director.

c. If a penalty is cancelled, other applicable steps will follow. For example, if the Contract had been suspended, it will be resumed. If notice of Contractor's violation has been published, the notice will be removed from City's website. If funds have been withheld, payments will be resumed etc.

d. If Contractor's compliance plan is not approved, the penalty will remain in place, however, EIC Staff will continue to work with Contractor and Project Delivery Team to attempt to achieve compliance.

IX. EIC Project Closeout Process

Upon receipt of notice from the Project Delivery Team that the project is physically completed, EIC Staff will:

A. Run B2Gnow Contract Summary Report to ensure that EIC Contract Requirements have been satisfied.
B. Check with Local Employment & Apprenticeship Training Program (LEAP) Staff to ensure LEAP Requirements have been satisfied and the project is ready to close on LCPtracker.
C. If EIC Contract Requirements are not met, EIC Staff will contact the Contractor via email with copy to the Project Delivery Team and request the Contractor provide an explanation in writing of the discrepancy between EIC Contract Requirements and the final outcomes via email to the Project Delivery Team and to EIC Staff at EICOffice@cityoftacoma.org. EIC Staff and the Project Delivery Team will review and file explanation in B2Gnow files.
D. If Contract Requirements are not met by the final outcomes and Contractor's explanation for the discrepancy is not satisfactory EIC Staff and the Project Delivery Team may recommend a violation be found and penalty requested.
E. If Contract Requirements are met, send email to Contractor from EICOffice@cityoftacoma.org with a copy to the Project Delivery Team.

X. Certified Business Complaint Process

A. A Certified Business may submit a complaint regarding any EIC related issues utilizing three options listed below:

- By sending an email to the EIC Staff at EICoffice@cityoftacoma.org.
- By filling out the EIC Complaint Form available on The City of Tacoma Equity in Contracting webpage. See EIC Complaint Form as shown at Appendix No. 9 to these Regulations.
- By calling the EIC Office line at (253) 591-5630

When a complaint has been received, EIC Staff will take the following steps:

- Record the complaint in the EIC Complaint log Database
- Send a message to the complainant acknowledging the receipt and recording of the complaint and informing complainant that an investigation will take place.
- As deemed appropriate, perform an investigation
- If an investigation is conducted, a report will be produced including a timeline of events and findings.
- Submit any final report to the EIC Program Manager for action as appropriate.

APPENDICES

Available upon request to EICOffice@cityoftacoma.org

1. **EIC Requirement Setting Methodology**
2. **Guidance on selecting Option 2: EIC overall Requirements**
3. **EIC Utilization Form**
4. **EIC Post Submittal Waiver Request Form**
5. **EIC Certified Business Termination and Substitution Request**
6. **EIC Guidance on Compliance Achievement Plan**
7. **Notice of Contractor's Violation Form**
8. **EIC Sanction(s) Request Form**
9. **Subcontractor Complaint Form**

TITLE 1

Administration and Personnel

CHAPTER 1.07
EQUITY IN CONTRACTING

Sections:
1.07.010 Policy and purpose.
1.07.020 Definitions.
1.07.030 Discrimination prohibited.
1.07.040 Program administration.
1.07.050 *Repealed.*
1.07.060 Program requirements.
1.07.070 Evaluation of submittals.
1.07.080 Contract compliance.
1.07.090 Program monitoring.
1.07.100 Enforcement.
1.07.110 Remedies.
1.07.120 Unlawful acts.
1.07.130 Severability.
1.07.140 Review of program.

1.07.010 Policy and purpose.

It is the policy of the City of Tacoma that citizens be afforded an opportunity for full participation in our free enterprise system and that historically underutilized business enterprises shall have an equitable opportunity to participate in the performance of City contracts. The City finds that in its contracting for supplies, services and public works, there has been historical underutilization of small and minority-owned businesses located in certain geographically and economically disfavored locations and that this underutilization has had a deleterious impact on the economic well-being of the City. The purpose of this chapter is to remedy the effects of such underutilization through use of narrowly tailored contracting requirements to increase opportunities for historically underutilized businesses to participate in City contracts. It is the goal of this chapter to facilitate a substantial procurement, education, and mentorship program designed to promote equitable participation by historically underutilized businesses in the provision of supplies, services, and public works to the City. It is not the purpose of this chapter to provide any person or entity with any right, privilege, or claim, not shared by the public, generally, and this chapter shall not be construed to do so. This chapter is adopted in accordance with Chapter 35.22 RCW and RCW 49.60.400.

(Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.020 Definitions.

Terms used in this chapter shall have the following meanings unless defined elsewhere in the Tacoma Municipal Code ("TMC"), or unless the context in which they are used clearly indicates a different meaning.

1.07.020.B

A. "Bid" means an offer submitted by a Respondent to furnish Supplies, Services, and/or Public Works in conformity with the Specifications and any other written terms and conditions included in a City request for such offer.

B. "Bidder" means an entity or individual who submits a Bid, Proposal or Quote. See also "Respondent."

1.07.020.C

"Certified Business" means an entity that has been certified as a Disadvantaged Business Enterprise ("DBE"), Small Business Enterprise ("SBE"), Minority Business Enterprise ("MBE"), Women Business Enterprise ("WBE"), or Minority and Women's Business Enterprise ("MWBE") by the Washington State Office of Minority and Women's Business Enterprise.

"City" means all Departments, Divisions and agencies of the City of Tacoma.

"Contract" means any type of legally binding agreement regardless of form or title that governs the terms and conditions for provision of supplies, services, or public works to the City. Contracts include the terms and conditions found in Specifications, Bidder or Respondent Submittals, and purchase orders issued by the City.

"Contractor" means any Person that presents a Submittal to the City, enters into a Contract with the City, and/or performs all or any part of a Contract awarded by the City, for the provision of Public Works, or Non-Public Works and Improvements, Supplies or Services.

1.07.020.G

"Goals" means the annual level of participation by Certified Businesses in City Contracts as established in this chapter, the Program Regulations, or as necessary to comply with applicable federal and state nondiscrimination laws and regulations. Goals or requirements for individual Contracts may be adjusted as provided for in this chapter or in regulations and shall not be construed as a minimum for any particular Contract or for any particular geographical area.

1.07.020.N

Reserved.

1.07.020.P

"Person" means individuals, companies, corporations, partnerships, associations, cooperatives, any other legally recognized business entity, legal representative, trustee, or receivers.

"Program Manager" means the individual appointed, from time to time, by the City's Community and Economic Development Director to administer the Program Regulations.

"Program Regulations" means the written regulations and procedures adopted pursuant to this chapter for procurement of Supplies, Services and Public Works.

"Proposal" means a written offer to furnish Supplies or Services in response to a Request for Proposals. This term may be further defined in the Purchasing Policy Manual and/or in competitive solicitations issued by the City.

"Public Works (or "Public Works and Improvements)" means all work, construction, alteration, repair, or improvement other than ordinary maintenance, executed at the cost of the City, or that is by law a lien or charge on any property therein. This term includes all Supplies, materials, tools, and equipment to be furnished in accordance with the Contract for such work, construction, alteration, repair, or improvement.

1.07.020.Q

"Quote" means a competitively solicited written offer to furnish Supplies or Services by a method of procurement that is less formalized than a Bid or a Proposal. This term may be further defined in the Purchasing Policy Manual.

1.07.020.R

"Respondent" means any entity or Person, other than a City employee, that provides a Submittal in response to a request for Bids, Request for Proposals, Request for Qualifications, request for quotes or other request for information, as such terms are defined in Section 1.06.251 TMC. This term includes any such entity or Person whether designated as a supplier, seller, vendor, proposer, Bidder, Contractor, consultant, merchant, or service provider that; (1) assumes a contractual responsibility to the City for provision of Supplies, Services, and/or Public Works; (2) is recognized by its industry as a provider of such Supplies, Services, and/or Public works; (3) has facilities similar to those commonly used by Persons engaged in the same or similar business; and/or (4) distributes, delivers, sells, or services a product or performs a Commercially Useful Function.

1.07.020.S

"Services" means non-Public Works and Improvements services and includes professional services, personal services, and purchased services, as such terms are defined in Section 1.06.251 TMC and/or the City's Purchasing Policy Manual.

"Submittal" means Bids, Proposals, Quotes, qualifications or other information submitted in response to requests for Bids, Requests for Proposals, Requests for Qualifications, requests for Quotations, or other City requests for information, as such terms are defined in Section 1.06.251 TMC.

"Supplies" means materials, Supplies, and other products that are procured by the City through a competitive process for either Public Works procurement or Non-Public Works and Improvements procurement unless an approved waiver has been granted by the appropriate authority.

1.07.020.T

"Tacoma Public Utilities Service Area" means any ZIP code in which Tacoma Public Utilities maintains infrastructure or provides retail services.

1.07.020.W

"Waiver" means a discretionary decision by the City that the one or more requirements of this chapter will not be applied to a Contract or Contracts.

(Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28766 Ex. A; passed June. 8, 2021: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28274 Ex. A; passed Dec. 16, 2014: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.030 Discrimination prohibited.

A. No person that is engaged in the construction of public works for the City, engaged in the furnishing of laborers or craftspeople for public works of the City, or is engaged for compensation in the provision of non-public works and improvements supplies and/or services to the City, shall discriminate against any other person on the basis of race, religion, color, national origin or ancestry, sex, gender identity, sexual orientation, age, marital status, familial status, or the presence of any sensory, mental or physical disability, or "pregnancy outcomes" under TMC 1.29.040, in employment. Such discrimination includes the unfair treatment or denial of normal privileges to a person as manifested in employment upgrades, demotions, transfers, layoffs, termination, rates of pay, recruitment of employees, or advertisement for employment.

B. The violation of the terms of RCW 49.60 or Chapter 1.29 TMC by any person that is engaged in the construction of public works for the City, is engaged in the furnishing of laborers or craftspeople for public works of the City, or is engaged for compensation in the provision of non-public works and improvements supplies and/or services shall result in the rebuttable presumption that the terms of this chapter have also been violated. Such violation may result in termination of any City contract the violator may have with the City and/or the violator's ineligibility for further City Contracts.

(Ord. 28859 Ex. A; passed Nov. 22, 2022: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.040 Program administration.

A. The Community and Economic Development Director, or their designated Program Manager, shall be responsible for administering this chapter and obtaining compliance with respect to contracts entered into by the City and/or its contractors. It shall be the duty of the Director to pursue the objectives of this chapter by conference, conciliation, persuasion, investigation, or enforcement action, as may be necessary under the circumstances. The Director is authorized to implement an administrative and compliance program to meet these responsibilities and objectives.

B. The Director is hereby authorized to adopt and to amend administrative regulations known as the Program Regulations, to properly implement and administer the provisions of this chapter. The Program Regulations shall be in conformance with City of Tacoma policies and state and federal laws and be designed to encourage achievement of the Goals set forth herein.

(Ord. 28766 Ex. A; passed June. 8, 2021: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 28110 Ex. B; passed Dec. 4, 2012: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.050 *Repealed by Ordinance No. 28931. Approval as a Certified Business.*

(Repealed by Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28766 Ex. A; passed June. 8, 2021: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28274 Ex. A; passed Dec. 16, 2014: Ord. 28147 Ex. A; passed May 7, 2013: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 28110 Ex. B; passed Dec. 4, 2012: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.060 Program requirements.

A. The program shall meet the following requirements:

1. Establishment of Annual Goals.

The Program Regulations adopted pursuant to this chapter shall state reasonably achievable cumulative annual goals for utilization of Certified Businesses in the provision of supplies, services, and public works procured by the City. Cumulative annual goals for the participation of Certified Businesses in City contracts shall be based on the number of qualified Certified Businesses operating within the Tacoma Public Utilities Service Area. The dollar value of all contracts awarded by the City to Certified Businesses in the procurement of supplies, services, and public works shall be counted toward the accomplishment of the applicable goal.

2. Application to Contracts.

The Program Manager shall establish department/division specific requirements for Certified Business participation in City contracts in accordance with this chapter and the Program Regulations.

B. Exceptions:

City departments/divisions or the Program Manager may request an exception to one or more of the requirements of this chapter as they apply to a particular Contract or Contracts. Exceptions may be granted in any one or more of the following circumstances:

1. Emergency:

The supplies, services and/or public works must be provided with such immediacy that neither the City nor the contractor can comply with the requirements herein. Such emergency will be deemed documented whenever a waiver of competitive solicitation for emergency situations is authorized under Tacoma Municipal Code Chapter 1.06.257 or as may be hereinafter amended.

2. Not Practicable:

The Contract involves special facilities or market conditions or specially tailored or performance criteria-based products, such that compliance with the requirements of this chapter would cause financial loss to the City or an interruption of vital services to the public. Such circumstances must be documented by the department/division awarding the Contract and approved by the senior financial manager or, for Contracts where the estimated cost is over $500,000 (excluding sales tax), approved by the Board of Contracts and Awards ("C&A Board").

3. Sole source:

The supplies, services, and/or public works are available from only one feasible source, and subcontracting possibilities do not reasonably exist as documented by the department/division awarding the Contract and approved by the senior financial manager or, for Contracts where the estimated cost is over $500,000 (excluding sales tax), approved by the C&A Board.

4. Government purchasing.

The Contract or Contracts are the result of a federal, state or inter-local government purchasing agreement and the use of such agreement in lieu of a bid solicitation conducted by the City is approved by the senior financial manager.

5. Lack of Certified Businesses:

An insufficient number of qualified contractors exist to create any utilization opportunities as documented by the Program Manager.

C. Waiver:

If, after receipt of Submittals but prior to Contract award, it is determined that due to unforeseen circumstances, a full or partial waiver of requirements is in the best interests of the City, the Director or Superintendent of the department/division awarding the Contract may request in writing that the City Manager or designee, on behalf of General Government, or the Director of Utilities or designee, on behalf of the Department of Public Utilities, approve such waiver..

Waivers may be granted only after determination by the City Manager or Director of Utilities that compliance with the requirements of this chapter would impose unwarranted economic burden on, or risk to, the City of Tacoma as compared with the degree to which the purposes and policies of this chapter would be furthered by requiring compliance.

(Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28766 Ex. A; passed June. 8, 2021: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.070 Evaluation of submittals.

A. All submittals for supplies, services, or public works and improvements contracts shall be evaluated for attainment of the Certified Business requirements established for that contract in accordance with this chapter and the Program Regulations.

B. The determination of Certified Business usage and the calculation of Certified Business requirements per this section shall include the following considerations:

1. General.

The dollar value of the Contract awarded by the City to a Certified Business in the procurement of supplies, services, or public works shall be counted toward achievement of the annual goal.

2. Supplies.

A Contractor may receive credit toward attainment of the Certified Business requirement(s) applicable to the Contract for expenditures for supplies obtained from a Certified Business; provided such Certified Business assumes the actual and contractual responsibility for delivering the supplies with its resources. The contractor may also receive credit toward attainment of the Certified Business goal for the amount of the commission paid to a Certified Business resulting from a supplies contract with the City; provided the Certified Business performs a commercially useful function in the process.

3. Services and Public Works subcontracts.

Any Contract awarded to a Certified Business or a bidder that utilizes a Certified Business as a subcontractor shall receive credit toward attainment of the Certified Business requirement(s) applicable to the Contract based on the percentage of

Certified Business usage stated in the bid. A contractor that utilizes a Certified Business as a subcontractor to provide services or public works shall receive a credit toward the contractor's attainment of the Certified Business requirement applicable to the contract based on the value of the subcontract with the Certified Business.

C. Evaluation of competitively solicited submittals for public works and improvements and for services when a requirement has been established for the contract to be awarded shall be as follows:

1. When contract award is based on price.

The lowest priced bid submitted by a responsive and responsible bidder will be reviewed to determine if it meets the requirement. Certified Businesses may self-count utilization or self-performance on such bids if they will perform the work for the scope the requirement is based upon. The Program Regulations may establish further requirements and procedures for self-utilization or self-performance by a bidder who is a Certified Business.

a. If the low bidder meets the stated Certified Business requirements, the bid shall be presumed the lowest and best responsible bid for contract award.

b. Any bidder that does not meet the stated Certified Business requirements shall be considered a non-responsible bidder unless a waiver of one or more of the requirements of this chapter is granted, in the City's sole discretion, pursuant to the criteria and processes in Tacoma Municipal Code 1.07.060.C.

2. When contract award is based on qualifications or other performance criteria in addition to price, solicitations shall utilize a scoring system that promotes participation by certified contractors. The Program Regulations may establish further requirements and procedures for final selection and contract award, including:

a. Evaluation of solicitations for Architectural and Engineering (A&E) services;

b. Evaluation and selection of submittals in response to requests for proposals; and

c. Selection of contractors from pre-qualified roster(s).

(Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28766 Ex. A; passed Jun. 8, 2021: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.080 Contract compliance.

A. The contractor awarded a contract based on Certified Business participation shall, during the term of the contract, comply with the requirements established in said contract. To ensure compliance with this requirement following contract award, the following provisions apply:

1. Any substitutions for or failure to utilize or termination of Certified Businesses projected to be used must be approved in advance by the Program Manager. Substitution of one Certified Business with another shall be allowed where there has been a refusal to execute necessary agreements by the original Certified Business, a default on agreements previously made or other reasonable excuse; provided that the substitution does not increase the dollar amount of the bid.

2. Where it is shown that no other Certified Business is available as a substitute and that failure to secure participation by the Certified Business identified in the solicitation is not the fault of the respondent, substitution with a non-Certified Business shall be allowed; provided, that, the substitution does not increase the dollar amount of the bid.

3. If the Program Manager determines that the contractor has not reasonably and actively pursued the use of replacement Certified Business, such contractor shall be deemed to be in non-compliance.

B. Record Keeping.

All contracts shall require contractors to maintain relevant records and information necessary to document compliance with this chapter and the contractor's utilization of Certified Businesses, and shall include the right of the City to inspect such records.

(Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28766 Ex. A; passed Jun. 8, 2021: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.090 Program monitoring.

A. An Advisory Committee shall monitor compliance with all provisions of this chapter and the related Regulations. The Program Manager shall establish procedures to collect data and monitor the effect of the provisions of this chapter to assure, insofar as is practical, that the remedies set forth herein do not disproportionately favor one or more racial, gender, ethnic, or other protected groups, and that the remedies do not remain in effect beyond the point that they are required to eliminate the

effects of under utilization in City contracting, unless such provisions are supported by a Disparity Study. The Program Manager shall have the authority to obtain from City departments/divisions, respondents, and contractors such relevant records, documents, and other information as is reasonably necessary to determine compliance.

B. The Program Manager shall submit an annual report to the Community and Economic Development Director, Director of Utilities, and the City Manager detailing performance of the program. The report shall document Certified Business utilization levels, waivers, proposed modifications to the program, and such other matters as may be specified in the Program Regulations.

(Ord. 28766 Ex. A; passed Jun. 8, 2021: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 28110 Ex. B; passed Dec. 4, 2012: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.100 Enforcement.

The Director, or designee, may investigate the employment practices of contractors to determine whether or not the requirements of this chapter have been violated. Such investigation shall be conducted in accordance with the procedures established in the Program Regulations.

(Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 28110 Ex. B; passed Dec. 4, 2012: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.110 Penalties.

A. Upon receipt of a determination of contractor violation by the Program Manager, the City Manager or Director of Utilities, as appropriate, may take the following actions, singly or together, as appropriate:

1. Forfeit the contractor's bid bond and/or performance bond;

2. Publish notice of the contractor's noncompliance;

3. Cancel, terminate, or suspend the contractor's contract, or portion thereof;

4. Withhold funds due contractor until compliance is achieved;

5. Recommend disqualification of eligibility for future contract awards by the City (debarment) per Section 1.06.279 TMC; and/or

6. Any other appropriate action, including a monetary penalty as such penalties may be specified in Program Regulations.

B. Prior to imposing of any of the foregoing penalties, the City shall provide written notice to the contractor specifying the violation and the City's intent to exercise such remedy or remedies. The notice shall provide that each specified remedy becomes effective within ten business days of receipt unless the contractor appeals said action to the Hearing Examiner pursuant to Chapter 1.23 TMC.

C. When non-compliance with this chapter or the Program Regulations has occurred, the Program Manager and the department/division responsible for enforcement of the contract may allow continuation of the contract upon the contractor's development of a plan for compliance acceptable to the Director.

(Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 28110 Ex. B; passed Dec. 4, 2012: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.120 Unlawful acts.

It shall be unlawful for any Person to willfully prevent or attempt to prevent, by intimidation, threats, coercion, or otherwise, any Person from complying with the provisions of this chapter.

(Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.130 Severability.

If any section of this chapter or its application to any Person or circumstance is held invalid by a court of competent jurisdiction, then the remaining sections of this chapter, or the application of the provisions to other Persons or circumstances, shall not be affected.

(Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.140 Review of program.

This chapter shall be in effect until such point in time that the City Council shall determine, after third party analyses, whether substantial effects or lack of opportunity of Certified Businesses remain true in the relevant market and whether, and for how long, some or all of the requirements of this chapter should remain in effect.

The Department Director or their designee shall review this chapter with City Council standing committee on a biennial basis in order to determine whether adjustments or revisions are required and present those proposals to the City Council for approval.

(Ord. 28931 Ex. A; passed Jan. 9, 2024: Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 28274 Ex. A; passed Dec. 16, 2014: Ord. 28141 Ex. A; passed Mar. 26, 2013: Ord. 27867 Ex. A; passed Dec. 15, 2009)

Section 4

Project Special Provisions

INTRO.AP1

INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2020 Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

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

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

1-01.AP1

Section 1-01, Definitions and Terms
August 1, 2016

1-01.3 Definitions

The following new term and definition is inserted after the eighth paragraph:

> **Cold Weather Protection Period** – A period of time 7 days from the day of concrete placement or the duration of the cure period, whichever is longer.

1-02.AP1

Section 1-02, Bid Procedures and Conditions
June 1, 2017

1-02.4(1) General

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

> Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business on the first Monday after the advertising date to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.6 Preparation of Proposal

In this section, “Disadvantaged Business Enterprise” is revised to read “Underutilized Disadvantaged Business Enterprise”, and “DBE” is revised to read “UDBE”.

1-02.7 Bid Deposit

(April 1, 2012 Tacoma GSP)

A deposit of at least 5 percent of the total Bid shall accompany each Bid. This deposit may be cash, certified check, cashier’s check, or a proposal bond (Surety bond). Any proposal bond shall be on a form acceptable to the Contracting Agency and shall be signed by the Bidder and the Surety. A proposal bond shall not be conditioned in any way to modify the minimum 5 percent required. The Surety shall:

(1) be registered with the Washington State Insurance Commissioner, and (2) appear on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner.

The failure to furnish a Bid deposit of a minimum of 5 percent shall make the Bid nonresponsive and shall cause the Bid to be rejected by the Contracting Agency.

If a Bid Bond is furnished, the form furnished by the Contracting Agency must be followed. No variations from the language thereof will be accepted.

If submitting your bid electronically, a scanned version of the original bid bond must accompany your electronic bid submittal. The original bid bond shall be sent to the Contracting Agency and postmarked no later than the day of bid opening. **Original bid bonds will be delivered to:**

City of Tacoma Procurement & Payables Division
Tacoma Public Utilities
PO Box 11007

1-02.9 Delivery of Proposal

Each Proposal shall be submitted to the City electronically via email to bids@cityoftacoma.org, with the Project Name as stated in the Call for Bids noted on the subject line of the email, or as otherwise required in the Bid Documents, to ensure proper handling and delivery. All electronic documents shall be in PDF format.

To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- UDBE Written Confirmation Document from each UDBE firm listed on the Bidder's completed UDBE Utilization Certification (WSDOT 272-056U)
- Good Faith Effort (GFE) Documentation
- UDBE Bid Item Breakdown (WSDOT 272-054)
- UDBE Trucking Credit Form (WSDOT 272-058)

These documents, if applicable, shall be received either with the Bid Proposal or as a supplement to the Bid. These documents shall be received **no later than 48 hours** (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

After submitting an electronic 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 emails it to bids@cityoftacoma.org, 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.

The Bidder's written request to revise or supplement a Bid Proposal must be accompanied by the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

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

1-02.12 Public Opening of Proposals

This section is supplemented with the following new paragraph:

NOTICE: City of Tacoma Public Bid Openings are cancelled until further notice. Preliminary and final bid results are posted at www.TacomaPurchasing.org

1-02.13 Irregular Proposals

In this section, "Disadvantaged Business Enterprise" is revised to read "Underutilized Disadvantaged Business Enterprise", and "DBE" is revised to read "UDBE".

1-04.AP1

Section 1-04, Scope of the Work
June 1, 2017

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

The following new paragraph is inserted before the second to last paragraph:

Whenever reference is made in these Specifications or the Special Provisions to codes, rules, specifications, and standards, the reference shall be construed to mean the code, rule, specification, or standard that is in effect on the Bid advertisement date, unless otherwise stated or as required by law.

1-04.3 Reference Information

This section is supplemented with the following new sentence:

If a document that is provided as reference information contains material also included as a part of the Contract, that portion of the document shall be considered a part of the Contract and not as Reference Information.

1-04.4(2)A General

Item number 4 in the third paragraph is revised to read:

4. Provide substitution for deleted or reduced Condition of Award Work, Apprentice Utilization and Training.

1-06.AP1

Section 1-06, Control of Material
August 7, 2017

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

1-06.6 Recycled Materials

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

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

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

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

1-06.6(1)A General

The minimum quantity of recycled concrete aggregate shall be 25 percent of the total quantity of aggregate that is incorporated into the Contract for those items listed in Section 9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material that allow the use of recycled concrete aggregate. The percentage of recycled material incorporated into the project for meeting the required percentage will be calculated in tons based on the quantity of recycled concrete used on the entire Contract and not as individual items.

If the Contractor's total cost for Work with recycled concrete aggregate is greater than without the Contractor may choose to not use recycled concrete aggregate. If

the Recycled Material Utilization Plan does not indicate the minimum usage of recycled concrete aggregate required above, or if completed project quantities do not meet the minimum usage required, the Contractor shall develop the following:

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

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

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

The Contractor's cost estimates shall be submitted as an attachment to the Recycled Material Utilization Plan, or with the Reporting form.

1-07.AP1

Section 1-07, Legal Relations and Responsibilities to the Public
August 7, 2017

1-07.1 Laws to be Observed

The second paragraph is deleted.

In the second to last sentence of the third paragraph, "WSDOT" is revised to read "Contracting Agency".

1-07.2(2) State Sales Tax: WAC 458-20-170 – Retail Sales Tax

The last three sentences of the first paragraph are deleted and replaced with the following new sentence:

The Contractor (Prime or Subcontractor) shall include sales or use tax on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project, in the unit bid prices.

1-07.3(1) Forest Fire Prevention

This section is supplemented with the following new subsections:

1-07.3(1)A Fire Prevention Control and Countermeasures Plan

The Contractor shall prepare and implement a project-specific fire prevention, control, and countermeasures plan (FPCC Plan) for the duration of the project. The Contractor shall submit a Type 2 Working Drawing no later than the date of the preconstruction conference.

1-07.3(1)A1 FPCC Plan Implementation Requirements

The Contractor's FPCC Plan shall be fully implemented at all times. The Contractor shall update the FPCC Plan throughout project construction so that the plan reflects actual site conditions and practices. The Contractor shall update the FPCC Plan at least annually and maintain a copy of the updated FPCC Plan that is

available for inspection on the project site. Revisions to the FPCC Plan and the Industrial Fire Precaution Level (IFPL) shall be discussed at the weekly project safety meetings.

1-07.3(1)A2 FPCC Plan Element Requirements

The FPCC Plan shall include the following:

1. The names, titles, and contact information for the personnel responsible for implementing and updating the plan.

2. The names and telephone numbers of the Federal, State, and local agencies the Contractor shall notify in the event of a fire.

3. All potential fire causing activities such as welding, cutting of metal, blasting, fueling operations, etc.

4. The location of fire extinguishers, water, shovels, and other firefighting equipment.

5. The response procedures the Contractor shall follow in the event of a fire.

Most of Washington State is covered under the IFPL system which, by law, is managed by the Department of Natural Resources (DNR). It is the Contractor's responsibility to be familiar with the DNR requirements and to verify whether or not IFPL applies to the specific project.

If the Contractor wishes to continue a work activity that is prohibited under an industrial fire precaution level, the Contractor shall obtain a waiver from the DNR and provide a copy to the Engineer prior to continuation of work on the project.

If the IFPL requirements prohibit the Contractor from performing Work the Contractor may be eligible for an unworkable day in accordance with Section 1-08.5.

The Contractor shall comply with the requirements of these provisions at no additional cost to the Contracting Agency.

1-07.8 High-Visibility Apparel

The last paragraph is revised to read:

High-visibility garments shall be labeled as, and in a condition compliant with the ANSI/ISEA 107 (2004 or later version) and shall be used in accordance with manufacturer recommendations.

1-07.8(1) Traffic Control Personnel

In this section, references to "ANSI/ISEA 107-2004" are revised to read "ANSI/ISEA 107".

1-07.8(2) Non-Traffic Control Personnel

In this section, the reference to "ANSI/ISEA 107-2004" is revised to read "ANSI/ISEA 107".

1-07.9(2) Posting Notices

Items 1 and 2 are revised to read:

1. EEOC - P/E-1 (revised 11/09, supplemented 09/15) – **Equal Employment Opportunity IS THE LAW** published by US Department of Labor. Post for projects with federal-aid funding.

2. FHWA 1022 (revised 05/15) – **NOTICE Federal-Aid Project** published by Federal Highway Administration (FHWA). Post for projects with federal-aid funding.

Items 5, 6 and 7 are revised to read:

5. WHD 1420 (revised 02/13) – **Employee Rights and Responsibilities Under The Family And Medical Leave Act** published by US Department of Labor. Post on all projects.

6. WHD 1462 (revised 01/16) – **Employee Polygraph Protection Act** published by US Department of Labor. Post on all projects.

7. F416-081-909 (revised 09/15) – **Job Safety and Health Law** published by Washington State Department of Labor and Industries. Post on all projects.

Items 9 and 10 are revised to read:

9. F700-074-909 (revised 06/13) – **Your Rights as a Worker in Washington State** by Washington State Department of Labor and Industries (L&I). Post on all projects.

10. EMS 9874 (revised 10/15) – **Unemployment Benefits** published by Washington State Employment Security Department. Post on all projects.

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

The second sentence of the first paragraph is deleted.

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

The SPCC Plan shall address all fuels, petroleum products, hazardous materials, and other materials defined in Chapter 447 of the WSDOT Environmental Manual M 31-11.

Item number four of the fourth paragraph (up until the colon) is revised to read:

4. **Potential Spill Sources** – Describe each of the following for all potentially hazardous materials brought or generated on-site, including but not limited to materials used for equipment operation, refueling, maintenance, or cleaning:

The first sentence of item 7e of the fourth paragraph is revised to read:

BMP methods and locations where they are used to prevent discharges to ground or water during mixing and transfer of hazardous materials and fuel.

The last paragraph is deleted.

1-08.AP1

Section 1-08, Prosecution and Progress
June 1, 2017

1-08.1 Subcontracting

The eighth and ninth paragraphs are revised to read:

> On all projects, the Contractor shall certify to the actual amounts paid to all firms that were used as Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the Contract. This includes all Disadvantaged, Minority, Small, Veteran or Women's Business Enterprise firms. This Certification shall be submitted to the Engineer on a monthly basis each month between Execution of the Contract and Physical Completion of the Contract using the application available at: https://wsdot.diversitycompliance.com. A monthly report shall be submitted for every month between Execution of the Contract and Physical Completion regardless of whether payments were made or work occurred.
>
> The Contractor shall comply with the requirements of RCW 39.04.250, 39.76.011, 39.76.020, and 39.76.040, in particular regarding prompt payment to Subcontractors. Whenever the Contractor withholds payment to a Subcontractor for any reason including disputed amounts, the Contractor shall provide notice within 10 calendar days to the Subcontractor with a copy to the Contracting Agency identifying the reason for the withholding and a clear description of what the Subcontractor must do to have the withholding released. Retainage withheld by the Contractor prior to completion of the Subcontractors work is exempt from reporting as a payment withheld and is not included in the withheld amount. The Contracting Agency's copy of the notice to Subcontractor for deferred payments shall be submitted to the Engineer concurrently with notification to the Subcontractor.

1-08.1(1) Prompt Payment, Subcontract Completion and Return of Retainage Withheld

In item number 5 of the first paragraph, "WSDOT" is revised to read "Contracting Agency".

The last sentence in item number 11 of the first paragraph is revised to read:

> The Contractor may also require any documentation from the Subcontractor that is required by the subcontract or by the Contract between the Contractor and Contracting Agency or by law such as affidavits of wages paid, and material acceptance certifications to the extent that they relate to the Subcontractor's Work.

Item number 12 of the first paragraph is revised to read:

> 12. If the Contractor fails to comply with the requirements of the Specification and the Subcontractor's retainage or retainage bond is wrongfully withheld, the Contractor will be subject to the actions described in No. 7 listed above. The Subcontractor may also seek recovery against the Contractor under applicable prompt pay statutes in addition to any other remedies provided for by the subcontract or by law.

1-08.5 Time for Completion

In item 2c of the last paragraph, “Quarterly Reports” is revised to read “Monthly Reports”.

1-09.AP1

Section 1-09, Measurement and Payment
April 4, 2016

1-09.6 Force Account

The second sentence of item number 4 is revised to read:

> A “specialized service” is a work operation that is not typically done by worker classifications as defined by the Washington State Department of Labor and Industries and by the Davis Bacon Act, and therefore bills by invoice for work in road, bridge and municipal construction.

1-10.AP1

Section 1-10, Temporary Traffic Control
January 3, 2017

1-10.1(2) Description

The first paragraph is revised to read:

> The Contractor shall provide flaggers and all other personnel required for labor for traffic control activities that are not otherwise specified as being furnished by the Contracting Agency.

In the third paragraph, “Project Engineer” is revised to read “Engineer”.

The following new paragraph is inserted after the third paragraph:

> The Contractor shall keep lanes, on-ramps, and off-ramps, open to traffic at all times except when Work requires closures. Ramps shall not be closed on consecutive interchanges at the same time, unless approved by the Engineer. Lanes and ramps shall be closed for the minimum time required to complete the Work. When paving hot mix asphalt the Contractor may apply water to the pavement to shorten the time required before reopening to traffic.

1-10.3(2)C Lane Closure Setup/Takedown

The following new paragraph is inserted before the last paragraph:

> Channelization devices shall not be moved by traffic control personnel across an open lane of traffic. If an existing setup or staging of traffic control devices require crossing an open lane of traffic, the traffic control devices shall be taken down completely and then set up in the new configuration.

2-02.AP2

Section 2-02, Removal of Structures and Obstructions
August 7, 2017

2-02.3(2)A Bridge Removal

This section's title is revised to read:

> **Bridge and Structure Removal**

2-03.AP2

Section 2-03, Roadway Excavation and Embankment
August 1, 2016

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

The second paragraph is revised to read:

> The Contractor shall acquire all permits and approvals required for the use of the disposal sites before any waste is hauled off the project. The Contractor shall submit a Type 1 Working Drawing consisting of copies of the permits and approvals for any disposal sites to be used. The cost of any such permits and approvals shall be included in the Bid prices for other Work.

The third paragraph is deleted.

2-06.AP2

Section 2-06, Subgrade Preparation
January 3, 2017

2-06.3(2) Subgrade for Pavement

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

> The Contractor shall compact the Subgrade to a depth of 6 inches to 95 percent of maximum density as determined by the compaction control tests for granular materials.

3-04.AP3

Section 3-04, Acceptance of Aggregate
January 3, 2017

3-04.5 Payment

In Table 1, the **Contingent Unit Price Per Ton** value for the item HMA Aggregate is revised to read "$15.00".

4-04.AP4

Section 4-04, Ballast and Crush Surfacing
January 3, 2017

4-04.3(5) Shaping and Compaction

The first sentence is revised to read:

Immediately following spreading and final shaping, each layer of surfacing shall be compacted to at least 95 percent of maximum density determined by the requirements of Section 2-03.3(14)D before the next succeeding layer of surfacing or pavement is placed.

5-01.AP5

Section 5-01, Cement Concrete Pavement Rehabilitation
January 3, 2017

In this section, “portland cement” is revised to read “cement”.

5-01.2 Materials

In the first paragraph, the following item is inserted after the item “Joint Sealants”:

Closed Cell Foam Backer Rod 9-04.2(3)A

5-01.3(1)A Concrete Mix Designs

This section, including title, is revised to read:

5-01.3(1)A Mix Designs

The Contractor shall use either concrete patching materials or cement concrete for the rehabilitation of cement concrete pavement. Concrete patching materials shall be used for spall repair and dowel bar retrofitting and cement concrete shall be used for concrete panel replacement.

5-01.3(1)A1 Concrete Patching Materials

Item number 1 is revised to read:

1. **Materials** – The prepackaged concrete patching material and the aggregate extender shall conform to Section 9-20.

5-01.3(1)A2 Portland Cement Concrete

This section, including title, is revised to read:

5-01.3(1)A2 Cement Concrete for Panel Replacement

Cement concrete for panel replacement shall meet the requirements of Sections 5-05.3(1) and 5-05.3(2) and be air entrained with a design air content of 5.5 percent. Cement concrete for panel replacement may use rapid hardening hydraulic cement meeting the requirements of Section 9-01.2(2). Rapid hardening hydraulic cement will be considered a cementitious material for the purpose of calculating the water/cementitious materials ratio and the minimum cementitious materials requirement.

5-01.3(1)B Equipment

This section’s title is revised to read:

Equipment for Panel Replacement

5-01.3(2)B Portland Cement Concrete

This section’s title is revised to read:

Cement Concrete for Panel Replacement

This section is supplemented with the following new subsection:

5-01.3(2)B1 Conformance to Mix Design
Acceptance of cement concrete pavement for panel replacement shall be in accordance with Section 5-01.3(2)B. The cement, coarse, and fine aggregate weights shall be within the tolerances of the mix design in accordance with Section 5-05.3(1).

5-01.3(2)B1 Rejection of Concrete

This section is renumbered as follows:

5-01.3(2)B2 Rejection of Concrete

5-01.3(4) Replace Portland Cement Concrete Panel

This section's title is revised to read:

Replace Cement Concrete Panel

5-01.3(8) Sealing Existing Transverse and Longitudinal Joints

This section's title is revised to read:

Sealing Existing Longitudinal and Transverse Joint

The first paragraph is revised to read:

The Contractor shall clean and seal existing longitudinal and transverse joints where shown in the Plans or as marked by the Engineer.

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

Old sealant and incompressible material shall be completely removed from the joint to the depth of the new reservoir with a diamond blade saw in accordance with the detail shown in the Standard Plans.

The fifth paragraph is revised to read:

Immediately prior to sealing, the cracks shall be blown clean with dry oil-free compressed air. If shown in the Plans, a backer rod shall be placed at the base of the sawn reservoir. The joints shall be completely dry before the sealing installation may begin. Immediately following the air blowing and backer rod placement, if required, the sealant material shall be installed in conformance to manufacturer's recommendations and in accordance with Section 5-05.3(8)B.

5-01.3(9) Portland Cement Concrete Pavement Grinding

This section's title is revised to read:

Cement Concrete Pavement Grinding

5-01.3(11) Concrete Slurry and Grinding Residue

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

> Slurry shall not be allowed to drain into an area open to traffic, off of the paved surface, into any drainage structure, water of the state, or wetlands.

The following new sentence is inserted at the end of the second paragraph:

> The Contractor shall submit copies of all disposal tickets to the Engineer within 5 calendar days.

5-01.4 Measurement

The fourth paragraph is revised to read:

> Sealing existing longitudinal and transverse joint will be measured by the linear foot, measured along the line of the completed joint.

5-01.5 Payment

The Bid item "Sealing Transverse and Longitudinal Joints", per linear foot and the paragraph following Bid item are revised to read:

> "Sealing Existing Longitudinal and Transverse Joint", per linear foot.
>
> The unit Contract price per linear foot for "Sealing Existing Longitudinal and Transverse Joint", shall be full payment for all costs to complete the Work as specified, including removing incompressible material, preparing and sealing existing transverse and longitudinal joints where existing transverse and longitudinal joints are cleaned and for all incidentals required to complete the Work as specified.

5-02.AP5

Section 5-02, Bituminous Surface Treatment
April 4, 2016

5-02.3(2) Preparation of Roadway Surface

This section is supplemented with the following new subsection:

> **5-02.3(2)E Crack Sealing**
>
> Where shown in the Plans, seal cracks and joints in the pavement in accordance with Section 5-04.3(4)A1 and the following:
>
> 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.

5-04.AP5

Section 5-04, Hot Mix Asphalt
April 3, 2017

This section (and all subsections) is revised to read:

This Section 5-04 is written in a style which, unless otherwise indicated, shall be interpreted as direction to the Contractor.

5-04.1 Description

This Work consists 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.

HMA shall be composed of asphalt binder and mineral materials as required, and may include reclaimed asphalt pavement (RAP) or reclaimed asphalt shingles (RAS), mixed in the proportions specified to provide a homogeneous, stable, and workable mix.

5-04.2 Materials

Provide materials as specified in these sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
Warm Mix Asphalt Additive	9-02.5
Aggregates	9-03.8
Reclaimed Asphalt Pavement (RAP)	9-03.8(3)B
Reclaimed Asphalt Shingles (RAS)	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Joint Sealants	9-04.2
Closed Cell Foam Backer Rod	9-04.2(3)A

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

Comply with each of the following:

- Develop the mix design in accordance with WSDOT SOP 732.
- Develop a mix design that complies with Sections 9-03.8(2) and 9-03.8(6).
- Develop a mix design no more than 6 months prior to submitting it for QPL evaluation.
- Submit mix designs to the WSDOT State Materials Laboratory in Tumwater, including WSDOT Form 350-042.
- Include representative samples of the materials that are to be used in the HMA production as part of the mix design submittal.
- Identify the brand, type, and percentage of anti-stripping additive in the mix design submittal.
- Include with the mix design submittal a certification from the asphalt binder supplier that the anti-stripping additive is compatible with the crude

source and the formulation of asphalt binder proposed for use in the mix design.

- Do not include warm mix asphalt (WMA) additives when developing a mix design or submitting a mix design for QPL evaluation. The use of warm mix asphalt (WMA) additives is not part of the process for obtaining approval for listing a mix design on the QPL. Refer to Section 5-04.2(2)B.

The Contracting Agency's basis for approving, testing, and evaluating HMA mix designs for approval on the QPL is dependent on the contractual basis for acceptance of the HMA mixture, as shown in Table 1.

Table 1

Basis for Contracting Agency Evaluation of HMA Mix Designs for Approval on the QPL		
Contractual Basis for Acceptance of HMA Mixture (see Section 5-04.3(9))	**Basis for Contracting Agency Approval of Mix Design for Placement on QPL**	**Contracting Agency Materials Testing for Evaluation of the Mix Design**
Statistical Evaluation	WSDOT Standard Practice QC-8	The Contracting Agency will test the mix design materials for compliance with Sections 9-03.8(2) and 9-03.8(6).
Visual Evaluation	Review of Form 350-042 for compliance with Sections 9-03.8(2) and 9-03.8(6)	The Contracting Agency may elect to test the mix design materials, or evaluate in accordance with WSDOT Standard Practice QC-8, at its sole discretion.

If the Contracting Agency approves the mix design, it will be listed on the QPL for 12 consecutive months. The Contracting Agency may extend the 12 month listing provided the Contractor submits a certification letter to the Qualified Products Engineer verifying that the aggregate source and job mix formula (JMF) gradation, and asphalt binder crude source and formulation have not changed. The Contractor may submit the certification no sooner than three months prior to expiration of the initial 12 month mix design approval. Within 7 calendar days of receipt of the Contractor's certification, the Contracting Agency will update the QPL. The maximum duration for approval of a mix design and listing on the QPL will be 24 months from the date of initial approval or as approved by the Engineer.

5-04.2(1)A Mix Designs Containing RAP and/or RAS

Mix designs are classified by the RAP and/or RAS content as shown in Table 2.

Table 2

Mix Design Classification Based on RAP/RAS Content

RAP/RAS Classification	RAP/RAS Content[1]
Low RAP/No RAS	0% ≤ RAP% ≤ 20% and RAS% = 0%
High RAP/Any RAS	20% < RAP% ≤ Maximum Allowable RAP[2] and/or 0% < RAS% ≤ Maximum Allowable RAS[2]

[1]Percentages in this table are by total weight of HMA
[2]See Table 4 to determine the limits on the maximum amount RAP and/or RAS.

5-04.2(1)A1 Low RAP/No RAS – Mix Design Submittals for Placement on QPL

For Low RAP/No RAS mix designs, comply with the following additional requirements:

1. Develop the mix design with or without the inclusion of RAP.

2. The asphalt binder grade shall be the grade indicated in the Bid item name or as otherwise required by the Contract.

3. Submit samples of RAP if used in development of the mix design.

4. Testing RAP or RAS stockpiles is not required for obtaining approval for placing these mix designs on the QPL.

5-04.2(1)A2 High RAP/Any RAS - Mix Design Submittals for Placement on QPL

For High RAP/Any RAS mix designs, comply with the following additional requirements:

1. For mix designs with any RAS, test the RAS stockpile (and RAP stockpile if any RAP is in the mix design) in accordance with Table 3.

2. For High RAP mix designs with no RAS, test the RAP stockpile in accordance with Table 3.

3. For mix designs with High RAP/Any RAS, construct a single stockpile for RAP and a single stockpile for RAS and isolate (sequester) these stockpiles from further stockpiling before beginning development of the mix design. Test the RAP and RAS during stockpile construction as required by item 1 and 2 above. Use the test data in developing the mix design, and report the test data to the Contracting Agency on WSDOT Form 350-042 as part of the mix design submittal for approval on the QPL. Account for the reduction in asphalt binder contributed from RAS in accordance with AASHTO PP 78. Do not add to these stockpiles after starting the mix design process.

Table 3

Test Frequency of RAP/RAS During RAP/RAS Stockpile Construction For Approving a High RAP/Any RAS Mix Design for Placement on the QPL		
Test Frequency[1]	Test for	Test Method
• 1/1000 tons of RAP (minimum of 10 per mix design) and • 1/100 tons of RAS (minimum of 10 per mix design)	Asphalt Binder Content and Sieve Analysis of Fine and Coarse Aggregate	FOP for AASHTO T 308 and FOP for WAQTC T 27/T 11

[1]"tons", in this table, refers to tons of the reclaimed material before being incorporated into HMA.

4. Limit the amount of RAP and/or RAS used in a High RAP/Any RAS mix design by the amount of binder contributed by the RAP and/or RAS, in accordance with Table 4.

Table 4

Maximum Amount of RAP and/or RAS in HMA Mixture	
Maximum Amount of Binder Contributed from:	
RAP	RAS
40%[1] minus contribution of binder from RAS	20%[2]

[1] Calculated as the weight of asphalt binder contributed from the RAP as a percentage of the total weight of asphalt binder in the mixture.

[2] Calculated as the weight of asphalt binder contributed from the RAS as a percentage of the total weight of asphalt binder in the mixture.

5. Develop the mix design including RAP, RAS, recycling agent, and new binder.

6. Extract, recover, and test the asphalt residue from the RAP and RAS stockpiles to determine the percent of recycling agent and/or grade of new asphalt binder needed to meet but not exceed the performance grade (PG) of asphalt binder required by the Contract.

   a. Perform the asphalt extraction in accordance with AASHTO T 164 or ASTM D 2172 using reagent grade solvent.

   b. Perform the asphalt recovery in accordance with AASHTO R 59 or ASTM D 1856.

c. Test the recovered asphalt residue in accordance with AASHTO R 29 to determine the asphalt binder grade in accordance with Section 9-02.1(4).

d. After determining the recovered asphalt binder grade, determine the percent of recycling agent and/or grade of new asphalt binder in accordance with ASTM D 4887.

e. Test the final blend of recycling agent, binder recovered from the RAP and RAS, and new asphalt binder in accordance with AASHTO R 29. The final blended binder shall meet but not exceed the performance grade of asphalt binder required by the Contract and comply with the requirements of Section 9-02.1(4).

7. Include the following test data with the mix design submittal:

   a. All test data from RAP and RAS stockpile construction.

   b. All data from testing the recovered and blended asphalt binder.

8. Include representative samples of the following with the mix design submittal:

   a. RAP and RAS.

   b. 150 grams of recovered asphalt residue from the RAP and RAS that are to be used in the HMA production.

5-04.2(1)B Commercial HMA - Mix Design Submittal for Placement on QPL

For HMA used in the Bid item Commercial HMA, in addition to the requirements of 5-04.2(1) identify the following in the submittal:

1. Commercial HMA

2. Class of HMA

3. Performance grade of binder

4. Equivalent Single Axle Load (ESAL)

The Contracting Agency may elect to approve Commercial HMA mix designs without evaluation.

5-04.2(1)C Mix Design Resubmittal for QPL Approval

Develop a new mix design and resubmit for approval on the QPL when any of the following changes occur. When these occur, discontinue using the mix design until after it is reapproved on the QPL.

1. Change in the source of crude petroleum used in the asphalt binder.

2. Changes in the asphalt binder refining process.

3. Changes in additives or modifiers in the asphalt binder.

4. Changes in the anti-strip additive, brand, type or quantity.

5. Changes to the source of material for aggregate.

6. Changes to the job mix formula that exceed the amounts as described in item 2 of Section 9-03.8(7), unless otherwise approved by the Engineer.

7. Changes in the percentage of material from a stockpile, when such changes exceed 5% of the total aggregate weight.

    a. For Low RAP/No RAS mix designs developed without RAP, changes to the percentage of material from a stockpile will be calculated based on the total aggregate weight not including the weight of RAP.

    b. For Low RAP/No RAS mix designs developed with RAP, changes to the percentage of material from a stockpile will be calculated based on the total aggregate weight including the weight of RAP.

    c. For High RAP/Any RAS mix designs, changes in the percentage of material from a stockpile will be based on total aggregate weight including the weight of RAP (and/or RAS when included in the mixture).

Prior to making any change in the amount of RAS in an approved mix design, notify the Engineer for determination of whether a new mix design is required, and obtain the Engineer's approval prior to implementing such changes.

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

Use only mix designs listed on the Qualified Products List (QPL). Submit WSDOT Form 350-041 to the Engineer to request approval to use a mix design from the QPL. Changes to the job mix formula (JMF) that have been approved on other contracts may be included. The Engineer may reject a request to use a mix design if production of HMA using that mix design on any contract is not in compliance with Section 5-04.3(11)D, E, F, and G for mixture or compaction.

5-04.2(2)A Changes to the Job Mix Formula

The approved mix design obtained from the QPL will be considered the starting job mix formula (JMF) and shall be used as the initial basis for acceptance of HMA mixture, as detailed in Section 5-04.3(9).

During production the Contractor may request to adjust the JMF. Any adjustments to the JMF will require approval of the Engineer and shall be

made in accordance with item 2 of Section 9-03.8(7). After approval by the Engineer, such adjusted JMF's shall constitute the basis for acceptance of the HMA mixture.

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

The Contractor may, at the Contractor's discretion, elect to use warm mix asphalt (WMA) processes for producing HMA. WMA processes include organic additives, chemical additives, and foaming. The use of WMA is subject to the following:

- Do not use WMA processes in the production of High RAP/Any RAS mixtures.
- Before using WMA processes, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed WMA process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

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

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified in Table 5, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Table 5

Minimum Surface Temperature for Paving		
Compacted Thickness (Feet)	**Wearing Course**	**Other Courses**
Less than 0.10	55°F	45°F
0.10 to 0.20	45°F	35°F
More than 0.20	35°F	35°F

5-04.3(2) Paving Under Traffic

These requirements apply when the Roadway being paved is open to traffic.

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.

During paving operations, maintain temporary pavement markings throughout the project. Install temporary pavement markings on the Roadway prior to opening to traffic. Temporary pavement markings shall comply with Section 8-23.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Equip mixing plants as follows.

1. **Use tanks for storage and preparation of asphalt binder which:**

- Heat the contents by means that do not allow flame to contact the contents or the tank, such as by steam or electricity.

- Heat and hold contents at the required temperatures.

- Continuously circulate contents to provide uniform temperature and consistency during the operating period.

- Provide an asphalt binder sampling valve, in either the storage tank or the supply line to the mixer.

2. **Provide thermometric equipment:**

   - In the asphalt binder feed line near the charging valve at the mixer unit, capable of detecting temperature ranges expected in the HMA and in a location convenient and safe for access by Inspectors.

   - At the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates, and situated in full view of the plant operator.

3. **When heating asphalt binder:**

   - Do not exceed the maximum temperature of the asphalt binder recommended by the asphalt binder supplier.

   - Avoid local variations in heating.

   - Provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F.

4. **Provide a mechanical sampler for sampling mineral materials that:**

   - Meets the crushing or screening requirements of Section 1-05.6.

5. **Provide HMA sampling equipment that complies with WSDOT T168.**

   - Use a mechanical sampling device installed between the discharge of the silo and the truck transport, approved by the Engineer, or

   - Platforms or devices to enable sampling from the truck transport without entering the truck transport for sampling HMA.

6. **Provide for setup and operation of the Contracting Agency's field testing:**

- As required in Section 3-01.2(2).

7. **Provide screens or a lump breaker:**

   - When using any RAP or any RAS, to eliminate oversize RAP or RAS particles from entering the pug mill or drum mixer.

5-04.3(3)B Hauling Equipment

Provide HMA hauling equipment with tight, clean, smooth metal beds and a cover of canvas or other suitable material of sufficient size to protect the HMA from adverse weather. Securely attach the cover to protect the HMA whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F.

Prevent HMA from adhering to the hauling equipment. Spray metal beds with an environmentally benign release agent. Drain excess release agent prior to filling hauling equipment with HMA. Do not use petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA. For hopper trucks, operate the conveyer during the process of applying the release agent.

5-04.3(3)C Pavers

Use self-contained, power-propelled pavers provided with an internally heated vibratory screed that is capable of spreading and finishing courses of HMA in lane widths required by the paving section shown in the Plans.

When requested by the Engineer, provide written certification that the paver is equipped with the most current equipment available from the manufacturer for the prevention of segregation of the coarse aggregate particles. The certification shall list the make, model, and year of the paver and any equipment that has been retrofitted to the paver.

Operate the screed in accordance with the manufacturer's recommendations and in a manner to produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. Provide a copy of the manufacturer's recommendations upon request by the Contracting Agency. Extensions to the screed will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. In the Travelled Way do not use extensions without both augers and an internally heated vibratory screed.

Equip the paver with automatic screed controls and sensors for either or both sides of the paver. The controls shall be capable of sensing grade from an outside reference line, sensing the transverse slope of the screed, and providing automatic signals that operate the screed to maintain the desired grade and transverse slope. Construct the sensor so it will operate from a reference line or a mat referencing device. The transverse slope controller shall be capable of maintaining the screed at the desired slope within plus or minus 0.1 percent.

Equip the paver with automatic feeder controls, properly adjusted to maintain a uniform depth of material ahead of the screed.

Manual operation of the screed is permitted in the construction of irregularly shaped and minor areas. These areas include, but are not limited to, gore areas, road approaches, tapers and left-turn channelizations.

When specified in the Contract, provide reference lines for vertical control. Place reference lines on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line is permitted. Automatically control the grade and slope of intermediate lanes by means of reference lines or 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 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.

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.

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

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 0.30 feet of the pavement section used in traffic lanes. However, an MTD/V is not required for HMA placed in irregularly shaped and minor areas such as tapers and turn lanes, or for HMA mixture that is accepted by Visual Evaluation. At the Contractor's request the Engineer may approve paving without an MTD/V; the Engineer will determine if an equitable adjustment in cost or time is due. If a windrow elevator is used, the Engineer may limit the length of the windrow in urban areas or through intersections.

To be approved for use, an MTV:

1. Shall be a self-propelled vehicle, separate from the hauling vehicle or paver.

2. Shall not 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

Operate rollers in accordance with the manufacturer's recommendations. When requested by the Engineer, provide a Type 1 Working Drawing of the manufacturer's recommendation for the use of any roller planned for use on the project. Do not use rollers that crush aggregate, produce pickup or washboard, unevenly compact the surface, displace the mix, or produce other undesirable results.

5-04.3(4) Preparation of Existing Paved Surfaces

Before constructing HMA on an existing paved surface, the entire surface of the pavement shall be clean. Entirely remove all fatty asphalt patches, grease drippings, and other deleterious substances from the existing pavement to the satisfaction of the Engineer. Thoroughly clean all pavements or bituminous surfaces of dust, soil, pavement grindings, and other foreign matter. Thoroughly remove any cleaning or solvent type liquids used to clean equipment spilled on the pavement before paving proceeds. Fill all holes and small depressions with an appropriate class of HMA. Level and thoroughly compact the surface of the patched area.

Apply a uniform coat of asphalt (tack coat) to all paved surfaces on which any course of HMA is to be placed or abutted. Apply tack coat to cover the cleaned existing pavement with a thin film of residual asphalt free of streaks and bare spots. Apply a heavy application of tack coat to all joints. For Roadways open to traffic, limit the application of tack coat to surfaces that will be paved during the same working shift. Equip the spreading equipment with a thermometer to indicate the temperature of the tack coat material.

Do not operate equipment on tacked surfaces until the tack has broken and cured. Repair tack coat damaged by the Contractor's operation, prior to placement of the HMA.

Unless otherwise approved by the Engineer, use cationic emulsified asphalt CSS-1, CSS-1h, STE-1, or Performance Graded (PG) asphalt for tack coat. The CSS-1 and CSS-1h may be diluted with water at a rate not to exceed one part water to one part emulsified asphalt. Do not allow the tack coat material to exceed the maximum temperature recommended by the asphalt supplier.

When shown in the Plans, prelevel uneven or broken surfaces over which HMA is to be placed by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

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 crack. 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.

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:

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.

5-04.3(4)B Soil Residual Herbicide

Where shown in the Plans, apply one application of an approved soil residual herbicide. Comply with Section 8-02.3(3)B. Complete paving within 48 hours of applying the herbicide.

Use herbicide registered with the Washington State Department of Agriculture for use under pavement. Before use, obtain the Engineer's approval of the herbicide and the proposed rate of application. Include the following information in the request for approval of the material:

1. Brand Name of the Material,

2. Manufacturer,

3. Environmental Protection Agency (EPA) Registration Number,

4. Material Safety Data Sheet, and

5. Proposed Rate of Application.

5-04.3(4)C Pavement Repair

Excavate pavement repair areas and backfill these with HMA in accordance with the details shown in the Plans and as staked. Conduct the excavation operations in a manner that will protect the pavement that is to remain. Repair pavement not designated to be removed that is damaged as a result of the Contractor's operations to the satisfaction of the Engineer at no cost to the Contracting Agency. Excavate only within one lane at a time unless approved otherwise by the Engineer. Do not excavate more area than can be completely backfilled and compacted during the same shift.

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, sawcut the perimeter of the pavement area to be removed unless the pavement in the pavement repair area is to be removed by a pavement grinder.

Excavated materials shall be 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.

Apply a heavy application of tack coat to all surfaces of existing pavement in the pavement repair area, in accordance with Section 5-04.3(4).

Place the HMA backfill in lifts not to exceed 0.35-foot compacted depth. Thoroughly compact each lift by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates, RAP, & RAS

Produce aggregate in compliance with Section 3-01. Comply with Section 3-02 for preparing stockpile sites, stockpiling, and removing from stockpile each of the following: aggregates, RAP, and RAS. Provide sufficient storage space for each size of aggregate, RAP and RAS. Fine aggregate or RAP may be uniformly blended with the RAS as a method of preventing the agglomeration of RAS particles. Remove the aggregates, RAP and RAS from stockpile(s) in a manner that ensures minimal segregation when being moved to the HMA plant for processing into the final mixture. Keep different aggregate sizes separated until they have been delivered to the HMA plant.

5-04.3(5)A Stockpiling RAP or RAS for High RAP/Any RAS Mixes

Do not place any RAP or RAS into a stockpile which has been sequestered for a High RAP/Any RAS mix design. Do not incorporate any RAP or RAS into a High RAP/Any RAS mixture from any source other than the stockpile which was sequestered for approval of that particular High RAP/Any RAS mix design.

RAP that is used in a Low RAP/No RAS mix is not required to come from a sequestered stockpile.

5-04.3(6) Mixing

The asphalt supplier shall introduce anti-stripping additive, in the amount designated on the QPL for the mix design, into the asphalt binder prior to shipment to the asphalt mixing plant.

Anti-strip is not required for temporary work that will be removed prior to Physical Completion.

Use asphalt binder of the grade, and from the supplier, in the approved mix design.

Prior to introducing reclaimed materials into the asphalt plant, remove wire, nails, and other foreign material. Discontinue use of the reclaimed material if the Engineer, in their sole discretion, determines the wire, nails, or other foreign material to be excessive.

Size RAP and RAS prior to entering the mixer to provide uniform and thoroughly mixed HMA. If there is evidence of the RAP or RAS not breaking down during the heating and mixing of the HMA, immediately suspend the use of the RAP or RAS until changes have been approved by the Engineer.

After the required amount of mineral materials, RAP, RAS, new asphalt binder and recycling agent have been introduced into the mixer, mix the HMA until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, RAP and RAS is ensured.

Upon discharge from the mixer, ensure that the temperature of the HMA does not exceed the optimum mixing temperature shown on the approved Mix Design Report by more than 25°F, or as approved by the Engineer. When a WMA additive is included in the manufacture of HMA, do not heat the WMA additive (at any stage of production including in binder storage tanks) to a temperature higher than 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, reduce the moisture content.

During the daily operation, HMA may be temporarily held in approved storage facilities. Do not incorporate HMA into the Work that has been held for more than 24 hours after mixing. Provide an easily readable, low bin-level indicator on the storage facility that indicates the amount of material in storage. Waste the HMA in storage when the top level of HMA drops 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. Dispose of rejected or waste HMA at no expense to the Contracting Agency.

5-04.3(7) Spreading and Finishing

Do not exceed the maximum nominal compacted depth of any layer in any course, as shown in Table 6, unless approved by the Engineer:

Table 6

Maximum Nominal Compacted Depth of Any Layer		
HMA Class	**Wearing Course**	**Other than Wearing Course**
1 inch	0.35 feet	0.35 feet
¾ and ½ inch	0.30 feet	0.35 feet
⅜ inch	0.15 feet	0.15 feet

Use HMA pavers complying with Section 5-04.3(3) to distribute the mix. 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, place the material produced for each JMF with separate spreading and compacting equipment. Do not intermingle HMA produced from more than one JMF. 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

Sample aggregate for meeting the requirements of Section 3-04 prior to being incorporated into HMA. (The acceptance data generated for the Section 3-04 acceptance analysis will not be commingled with the acceptance data

generated for the Section 5-04.3(9) acceptance analysis.) Aggregate acceptance samples shall be taken as described in Section 3-04. Aggregate acceptance testing will be performed by the Contracting Agency. Aggregate contributed from RAP and/or RAS will not be evaluated under Section 3-04.

For aggregate that will be used in HMA mixture which will be accepted by Statistical Evaluation, the Contracting Agency's acceptance of the aggregate will be based on:

1. Samples taken prior to mixing with asphalt binder, RAP, or RAS;

2. Testing for the materials properties of fracture, uncompacted void content, and sand equivalent;

3. Evaluation by the Contracting Agency in accordance with Section 3-04, including price adjustments as described therein.

For aggregate that will be used in HMA which will be accepted by Visual Evaluation, evaluation in accordance with items 1, 2, and 3 above is at the discretion of the Engineer.

5-04.3(9) HMA Mixture Acceptance

The Contracting Agency will evaluate HMA mixture for acceptance by one of two methods as determined from the criteria in Table 7.

Table 7

Basis of Acceptance for HMA Mixture		
	Visual Evaluation	**Statistical Evaluation**
Criteria for Selecting the Evaluation Method	• Commercial HMA placed at any location • Any HMA placed in: ○ sidewalks ○ road approaches ○ ditches ○ slopes ○ paths ○ trails ○ gores ○ prelevel ○ temporary pavement[1] ○ pavement repair • Other nonstructural applications of HMA as approved by the Engineer	• All HMA mixture other than that accepted by Visual Evaluation

[1] Temporary pavement is HMA that will be removed before Physical Completion of the Contract.

5-04.3(9)A Test Sections

This Section applies to HMA mixture accepted by Statistical Evaluation. A test section is not allowed for HMA accepted by Visual Evaluation.

The purpose of a test section is to determine whether or not the Contractor's mix design and production processes will produce HMA meeting the Contract requirements related to mixture. Construct HMA mixture test sections at the beginning of paving, using at least 600 tons and a maximum of 1,000 tons or as specified by the Engineer. Each test section shall be constructed in one continuous operation.

5-04.3(9)A1 Test Section – When Required, When to Stop

Use Tables 8 and 9 to determine when a test section is required, optional, or not allowed, and to determine when performing test sections may end. Each mix design will be evaluated independently for the test section requirements. If more than one test section is required, each test section shall be evaluated separately by the criteria in table 8 and 9.

Table 8

Criteria for Conducting and Evaluating HMA Mixture Test Sections (For HMA Mixture Accepted by Statistical Evaluation)		
	High RAP/Any RAS	**Low RAP/No RAS**
Is Mixture Test Section Optional or Mandatory?	Mandatory[1]	At Contractor's Option
Waiting period after paving the test section.	4 calendar days[2]	4 calendar days[2]
What Must Happen to Stop Performing Test Sections?	Meet "Results Required to Stop Performing Test Sections" in Table 9 for High RAP/Any RAS.	Provide samples and respond to WSDOT test results required by Table 9 for Low RAP/No RAS.

[1]If a mix design has produced an acceptable test section on a previous contract (paved in the same calendar year, from the same plant, using the same JMF) the test section may be waived if approved by the Engineer.

[2]This is to provide time needed by the Contracting Agency to complete testing and the Contractor to adjust the mixture in response to those test results. Paving may resume when this is done.

Table 9

Results Required to Stop Performing HMA Mixture Test Sections[1] (For HMA Mixture Accepted by Statistical Evaluation)		
Test Property	**Type of HMA**	
	High RAP/Any RAS	**Low RAP/No RAS**
Gradation	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4[2]	None[4]
Asphalt Binder	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4[2]	None[4]
V_a	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4[2]	None[4]
Hamburg Wheel Track Indirect Tensile Strength	Meet requirements of Section 9-03.8(2).[3]	These tests will not be done as part of Test Section.
Aggregates Sand Equivalent Uncompacted Void Content Fracture	Nonstatistical Evaluation in accordance with the requirements of Section 3-04[3]	None[3]

[1]In addition to the requirements of this table, acceptance of the HMA mixture used in each test section is subject to the acceptance criteria and price adjustments for Statistical Evaluation (see Table 9a).

[2]Divide the test section lot into three sublots, approximately equal in size. Take one sample from each sublot, and test each sample for the property in the first column.

[3]Take one sample for each test section lot. Test the sample for the properties in the first column.

[4]Divide the test section lot into three sublots, approximately equal in size. Take one sample from each sublot, and test each sample for the property in the first column. There are no criteria for discontinuing test sections for these mixes; however, the contractor must comply with Section 5-04.3(11)F before resuming paving.

5-04.3(9)A2 Test Section – Evaluating the HMA Mixture in a Test Section

The Engineer will evaluate the HMA mixture in each test section for rejection, acceptance, and price adjustments based on the criteria in Table 9a using the data generated from the testing required by Table 9. Each test section shall be considered a separate lot.

Table 9a

Acceptance Criteria for HMA Mixture Placed in a Test Section (For HMA Mixture Accepted by Statistical Evaluation)		
Test Property	**Type of HMA**	
	High RAP/Any RAS	**Low RAP/No RAS**
Gradation Asphalt Binder V_a	Statistical Evaluation	Statistical Evaluation
Hamburg Wheel Track Indirect Tensile Strength	Pass/Fail for the requirements of Section 9-03.8(2)[1]	N/A
HMA Aggregate Sand Equivalent Uncompacted Void Content	Nonstatistical Evaluation in accordance with the requirements of Section 3-04	Nonstatistical Evaluation in accordance with the requirements of Section 3-04

[1]Failure to meet the specifications for Hamburg and/or IDT will cause the mixture in the test section to be rejected. Refer to Section 5-04.3(11).

5-04.3(9)B Mixture Acceptance – Statistical Evaluation

5-04.3(9)B1 Mixture Statistical Evaluation – Lots and Sublots

HMA mixture which is accepted by Statistical Evaluation will be evaluated by the Contracting Agency dividing that HMA tonnage into mixture lots, and each mixture lot will be evaluated using stratified random sampling by the Contracting Agency sub-dividing each mixture lot into mixture sublots. All mixture in a mixture lot shall be of the same mix design. The mixture sublots will be numbered in the order in which the mixture (of a particular mix design) is paved.

Each mixture lot comprises a maximum of 15 mixture sublots, except:

- The final mixture lot of each mix design on the Contract will comprise a maximum of 25 sublots.
- A mixture lot for a test section will consist of three sublots.

Each mixture sublot shall be approximately uniform in size with the maximum mixture sublot size as specified in Table 10. The quantity of material represented by the final mixture sublot of the project, for each mix design on the project, may be increased to a maximum of two times the mixture sublot quantity calculated.

Table 10

Maximum HMA Mixture Sublot Size For HMA Accepted by Statistical Evaluation	
HMA Original Plan Quantity (tons)[1]	**Maximum Sublot Size (tons)[2]**

< 20,000	1,000
20,000 to 30,000	1,500
>30,000	2,000

[1] "Plan quantity" means the plan quantity of all HMA of the same class and binder grade which is accepted by Statistical Evaluation.

[2] The maximum sublot size for each combination of HMA class and binder grade shall be calculated separately.

- For a mixture lot in progress with a mixture CPF less than 0.75, a new mixture lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced. See also Section 5-04.3(11)F.

- If, before completing a mixture lot, the Contractor requests a change to the JMF which is approved by the Engineer, the mixture produced in that lot after the approved change will be evaluated on the basis of the changed JMF, and the mixture produced in that lot before the approved change will be evaluated on the basis of the unchanged JMF; however, the mixture before and after the change will be evaluated in the same lot. Acceptance of subsequent mixture lots will be evaluated on the basis of the changed JMF.

5-04.3(9)B2 Mixture Statistical Evaluation – Sampling
Comply with Section 1-06.2(1).

Samples of HMA mixture which is accepted by Statistical Evaluation will be randomly selected from within each sublot, with one sample per sublot. The Engineer will determine the random sample location using WSDOT Test Method T 716. The Contractor shall obtain the sample when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with FOP for WAQTC T 168.

5-04.3(9)B3 Mixture Statistical Evaluation – Acceptance Testing
Comply with Section 1-06.2(1).

The Contracting Agency will test the mixture sample from each sublot (including sublots in a test section) for the properties shown in Table 11.

Table 11

Testing Required for each HMA Mixture Sublot		
Test	**Procedure**	**Performed by**
V_a	WSDOT SOP 731	Engineer
Asphalt Binder Content	FOP for	Engineer

	AASHTO T 308	
Gradation: Percent Passing 1½″, 1″, ¾″, ½″, ⅜″, No. 4, No. 8, No. 200	FOP for WAQTC T 27/T 11	Engineer

The mixture samples and tests taken for the purpose of determining acceptance of the test section (as described in Section 5-04.3(9)A) shall also be used as the test results for acceptance of the mixture described in 5-04.3(9)B3, 5-04.3(9)B4, 5-04.3(9)B5, and 5-04.3(9)B6.

5-04.3(9)B4 Mixture Statistical Evaluation – Pay Factors

Comply with Section 1-06.2(2).

The Contracting Agency will determine a pay factor (PF_i) for each of the properties in Table 11, for each mixture lot, using the quality level analysis in Section 1-06.2(2)D. For Gradation, a pay factor will be calculated for each of the sieve sizes listed in Table 11 which is equal to or smaller than the maximum allowable aggregate size (100 percent passing sieve) of the HMA mixture. The USL and LSL shall be calculated using the Job Mix Formula Tolerances (for Statistical Evaluation) in Section 9-03.8(7).

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)B5 Mixture Statistical Evaluation – Composite Pay Factors (CPF)

Comply with Section 1-06.2(2).

In accordance with Section 1-06.2(2)D4, the Contracting Agency will determine a Composite Pay Factor (CPF) for each mixture lot from the pay factors calculated in Section 5-04.3(9)B4, using the price adjustment factors in Table 12. Unless otherwise specified, the maximum CPF for HMA mixture shall be 1.05.

Table 12

HMA Mixture 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 (V_a)	20

5-04.3(9)B6 Mixture Statistical Evaluation – Price Adjustments

For each HMA mixture lot, a Job Mix Compliance Price Adjustment will be determined and applied, as follows:

JMCPA = [0.60 x (CPF – 1.00)] x Q x UP

Where

JMCPA = Job Mix Compliance Price Adjustment for a given lot of mixture ($)
CPF = Composite Pay factor for a given lot of mixture (maximum is 1.05)
Q = Quantity in a given lot of mixture (tons)
UP = Unit price of the HMA in a given lot of mixture ($/ton)

5-04.3(9)B7 Mixture Statistical Evaluation – Retests

The Contractor may request that a mixture sublot be retested. To request a retest, submit a written request to the Contracting Agency within 7 calendar days after the specific test results have been posted to the website or emailed to the Contractor, whichever occurs first. The Contracting Agency will send a split of the original acceptance sample for testing by the Contracting Agency to either the Region Materials Laboratory or the State Materials Laboratory as determined by the Engineer. The Contracting Agency will not test the split of the sample with the same equipment or by the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and V_a, and the results of the retest will be used for the acceptance of the HMA mixture in place of the original mixture 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 $250 per sample.

5-04.3(9)C Vacant

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

Visual Evaluation of HMA mixture will be by visual inspection by the Engineer or, in the sole discretion of the Engineer, the Engineer may sample and test the mixture.

5-04.3(9)D1 Mixture Visual Evaluation – Lots, Sampling, Testing, Price Adjustments

HMA mixture accepted by Visual Evaluation will not be broken into lots unless the Engineer determines that testing is required. When that occurs, the Engineer will identify the limits of the questionable HMA mixture, and that questionable HMA mixture shall constitute a lot. Then, the Contractor will take samples from the truck, or the Engineer will take core samples from the roadway at a minimum of three random locations from within the lot, selected in accordance with WSDOT Test Method T 716, taken from the roadway in accordance with WSDOT SOP 734, and tested in accordance with WSDOT SOP 737. The Engineer will test one of the samples for all constituents in Section 5-04.3(9)B3. If all constituents from that test fall within the Job Mix Formula Tolerances (for Visual Evaluation) in

Section 9-03.8(7), the lot will be accepted at the unit Contract price with no further evaluation.

When one or more constituents fall outside those tolerance limits, the other samples will be tested for all constituents in Section 5-04.3(9)B3, and a Job Mix Compliance Price Adjustment will be calculated in accordance with Table 13.

Table 13

Visual Evaluation – Out of Tolerance Procedures	
Comply with the Following	
Pay Factors[1]	Section 5-04.3(9)B4
Composite Pay Factors[2]	Section 5-04.3(9)B5
Price Adjustments	Section 5-04.3(9)B6

[1]The Visual Evaluation tolerance limits in Section 9-03.8(7) will be used in the calculation of the PF_i.
[2]The maximum CPF shall be 1.00.

5-04.3(9)E Mixture Acceptance – Notification of Acceptance Test Results

The results of all mixture acceptance testing and the Composite Pay Factor (CPF) of the lot after three sublots have been tested will be available to the Contractor through The Contracting Agency's website.

The Contracting Agency will endeavor to provide written notification (via email to the Contractor's designee) of acceptance test results through its web-based materials testing system Statistical Analysis of Materials (SAM) within 24 hours of the sample being made available to the Contracting Agency. However, the Contractor agrees:

1. Quality control, defined as the system used by the Contractor to monitor, assess, and adjust its production processes to ensure that the final HMA mixture will meet the specified level of quality, is the sole responsibility of the Contractor.

2. The Contractor has no right to rely on any testing performed by the Contracting Agency, nor does the Contractor have any right to rely on timely notification by the Contracting Agency of the Contracting Agency's test results (or statistical analysis thereof), for any part of quality control and/or for making changes or correction to any aspect of the HMA mixture.

3. The Contractor shall make no claim for untimely notification by the Contracting Agency of the Contracting Agency's test results or statistical analysis.

5-04.3(10) HMA Compaction Acceptance

For all HMA, the Contractor shall comply with the General Compaction Requirements in Section 5-04.3(10)A. The Contracting Agency will evaluate all HMA for compaction compliance with one of the following - Statistical

Evaluation, Visual Evaluation, or Test Point Evaluation - determined by the criteria in Table 14:

Table 14

Criteria for Determining Method of Evaluation for HMA Compaction[1]		
Statistical Evaluation of HMA Compaction is Required For:	**Visual Evaluation of HMA Compaction is Required For:**	**Test Point Evaluation of HMA Compaction is Required For:**

• Any HMA for which the specified course thickness is greater than 0.10 feet, and the HMA is in:
  ○ traffic lanes, including but not limited to:
  • ramp lanes
  • truck climbing lanes
  • weaving lanes
  • speed change lanes
	• "HMA for Preleveling…"
	• "HMA for Pavement Repair…"
		• Any HMA not meeting the criteria for Statistical Evaluation or Visual Evaluation

[1]This table applies to all HMA, and shall be the sole basis for determining the acceptance method for compaction.

The Contracting Agency may, at its sole discretion, evaluate any HMA for compliance with the Cyclic Density requirements of Section 5-04.3(10)B.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Immediately after the HMA has been spread and struck off, and after surface irregularities have been adjusted, thoroughly and uniformly compact the mix. The completed course shall be free from ridges, ruts, humps, depressions, objectionable marks, and irregularities and shall conform to the line, grade, and cross-section shown in the Plans. If necessary, alter the JMF in accordance with Section 9-03.8(7) to achieve desired results.

Compact the mix when it is in the proper condition so that no undue displacement, cracking, or shoving occurs. Compact areas inaccessible to large compaction equipment by mechanical or hand tampers. Remove HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective. Replace the removed material with new HMA, and compact it immediately 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. An exception shall be that pneumatic tired rollers shall be used for compaction of the wearing course beginning

October 1st of any year through March 31st of the following year. Coverage with a steel wheel roller may precede pneumatic tired rolling. Unless otherwise approved by the Engineer, operate rollers in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, do not operate a roller in a mode that results in checking or cracking of the mat.

On bridge decks and on the five feet of roadway approach immediately adjacent to the end of bridge/back of pavement seat, operate rollers in static mode only.

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 HMA Compaction Acceptance – Statistical Evaluation

HMA compaction which is accepted by Statistical Evaluation will be based on acceptance testing performed by the Contracting Agency, and statistical analysis of those acceptance tests results. This will result in a Compaction Price Adjustment.

5-04.3(10)C1 HMA Compaction Statistical Evaluation – Lots and Sublots

HMA compaction which is accepted by Statistical Evaluation will be evaluated by the Contracting Agency dividing the project into compaction lots, and each compaction lot will be evaluated using stratified random sampling by the Contracting Agency sub-dividing each compaction lot into compaction sublots. All mixture in any individual compaction lot shall be of the same mix design. The compaction sublots will be numbered in the order in which the mixture (of a particular mix design) is paved.

Each compaction lot comprises a maximum of 15 compaction sublots, except for the final compaction lot of each mix design on the Contract, which comprises a maximum of 25 sublots.

Each compaction sublot shall be uniform in size as shown in Table 15, except that the last compaction sublot of each day may be increased to a maximum of two times the compaction sublot quantity calculated. Minor variations in the size of any sublot shall not be cause to invalidate the associated test result.

Table 15

HMA Compaction Sublot Size	
HMA Original Plan Quantity (tons)[1]	Compaction Sublot Size (tons)

<20,000	100
20,000 to 30,000	150
>30,000	200

[1] In determining the plan quantity tonnage, do not include any tons accepted by test point evaluation.

The following will cause one compaction lot to end prematurely and a new compaction lot to begin:

- For a compaction lot in progress with a compaction CPF less than 0.75, a new compaction lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced. See also Section 5-04.3(11)F.

All HMA which is paved on a bridge and accepted for compaction by Statistical Evaluation will compose a bridge compaction lot. If the contract includes such HMA on more than one bridge, compaction will be evaluated on each bridge individually, as separate bridge compaction lots.

Bridge compaction sublots will be determined by the Engineer subject to the following:

- All sublots on a given bridge will be approximately the same size.
- Sublots will be stratified from the lot.
- In no case will there be less than 3 sublots in each bridge compaction lot.
- No sublot will exceed 50 tons.
- Compaction test locations will be determined by the Engineer in accordance with WSDOT FOP for AASHTO T716.

5-04.3(10)C2 HMA Compaction Statistical Evaluation – Acceptance Testing

Comply with Section 1-06.2(1).

The location of HMA compaction acceptance tests will be randomly selected by the Contracting Agency from within each sublot, with one test per sublot. The Contracting Agency will determine the random sample location using WSDOT Test Method T 716.

Use Table 16 to determine compaction acceptance test procedures and to allocate compaction acceptance sampling and testing responsibilities between the Contractor and the Contracting Agency. HMA cores shall be taken or nuclear density testing shall occur after

completion of the finish rolling, prior to opening to traffic, and on the same day that the mix is placed.

Table 16

HMA Compaction Acceptance Testing Procedures and Responsibilities			
	When Contract Includes Bid Item "HMA Core – Roadway" or "HMA Core – Bridge"[4]	When Contract Does Not Include Bid Item "HMA Core – Roadway" or "HMA Core – Bridge"[4]	
Basis for Test:	Cores	Cores[3]	Nuclear Density Gauge[3]
In-Place Density Determined by:	Contractor shall take cores[1] using WSDOT SOP 734[2] Contracting Agency will determine core density using FOP for AASHTO T 166	Contracting Agency will take cores[1] using WSDOT SOP 734 Contracting Agency will determine core density using FOP for AASHTO T 166	Contracting Agency, using WSDOT FOP for AASHTO T 355
Theoretical Maximum Density Determined by:	Contracting Agency, using FOP for AASHTO T 209		
Rolling Average of Theoretical Maximum Densities Determined by:	Contracting Agency, using WSDOT SOP 729		
Percent Compaction in Each Sublot Determined by:	Contracting Agency, using WSDOT SOP 736	Contracting Agency, using WSDOT SOP 736	Contracting Agency, using WSDOT FOP for AASHTO T 355

[1]The core diameter shall be 4-inches unless otherwise approved by the Engineer.

[2]The Contractor shall take the core samples in the presence of the Engineer, at locations designated by the Engineer, and deliver the core samples to the Contracting Agency.

[3]The Contracting Agency will determine, in its sole discretion, whether it will take cores or use the nuclear density gauge to determine in-place density. Exclusive reliance on cores for density acceptance is generally intended for small paving projects and is not intended as a

replacement for nuclear gauge density testing on typical projects.

[4]The basis for test of all compaction sublots in a bridge compaction lot shall be cores. These cores shall be taken by the Contractor when the Proposal includes the bid item "HMA Cores – Bridge". When there is no bid item for "HMA Cores – Bridge", the Engineer will be responsible for taking HMA cores for all compaction sublots in a bridge compaction lot. In either case, the Engineer will determine core location, in-place density of the core, theoretical maximum density, rolling average of theoretical maximum density, and percent compaction using the procedure called for in this Section.

When using the nuclear density gauge for acceptance testing of pavement density, the Engineer will follow WSDOT SOP 730 for correlating the nuclear gauge with HMA cores. When cores are required for the correlation, coring and testing will be by the Contracting Agency. When a core is taken for gauge correlation at the location of a sublot, the relative density of the core will be used for the sublot test result and is exempt from retesting.

5-04.3(10)C3 HMA Statistical Compaction – Price Adjustments

For each HMA compaction lot (that is accepted by Statistical Evaluation) which has less than three compaction sublots, for which all compaction sublots attain a minimum of 91 percent compaction determined in accordance with WSDOT FOP for AASHTO T 355 (or WSDOT SOP 736 when provided by the Contract), the HMA will be accepted at the unit Contract price with no further evaluation.

For each HMA compaction lot (that is accepted by Statistical Evaluation) which does not meet the criteria in the preceding paragraph, the compaction lot shall be evaluated in accordance with Section 1-06.2(2) to determine the appropriate Compaction Price Adjustment (CPA). All of the test results obtained from the acceptance samples from a given compaction lot shall be evaluated collectively. Additional testing by either a nuclear density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For the statistical analysis in Section 1-06.2, use the following values:

x = Percent compaction of each sublot
USL = 100
LSL= 91

Each CPA will be determined as follows:

$$CPA = [0.40 \times (CPF - 1.00)] \times Q \times UP$$

Where

CPA = Compaction Price Adjustment for the compaction lot ($)
CPF = Composite Pay Factor for the compaction lot (maximum is 1.05)
Q = Quantity in the compaction lot (tons)
UP = Unit price of the HMA in the compaction lot ($/ton)

5-04.3(10)C4 HMA Statistical Compaction – Requests for Retesting

For a compaction sublot that has been tested with a nuclear density gauge that did not meet the minimum of 91 percent of the theoretical 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, taken at the same location as the nuclear density test, be used for determination of the relative density of the compaction sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the compaction 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 compaction sublot have been provided or made available to the Contractor. 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 retesting. When the CPF for the compaction lot based on the results of the cores is less than 1.00, the Contracting Agency will deduct the cost for the coring 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)D HMA Compaction – Visual Evaluation

Visual Evaluation will be the basis of acceptance for compaction of the Bid items “HMA for Pavement Repair Cl. ___ PG ___”and “HMA for Prelevelling Class___ PG___”. This HMA shall be thoroughly compacted to the satisfaction of the Engineer. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller.

5-04.3(10)E HMA Compaction – Test Point Evaluation

When compaction acceptance is by Test Point Evaluation, compact HMA based on a test point evaluation of the compaction train. Perform the test point evaluation 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.

5-04.3(10)F HMA Compaction Acceptance – Notification of Acceptance Test Results

The obligations and responsibilities for notifying the Contractor of compaction acceptance test results are the same as for mixture acceptance test results. See Section 5-04.3(9)E.

5-04.3(11) Reject Work

This Section applies to HMA and all requirements related to HMA (except aggregates prior to being incorporated into HMA). For rejection of aggregate prior to its incorporation into HMA refer to Section 3-04.

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.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to acceptance sampling and testing, 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.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests the rejected material to be tested. If the Contractor requests testing, acceptance will be by Statistical Evaluation, and a minimum of three samples will be obtained and tested. When uncompacted material is required for testing but not available, the Engineer will determine random sample locations on the roadway in accordance with WSDOT Test Method T 716, take cores in accordance with WSDOT SOP 734, and test the cores in accordance with WSDOT SOP 737.

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 (Mixture or Compaction)

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a mixture or compaction 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. The Contracting Agency will obtain a minimum of three random samples of the suspect material and perform the testing. When uncompacted material is required for testing but is not available, the

Engineer will select random sample locations on the roadway in accordance with WSDOT Test Method T 716, take cores samples in accordance with WSDOT SOP 734, and test the material in accordance with WSDOT SOP 737. 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 (Mixture or Compaction)

An entire mixture or compaction sublot that is suspected of being defective may be rejected. When this occurs, a minimum of two additional random samples from this sublot will be obtained. When uncompacted material is required for the additional samples but the material has been compacted, the Contracting Agency will take and test cores from the roadway as described in Section 5-04.3(11)D. The 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 (Mixture or Compaction)

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 when:

1. the Composite Pay Factor (CPF) of a mixture or compaction lot in progress drops below 1.00 and the Contractor is taking no corrective action, or

2. the Pay Factor (PF_i) for any constituent of a mixture or compaction lot in progress drops below 0.95 and the Contractor is taking no corrective action, or

3. either the PF_i for any constituent (or the CPF) of a mixture or compaction 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

Conduct operations such that placement of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed, but the roller may pass over the unprotected end of the freshly laid HMA only when the placement of the course is discontinued for such a length of time that the HMA will cool below compaction temperature. When the Work is resumed, cut back the previously compacted HMA to produce a slightly beveled edge for the full thickness of the course.

Construct a temporary wedge of HMA on a 50H:1V where a transverse joint as a result of paving or planing is open to traffic. Separate the HMA in the temporary wedge from the permanent HMA upon which it is placed by strips of heavy wrapping paper or other

methods approved by the Engineer. Remove the wrapping paper and trim the joint to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

Waste the material that is cut away and place new HMA against the cut. Use rollers or tamping irons to seal the joint.

5-04.3(12)A2 Longitudinal Joints

Offset the longitudinal joint in any one course from the course immediately below by not more than 6 inches nor less than 2 inches. Locate all longitudinal joints constructed in the wearing course at a lane line or an edge line of the Traveled Way. Construct a notched wedge joint 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 nor more than ½ of the compacted lift thickness, and then taper down on a slope not steeper than 4H:1V. Uniformly compact the sloped portion of the HMA notched wedge joint.

On one-lane ramps a longitudinal joint may be constructed at the center of the traffic lane, subject to approval by the Engineer, if:

1. The ramp must remain open to traffic, or

2. The ramp is closed to traffic and a hot-lap joint is constructed.

    a. Two paving machines shall be used to construct the hot-lap joint.

    b. The pavement within 6 inches of the hot-lap joint will not be excluded from random location selection for compaction testing.

    c. Construction equipment other than rollers shall not operate on any uncompacted HMA.

When HMA is placed adjacent to cement concrete pavement, construct longitudinal joints between the HMA and the cement concrete pavement. Saw the joint to the dimensions shown on Standard Plan A-40.10 and fill with joint sealant meeting the requirements of Section 9-04.2.

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 sealsto 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 HMA overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified in the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with Section 5-05.3(8). Apply the sealant 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, correct the pavement surface by one of the following methods:

1. Remove material from high places by grinding with an approved grinding machine, or

2. Remove and replace the wearing course of HMA, or

3. By other method approved by the Engineer.

Correct defects 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 portland cement concrete pavement is to be placed on HMA, the surface tolerance of the HMA shall be such that no surface elevation lies above the Plan grade minus the specified Plan depth of portland cement concrete pavement. Prior to placing the portland cement concrete pavement, bring any such irregularities to the required tolerance by grinding or other means approved by the Engineer.

When utility appurtenances such as manhole covers and valve boxes are located in the Traveled Way, pave the Roadway before the utility appurtenances are adjusted to the finished grade.

5-04.3(14) Planing Bituminous Pavement

Plane in such a manner that the underlying pavement is not torn, broken, or otherwise damaged by the planing operation. Delamination or raveling of the underlying pavement will not be construed as damage due to the Contractor's operations. Pavement outside the limits shown in the Plans or designated by the Engineer that is damaged by the Contractor's operations shall be repaired to the satisfaction of the Engineer at no additional cost to the Contracting Agency.

For mainline planing operations, use equipment with automatic controls and with sensors for either or both sides of the equipment. The controls shall be capable of sensing the grade from an outside reference line, or a mat-referencing device. The automatic controls shall have a transverse slope controller capable of maintaining the mandrel at the desired transverse slope (expressed as a percentage) within plus or minus 0.1 percent.

Remove all loose debris from the planed surface before opening the planed surface to traffic. The planings and other debris resulting from the planing operation shall become the property of the Contractor and be disposed of in accordance with Section 2-03.3(7)C, or as otherwise allowed by the Contract.

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

Construct HMA approaches at the locations shown in the Plans or where staked by the Engineer, in accordance with Section 5-04.

5-04.4 Measurement

HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the HMA. If the Contractor elects to remove and replace HMA as allowed by Section 5-04.3(11), the material removed will not be measured.

Roadway cores will be measured per each for the number of cores taken.

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

Soil residual herbicide will be measured by the mile for the stated width to the nearest 0.01 mile or by the square yard, whichever is designated in the Proposal.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Asphalt for fog seal will be measured by the ton, as provided in Section 5-02.4.

Longitudinal joint seals between the HMA and cement concrete pavement will be measured by the linear foot along the line and slope of the completed joint seal.

HMA sawcut and seal, and paved panel joint seal, will be measured by the linear foot along the line and slope of the completed joint seal.

Planing bituminous pavement will be measured by the square yard.

Temporary pavement marking will be measured by the linear foot as provided in Section 8-23.4.

Water will be measured by the M gallon as provided in Section 2-07.4.

5-04.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"HMA Cl. ___ PG ___", per ton.
"HMA for Approach Cl. ___ PG ___", per ton.
"HMA for Preleveling Cl. ___ PG ___", per ton.
"HMA for Pavement Repair Cl. ___ PG ___", per ton.
"Commercial HMA", per ton.
The unit Contract price per ton for "HMA Cl. ___ PG ___", "HMA for Approach Cl. ___ PG ___", "HMA for Preleveling Cl. ___ PG ___", "HMA for Pavement Repair Cl. ___ PG ___", and "Commercial HMA" shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

"Crack Sealing-FA", by force account.
"Crack Sealing-FA" will be paid for by force account as specified in Section 1-09.6. 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.

"Crack Sealing-LF", per linear foot.
The unit Contract price per linear foot for "Crack Sealing-LF" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4)A.

"Soil Residual Herbicide ____ ft. Wide", per mile, or
"Soil Residual Herbicide", per square yard.

The unit Contract price per mile or per square yard for “Soil Residual Herbicide” shall be full payment for all costs incurred to obtain, provide and install herbicide in accordance with Section 5-04.3(4)B.

“Pavement Repair Excavation Incl. Haul”, per square yard.
The unit Contract price per square yard for “Pavement Repair Excavation Incl. Haul” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4)C with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for “HMA for Pavement Repair Cl. ___ PG ___”, per ton.

“Asphalt for Fog Seal”, per ton.
Payment for “Asphalt for Fog Seal” is described in Section 5-02.5.

“Longitudinal Joint Seal”, per linear foot.
The unit Contract price per linear foot for “Longitudinal Joint Seal” shall be full payment for all costs incurred to construct the longitudinal joint between HMA and cement concrete pavement, as described in Section 5-04.3(12)B.

“HMA Sawcut And Seal”, per linear foot.
The unit Contract price per linear foot for “HMA Sawcut And Seal” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12)B1.

“Paved Panel Joint Seal”, per linear foot.
The unit Contract price per linear foot for “Paved Panel Joint Seal” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12)B2.

“Planing Bituminous Pavement”, per square yard.
The unit Contract price per square yard for “Planing Bituminous Pavement” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

“Temporary Pavement Marking”, per linear foot.
Payment for “Temporary Pavement Marking” is described in Section 8-23.5.

“Water”, per M gallon.
Payment for “Water” is described in Section 2-07.5.

“Job Mix Compliance Price Adjustment”, by calculation.
“Job Mix Compliance Price Adjustment” will be calculated and paid for as described in Section 5-04.3(9)B6 and 5-04.3(9)D1.

“Compaction Price Adjustment”, by calculation.
“Compaction Price Adjustment” will be calculated and paid for as described in Section 5-04.3(10)C3.

“HMA Core – Bridge”, per each.

The unit Contract price per each for "HMA Core – Bridge" shall be full payment for all costs, including traffic control, associated with taking HMA density cores in pavement that is on a bridge deck.

"HMA Core – Roadway", per each.
The unit Contract price per each for "HMA Core – Roadway" shall be full payment for all costs, including traffic control, associated with taking HMA density cores in pavement that is not on a bridge deck.

"Cyclic Density Price Adjustment", by calculation.
"Cyclic Density Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)B.

5-05.AP5

Section 5-05, Cement Concrete Pavement
January 3, 2017

5-05.3(1) Concrete Mix Design for Paving

In last sentence of the second paragraph of item number 1, the reference to "Section 9-01.2(4)" is revised to read "Section 9-01.2(1)B".

The following is inserted after item number 2:

3. **Mix Design Modifications** - The Contractor may initiate adjustments to the aggregate proportions of the approved mix design. An adjustment in both the fine and coarse aggregate batch target weights of plus or minus 200 pounds per cubic yard will be allowed without resubmittal of the mix design. The adjusted aggregate weights shall become the new batch target weights for the mix design.

Item number 3 is renumbered to 4 and revised (up until the table) to read:

4. **Conformance to Mix Design** - Cement and coarse and fine aggregate weights shall be within the following tolerances of the batch target weights of the mix design:

Portland Cement Concrete Batch Weights		
Cement	+5%	-1%
Coarse Aggregate	+2%	-2%
Fine Aggregate	+2%	-2%

5-05.3(3)B Mixing Equipment

The last sentence of item number 4 is revised to read:

Plant-mixed concrete may be transported in nonagitated vehicles provided that the concrete is in a workable condition when placed and:

a. discharge is completed within 45 minutes after the introduction of mixing water to the cement and aggregates, or

b. discharge is completed within 60 minutes after the introduction of mixing water to the cement and aggregates, provided the concrete mix temperature is 70°F or below during placement, or

c. discharge is completed within 60 minutes after the introduction of mixing water to the cement and aggregates, provided the mix contains an approved set retarder at the manufacturer's minimum dosage rate.

5-05.3(6) Subgrade

This section, including title, is revised to read:

5-05.3(6) Surface Preparation

The Subgrade surface shall be prepared and compacted a minimum of 3 feet beyond each edge of the area which is to receive concrete pavement in order to accommodate the slip-form equipment.

Concrete shall not be placed during a heavy rainfall. Prior to placing concrete:

1. The surface shall be moist;

2. Excess water (e.g., standing, pooling or flowing) shall be removed from the surface.

3. The surface shall be clean and free of any deleterious materials.

4. The surface temperature shall not exceed 120°F or be frozen.

5-05.3(7)A Slip-Form Construction

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

The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose, or by an electronic control system capable of controlling the line and grade within required tolerances.

6-02.AP6

Section 6-02, Concrete Structures
August 7, 2017

6-02.2 Materials

The item "Elastomeric Bearing Pads" is revised to read "Fabricated Bridge Bearing Assemblies".

6-02.3(2) Proportioning Materials

In the sixth paragraph, the reference to "Section 9-01.2(4)" is revised to read "9-01.2(1)B".

6-02.3(2)A Contractor Mix Design

The following new sentence is inserted after the first sentence of the third paragraph:

The mix design submittal shall also include test results no older than one year showing that the Aggregates do not contain Deleterious Substances in accordance with Section 9-03.

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

Item number 4 of the first paragraph is deleted.

Items number 5, 6, and 7 of the first paragraph are renumbered to 4, 5, and 6, respectively.

The following new sentence is inserted after the second sentence of the last paragraph:

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

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

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

6-02.3(2)B Commercial Concrete

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

Commercial concrete does not require mix design or source approvals for cement, aggregate, and other admixtures.

6-02.3(5)G Sampling and Testing for Temperature, Consistency and Air Content

The last three paragraphs are revised to read:

Sampling and testing will be performed before concrete placement from the first load. Concrete shall not be placed until all tests have been completed by the Engineer, and the results indicate that the concrete is within acceptable limits. If the concrete is not within acceptable limits, sampling and testing will continue before concrete placement for each load until one load meets all of the applicable acceptance requirements. After one test indicates that the concrete is within specified limits, the concrete may be placed and the sampling and testing frequency may decrease to one for every 100 cubic yards. Sampling shall be performed in accordance with FOP for WAQTC TM 2 and random samples shall be selected in accordance with WSDOT T 716. After the first acceptable load of concrete, up to ½ cubic yard may be placed from subsequent loads to be tested prior to testing for acceptance.

When the results for any subsequent acceptance test indicates that the concrete as delivered and approved by the Contractor for placement does not conform to the specified limits, the sampling and testing frequency will be resumed for each load. Whenever one subsequent test indicates that the concrete is within the specified limits, the random sampling and testing frequency of one for every 100 cubic yards may resume.

Sampling and testing for a placement of one class of concrete consisting of 50 cubic yards or less will be as listed above, except that after one set of tests indicate that the

concrete is within specified limits, the remaining concrete to be placed may be accepted by visual inspection.

6-02.3(6)A1 Hot Weather Protection

This section is revised to read:

The Contractor shall provide concrete within the specified temperature limits. Cooling of the coarse aggregate piles by sprinkling with water is permitted provided the moisture content is monitored and the mixing water is adjusted for the free water in the aggregate. Shading or cooling aggregate piles (sprinkling of fine aggregate piles with water is not allowed). If sprinkling of the coarse aggregates is to be used, the piles moisture content shall be monitored and the mixing water adjusted for the free water in the aggregate. In addition, when removing the coarse aggregate, it shall be removed from at least 1 foot above the bottom of the pile. Refrigerating mixing water; or replacing all or part of the mixing water with crushed ice, provided the ice is completely melted by placing time.

If air temperature exceeds 90°F, the Contractor shall use water spray or other accepted methods to cool all concrete-contact surfaces to less than 90°F. These surfaces include forms, reinforcing steel, steel beam flanges, and any others that touch the mix.

6-02.3(6)A2 Cold Weather Protection

This section is revised to read:

Concrete shall be maintained at or above a temperature of 40°F during the first seven days of the Cold Weather Protection Period and at or above a temperature of 35°F during the remainder of the Cold Weather Protection Period. Cold weather protection requirements do not apply to concrete in shafts and piles placed below the ground line.

Prior to placing concrete in cold weather, the Contractor shall submit a Type 2 Working Drawing with a written procedure for cold weather concreting. The procedure shall detail how the Contractor will adequately cure the concrete and prevent the concrete temperature from falling below the minimum temperature. Extra protection shall be provided for areas especially vulnerable to freezing (such as exposed top surfaces, corners and edges, thin sections, and concrete placed into steel forms). Concrete placement will only be allowed if the Contractor's cold weather protection plan has been accepted by the Engineer.

Prior to concrete placement, the Contractor shall review the 7-day temperature predictions for the job site from the Western Region Headquarters of the National Weather Service (www.wrh.noaa.gov). When temperatures below 35°F are predicted, the Contractor shall:

1. Install temperature sensors in each concrete placement. One sensor shall be installed for every 100 cubic yards of concrete placed. Sensors shall be installed at locations directed by the Engineer, and shall be placed 1.5 inches from the face of concrete.

2. Immediately after concrete placement, temperature sensors shall be installed on the concrete surface at locations directed by the Engineer. One sensor shall be installed for every 100 cubic yards of concrete placed.

Temperatures shall be measured and recorded a minimum of every hour for the duration of the Cold Weather Protection Period. Temperature data shall be submitted to the Engineer as a Type 1 Working Drawing within three days following the end of the Cold Weather Protection Period.

For each day that the concrete temperature falls below 40°F during the first seven days of the Cold Weather Protection Period, no curing time is awarded for that day and the Cold Weather Protection Period is extended for one additional day. If the concrete temperature falls below 35°F during the Cold Weather Protection Period, the concrete may be rejected by the Engineer.

6-02.3(7) Concrete Exposed to Sea Water

This section including title is revised to read:

6-02.3(7) Vacant

6-02.3(8) Concrete Exposed to Alkaline Soils or Water

This section including title is revised to read:

6-02.3(8) Vacant

6-02.3(10)D4 Monitoring Bridge Deck Concrete Temperature After Placement

This section is revised to read:

The Contractor shall measure and record the concrete temperature and ambient temperature a minimum of every hour for seven calendar days after concrete placement. The Contractor shall place two temperature sensors in the bridge deck at locations specified by the Engineer. The Contractor shall measure ambient temperature near the locations where concrete temperature is being measured. When the bridge deck is being enclosed and heated to meet cold weather requirements, ambient temperature readings shall be taken within the enclosure. The Contractor shall submit the concrete temperature and ambient temperature data as a Type 1 Working Drawing in spreadsheet format within 14 calendar days from placing the bridge deck concrete.

The Contractor shall submit a Type 1 Working Drawing consisting of the type and model of each device and the method used to measure and record the temperatures.

6-02.3(13)A Strip Seal Expansion Joint System

The first paragraph is revised to read:

The Contractor shall submit Type 2 Working Drawings consisting of the strip seal expansion joint shop drawings. These plans shall include, at a minimum, the following:

1. Plan, elevation, and sections of the joint system and all components, with dimensions and tolerances.

2. All material designations.

3. Manufacturer's written installation procedure. The installation procedure shall indicate how the extrusions set into the two sides of the joint will be allowed to move independently of one another.

4. Corrosion protection system used on the metal components.

5. Locations of welded shear studs, lifting mechanisms, temperature setting devices, and construction adjustment devices.

6. Method of sealing the system to prevent leakage of water through the joint.

7. Details of the temporary supports for the steel extrusions while the encapsulating concrete of the headers is placed and cured.

8. The gland installation procedure, including the means and methods used to install the gland and assure correct seating of the gland within the steel extrusions.

The following new paragraph is inserted after the third paragraph:

If the gland is installed in the field, the Contractor shall have the services of a strip seal expansion joint system manufacturer's technical representative physically present at the job site. The manufacturer's technical representative shall train the Contractor's personnel performing the field installation of the gland, provide technical assistance for installing the gland, and observe and inspect the installation of at least the first complete joint.

The second to last paragraph is deleted.

6-02.3(14)D General Requirements for Concrete Surface Finishes Produced by Form Liners

The first two sentences of the third paragraph are deleted.

6-02.3(16) Plans for Falsework and Formwork

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

A submittal is not required for footing or retaining wall formwork if the concrete placement is 4 feet or less in height.

The second to last paragraph is revised to read:

The Contractor shall furnish associated design calculations to the Engineer as part of the submittal. The design calculations shall include the structural and geotechnical design of the foundation and shall show the stresses and deflections in all load-carrying members that are part of the falsework system. Construction details which may be shown in the form of sketches on the calculation sheets shall be shown in the falsework or formwork drawings as well. Falsework or formwork plans will not be accepted in cases where it is necessary to refer to the calculation sheets for information needed for complete understanding of the falsework and formwork plans or how to construct the falsework and formwork.

The last paragraph is deleted.

6-02.3(17)D Falsework Support Systems: Piling, Temporary Concrete Footings, Timber Mudsills, Manufactured Shoring Towers, Caps, and Posts

This section, including title, is revised to read:

6-02.3(17)D Falsework Support Systems: Foundations, Manufactured Shoring Towers, Caps, and Posts

Foundations for falsework shall be designed for conditions stated in this Section using methods shown in the AASHTO Standard Specifications for Highway Bridges Seventeenth Edition – 2002 for allowable stress design, the AASHTO LRFD Bridge Design Specifications for load and resistance factor design or the AASHTO Guide Design Specifications for Bridge Temporary Works. Allowable stresses for materials shall not exceed stresses and conditions allowed by Section 6-02.3(17)B.

6-02.3(17)D1 Piling

This section including title is revised to read:

6-02.3(17)D1 Vacant

6-02.3(17)D2 Temporary Concrete Footings and Timber Mudsills

This section including title is revised to read:

6-02.3(17)D2 Vacant

6-02.3(17)D4 Manufactured Shoring Tower Systems and Devices

The fifth paragraph is deleted.

6-02.3(17)D5 Cross-Braced Type Base Frames

This section is deleted in its entirety.

6-02.3(17)D6 Ladder Type Base Frames

This section is deleted in its entirety.

6-02.3(17)D7 Intermediate Strength Shoring

This section is deleted in its entirety.

6-02.3(17)D8 Heavy-Duty Shoring Systems

This section is deleted in its entirety.

6-02.3(17)K Concrete Forms on Steel Spans

In the last paragraph, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

6-02.3(17)N Removal of Falsework and Forms

The fifth paragraph is deleted.

6-02.3(19)A Vacant

This section, including title, is revised to read:

6-02.3(19)A Submittals of Acceptance Test Reports and Certificates

The Contractor shall submit the following production samples and test reports and certificates for fabricated bridge bearing assemblies as applicable:

1. A Type 2 Working Drawing consisting of a six-inch square by ⅛-inch thick sample of PTFE taken from the lot of production material.

2. A Type 2 Working Drawing consisting of a six-inch square by 1-inch thick sample of pre-formed fabric pad taken from the lot of production material.

3. Type 1 Working Drawings consisting of Manufacturers' Certificates of Compliance for the PTFE, polyether urethane, pre-formed fabric pad duck, silicone grease, epoxy gel, and resin filler.

4. Type 1 Working Drawings consisting of certified mill test reports for all steel and stainless steel in the bearing assemblies.

5. Type 1 Working Drawings consisting of certified test reports confirming that the pre-formed fabric pads meet the specific requirements of proof load.

6-02.3(24)A Field Bending

This section (excluding the tables) is revised to read:

Field bending of AASHTO M31 Grade 60 and ASTM A706 Grade 60 reinforcement shall be done in accordance with the requirements of this section. Field bending of all other reinforcement shall require a Type 2 Working Drawing showing the bend radii, bending and heating procedures, and any inspection or testing requirements.

Field bending shall not be done on reinforcement within the top or bottom third of column lengths or within plastic hinge regions identified in the Plans. Field bending shall not be done on bar sizes No. 14 or No. 18.

In field-bending steel reinforcing bars, the Contractor shall:

1. Make the bend gradually using a bending tool equipped with a bending diameter as listed in Table 1. Bending shall not be done by means of hammer blows and pipe sleeves. When bending to straighten a previously bent bar, move a hickey bar progressively around the bend.

2. Apply heat as described below for bending bar sizes No. 6 through No. 11 and for bending bar sizes No. 5 and smaller when the bars have been previously bent. Previously unbent bars of sizes No. 5 and smaller may be bent without heating when the bar temperature is 40°F or higher. When previously unbent bars of sizes No. 5 and smaller have a bar temperature lower than 40°F, they shall be heated to within the range of 100°F to 150°F prior to bending. In applying heat for field-bending steel reinforcing bars, the Contractor shall:

    a. Avoid damage to the concrete by insulating any concrete within 6 inches of the heated bar area;

b. Apply two heat tips simultaneously at opposite sides of bar sizes No. 7 or larger;

c. Heat the bar to within the required temperature range shown in Table 2 as verified by using temperature-indicating crayons or other suitable means;

d. Heat a minimum bar length as shown in Table 3. Locate the heated section of the bar to include the entire bending length;

e. Bend immediately after the required temperature range has been achieved. Maintain the bar within the required temperature range during the entire bending process;

f. Do not cool bars artificially with water, forced air, or other means.

3. Limit any bend or straightening to these maximum angles: 135 degrees for bar sizes No. 8 or smaller, and 90 degrees for bar sizes No. 9 through No. 11.

4. Repair epoxy coating on epoxy coated bars in accordance with Section 6-02.3(24)H.

6-02.3(25) Prestressed Concrete Girders

Under the heading "**Prestressed Concrete Slab Girder**", the second sentence is deleted.

6-02.3(25)A Shop Drawings

The sixth paragraph is deleted.

6-02.3(25)F Prestress Release

The last two sentences of the last paragraph are deleted and replaced with the following single sentence:

This request shall be submitted as a Type 2E Working Drawing analyzing changes in vertical deflection, girder lateral stability and concrete stresses in accordance with Section 6-02.3(25)L2.

6-02.3(25)H Finishing

Item number 2 in the first paragraph is revised to read:

2. The bottoms, sides, and tops of the lower flanges on all girders, including the top of the bottom slab between the tub girder webs.

6-02.3(25)I Fabrication Tolerances

Items 4 and 5 in the first paragraph are revised to read:

4. Flange Depth: ± ¼ inch

5. Strand Position:

   Individual strands: ± ¼ inch

Bundled strands: ± ½ inch

Harped strand group center of gravity at the girder ends: ± 1 inch

Items 7, 8, 9 and 10 in the first paragraph are revised to read:

7. Position of an Interior Void, vertically and horizontally: ± ½ inch.

8. Bearing Recess (center of recess to girder end): ± ⅝ inch.

9. Girder Ends (deviation from square or designated skew):

   Horizontal: ± ⅛ inch per foot of girder width, up to a maximum of ± ½ inch

   Vertical: ± $\frac{3}{16}$ inch per foot of girder depth, up to a maximum of ± 1 inch

10. Bearing Area Deviation from Plane (in length or width of bearing): ± ⅛ inch

Items 14 and 15 in the first paragraph are revised to read:

14. Local smoothness of any surface: ± ¼ inch in 10 feet.

15. Differential Camber between Girders in a Span (measured in place at the job site):

For wide flange deck and deck bulb tee girders with a cast-in-place reinforced concrete deck:	Cambers shall be equalized when the differences in cambers between adjacent girders exceeds ± ¾ inch
For wide flange deck, deck bulb tee and slab girders without a cast-in-place reinforced concrete deck:	Cambers shall be equalized when the differences in cambers between adjacent girders exceeds ± ¼ inch

Item 17 in the first paragraph is revised to read:

17. Position of Lifting Embedments: ± 3 inches longitudinal, ± ¼ inch transverse.

6-02.3(25)J Horizontal Alignment

This section is revised to read:

The Contractor shall check and record the horizontal alignment (sweep) of each girder at the following times:

1. Initial – Upon removal of the girder from the casting bed

2. Shipment – Within 14 days prior to shipment; and

3. Erection – After girder erection and cutting temporary top strands but prior to any equalization, welding ties or placement of diaphragms.

Horizontal alignment of the top and bottom flanges shall be checked and recorded. Alternatively, the Contractor may check and record the horizontal alignment of the web

near mid-height of the girder. Each check shall be made by measuring the maximum offset at mid-span relative to a chord that starts and stops at the girder ends. The Contractor shall check and record the alignment at a time when the girder is not influenced by temporary differences in surface temperature. Records for the initial check (item 1 above) shall be included in the Contractor's prestressed concrete certificate of compliance. Records for all other checks shall be submitted as a Type 1 Working Drawing.

For each check (Items 1 to 3 above), the alignment shall not be offset more than ⅛ inch for each 10 feet of girder length. Girders not meeting this tolerance for the shipment check (Item 2 above) shall require an analysis of girder lateral stability and stresses in accordance with Section 6-02.3(25)L1. The Contractor shall perform this analysis and submit it as a Type 2E Working Drawing prior to shipment of the girder. Any girder that exceeds an offset of ⅛ inch for each 10 feet of girder length for the erection check (Item 3 above) shall be corrected at the job site to the ⅛ inch maximum offset per 10 feet of girder length before concrete is placed into the diaphragms. The Contractor shall submit a Type 2 Working Drawing for any required corrective action.

The maximum distance between the side of a prestressed concrete slab girder, or the edge of the top flange of a wide flange deck, wide flange thin deck or deck bulb tee girder, and a chord that extends the full length of the girder shall be ±½ inch after erection (Item 3 above).

6-02.3(25)K Vertical Deflection

Items 2 and 3 in the first paragraph are revised to read:

2. Shipment – Within 14 days prior to shipment;

3. Erection – After girder erection and cutting temporary top strands but prior to any equalization, welding ties or placement of diaphragms.

The following new paragraph is inserted after the second paragraph:

Girders with vertical deflections not meeting the limit shown in the Plans for the shipment check (Item 2 above) shall require an analysis of girder lateral stability and stresses in accordance with Section 6-02.3(25)L1. The Contractor shall perform this analysis and submit it as a Type 2E Working Drawing prior to shipment.

The following new sentence is inserted after the second sentence of the fourth to last paragraph:

Any diaphragms are assumed to be placed.

The last three paragraphs are deleted and replaced with the following:

If the girder vertical deflection measured for the erection check (Item 3 above) is not between the lower "D" dimension bound shown in the Plans and the upper "D" dimension bound shown in the Plans plus ¾ inches, the Engineer may require corrective action. The Contractor shall submit a Type 2 Working Drawing for any required corrective action.

6-02.3(25)L Handling and Storage

The second paragraph is revised to read:

For strand lift loops, only ½-inch diameter or 0.6-inch diameter strand conforming to Section 9-07.10 shall be used, and a minimum 2-inch diameter straight pin of a shackle shall be used through the loops. Multiple loops shall be held level in the girder during casting in a manner that allows each loop to carry its share of the load during lifting. The minimum distance from the end of the girder to the centroid of the strand lift loops shall be 3 feet. The loops for all prestressed concrete girders, with the exception of prestressed concrete slab girders, shall project a minimum of 1′-6″ from the top of the girder. The loops for prestressed concrete slab girders shall project a minimum of 4 inches. Loops shall extend to within 3 inches clear of the bottom of the girder, terminating with a 9-inch long 90-degree hook. Loads on individual loops shall be limited to 12 kips, and all girders shall be picked up at a minimum angle of 60 degrees from the top of the girder.

The third sentence of the fourth paragraph is revised to read:

Alternatively, these temporary strands may be post-tensioned provided the strands are stressed on the same day that the permanent prestress is released into the girder and the strands are tensioned prior to lifting the girder.

The second to last sentence of the fourth paragraph is revised to read:

When the post-tensioned alternative is used, the Contractor shall be responsible for properly sizing the anchorage plates, and configuring the reinforcement adjacent to the anchorage plates, to prevent bursting or splitting of the concrete in the top flange.

The second to last paragraph is deleted.

This section is supplemented with the following new subsections:

6-02.3(25)L1 Girder Lateral Stability and Stresses

The Contractor shall be responsible for safely lifting, storing, shipping and erecting prestressed concrete girders.

The Contract documents may provide shipping and handling details for girders including lifting embedment locations (L), shipping support locations (L_1 and L_2), minimum shipping support rotational spring constants (K_θ), minimum shipping support center-to-center wheel spacings (W_{cc}), vertical deflections and number of temporary top strands. These shipping and handling details have been determined in accordance with Section 6-02.3(25)L2.

The Contractor shall submit a Type 2E Working Drawing analyzing girder lateral stability and concrete stresses during lifting, storage, shipping and erection in accordance with Section 6-02.3(25)L2 in the following cases:

1. Any of the analysis assumptions listed in Section 6-02.3(25)L2 are invalid. Determination of validity shall be made by the Contractor, except that analysis assumptions shall be considered invalid if the actual values are outside of the provided tolerances.

2. The Contractor intends to alter the shipping and handling details provided in the Contract documents.

3. The Contract documents do not provide shipping and handling details.

6-02.3(25)L2 Lateral Stability and Stress Analysis

Analysis for girder lateral stability and concrete stresses during lifting, storage, shipping and erection shall be in accordance with the PCI Recommended Practice for Lateral Stability of Precast, Prestressed Concrete Bridge Girders, First Edition, Publication CB-02-16-E and the AASHTO LRFD Bridge Design Specifications edition identified in the Contract documents. The following design criteria shall be met:

1. Factor of Safety against cracking shall be at least 1.0

2. Factor of Safety against failure shall be at least 1.5

3. Factor of Safety against rollover shall be at least 1.5

4. Allowable concrete stresses shall be as specified in Section 6-02.3(25)L3

The analysis shall address any effects on girder vertical deflection (camber), "A" dimensions at centerline of bearings and deck screed cambers (C).

Shipping and handling details provided in the Contract documents have been determined using the following analysis assumptions:

1. Girder dimensions, strand locations and lifting embedment locations are within the tolerances specified in Section 6-02.3(25)I

2. Girder horizontal alignment (sweep) is within the tolerance specified in Section 6-02.3(25)J

3. Girder vertical deflection (camber) at midspan is less than or equal to the value shown in the Plans for shipping

4. Minimum concrete compressive strength at release (f'_{ci}) has been reached before initial lifting from casting bed. Minimum concrete compressive strength at 28 days (f'_c) has been reached before shipping.

5. Height of girder bottom above roadway at shipping supports is less than or equal to 72 inches

6. Height of shipping support roll center above roadway is 24 inches, ± 2 inches

7. Shipping support longitudinal placement (L_1 and L_2) tolerance is ± 6 inches

8. Shipping support lateral placement tolerance is ±1 inches

9. Shipping supports provide the minimum shipping support rotational spring constant (K_θ) and minimum shipping support center-to-center wheel spacings (W_{cc}) shown in the Plans

10. For shipping at highway speeds a ± 20% dynamic load allowance (impact) is included with a typical roadway superelevation of 2%

11. For turning at slow speeds, no dynamic load allowance (impact) is included with a maximum roadway superelevation of 6%

12. Wind, centrifugal and seismic forces are not considered

6-02.3(25)L3 Allowable Stresses

Prestressed concrete girder stresses shall be limited to the following values at all stages of construction and in service:

Condition	Stress	Location	Allowable Stress (ksi)
Temporary Stress at Transfer and Lifting from Casting Bed	Tensile	In areas without bonded reinforcement sufficient to resist the tensile force in the concrete	$0.0948\lambda\sqrt{f'_{ci}} \leq 0.2$
		In areas with bonded reinforcement sufficient to resist the tensile force in the concrete	$0.24\lambda\sqrt{f'_{ci}}$
	Compressive	All locations	$0.65f'_{ci}$
Temporary Stress at Shipping and Erection	Tensile	In areas without bonded reinforcement sufficient to resist the tensile force in the concrete	$0.0948\lambda\sqrt{f'_c} \leq 0.2$
		In areas with bonded reinforcement sufficient to resist the tensile force in the concrete	$0.19\lambda\sqrt{f'_c}$
		In areas with bonded reinforcement sufficient to resist the tensile force in the concrete when shipping at 6% superelevation, without impact	$0.24\lambda\sqrt{f'_c}$
	Compressive	All locations	$0.65f'_c$
Final Stresses at Service Load	Tensile	Precompressed tensile zone	0.0
	Compressive	Effective prestress and permanent loads	$0.45f'_c$
		Effective prestress, permanent loads and	$0.60f'_c$

		transient (live) loads	
Final Stresses at Fatigue Load	Compressive	Fatigue I Load Combination plus one-half effective prestress and permanent loads	$0.40f_c'$

Variables are as defined in the AASHTO LRFD Bridge Design Specifications.

6-02.3(25)M Shipping

The last four paragraphs are deleted and replaced with the following:

Girder lateral stability and stresses during shipping shall be in accordance with Section 6-02.3(25)L1.

If the Contractor elects to assemble spliced prestressed concrete girders into shipping configurations not shown in the Contract documents, the Contractor shall submit a Type 2E Working Drawing analyzing girder lateral stability and concrete stresses in accordance with Section 6-02.3(25)L2 before shipping.

6-02.3(25)N Prestressed Concrete Girder Erection

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

The erection plan shall conform to Section 6-02.3(25)L1.

The last paragraph is revised to read:

Stop plates and dowel bars for prestressed concrete girders shall be set with either epoxy grout conforming to Section 9-26.3 or type IV epoxy bonding agent conforming to Section 9-26.1.

6-02.3(25)O Girder to Girder Connections

The second paragraph is revised to read:

Prestressed concrete girders shall be constructed in the following sequence:

1. If required, deflections shall be equalized in accordance with the Contractor's equalization plan.

2. Any intermediate diaphragms shall be placed and any weld ties shall be welded in accordance with Section 6-03.3(25). Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties.

3. Any keyways between adjacent girders shown in the Plans to receive grout shall be filled flush with the surrounding surfaces using a grout conforming to Section 9-20.3(2).

4. Equalization equipment shall not be removed and other construction equipment shall not be placed on the structure until intermediate diaphragms and keyway grout have attained a minimum compressive strength of 2,500 psi.

6-02.3(26)D2 Test Block Dimensions

The first sentence is revised to read:

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

6-02.3(26)E2 Ducts for External Exposed Installation

In the first paragraph, “ASTM D3350” is revised to read “ASTM D3035”.

In the fourth paragraph, "ASTM D3505" is revised to read "ASTM D3035".

6-02.3(26)G Tensioning

Item number 1 of the second paragraph is revised to read:

1. All concrete has reached a compressive strength of at least 4,000 psi or the strength specified in the Plans. When tensioning takes place prior to 28-day compressive strength testing on concrete sampled in accordance with Section 6-02.3(25)H, compressive strength shall be verified on field cured cylinders in accordance with the FOP for AASHTO T23.

6-02.3(27)A Use of Self-Consolidating Concrete for Precast Units

Item number 2 of the first paragraph is revised to read:

2. Precast reinforced concrete three-sided structures, box culverts and split box culverts in accordance with Section 7-02.3(6).

6-03.AP6

Section 6-03, Steel Structures
January 3, 2017

6-03.3(33) Bolted Connections

In this section, “AASHTO M253” is revised to read “ASTM F3125 Grade A490”, “ASTM F1852” is revised to read “ASTM F3125 Grade F1852”, and “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

In the headings of Table 3, “A 325” is revised to read “ASTM F3125 Grade A325”.

In the headings of Table 3, “M 253” is revised to read “ASTM F3125 Grade A490”.

6-05.AP6

Section 6-05, Piling
August 1, 2016

In this section, the words “capacity” and “capacities” are replaced with “resistance” and “resistances”, respectively.

6-05.3(1) Piling Terms

The third paragraph is revised to read:

Overdriving – Over-driving of piles occurs when the ultimate bearing resistance calculated from the equation in Section 6-05.3(12), or the wave equation driving criteria if applicable, exceeds the ultimate bearing resistance required in the Contract in order to reach the minimum tip elevation specified in the Contract, or as required by the Engineer.

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

Minimum Tip Elevation – The minimum tip elevation is the elevation to which the pile tip shall be driven.

6-05.3(3)A Casting and Stressing

The last sentence of the third paragraph is revised to read:

If the corrective action is not acceptable to the Engineer, the piling(s) will be subject to rejection by the Engineer.

6-05.3(5) Manufacture of Steel Piles

This section is supplemented with the following new paragraph:

At least 14-days prior to the start of production of the piling, the Contractor shall advise the Engineer of the production schedule. The Contractor shall give the Inspector safe and free access to the Work. If the Inspector observes any nonspecification Work or unacceptable quality control practices, the Inspector will advise the plant manager. If the corrective action is not acceptable to the Engineer, the piling(s) will be subject to rejection by the Engineer.

6-05.3(9)A Pile Driving Equipment Approval

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

The Contractor shall submit Type 2E Working Drawings consisting of a wave equation analysis for all pile driving systems used to drive piling with required maximum driving resistances of greater than 300 tons.

6-07.AP6

Section 6-07, Painting
August 7, 2017

6-07.3(2) Submittals

This section is revised to read:

The Contractor shall submit a painting plan consisting of one comprehensive submittal including all components described in this Section. The Contractor shall submit Type 2 Working Drawings of the painting plan components.

For shop application of paint, the painting plan shall include the documents and samples listed in Sections 6-07.3(2)B, 6-07.3(2)C, and 6-07.3(2)E.

For field application of paint, the painting plan shall include the documents and samples listed in Section 6-07.3(2)A through 6-07.3(2)F.

6-07.3(2)A Work Force Qualifications Submittal Component

Item number 2 is revised to read:

2. Resumé of qualifications and contact information for the Contractor's on-site supervisors. Each on-site supervisor shall have 3 years' minimum of industrial painting field experience with 1 year minimum of field supervisory or management experience in bridge painting projects.

6-07.3(2)D Hazardous Waste Containment, Collection, Testing, and Disposal Submittal Component

This section is revised to read:

The hazardous waste containment, collection, testing, and disposal submittal component of the painting plan shall include the following:

1. Abrasive blasting containment system attachment and support in accordance with Section 6-07.3(10)A, with a complete description of each attachment device.

2. Details of jobsite material storage facilities and containment waste storage facilities, including location, security, and environmental control.

3. Methods and materials used to contain, collect, and dispose of all containment waste and all construction-related waste, including transportation of waste.

4. Details of the containment waste sampling plan conforming to WAC 173-303 for waste designated as dangerous waste or extremely hazardous waste.

5. The name of, and contact information for, the accredited analytical laboratory performing the testing of the containment waste samples in accordance with Section 6-07.3(10)F.

6. Process for tracking the disposal of hazardous waste, including a sample form of the tracking documentation.

7. When a wind speed threshold is specified, a description of the method to lower or withdraw tarps, plastic exterior, and other containment components presenting an exposed face to wind, and the estimated time required to accomplish this action.

8. Provisions for dust and debris collection, ventilation, and auxiliary lighting within the containment system.

6-07.3(2)E Cleaning and Surface Preparation Equipment Submittal Component

This section, including title, is revised to read:

6-07.3(2)E Cleaning and Surface Preparation Submittal Component

The cleaning and surface preparation submittal component of the painting plan shall include the following:

1. Details of the abrasive blast cleaning operation, including:

   a. Description of the abrasive blast cleaning procedure.

   b. Type, manufacturer, and brand of abrasive blast material and all associated additives, including Materials Safety Data Sheets (MSDS).

   c. Description of the abrasive blast cleaning equipment to be used.

6-07.3(3)A Quality Control and Quality Assurance for Shop Application of Paint

In this section, “approved” is revised to read “accepted”.

6-07.3(3)B Quality Control and Quality Assurance for Field Application of Paint

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

For field application of paint, the Contractor shall conduct quality control inspections as required by SSPC-PA 1, using the personnel and the processes outlined in the painting plan.

The second paragraph is revised to read:

A Type 1 Working Drawing consisting of the Contractor’s daily quality control report, signed and dated by the Contractor’s quality control inspector, accompanied by copies of the test results of quality control tests performed on the work covered by the daily quality control report, shall be submitted before the end of the next day’s work shift.

In the third paragraph, “approval” is revised to read “acceptance”.

Item number 2 of the fourth paragraph is deleted.

In the fourth paragraph, items 3, 4 and 5 are renumbered to 2, 3 and 4, respectively.

6-07.3(9)F Shop Surface Cleaning and Preparation

In the first sentence, “approved” is revised to read “accepted”.

6-07.3(9)G Application of Shop Primer Coat

In the first sentence of the first paragraph, “approval” is revised to read “acceptance”.

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

Primer shall be applied with the spray nozzles and pressures recommended by the manufacturer of the paint system, to attain the film thicknesses specified.

In the third paragraph, the first sentence is revised to read:

The Contractor shall provide access to the steel to permit inspection by the Engineer.

6-07.3(9)I Application of Field Coatings

The following new paragraph is inserted before to the first paragraph:

An on-site supervisor shall be present for each work shift at the bridge site.

In the fourth paragraph (after the preceding Amendment is applied), “approved” is deleted from the first sentence.

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

All paint damage that occurs shall be repaired in accordance with the manufacturer’s written recommendations.

6-07.3(10)A Containment

The first four paragraphs are deleted and replaced with the following three paragraphs:

The containment system shall be in accordance with SSPC Technology Guide No. 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations Class 1. The containment system shall fully enclose the steel to be painted and not allow any material to escape the containment system. The Contractor shall protect the surrounding environment from all debris or damage resulting from the Contractor’s operations.

Except as otherwise specified in the Contract, the containment length shall not exceed the length of a span (defined as pier to pier). The containment system shall not cause any damage to the existing structure. Attachment devices shall not mark or otherwise damage the steel member to which they are attached. Field-welding of attachments to the existing structure will not be allowed. The Contractor shall not drill holes into the existing structure or through existing structural members except as shown in the Contractor’s painting plan Working Drawing submittal.

Emissions shall be assessed by Visible Emission Observations (Method A) in SSPC Technology Update No. 7 Section 6.2 and shall be limited to the Level A Acceptance Criteria Option Level 0 Emissions standard. If visible emissions occur or if failure to the containment system occurs or if signs of failure to the containment system are present, the Contractor shall stop work immediately. Work shall not resume until the failure has been corrected to the satisfaction of the Engineer.

6-07.3(10)B Bird Guano, Fungus, and Vegetation Removal

The last paragraph is revised to read:

Bird guano, bird nesting materials, fungus, and vegetative growth shall be disposed of at a land disposal site accepted by the Engineer. The Contractor shall submit a Type 1

Working Drawing consisting of a copy of the disposal receipt, which shall include a description of the disposed material.

6-07.3(10)C Dry Cleaning

This section is revised to read:

Dry cleaning shall include removal of accumulated dirt and debris on the surfaces to be painted. Collected dirt and debris shall be disposed of at a land disposal site accepted by the Engineer. The Contractor shall submit a Type 1 Working Drawing consisting of a copy of the disposal receipt, which shall include a description of the disposed material.

6-07.3(10)D Surface Preparation Prior to Overcoat Painting

The second paragraph is revised to read:

Following any preparation by SSPC-SP1, all steel surfaces to be painted shall be prepared in accordance with SSPC-SP 7, brush-off blast cleaning. Surfaces inaccessible to brush-off blast shall be prepared in accordance with SSPC-SP 15, commercial grade power tool cleaning, as allowed by the Engineer.

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

Following brush-off blast cleaning, the Contractor shall perform spot abrasive blast cleaning in accordance with SSPC-SP 6, commercial blast cleaning.

In the fifth sentence of the third paragraph, “approved” is revised to read “accepted”.

The second sentence of the last paragraph is deleted.

6-07.3(10)F Collecting, Testing, and Disposal of Containment Waste

The third, fourth and fifth paragraphs are deleted and replaced with the following two new paragraphs:

Containment waste is defined as all paint chips and debris removed from the steel surface and all abrasive blast media, as contained by the containment system. After all waste from the containment system has been collected, the Contractor shall collect representative samples of the components that field screening indicates are lead-contaminated material. The Contractor shall collect at least one representative sample from each container. The Contractor may choose to collect a composite sample of each container, but the composite sample must consist of several collection points (a minimum of 3 random samples) that are representative of the entire contents of the container and representative of the characteristics of the type of waste in the container. In accordance with WAC 173–303-040, a representative sample means “a sample which can be expected to exhibit the average properties of the sample source.”

The debris shall be tested for metals using the Toxicity Characteristics Leaching Procedure (TCLP) and EPA Methods 1311 and 6010. At a minimum, the materials should be analyzed for the Resource Conservation and Recovery Act (RCRA) 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Pursuant to the Dangerous Waste (DW) Regulations Chapter 173-303-90(8)(c) WAC, “Any waste that contains contaminants which occur at concentrations at or above the DW

threshold must be designated as DW." All material within each individual container or containment system that designates as DW shall be disposed of at a legally permitted Subtitle C Hazardous Waste Landfill. All material within each individual container or containment system that designate below the DW threshold, will be designated as "Solid Waste" and shall be disposed of at a legally permitted Subtitle D Landfill. Disposal shall be in accordance with WAC 173-303 for waste designated "Dangerous Waste" and pursuant to WAC 173-350 for waste designated as "Solid Waste".

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

The Contractor shall submit a Type 1 Working Drawing consisting of two copies of the transmittal documents or bill of lading listing the waste material shipped from the construction site to the waste disposal site.

6-07.3(10)G Treatment of Pack Rust and Gaps

In this section, "approved by the Engineer" is revised to read "accepted by the Engineer".

6-07.3(10)H Paint System

In the last paragraph, "approved" is revised to read "allowed".

6-07.3(10)I Paint Color

In the last sentence, "approved" is revised to read "allowed".

6-07.3(10)J Mixing and Thinning Paint

In the third paragraph, "approved" is revised to read "allowed".

6-07.3(10)O Applying Field Coatings

The following new paragraph is inserted before the first paragraph:

An on-site supervisor shall be present for each work shift at the bridge site.

In the sixth paragraph (after the preceding Amendment is applied), "approved" and "approval" are revised to read "accepted" and "acceptance", respectively.

In the seventh paragraph (after the preceding Amendment is applied), "approval" is revised to read "concurrence".

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

Any plank removal or cutting shall be done with the concurrence of the Engineer.

6-07.3(10)P Field Coating Repair

In the second to last sentence, "approved" is revised to read "accepted".

The last sentence is deleted.

6-07.3(11)A Painting of Galvanized Surfaces

In the last sentence, "approval" is revised to read "acceptance".

6-07.5 Payment

The following new paragraph is inserted after the paragraph following the Bid item "Cleaning and Painting - _____", lump sum:

When a weather station is specified, all costs in connection with furnishing, installing, operating, and removing the weather station, including furnishing mounting hardware and repeaters, accessories and wireless display console units, processing and submitting daily weather data reports, maintenance and upkeep, shall be included in the lump sum Contract price for "Cleaning And Painting – _____".

6-08.AP6

Section 6-08, Waterproofing
January 3, 2017

This section and all subsections, including title, is revised to read:

6-08 Bituminous Surfacing on Structure Decks

6-08.1 Description

This Work consists of removing and placing Hot Mix Asphalt (HMA) or Bituminous Surface Treatment (BST) directly on or over a Structure. This Work also includes performing concrete bridge deck repair, applying waterproofing membrane, and sealing paving joints.

6-08.2 Materials

Materials shall meet the requirements of the following sections:

Bituminous Surface Treatment	5-02.2
Hot Mix Asphalt	5-04.2
Joint Sealants	9-04.2
Closed Cell Foam Backer Rod	9-04.2(3)A
Waterproofing Membrane (Deck Seal)	9-11
Bridge Deck Repair Material	9-20.5

6-08.3 Construction Requirements

6-08.3(1) Definitions

Adjusted Removal Depth – the Bituminous Pavement removal depth specified by the Engineer to supersede the Design Removal Depth after review of the Contractor survey of the existing Bituminous Pavement grade profile.

Bituminous Pavement – the surfacing material containing an asphalt binder.

Design Removal Depth – the value shown in the "pavement schedule" or elsewhere in the Plans to indicate the design thickness of Bituminous Pavement to be removed.

Final Grade Profile – the compacted finished grade surface of completed Bituminous Pavement surfacing consisting of a vertical profile and superelevation cross-slope, developed by the Engineer for Grade Controlled Structure Decks based on the Contractor survey.

Grade Controlled – a Structure Deck requiring restriction of Bituminous Pavement work, including restriction of pavement removal methods and restriction of overlay pavement thicknesses.

Structure Deck – the bridge deck (concrete or timber), bridge approach slab, top of concrete box culvert, or other concrete surfaces over or upon which existing Bituminous Pavement is removed and new Bituminous Pavement is applied.

6-08.3(2) Contractor Survey for Grade Controlled Structure Decks

Prior to removing existing Bituminous Pavement from a Grade Controlled Structure Deck, the Contractor shall complete a survey of the existing surface for use in establishing the existing cross section and grade profile elevations. When removal of Bituminous Pavement is to be achieved by rotary milling/planing, the Contractor's survey shall also include the depths of the existing surfacing at each survey point.

The Contractor is responsible for all calculations, surveying, installation of control points, and measuring required for setting, maintaining and resetting equipment and materials necessary for the construction of the overlay to the Final Grade Profile.

6-08.3(2)A Survey Requirements

The Contractor shall establish at least two primary survey control points for controlling actual Bituminous Pavement removal depth and the Final Grade Profile. Horizontal control shall be by station and offset which shall be tied to either the Roadway centerline or the Structure centerline. Vertical control may be an assumed datum established by the Contractor.

Primary control points shall be described by station or milepost and offset on the baseline selected by the Contractor. The Contractor may expand the survey control information to include secondary horizontal and vertical control points as needed for the project.

Survey information collected shall include station or milepost, offset, and elevation for each lane line and curb line. Survey information shall be collected at even 20 foot station intervals, and along the centerline of each bridge expansion joint. The survey shall extend 300'-0" beyond the bridge back of pavement seat or end of Structure Deck. The survey information shall include the top of Bituminous Pavement elevation and, when rotary milling/planing equipment is used, the corresponding depth of Bituminous Pavement to the Structure Deck. The Contractor shall ensure a surveying accuracy to within ± 0.01 feet for vertical control and ± 0.2 feet for horizontal control.

Voids in HMA created by the Contractor's Bituminous Pavement depth measurements shall be filled by material conforming to Section 9-20 or another material acceptable to the Engineer.

6-08.3(2)B Survey Submittal

The Contractor's survey records shall include descriptions of all survey control points including station/milepost, offset, and elevations of all secondary control points. The Contractor shall maintain survey records of sufficient detail to allow the survey to be reproduced. The Contractor shall submit a Type 2 Working Drawing consisting of the compiled survey records and information. Survey data shall be submitted as an electronic file in Microsoft Excel format.

6-08.3(2)C Final Grade Profile and Adjusted Removal Depth

Based on the results of the survey, the Engineer may develop a Final Grade Profile and Adjusted Removal Depth. If they are developed, the Final Grade Profile and Adjusted Removal Depth will be provided to the Contractor within three working days after receiving the Contractor's survey information. When provided, the Adjusted Removal Depth supersedes the Design Removal Depth to become the Bituminous Pavement removal depth for that Structure Deck.

6-08.3(3) General Bituminous Pavement Removal Requirements

The Contractor shall remove Bituminous Pavement and associated deck repair material from Structure Decks to the horizontal limits shown in the Plans and to either the specified or adjusted Bituminous Pavement removal depth as applicable.

Removal of Bituminous Pavement within 12-inches of existing permanent features that limit the reach of the machine or the edge of the following items shall be by hand or by hand operated (nominal 30-pounds class) power tools: existing bridge expansion joint headers; steel expansion joint assemblies; concrete butt joints between back of pavement seats and bridge approach slabs, bridge drain assemblies; thrie beam post steel anchorage assemblies fastened to the side or top of the Structure Deck.

When removing Bituminous Pavement with a planer, Section 5-04.3(14) shall apply. If the planer contacts the Structure Deck in excess of the specified planing depth tolerance, or contacts steel reinforcing bars at any time, the Contractor shall immediately cease planing operations and notify the Engineer. Planing operations shall not resume until completion of the appropriate adjustments to the planing machine and receiving the Engineer's concurrence to resume.

6-08.3(4) Partial Depth Removal of Bituminous Pavement from Structure Decks

The depth of surfacing removal, as measured to the bottom of the lowest milling groove generated by the rotary milling/planing machine shall be +0.01, -0.02-feet of the specified or Adjusted Removal Depth as applicable.

6-08.3(5) Full Depth Removal of Bituminous Pavement from Structure Decks

6-08.3(5)A Method of Removal

The Contractor shall perform full depth removal by a method that does not damage or remove the Structure Deck in excess of the specified

Bituminous Pavement removal tolerance. The Contractor shall submit a Type 2 Working Drawing consisting of the proposed methods and equipment to be used for full depth removal.

6-08.3(5)B Planer Requirements for Full Depth Removal

The final planed surface shall have a finished surface with a tolerance of +0.01, -0.02 feet within the planed surface profile, as measured from a 10-foot straight edge. Multiple passes of planing to achieve smoothness will not be allowed.

In addition to Section 6-08.3(3), the planing equipment shall conform to the following additional requirements:

1. The cutting tooth spacing on the rotary milling head shall be less than or equal to ¼ inch.

2. The rotary milling/planing machine shall have cutting teeth that leave a uniform plane surface at all times. All teeth on the mill head shall be kept at a maximum differential tolerance of ⅜-inch between the shortest and longest tooth, as measured by a straight edge placed the full width of the rotary milling head.

3. Cutting tips shall be replaced when 30 percent of the total length of the cutting tip material remains.

Prior to each day's Bituminous Pavement removal operations, the Contractor shall confirm to the satisfaction of the Engineer that the rotary head cutting teeth are within the specified tolerances.

6-08.3(5)C Structure Deck Cleanup after Bituminous Pavement Removal

Waterproofing membrane that is loose or otherwise not firmly bonded to the Structure Deck shall be removed as an incidental component of the Work of surfacing removal. Existing waterproofing membrane bonded to the Structure Deck need not be removed.

6-08.3(6) Repair of Damage due to Bituminous Pavement Removal Operations

All concrete bridge deck, pavement seat, and steel reinforcing bar damage due to the Contractor's surfacing removal operations shall be repaired by the Contractor in accordance with Section 1-07.13, and as specified below.

Damaged concrete in excess of the specified Bituminous Pavement removal tolerance shall be repaired in accordance with Section 6-08.3(7), with the bridge deck repair material placed to the level of the surrounding bridge deck and parallel to the final grade paving profile.

Damaged steel reinforcing bar shall be repaired as follows:

1. Damage to steel reinforcing bar resulting in a section loss less than 20-percent of the bar with no damage to the surrounding concrete

shall be left in place and shall be repaired by removing the concrete to a depth ¾-inches around the top steel reinforcing bar and placing bridge deck repair material accepted by the Engineer to the level of the bridge deck and parallel to the final grade paving profile.

2. Damage to steel reinforcing bar resulting in a section loss of 20-percent or more in one location, bars partially or completely removed from the bridge deck, or where there is a lack of bond to the concrete, shall be repaired by removing the adjacent concrete and splicing a new bar of the same size. Concrete shall be removed to provide a ¾-inch minimum clearance around the bars. The splice bars shall extend a minimum of 40 bar diameters beyond each end of the damage.

6-08.3(7) Concrete Deck Repair

This Work consists of repairing the concrete deck after Bituminous Pavement has been removed.

6-08.3(7)A Concrete Deck Preparation

The Contractor, with the Engineer, shall inspect the exposed concrete deck to establish the extent of bridge deck repair in accordance with Section 6-09.3(6), except item 4 in Section 6-09.3(6) does not apply. Areas of Structure Deck left with existing well bonded waterproof membrane after full depth Bituminous Pavement removal are exempt from this inspection requirement.

All loose and unsound concrete within the repair area shall be removed with jackhammers or chipping hammers no more forceful than the nominal 30 pounds class, or other mechanical means acceptable to the Engineer, and operated at angles less than 45 degrees as measured from the surface of the deck to the tool. If unsound concrete exists around the existing steel reinforcing bars, or if the bond between concrete and steel reinforcing bar is broken, the Contractor shall remove the concrete to provide a ¾ inch minimum clearance to the bar. The Contractor shall take care to prevent damage to the existing steel reinforcing bars and concrete to remain.

After removing sufficient concrete to establish the limits of the repair area, the Contractor shall make ¾ inch deep vertical saw cuts and maintain square edges at the boundaries of the repair area. The exposed steel reinforcing bars and concrete in the repair area shall be abrasive blasted and blown clean just prior to placing the bridge deck repair material.

6-08.3(7)B Ultra-Low Viscosity, Two-Part Liquid, Polyurethane-Hybrid Polymer Concrete

The ultra-low viscosity, two-part liquid, polyurethane-hybrid polymer concrete shall be mixed in accordance with the manufacturer's recommendations.

Aggregate shall conform to the gradation limit requirements recommended by the manufacturer. The aggregate and the ultra-low

viscosity, two-part liquid, polyurethane-hybrid polymer concrete shall be applied to the repair areas in accordance with the sequence and procedure recommended by the manufacturer.

All repairs shall be float finished flush with the surrounding surface within a tolerance of ⅛ inch of a straight edge placed across the full width and breadth of the repair area.

6-08.3(7)C Pre-Packaged Cement Based Repair Mortar

The Contractor shall mix the pre-packaged cement based repair mortar using equipment, materials and proportions, batch sizes, and process as recommended by the manufacturer.

All repairs shall be float finished flush with the surrounding surface within a tolerance of ⅛ inch of a straight edge placed across the full width and breadth of the repair area.

6-08.3(7)D Cure

All bridge deck repair areas shall be cured in accordance with the manufacturer's recommendations and attain a minimum compressive strength of 2,500 psi before allowing vehicular and foot traffic on the repair and placing waterproofing membrane on the bridge deck over the repair.

6-08.3(8) Waterproof Membrane for Structure Decks

This work consists of furnishing and placing a waterproof sheet membrane system over a prepared Structure Deck prior to placing an HMA overlay. The waterproof membrane system shall consist of a sheet membrane adhered to the Structure Deck with a primer.

The Contractor shall comply with all membrane manufacturer’s installation recommendations.

6-08.3(8)A Structure Deck Preparation

The Structure Deck and ambient air temperatures shall be above 50°F and the Structure Deck shall be surface-dry at the time of the application of the primer and membrane.

All areas of a Structure Deck that have fresh cast bridge deck concrete less than 28 days old (not including bridge deck repair concrete placed in accordance with Section 6-08.3(7)) shall cure for a period of time recommended by the membrane manufacturer, or as specified by the Engineer, before application of the membrane.

The entire Structure Deck and the sides of the curb and expansion joint headers to the height of the HMA overlay shall be free of all foreign material such as dirt, grease, etc. Prior to applying the primer or sheet membrane, all dust and loose material shall be removed from the Structure Deck with compressed air. All surface defects such as spalled areas, cracks, protrusions, holes, sharp edges, ridges, etc., and other

surface imperfections greater than ¼ inch in width shall be corrected prior to application of the membrane.

6-08.3(8)B Applying Primer

The primer shall be applied to the cleaned deck surfaces at the rate according to the procedure recommended by the membrane manufacturer. All surfaces to be covered by the membrane shall be thoroughly and uniformly coated with primer. Structure Deck areas left with existing well bonded waterproof membrane after bituminous surfacing removal shall receive an application of primer in accordance with the membrane manufacturer's recommendations. Precautionary measures shall be taken to ensure that pools and thick layers of primer are not left on the deck surface. The membrane shall not be applied until the primer has cured or volatile material has substantially dissipated, in accordance with the membrane manufacturer's recommendations.

The primer and waterproof membrane shall extend from the bridge deck up onto the curb face and expansion joint header face the thickness of the HMA overlay. The membrane shall adhere to the vertical surface.

6-08.3(8)C Placing Waterproof Membrane

Membrane application shall begin at the low point on the deck, and continue in a lapped shingle pattern. The overlap shall be a minimum of six inches or greater if recommended by the membrane manufacturer. Membrane seams shall be sealed as recommended by the membrane manufacturer. Hand rollers or similar tools shall be used on the applied membrane to assure firm and uniform contact with the primed Structure surfaces.

The fabric shall be neatly cut and contoured at all expansion joints and drains. The cuts at bridge drains shall be two right angle cuts made to the inside diameter of the bridge deck drain outlet, after which the corners of the waterproof membrane shall be turned down into the drains and laid in a coating of primer.

6-08.3(8)D Membrane Repair and Protection

The waterproof membrane will be visually inspected by the Engineer for uniformity, tears, punctures, bonding, bubbles, wrinkles, voids and other defects. All such deficiencies shall be repaired in accordance with the membrane manufacturer's recommendations prior to placement of the HMA overlay.

The membrane material shall be protected from damage due to the paving operations in accordance with the membrane manufacturer's recommendations. No traffic or equipment except that required for the actual waterproofing and paving operations will be permitted to travel or rest on the membrane until it is covered by the HMA overlay. The use of windrows is not allowed for laydown of HMA on a membrane.

Where waterproofing membrane is placed in stages or applied at different times, a strip of temporary paper shall be used to protect the membrane overlap from the HMA hand removal methods.

6-08.3(9) Placing Bituminous Pavement on Structure Decks

HMA overlay shall be applied on Grade Controlled Structure Decks using reference lines for vertical control in accordance with Section 5-04.3(3)C.

The compacted elevation of the HMA overlay on Structure Decks shall be within ± 0.02 feet of the specified overlay thickness or Final Grade Profile as applicable. Deviations from the final grade paving profile in excess of the specified tolerance and areas of non-conforming surface smoothness shall be corrected in accordance with Section 5-04.3(13).

Final grade Roadway transitions to a Structure Deck with Bituminous Pavement shall not exceed a 0.20 percent change in grade in accordance with the bridge deck transition for HMA overlay Standard Plan, unless shown otherwise in the Plans.

Final grade compacted HMA elevations shall be higher than an adjacent concrete edge by ¼ inch ± ⅛ inch at all expansion joint headers and concrete butt joints as shown in the concrete to asphalt butt joint details of the bridge paving joint seals Standard Plan. This also applies to steel edges within the limits of the overlay such as bridge drain frames and steel joint riser bars at bridge expansion joints.

6-08.3(9)A Protection of Structure Attachments and Embedments

The Contractor is responsible for protecting all Structure attachments and embedments from the application of BST and HMA.

Drainage inlets that are to remain open, and expansion joints, shall be cleaned out immediately after paving is completed. Materials passing through expansion joints shall be removed from the bridge within 10 working days.

All costs incurred by the Contractor in protective measures and clean up shall be included in the unit Contract prices for the associated Bid items of Work.

6-08.3(10) HMA Compaction on Structure Decks

Compaction of HMA on Structure Decks shall be in accordance with Section 5-04.3(10).

Work rejected in accordance with Section 5-04.3(11) shall include the materials, work, and incidentals to repair an existing waterproof membrane damaged by the removal of the rejected work.

6-08.3(11) Paved Panel Joint Seals and HMA Sawcut and Seal

Bridge paving joint seals shall be installed in accordance with Section 5-04.3(12)B and the details shown in the Plans and Standard Plans.

When concrete joints are exposed after removal of Bituminous Pavement, the joints shall be cleaned and sealed in accordance with Section 5-01.3(8) and the paved panel joint seal details of the bridge paving joint seals Standard Plan, including placement of the closed cell backer rod at the base of the cleaned joint. If waterproofing membrane is required, the membrane shall be slack or folded at the concrete joint to allow for Structure movements without stress to the membrane. After placement of the HMA overlay, the second phase of the paved panel joint seal shall be completed by sawing the HMA and sealing the sawn joint in accordance with Section 5-04.3(12)B2.

6-08.4 Measurement

Removing existing Bituminous Pavement from Structure Decks will be measured by the square yard of Structure Deck surface area with removed overlay.

Bridge deck repair will be measured by the square foot surface area of deck concrete removed with the measurement taken at the plane of the top mat of steel reinforcing bars.

Waterproof membrane will be measured by the square yard surface area of Structure Deck and curb and header surface area covered by membrane.

6-08.5 Payment

Payment will be made for each of the following Bid items when they are included in the Proposal:

"Structure Surveying", lump sum.

"Removing Existing Overlay From Bridge Deck___", per square yard.
The unit Contract price per square yard for "Removing Existing Overlay From Bridge Deck___", shall be full pay for performing the Work as specified for full removal of Bituminous Pavement on Structure Decks, including the removal of existing waterproof membrane and disposing of materials.

"Bridge Deck Repair Br. No.___", per square foot.
The unit Contract price per square foot for "Bridge Deck Repair Br. No.___" shall be full pay for performing the Work as specified, including removing and disposing of the concrete within the repair area and furnishing, placing, finishing, and curing the repair concrete.

"Waterproof Membrane Br. No.___", per square yard.
The unit Contract price per square yard for "Waterproof Membrane Br. No.___" shall be full pay for performing the Work as specified, including repairing any damaged or defective waterproofing membrane and repair of damaged HMA overlay.

6-09.AP6

Section 6-09, Modified Concrete Overlays
April 4, 2016

6-09.3(8)A Quality Assurance for Microsilica Modified and Fly Ash Modified Concrete Overlays

The first sentence of the first paragraph is revised to read the following two new sentences:

> The Engineer will perform slump, temperature, and entrained air tests for acceptance in accordance with Section 6-02.3(5)D and as specified in this Section after the Contractor has turned over the concrete for acceptance testing. Concrete samples for testing shall be supplied to the Engineer in accordance with Section 6-02.3(5)E.

The last paragraph is deleted.

6-09.3(8)B Quality Assurance for Latex Modified Concrete Overlays

The first two paragraphs are deleted and replaced with the following:

> The Engineer will perform slump, temperature, and entrained air tests for acceptance in accordance with Section 6-02.3(5)D and as specified in this Section after the Contractor has turned over the concrete for acceptance testing. The Engineer will perform testing as the concrete is being placed. Samples shall be taken on the first charge through each mobile mixer and every other charge thereafter. The sample shall be taken after the first 2 minutes of continuous mixer operation. Concrete samples for testing shall be supplied to the Engineer in accordance with Section 6-02.3(5)E.

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

> Recommendations made by the technical representative on or off the jobsite shall be adhered to by the Contractor.

6-10.AP6

Section 6-10, Concrete Barrier
August 7, 2017

6-10.3(5) Temporary Concrete Barrier

This section title is revised to read:

> **Temporary Barrier**

The first paragraph is revised to read:

> For temporary barrier, the Contractor may use precast concrete barrier or temporary steel barrier. Temporary concrete barrier shall comply with Standard Plan requirements and cross-sectional dimensions, except that: (1) it may be made in other lengths than those shown in the Standard Plan, and (2) it may have permanent lifting holes no larger than 4 inches in diameter or lifting loops. Temporary steel barrier shall be certified that it meets the requirements of NCHRP 350 or MASH Test Level 3 or 4 and shall be installed in accordance with the manufacturer's recommendations.

6-10.4 Measurement

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

> Temporary barrier will be measured by the linear foot along the completed line and slope of the barrier, one time only for each setup of barrier protected area.

6-10.5 Payment

The Bid item “Temporary Conc. Barrier”, per linear foot, and the paragraph following this Bid item, is revised to read:

> “Temporary Barrier”, per linear foot.
>
> The unit Contract price per linear foot for “Temporary Barrier” shall be full pay for all costs, including furnishing, installing, connecting, anchoring, maintaining, temporary storage, and final removal of the temporary barrier.

6-12.AP6

Section 6-12, Noise Barrier Walls
January 3, 2017

6-12.3(9) Access Doors and Concrete Landing Pads

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

> The Contractor shall construct concrete landing pads for each access door location as shown in the Plans.

6-12.5 Payment

In the paragraph following the bid item “Noise Barrier Wall Access Door”, per each, “concrete landing pad” is revised to read “concrete landing pads”.

6-14.AP6

Section 6-14, Geosynthetic Retaining Walls
January 3, 2017

6-14.3(2) Submittals

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

> The Contractor shall submit Type 2E Working Drawings consisting of detailed plans for each wall.

6-14.5 Payment

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

> “Concrete Fascia Panel For Geosynthetic Wall”, per square foot.
>
> All costs in connection with constructing the concrete fascia panels as specified shall be included in the unit Contract price per square foot for “Concrete Fascia Panel For Geosynthetic Wall”, including all steel reinforcing bars, premolded joint filler, polyethylene bond breaker strip, joint sealant, PVC pipe for weep holes, exterior

surface finish, and pigmented sealer (when specified), constructing and placing the concrete footing, edge beam, anchor beam, anchor rod assembly, and backfill.

6-19.AP6

Section 6-19, Shafts
January 3, 2017

6-19.3 Construction Requirements

This section is supplemented with the following new subsection:

6-19.3(10) Engineer's Final Acceptance of Shafts

The Engineer will determine final acceptance of each shaft, based on the nondestructive QA test results and analysis for the tested shafts, and will provide a response to the Contractor within 3 working days after receiving the test results and analysis submittal.

6-19.3(1)B Nondestructive Testing of Shafts

This section's content is deleted and replaced with the following new subsections:

6-19.3(1)B1 Nondestructive Quality Assurance (QA) Testing of Shafts

Unless otherwise specified in the Special Provisions, the Contractor shall perform nondestructive QA testing of shafts, except for those constructed completely in the dry. Either crosshole sonic log (CSL) testing in accordance with ASTM D 6760 or thermal integrity profiling (TIP) testing in accordance with ASTM D 7949 shall be used.

6-19.3(1)B2 Nondestructive Quality Verification (QV) Testing of Shafts

The Contracting Agency may perform QV nondestructive testing of shafts that have been QA tested by the Contractor. The Contracting Agency may test up to ten percent of the shafts. The Engineer will identify the shafts selected for QV testing and the testing method the Contracting Agency will use.

The Contractor shall accommodate the Contracting Agency's nondestructive testing.

6-19.3(2) Shaft Construction Submittal

This section is revised to read:

The shaft construction submittal shall be comprised of the following four components: construction experience; shaft installation narrative; shaft slurry technical assistance; and nondestructive QA testing personnel. The submittals shall be Type 2 Working Drawings, except the shaft slurry technical assistance and nondestructive QA testing personnel submittals shall be Type 1.

This section is supplemented with the following new subsection:

6-19.3(2)D Nondestructive QA Testing Organization and Personnel

The Contractor shall submit the names of the testing organizations, and the names of the personnel who will conduct nondestructive QA testing of shafts. The submittal shall include documentation that the qualifications specified below are satisfied. For TIP testing, the testing organization is the group that performs the data analysis and

produces the final report. The testing organizations and the testing personnel shall meet the following minimum qualifications:

1. The testing organization shall have performed nondestructive tests on a minimum of three deep foundation projects in the last two years.

2. Personnel conducting the tests for the testing organization shall have a minimum of one year experience in nondestructive testing and interpretation.

3. The experience requirements for the organization and personnel shall be consistent with the testing methods the Contractor has selected for nondestructive testing of shafts.

4. Personnel preparing test reports shall be a Professional Engineers, licensed under Title 18 RCW, State of Washington, and in accordance with WAC 196-23-020.

6-19.3(3) Shaft Excavation

The second paragraph is revised to read:

Shaft excavation shall not be started until the Contractor has received the Engineer's acceptance for the reinforcing steel centralizers required when the casing is to be pulled during concrete placement.

This section is supplemented with the following:

Except as otherwise noted, the Contractor shall not commence subsequent shaft excavations until receiving the Engineer's acceptance of the first shaft, based on the results and analysis of the nondestructive testing for the first shaft. The Contractor may commence subsequent shaft excavations prior to receiving the Engineer's acceptance of the first shaft, provided the following condition is satisfied:

The Engineer permits continuing with shaft construction based on the Engineer's observations of the construction of the first shaft, including, but not limited to, conformance to the shaft installation narrative in accordance with Section 6-19.3(2)B, and the Engineer's review of Contractor's daily reports and Inspector's daily logs concerning excavation, steel reinforcing bar placement, and concrete placement.

6-19.3(5)B Steel Reinforcing Bar Cage Centralizers

This section is supplemented with the following new sentence:

The Contractor shall furnish and install additional centralizers as required to maintain the specified concrete cover throughout the length of the shaft.

6-19.3(5)C Concrete Cover Over Steel Reinforcing Bars

In the table, the second column (including heading) is revised to read:

Minimum Concrete Cover, and Concrete Cover Tolerance, Except at

Permanent Slip Casing (Inches)
3, -1½
4, -2
4, -2
6, -3

The following new paragraph is inserted after the table:

The concrete cover tolerances specified above apply to the concrete cover specified in the Plans, even if it exceeds the minimum concrete cover.

6-19.3(6) Access Tubes for Crosshole Sonic Log (CSL) Testing

This section title is revised to read:

6-19.3(6) Contractor Furnished Accessories for Nondestructive QA Testing

This section is supplemented with the following three new subsections:

6-19.3(6)D Shafts Requiring Thermal Wire

The Contractor shall furnish and install thermal wire in all shafts receiving the thermal wire method of TIP testing, except as otherwise noted in Section 6-19.3(1)B1.

6-19.3(6)E Thermal Wire and Thermal Access Points (TAPs)

The thermal wire and associated couplers shall be obtained from the source specified in the Special Provisions.

The Contractor shall securely attach the thermal wire to the interior of the reinforcement cage of the shaft in conformance with the supplier's instructions. At a minimum, one thermal wire shall be furnished and installed for each foot of shaft diameter, rounded to the nearest whole number, as shown in the Plans. The number of thermal wires for shaft diameters specified as "X feet 6 inches" shall be rounded up to the next higher whole number. The thermal wires shall be placed around the shaft, inside the spiral or hoop reinforcement, and tied to the vertical reinforcement with plastic "zip" ties at a maximum spacing of 2-feet. Steel tie wire shall not be used.

The thermal wire shall be installed in straight alignment and taut, but with enough slack to not be damaged during reinforcing cage lofting. The wires shall be as near to parallel to the vertical axis of the reinforcement cage as possible. The thermal wire shall extend from the bottom of the reinforcement cage to the top of the shaft, with 15-feet of slack wire provided above the top of shaft. Care shall be taken to prevent damaging the thermal wires during reinforcement cage installation and concrete placement operations in the shaft excavation.

After completing shaft reinforcement cage fabrication at the site and prior to installation of the cage into the shaft excavation, the Contractor shall install and connect thermal access points (TAPs) to the thermal wires. The TAPs shall record data for at least one hour after the cage is placed in the excavation to measure the slurry temperature and enable the steel and slurry temperatures to equilibrate prior to placing concrete in the shaft. The TAPs shall record and store data every 15 minutes. The TAPs shall remain active for a minimum of 36 hours.

Prior to beginning concrete placement the TAPs shall be checked to ensure they are recording data and that the wires have not been damaged. If a TAP unit is not functioning due to a damaged wire, the Contractor shall repair or replace the wire. If a TAP unit fails or a wire breaks after concrete placement has started, the Contractor shall not stop the concrete placement operation to repair the wire.

6-19.3(6)F Use of Access Tubes for TIP Testing Under the Thermal Probe Method

The Contractor may use access tubes for TIP testing under the thermal probe method. Access tubes shall be cared for in accordance with Section 6-19.3(6)C. Prior to TIP testing under the thermal probe method, the water in each tube shall be removed, collected, and stored in an insulated container. The access tube shall be blown dry and swabbed to remove residual water. After TIP testing, the collected and stored tube water shall be introduced back into the access tube. New potable water may be used, provided the water temperature is not more than 10°F cooler than the average concrete temperature measured by the probe.

6-19.3(6)A Shafts Requiring CSL Access Tubes

This section, including title, is revised to read:

6-19.3(6)A Shafts Requiring Access Tubes

The Contractor shall furnish and install access tubes in all shafts receiving CSL testing or the thermal probe method of TIP testing, except as otherwise noted in Section 6-19.3(1)B1.

6-19.3(6)B Orientation and Assembly of the CSL Access Tubes

This section's title is revised to read:

6-19.3(6)B Orientation and Assembly of the Access Tubes

6-19.3(6)C Care for CSL Access Tubes from Erection through CSL Testing

This section's title is revised to read:

6-19.3(6)C Care for Access Tubes from Erection Through Nondestructive QA Testing

The second sentence is revised to read:

The Contractor shall keep all of a shaft's access tubes full of water through the completion of nondestructive QA testing of that shaft.

6-19.3(7)A Concrete Class for Shaft Concrete

This section is revised to read:

Shaft concrete shall be Class 5000P conforming to Section 6-02.

6-19.3(7)B Concrete Placement Requirements

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

The Section 6-02.3(6) restriction for 5 feet maximum free fall shall not apply to placement of concrete into a shaft.

6-19.3(7)I Requirements for Placing Concrete Above the Top of Shaft

This section is revised to read:

Concrete shall not be placed above the top of shaft (for column splice zones, columns, footings, or shaft caps) until the Contractor receives the Engineer's acceptance of nondestructive QA testing, if performed at that shaft, and acceptance of the shaft.

6-19.3(9) Nondestructive Testing of Shafts (Crosshole Sonic Log (CSL) Testing)

This section, including title, is revised to read:

6-19.3(9) Nondestructive QA Testing of Shafts

The Contractor shall provide nondestructive QA testing and analysis on all shafts with access tubes or thermal wires and TAPs facilitating the testing (See Section 6-19.3(1)B). The testing and analysis shall be performed by the testing organizations identified by the Contractor's submittal in accordance with Section 6-19.3(2)D.

The Engineer may direct that additional testing be performed at a shaft if anomalies or a soft bottom are detected by the Contractor's testing. If additional testing at a shaft confirms the presence of a defect(s) in the shaft, the testing costs and the delay costs resulting from the additional testing shall be borne by the Contractor in accordance with Section 1-05.6. If the additional testing indicates that the shaft has no defect, the testing costs and the delay costs resulting from the additional testing will be paid by the Contracting Agency in accordance with Section 1-05.6, and, if the shaft construction is on the critical path of the Contractor's schedule, a time extension equal to the delay created by the additional testing will be granted in accordance with Section 1-08.8.

6-19.3(9)A Schedule of CSL Testing

This section, including title, is revised to read:

6-19.3(9)A TIP Testing Using Thermal Probes or CSL Testing

If selected as the nondestructive QA testing method by the Contractor, TIP testing using thermal probes, or CSL testing shall be performed after the shaft concrete has cured at least 96 hours. Additional curing time prior to testing may be required if the shaft concrete contains admixtures, such as set retarding admixture or water-reducing admixture, added in accordance with Section 6-02.3(3). The additional curing time prior to testing required under these circumstances shall not be grounds for additional compensation or extension of time to the Contractor in accordance with Section 1-08.8.

6-19.3(9)B Inspection of CSL Access Tubes

This section's title is revised to read:

6-19.3(9)B Inspection of Access Tubes

6-19.3(9)C Engineer's Final Acceptance of Shafts

This section, including title, is revised to read:

6-19.3(9)C TIP Testing With Thermal Wires and TAPs

If selected as the nondestructive QA testing method by the Contractor, TIP testing with thermal wires and TAPs (See Section 6-19.3(6)E) shall be performed. The TIP testing shall commence at the beginning of the concrete placement operation, recording temperature readings at 15-minute intervals until the peak temperature is captured in the data. Additional curing time may be required if the shaft concrete contains admixtures, such as set retarding admixture or water-reducing admixture, added in accordance with Section 6-02.3(3). The additional curing time required under these circumstances shall not be grounds for additional compensation or extension of time to the Contractor in accordance with Section 1-08.8.

TIP testing shall be conducted at all shafts in which thermal wires and TAPs have been installed for thermal wire analysis (Section 6-19.3(6)A).

6-19.3(9)D Requirements to Continue Shaft Excavation Prior to Acceptance of First Shaft

This section, including title, is revised to read:

6-19.3(9)D Nondestructive QA Testing Results Submittal

The Contractor shall submit the results and analysis of the nondestructive QA testing for each shaft tested. The Contractor shall submit the test results within three working days of testing. Results shall be a Type 1 Working Drawing presented in a written report.

TIP reports shall include:

1. A map or plot of the wire/tube location within the shaft and their position relative to a known and identifiable location, such as North.

2. Graphical displays of temperature measurements versus depth of each wire or tube for the analysis time selected, overall average temperature with depth, shaft radius or diameter with depth, concrete cover versus cage position with depth, and effective radius.

3. The report shall identify unusual temperatures, particularly significantly cooler local deviations from the overall average.

4. The report shall identify the location and extent where satisfactory or questionable concrete is identified.

    a. Satisfactory (S) - 0 to 6% Effective Radius Reduction and Cover Criteria Met

    b. Questionable (Q) - Effective Local Radius Reduction > 6%, Effective Local Average Diameter Reduction > 4%, or Cover Criteria Not Met

5. Variations in temperature between wire/tubes (at each depth) which in turn correspond to variations in cage alignment.

6. Where shaft specific construction information is available (e.g. elevations of the top of shaft, bottom of casing, bottom of shaft, etc.), these values shall be noted on all pertinent graphical displays.

CSL reports shall include:

1. A map or plot of the tube location within the shaft and their position relative to a known and identifiable location, such as North.

2. Graphical displays of CSL Energy versus Depth and CSL signal arrival time versus depth or velocity versus depth.

3. The report shall identify the location and extent where good, questionable, and poor concrete is identified, where no signal was received, or where water is present.

    a. Good (G) - No signal distortion and decrease in signal velocity of 10% or less is indicative of good quality concrete.

    b. Questionable (Q) - Minor signal distortion and a lower signal amplitude with a decrease in signal velocity between 10% and 20%.

    c. Poor (P) - Severe signal distortion and much lower signal amplitude with a decrease in signal velocity of 20% or more.

    d. No Signal (NS) - No signal was received.

    e. Water (W) - A measured signal velocity of nominally V = 4,800 to 5,000 fps.

All QA test reports will provide a recommendation to accept the shaft as-is, recommendation for further review by the Engineer, or will provide a plan for further testing, investigation or repair to address any deficiencies identified by the testing.

6-19.3(9)E Additional CSL Testing

This section, including title, is revised to read:

6-19.3(9)E Vacant

6-19.3(9)I Requirements for CSL Access Tubes and Cored Holes After CSL Testing

This section's title is revised to read:

6-19.3(9)I Requirements for Access Tubes and Cored Holes After CSL Testing

6-19.4 Measurement

This section is revised to read:

Constructing shafts will be measured by the linear foot. The linear foot measurement will be calculated using the top of shaft elevation and the bottom of shaft elevation for each shaft as shown in the Plans.

Rock excavation for shaft, including haul, will be measured by the linear foot of shaft excavated. The linear feet measurement will be computed using the top of the rock line, defined as the highest bedrock point within the shaft diameter, and the bottom elevation shown in the Plans.

QA shaft test will be measured once per shaft tested.

6-19.5 Payment

This section is revised to read:

Payment will be made for the following Bid items when they are included in the Proposal:

"Constructing___Diam. Shaft", per linear foot.
The unit Contract price per linear foot for "Constructing___Diam. Shaft" shall be full pay for performing the Work as specified, including:

1. Soil excavation for shaft, including all costs in connection with furnishing, mixing, placing, maintaining, containing, collecting, and disposing of all mineral, synthetic and water slurry, and disposing of groundwater collected by the excavated shaft.

2. Furnishing and placing temporary shaft casing, including temporary casing in addition to the required casing specified in the Special Provisions, and including all costs in connection with completely removing the casing after completing shaft construction.

3. Furnishing permanent casing for shaft.

4. Placing permanent casing for shaft.

5. Casing shoring, including all costs in connection with furnishing and installing casing shoring above the specified upper limit for casing shoring but necessary to provide for sufficient water head pressure to resist artesian water pressure present in the shaft excavation, removing casing shoring, and placing seals when required.

6. Furnishing and placing steel reinforcing bar and epoxy-coated steel reinforcing bar, including furnishing and installing steel reinforcing bar centralizers.

7. Installation of CSL tubes or thermal wires.

8. Furnishing, placing and curing concrete to the top of shaft or to the construction joint at the base of the shaft-column splice zone as applicable.

Payment for “Constructing___Diam. Shaft” will be made upon Engineer acceptance of the shaft, including completion of satisfactory QA shaft tests as applicable.

“Rock Excavation For Shaft Including Haul”, per linear foot.
When rock excavation is encountered, payment for rock excavation is in addition to the unit Contract price per linear foot for “Constructing___Diam. Shaft”

“Shoring Or Extra Excavation Cl. A - ___”, lump sum.
The lump sum Contract price for “Shoring Or Extra Excavation Cl. A - ___” shall be full pay for performing the Work as specified, including all costs in connection with all excavation outside the limits specified for soil and rock excavation for shaft including haul, all temporary telescoping casings, and all temporary casings beyond the limits of required temporary casing specified in the Special Provisions.

“QA Shaft Test”, per each.
The unit Contract price per each for “QA Shaft Test” shall be full pay for performing the Work as specified, including operating all associated accessories necessary to record and process data and develop the summary QA test reports. Section 1-04.6 does not apply to this bid item.

“Removing Shaft Obstructions”, estimated.
Payment for removing, breaking-up, or pushing aside shaft obstructions, as defined in Section 6-19.3(3)E, will be made for the changes in shaft construction methods necessary to deal with the obstruction. The Contractor and the Engineer shall evaluate the effort made and reach agreement on the equipment and employees utilized, and the number of hours involved for each. Once these cost items and their duration have been agreed upon, the payment amount will be determined using the rate and markup methods specified in Section 1-09.6. For the purpose of providing a common proposal for all Bidders, the Contracting Agency has entered an amount for the item “Removing Shaft Obstructions” in the Bid Proposal to become a part of the total Bid by the Contractor.

If drilled shaft tools, cutting teeth, casing or Kelly bar is damaged as a result of the obstruction removal work, the Contractor will be compensated for the costs to repair this equipment in accordance with Section 1-09.6.

If shaft construction equipment is idled as a result of the Work required to deal with the obstruction and cannot be reasonably reassigned within the project, then standby payment for the idled equipment will be added to the payment calculations. If labor is idled as a result of the Work required to deal with the obstruction and cannot be reasonably reassigned within the project, then all labor costs resulting from Contractor labor agreements and established Contractor policies will be added to the payment calculations.

The Contractor shall perform the amount of obstruction Work estimated by the Contracting Agency within the original time of the Contract. The Engineer will consider a time adjustment and additional compensation for costs related to the extended duration of the shaft construction operations, provided:

1. The dollar amount estimated by the Contracting Agency has been exceeded, and

2. The Contractor shows that the obstruction removal Work represents a delay to the completion of the project based on the current progress schedule provided in accordance with Section 1-08.3.

7-02.AP7

Section 7-02, Culverts
January 3, 2017

7-02.2 Materials

The following three new items are inserted after the item "Aggregate for Portland Cement Concrete:

Gravel Backfill for Pipe Zone Bedding	9-03.12(3)
Butyl Rubber Sealant	9-04.11
External Sealing Band	9-04.12

The last paragraph is deleted.

7-02.3(6) Precast Reinf. Conc. Three Sided Structures, Box Culverts and Split Box Culverts

This section is supplemented with the following new paragraph:

When the Plans include a complete set of design details for a Structure (defining panel shapes and dimensions, concrete strength requirements, and steel reinforcing bar, joint, and connection details), the design and load rating preparation and calculation submittal requirements of Sections 7-02.3(6)A1 and 7-02.3(6)A2 do not apply for the components shown in the Plans, but all other requirements of this Section remain in effect. The Contractor may propose alternate concrete culvert designs, accommodating the same rise, span, and length as shown in the Plans, to replace the Structure details shown in the Plans. If an alternate concrete culvert design is proposed, all of the requirements of this Section, including design and load rating preparation and calculation submittal, apply.

7-02.3(6)A General

This section is supplemented with the following two new paragraphs:

Tolerances for PRCTSS shall be as follows:

1. Internal Dimensions – The internal dimension shall not vary more than 1 percent or 2 inches, whichever is less, from the Plan dimensions. The haunch dimensions shall not vary more than ¾ inch from the Plan dimensions.

2. Slab and Wall Thickness – The slab and wall thickness shall not be less than that shown in the Plans by more than 5 percent or ½ inch, whichever is greater. A thickness more than that required in the Plans will not be a cause for rejection if proper joining is not affected.

3. Length of Opposite Surfaces – Variations in lengths of two opposite surfaces of the three-sided section shall not be more than ¾ inch unless beveled sections are being used to accommodate a curve in the alignment.

4. Reinforcing steel placement shall meet the tolerances specified in Section 6-02.3(24)C.

Tolerances for PRCBC and PRCSBC shall be as follows:

1. Internal Dimensions – The internal dimensions shall not vary more than 1 percent from the Plan dimensions. If haunches are used, the haunch dimensions shall not vary more than ¼ inch from the Plan dimensions.

2. Slab and Wall Thickness – The slab and wall thickness shall not be less than that shown in the Plans by more than 5 percent or 3/16 inch, whichever is greater. A thickness more than that required in the Plans will not be a cause for rejection.

3. Length of Opposite Box Segments – Variations in lengths of two opposite surfaces of the box segments shall not be more than ⅛ inch per foot of internal span, with a maximum of ⅝ inch for all sizes through 7 feet internal span, and a maximum of ¾ inch for internal spans greater than 7 feet, except where beveled sections are being used to accommodate a curve in the alignment.

4. Length of Box Segments – The underrun in length of a segment shall not be more than ⅛ inch per foot of length with a maximum of ½ inch in any box segment.

5. Length of Legs and Slabs – The variation in length of the legs shall not be more than ⅛ inch per foot of the rise of the leg per leg with a maximum of ⅝ inches. The differential length between opposing legs of the same segment shall not be more than ½ inch. Length of independent top slab spans shall not vary by more than ⅛ inch per foot of span of the top slab, with a maximum of ⅝ inches.

6. Reinforcing steel placement shall meet the tolerances specified in Section 6-02.3(24)C.

This section is supplemented with the following new subsection:

7-02.3(6)A5 Wingwalls and Retaining Walls

Wingwalls and retaining walls (including cutoff walls and headwalls) shall be constructed in accordance with the Contractor's design and Working Drawing submittal or when the Plans include a complete set of design details for a wall (defining panel shapes and dimensions, concrete strength requirements, and steel reinforcing bar, joint, and connection details),the details shown in the Plans.

Precast concrete construction shall conform to Sections 6-02.3(28) and 6-11.3(3).

Culvert bedding material shall be furnished, placed, and compacted in accordance with Section 7-02.3(6)A4.

7-02.3(6)A1 Design Criteria

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

Whenever the minimum finished backfill or surfacing depth above the top of the Structure is less than 1'-0" (except when the top of the Structure is directly exposed to vehicular traffic), either all steel reinforcing bars in the span unit shall be epoxy-coated with 2" minimum concrete cover from the face of concrete to the face of the top mat of steel reinforcing bars, or the minimum concrete cover shall be 2½".

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

Concrete cover from the face of any concrete surface to the face of any steel reinforcement shall be 1-inch minimum end clearance at all joints, and 2-inches minimum at all other locations.

7-02.3(6)A2 Submittals

The first paragraph is revised to read:

The Contractor shall submit shop drawings of the precast Structures. Fabrication shop drawings replicating complete design details when shown in the Plans shall be Type 2 Working Drawings. Submittals completing the design based on the schematic geometric requirements shown in the Plans, or proposing a Contractor designed alternative concrete culvert Structure shall be Type 2E Working Drawings with supporting design calculations.

The last paragraph is revised to read:

For precast Structures with a span length greater than 20-feet (as defined in Section 7-02.3(6)A1), except when the depth of fill above the top of culvert exceeds the Structure span length, a Type 2E Working Drawing shall be submitted consisting of a load rating report prepared in accordance with the AASHTO Manual for Bridge Evaluation and WSDOT Bridge Design Manual LRFD M 23-50 Chapter 13. Soil pressures used shall include effects from the backfill material and compaction methods, and shall be in accordance with the WSDOT Geotechnical Design Manual M 46-03 and the geotechnical report prepared for the project.

7-02.3(6)A3 Casting

This section is revised to read:

Concrete shall conform to Section 6-02.3(28)B, with a 28-day compressive strength as specified in the Plans or the Working Drawings submittal.

7-02.3(6)A4 Excavation and Bedding Preparation

The last paragraph is revised to read:

The upper layer of bedding course shall be a 6-inch minimum thickness layer of culvert bedding material, defined as granular material either conforming to Section 9-03.12(3)

or to AASHTO Grading No. 57 as specified in Section 9-03.1(4)C. The plan limits of the culvert bedding material shall extend 1-foot beyond the plan limits of the culvert or the Structure footing as applicable. The culvert bedding material shall be compacted in accordance with the Section 2-09.3(1)E requirements for gravel backfill for drains. After compaction, the culvert bedding material shall be screeded transversely to the specified line and grade. Voids in the screeded culvert bedding material shall be filled and then rescreeded prior to erecting the precast Structure.

7-02.3(6)B3 Erection

The last paragraph is revised to read:

Adjacent precast sections shall be connected by welding the weld-tie anchors in accordance with Section 6-03.3(25). Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties. The weld-tie anchor spacing shall not exceed 6'-0". After connecting the weld-tie anchors, the Contractor shall paint the exposed metal surfaces with one coat of field primer conforming to Section 9-08.1(2)F. Keyways shall be filled with grout conforming to Section 9-20.3(2).

7-02.3(6)C1 Casting

This section is revised to read:

PRCSBC shall consist of lid elements and "U" shaped base elements. The vertical legs of the "U" shaped base elements shall be full height matching the rise of the culvert, except as otherwise specified for culvert spans greater than 20-feet. For PRCSBC spans greater than 20-feet (as defined in Section 7-02.3(6)A1), the lid elements may include vertical legs of a maximum length of 4-feet.

All vertical and horizontal joints of PRCBC and PRCSBC elements shall be tongue and groove type joints, except PRCBC and PRCSBC of 20-foot span or less may have keyway joints connected by weld-tie anchors in accordance with Section 6-02.3(25)O. The weld-tie anchor spacing shall not exceed 6'-0". There shall be at least two galvanized steel tie plates across each top unit tongue and groove joint and each tongue and groove joint between upper and lower units, unless otherwise shown in the Plans or required by the seismic designed completed in accordance with Section 7-02.3(6)A1.

7-02.3(6)C3 Erection

This section is revised to read:

PRCBC and PRCSBC shall be erected and backfilled in accordance with the erection sequence specified in the Working Drawing submittal, and the construction equipment restrictions specified in Section 6-02.3(25)O.

The Contractor shall install a continuous strip of butyl rubber sealant within all tongue and groove joints prior to connecting the precast elements together. The butyl rubber sealant shall have a minimum cross section of ½-inch by 1½-inch, unless otherwise shown in the Plans.

After connecting the joints with weld-tie anchors, the Contractor shall paint the exposed metal surfaces with one coat of field primer conforming to Section 9-08.1(2)F. Keyways shall be filled with grout conforming to Section 9-20.3(2).

The Contractor shall wrap all exterior joints along the top and sides of the PRCBC and PRCSBC with a 12-inch wide strip of external sealing band centered about the joint and adhesively bonded to the concrete surface.

Backfill beside the PRCBC and PRCSBC shall be brought up in sequential layers, compacted concurrently. The difference in backfill height on opposing sides of the Structure shall not exceed 2-feet.

7-02.4 Measurement

This section is supplemented with the following:

Culvert bedding material will be measured by the cubic yard of material placed.

7-02.5 Payment

This section is supplemented with the following:

"Culvert Bedding Material", per cubic yard.

7-08.AP7

Section 7-08, General Pipe Installation Requirements
January 3, 2017

7-08.3(1)A Trenches

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

The embankment material shall be compacted to 95 percent of maximum density and the moisture content at the time of compaction shall be between optimum and 3 percentage points below optimum as determined by the Compaction Control Tests specified in Section 2-03.3(14)D.

7-09.AP7

Section 7-09, Water Mains
April 3, 2017

7-09.3(24)D Dry Calcium Hypochlorite

The second paragraph is revised to read:

The number of grams of 70 percent test calcium hypochlorite required for a 20-foot length of pipe equals $0.238 \times d^2$, in which "d" is the diameter in inches.

8-01.AP8

Section 8-01, Erosion Control and Water Pollution Control
August 1, 2016

8-01.2 Materials

This section is supplemented with the following new paragraph:

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

8-01.3(7) Stabilized Construction Entrance

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

Material used for stabilized construction entrance shall be free of extraneous materials that may cause or contribute to track out.

8-01.3(8) Street Cleaning

This section is revised to read:

Self-propelled street sweepers shall be used to remove and collect sediment and other debris from the Roadway, whenever required by the Engineer. The street sweeper shall effectively collect these materials and prevent them from being washed or blown off the Roadway or into waters of the State. Street sweepers shall not generate fugitive dust and shall be designed and operated in compliance with applicable air quality standards.

Material collected by the street sweeper shall be disposed of in accordance with Section 2-03.3(7)C.

Street washing with water will require the concurrence of the Engineer.

8-09.AP8

Section 8-09, Raised Pavement Markers

January 3, 2017

8-09.5 Payment

In the last paragraph, “flaggers and spotters” is revised to read “flaggers”.

8-10.AP8

Section 8-10, Guide Posts

January 4, 2016

8-10.3 Construction Requirements

The last sentence of the second paragraph is deleted.

8-11.AP8

Section 8-11, Guardrail

January 17, 2017

8-11.3(1)C Terminal and Anchor Installation

This section is supplemented with the following new paragraph:

Beam Guardrail Non-flared Terminals for Type 1 guardrail shall meet the crash test and evaluation criteria of NCHRP 350 or the Manual for Assessing Safety Hardware (MASH). Beam Guardrail Non-flared Terminals for Type 31 guardrail shall meet the crash test and evaluation criteria of MASH.

8-11.3(1)F Removing and Resetting Beam Guardrail

The last sentence of the first paragraph is deleted.

8-11.5 Payment

The paragraph following the Bid item "Removing and Resetting Beam Guardrail", per linear foot is revised to read:

> The unit Contract price per linear foot for "Removing and Resetting Beam Guardrail" shall be full payment for all costs to perform the Work as described in Section 8-11.3(1)F, except for replacement posts and blocks.

The paragraph following the Bid item "Raising Existing Beam Guardrail", per linear foot is revised to read:

> The unit Contract price per linear foot for "Raising Existing Beam Guardrail" shall be full payment for all costs to perform the Work as described in Section 8-11.3(1)E, except for replacement posts and blocks.

8-20.AP8

Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and Electrical
August 7, 2017

8-20.1 Description

This section is supplemented with the following new subsection:

> **8-20.1(3) Permitting and Inspections**
>
> Electrical installations are subject to electrical inspection in accordance with RCW 19.28.101. Electrical inspections may only be performed by an electrical inspector meeting the requirements of RCW 19.28.321. Electrical installations will not be accepted until they have been inspected and approved by an electrical inspector as required by this Section. This inspection is required even if there is no new electrical service or new electrical meter being installed in the Contract.
>
> Installations within WSDOT right of way are subject to a minimum of a final inspection by a WSDOT certified electrical inspector as allowed by RCW 19.28.141. A separate permit is not required for electrical installations within WSDOT right of way. Additional inspections may be required at the discretion of the Engineer.
>
> Installations outside of WSDOT right of way are subject to permitting and inspection by the Washington State Department of Labor and Industries (L&I) or a local jurisdiction approved for that location by L&I. Approved local jurisdictions and their contacts may be found on the L&I website at http://www.lni.wa.gov/TradesLicensing/Electrical/FeePermInsp/CityInspectors/.

8-20.1(1) Regulations and Code

The second paragraph is revised to read:

Wherever reference is made in these Specifications or in the Special Provisions to the Code, the rules, or the standards mentioned above, the reference shall be construed to mean the code, rule, or standard that is in effect on the Bid advertisement date.

8-20.3(5)A General

The last paragraph is revised to read:

Immediately after the sizing mandrel has been pulled through, install an equipment grounding conductor if applicable (see Section 8-20.3(9)) and any new or existing wire or cable as specified in the Plans. Where conduit is installed for future use, install a 200-pound minimum tensile strength pull string with the equipment grounding conductor. The pull string shall be attached to duct plugs or caps at both ends of the conduit.

8-20.3(5)A1 Fiber Optic Conduit

The last paragraph is deleted.

8-20.3(5)B Conduit Type

The second and third paragraphs are deleted and replaced with the following new paragraph:

PVC and HDPE conduits shall be Schedule 80 unless installed as innerduct.

8-20.3(5)D Conduit Placement

Item number 2 is revised to read:

2. 24-inches below the top of the untreated surfacing on a Roadbed.

8-20.3(9) Bonding, Grounding

The following two new paragraphs are inserted after the first paragraph:

Install an equipment grounding conductor in all new conduit, whether or not the equipment grounding conductor is called for in the wire schedule.

For each new conduit with innerduct install an equipment grounding conductor in only one of the innerducts unless otherwise required by the NEC or the Plans.

The fourth paragraph (after the preceding Amendments are applied) is revised to read:

Bonding jumpers and equipment grounding conductors meeting the requirements of Section 9-29.3(2)A3 shall be minimum #8 AWG, installed in accordance with the NEC. Where existing conduits are used for the installation of new circuits, an equipment grounding conductor shall be installed unless an existing equipment ground conductor, which is appropriate for the largest circuit, is already present in the existing raceway. The equipment ground conductor between the isolation switch and the sign lighter fixtures shall be minimum #14 AWG stranded copper conductor. Where parallel circuits are enclosed in a common conduit, the equipment-grounding conductor shall be sized by the largest overcurrent device serving any circuit contained within the conduit.

The second sentence of the fifth paragraph (after the preceding Amendments are applied) is revised to read:

> A non-insulated stranded copper conductor, minimum #8 AWG with a full circle crimp on connector (crimped with a manufacturer recommended crimper) shall be connected to the junction box frame or frame bonding stud, the other end shall be crimped to the equipment bonding conductor, using a “C” type crimp connector.

The last two sentences of the sixth paragraph (after the preceding Amendments are applied) are revised to read:

> For light standards, signal standards, cantilever and sign bridge Structures the supplemental grounding conductor shall be #4 AWG non-insulated stranded copper conductor. For steel sign posts which support signs with sign lighting or flashing beacons the supplemental grounding conductor shall be #6 AWG non insulated stranded copper conductor.

The fourth to last paragraph is revised to read:

> Install a two grounding electrode system at each service entrance point, at each electrical service installation and at each separately derived power source. The service entrance grounding electrode system shall conform to the “Service Ground” detail in the Standard Plans. If soil conditions make vertical grounding electrode installation impossible an alternate installation procedure as described in the NEC may be used. Maintain a minimum of 6 feet of separation between any two grounding electrodes within the grounding system. Grounding electrodes shall be bonded copper, ferrous core materials and shall be solid rods not less than 10 feet in length if they are ½ inch in diameter or not less than 8 feet in length if they are ⅝ inch or larger in diameter.

8-20.3(13)A Light Standards

The first sentence in the second to last paragraph is revised to read:

> All new and relocated metal light standards shall be numbered for identification using painted 4 inch block gothic letters (similar to series C highway lettering) and numbers installed 3 feet above the base facing the Traveled Way.

The numbered list in the second to last paragraph is deleted and replaced with the following:

> NN
> CC-SSSS
> VVV
>
> Where:
> **NN** – Is the pole number as identified in the Plans. May be one or more characters.
> **CC** – Is the circuit letter as identified in the Plans. May be one or more characters.
> **SSSS** – Is he service cabinet number as identified in the Plans. Do not include the two or three letter prefix. Up to four digits - do not include leading zeros.
> **VVV** – Is the operating voltage of the luminaire. Always three digits.

8-20.3(13)C Luminaires

The first paragraph is revised to read:

The Contractor shall mark the installation date on the inside of the luminaire ballast or driver housing using a permanent marking pen.

8-22.AP8

Section 8-22, Pavement Marking
August 7, 2017

8-22.3(6) Removal of Pavement Markings

This section is revised to read:

Pavement markings to be removed shall be obliterated until all blemishes caused by the pavement marking removal conform to the coloration of the adjacent pavement.

Grinding to remove pavement markings in their entirety is allowed in areas designated for applications of either Hot Mix Asphalt (HMA) or Bituminous Surface Treatment (BST). Pavement marking removal shall be performed from April 1st through September 30th and only in those areas that shall be paved within the same time window as the grinding, unless otherwise allowed by the Engineer in writing.

For all cement concrete pavement and areas that will not be overlaid with hot mix asphalt or BST, grinding is allowed to a depth just above the pavement surface and then Water blasting or shot blasting shall be required to remove the remaining pavement markings.

If in the opinion of the Engineer, the pavement is materially damaged by pavement marking removal, such damage shall be repaired by the Contractor in accordance with Section 1-07.13(1). Sand or other material deposited on the pavement as a result of removing lines and markings shall be removed as the Work progresses to avoid hazardous conditions. Accumulation of sand or other material which might interfere with drainage will not be permitted.

8-22.4 Measurement

The first two sentences of the fourth paragraph are revised to read:

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

8-22.5 Payment

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

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

"Plastic Wide Dotted Entry Line", per linear foot.

9-01.AP9

Section 9-01, Portland Cement
August 7, 2017

This section's title is revised to read:

Cement

9-01.1 Types of Cement

This section is revised to read:

Cement shall be classified as portland cement, blended hydraulic cement, or rapid hardening hydraulic cement.

9-01.2(2) Vacant

This section, including title, is revised to read:

9-01.2(2) Rapid Hardening Hydraulic Cement

Rapid hardening hydraulic cement shall meet the requirements of ASTM C 1600.

9-01.2(3) Low Alkali Cement

This section is renumbered as follows:

9-01.2(1)A Low Alkali Cement

9-01.2(4) Blended Hydraulic Cement

This section is renumbered as follows:

9-01.2(1)B Blended Hydraulic Cement

In the first paragraph, items number 3 through 5 are revised to read:

3. Type IT(PX)(LY), where (PX) equals the targeted percentage of pozzolan, and (LY) equals the targeted percentage of limestone. The pozzolan (PX) shall be Class F fly ash and shall be a maximum of 35 percent. (LY) shall be a minimum of 5 percent and a maximum of 15 percent. Separate testing of each source of fly ash at each proposed replacement level shall be conducted in accordance with ASTM C1012. Expansion at 180 days shall be 0.10 percent or less.

4. Type IT(SX)(LY), where (SX) equals the targeted percentage of slag cement, and (LY) equals the targeted percentage of limestone. (SX) shall be a maximum of 50 percent. (LY) shall be a minimum of 5 percent and a maximum of 15 percent. Separate testing of each source of slag at each proposed replacement level shall be conducted in accordance with ASTM C1012. Expansion at 180 days shall be 0.10 percent or less.

5. Type IL(X), where (X) equals the targeted percentage of limestone, and shall be a minimum of 5 percent and a maximum of 15 percent. Testing shall be conducted in accordance with ASTM C1012. Expansion at 180 days shall be 0.10 percent or less.

9-01.3 Tests and Acceptance

The second paragraph is revised to read:

Cement producers/suppliers that certify portland cement or blended hydraulic cement shall participate in the Cement Acceptance Program as described in WSDOT Standard Practice QC 1. Rapid hardening hydraulic cement producers/suppliers are not required to participate in WSDOT Standard Practice QC 1.

9-03.AP9

Section 9-03, Aggregates
August 7, 2017

9-03.1(1) General Requirements

In this section, each reference to “Section 9-01.2(3)” is revised to read “Section 9-01.2(1)A”.

This first paragraph is supplemented with the following:

Reclaimed aggregate may be used if it complies with the specifications for Portland Cement Concrete. Reclaimed aggregate is aggregate that has been recovered from plastic concrete by washing away the cementitious materials.

9-03.1(2) Fine Aggregate for Portland Cement Concrete

This section is revised to read:

Fine aggregate shall consist of natural sand or manufactured sand, or combinations thereof, accepted by the Engineer, having hard, strong, durable particles free from adherent coating. Fine aggregate shall be washed thoroughly to meet the specifications.

9-03.1(2)A Deleterious Substances

This section is revised to read:

The amount of deleterious substances in the washed aggregate shall be tested in accordance with AASHTO M 6 and not exceed the following values:

Material finer than No. 200 Sieve	2.5 percent by weight
Clay lumps and friable particles	3.0 percent by weight
Coal and lignite	0.25 percent by weight
Particles of specific gravity less than 2.00	1.0 percent by weight.

Organic impurities shall be tested in accordance with AASHTO T 21 by the glass color standard procedure and results darker than organic plate no. 3 shall be rejected. A darker color results from AASHTO T 21 may be used provided that when tested for the effect of organic impurities on strength of mortar, the relative

strength at 7 days, calculated in accordance with AASHTO T 71, is not less than 95 percent.

9-03.1(4) Coarse Aggregate for Portland Cement Concrete

This section is revised to read:

Coarse aggregate for concrete shall consist of gravel, crushed gravel, crushed stone, or combinations thereof having hard, strong, durable pieces free from adherent coatings. Coarse aggregate shall be washed to meet the specifications.

9-03.1(4)A Deleterious

This section, including title, is revised to read:

9-03.1(4)A Deleterious Substances

The amount of deleterious substances in the washed aggregate shall be tested in accordance with AASHTO M 80 and not exceed the following values:

Material finer than No. 200	1.0[1] percent by weight
Clay lumps and Friable Particles	2.0 percent by weight
Shale	2.0 percent by weight
Wood waste	0.05 percent by weight
Coal and Lignite	0.5 percent by weight
Sum of Clay Lumps, Friable Particles, and Chert (Less Than 2.40 specific gravity SSD)	3.0 percent by weight

[1]If the material finer than the No. 200 sieve is free of clay and shale, this percentage may be increased to 1.5.

9-03.1(4)C Grading

The following new sentence is inserted at the beginning of the last pargraph:

Where coarse aggregate size 467 is used, the aggregate may be furnished in at least two separate sizes.

9-03.1(5) Combined Aggregate Gradation for Portland Cement Concrete

This section is revised to read:

As an alternative to using the fine aggregate sieve grading requirements in Section 9-03.1(2)B, and coarse aggregate sieve grading requirements in Section 9-03.1(4)C, a combined aggregate gradation conforming to the requirements of Section 9-03.1(5)A may be used.

9-03.1(5)A Deleterious Substances

This section is revised to read:

The amount of deleterious substances in the washed aggregates $\frac{3}{8}$ inch or larger shall not exceed the values specified in Section 9-03.1(4)A and for aggregates smaller than $\frac{3}{8}$ inch they shall not exceed the values specified in Section 9-03.1(2)A.

9-03.1(5)B Grading

The first paragraph is deleted.

9-03.8(2) HMA Test Requirements

In the table in item number 3, the heading “Statistical and Nonstatistical” is revised to read “Statistical”.

9-03.8(7) HMA Tolerances and Adjustments

In the table in item number 1, the column titled “Nonstatistical Evaluation” is deleted.

In the table in item 1, the last column titled “Commercial Evaluation” is revised to read “Visual Evaluation”.

9-03.11(1) Streambed Sediment

The following three new sentences are inserted after the first sentence of the first paragraph:

> Alternate gradations may be used if proposed by the Contractor and accepted by the Engineer. The Contractor shall submit a Type 2 Working Drawing consisting of 0.45 power maximum density curve of the proposed gradation. The alternate gradation shall closely follow the maximum density line and have Nominal Aggregate Size of no less than 1½ inches or no greater than 3 inches.

9-03.12(4) Gravel Backfill for Drains

The following new sentence is inserted at the beginning of the second paragraph:

> As an alternative, AASHTO grading No. 57 may be used in accordance with Section 9-03.1(4)C.

9-03.12(5) Gravel Backfill for Drywells

The following new sentence is inserted at the beginning of the second paragraph:

> As an alternative, AASHTO grading No. 4 may be used in accordance with Section 9-03.1(4)C.

9-03.21(1)B Concrete Rubble

This section, including title, is revised to read:

> **9-03.21(1)B Recycled Concrete Aggregate**
>
> Recycled concrete aggregates are coarse aggregates manufactured from hardened concrete mixtures. Recycled concrete aggregate may be used as coarse aggregate or blended with coarse aggregate for Commercial Concrete. Recycled concrete aggregate shall meet all of the requirements for coarse aggregate contained in Section 9-03.1(4) or 9-03.1(5). In addition to the requirements of Section 9-03.1(4) or 9-03.1(5), recycled concrete shall:
>
> 1. Contain an aggregated weight of less than 1 percent of adherent fines, vegetable matter, plastics, plaster, paper, gypsum board, metals, fabrics, wood, tile, glass, asphalt (bituminous) materials, brick, porcelain or other deleterious substance(s) not otherwise noted;

2. Be free of components such as chlorides and reactive materials that are detrimental to the concrete, unless mitigation measures are taken to prevent recurrence in the new concrete;

3. Have an absorption of less than 10 percent when tested in accordance with AASHTO T 85.

4. Be considered mechanically fractured and therefore be considered part of the total fracture calculation as determined by the FOP for AASHTO T 335.

Recycled concrete aggregate shall be in a saturated condition prior to mixing.

Recycled concrete aggregate shall not be placed below the ordinary high water mark of any surface water of the State.

9-03.21(1)D Recycled Steel Furnace Slag

This section title is revised to read:

Steel Slag

9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material

In the Hot Mix Asphalt column, each value of “20” is revised to read “25”.

The last column heading “Steel Furnace Slag” is revised to read “Steel Slag”.

The following new row is inserted after the second row:

Coarse Aggregate for Commercial Concrete	9-03.1(4)	0	100	0	0

9-04.AP9

Section 9-04, Joint and Crack Sealing Materials
January 3, 2017

This section is supplemented with the following two new subsections:

9-04.11 Butyl Rubber Sealant

Butyl rubber sealant shall conform to ASTM C 990.

9-04.12 External Sealing Band

External sealing band shall by Type III B conforming to ASTM C 877.

9-04.1(2) Premolded Joint Filler for Expansion Joints

This section is supplemented with the following:

As an alternative to the above, a semi-rigid, non-extruding, resilient type, closed-cell polypropylene foam, preformed joint filler with the following physical properties as tested to AASHTO T 42 Standard Test Methods may be used.

Closed-Cell Polypropylene Foam Preformed Joint Filler		
Physical Property	**Requirement**	**Test Method**
Water Absorption	< 1.0%	AASHTO T 42
Compression Recovery	> 80%	AASHTO T 42
Extrusion	< 0.1 in.	AASHTO T 42
Density	> 3.5 lbs./cu.ft.	AASHTO T 42
Water Boil (1 hr.)	No expansion	AASHTO T 42
Hydrochloric Acid Boil (1 hr.)	No disintegration	AASHTO T 42
Heat Resistance °F	392°F± 5°F	ASTM D 5249

9-04.2(1) Hot Poured Joint Sealants

This section's content is deleted and replaced with the following new subsections:

9-04.2(1)A Hot Poured Sealant

Hot poured sealant shall be sampled in accordance with ASTM D5167 and tested in accordance with ASTM D5329.

9-04.2(1)A1 Hot Poured Sealant for Cement Concrete Pavement

Hot poured sealant for cement concrete pavement shall meet the requirements of ASTM D6690 Type IV, except for the following:

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

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

9-04.2(1)A2 Hot Poured Sealant for Bituminous Pavement

Hot poured sealant for bituminous pavement shall meet the requirements of ASTM D6690 Type I or Type II.

9-04.2(1)B Sand Slurry for Bituminous Pavement

Sand slurry is mixture consisting of the following components measured by total weight:

1. Twenty percent CSS-1 emulsified asphalt,

2. Two percent portland cement, and

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

9-04.2(2) Poured Rubber Joint Sealer

The last paragraph is deleted.

9-04.4(1) Rubber Gaskets for Concrete Pipes and Precast Manholes

"AASHTO M 198" is revised to read "ASTM C 990".

9-04.4(3) Gaskets for Aluminum or Steel Culvert or Storm Sewer Pipe

In the last sentence, "AASHTO M 198" is revised to read "ASTM C 990".

9-06.AP9

Section 9-06, Structural Steel and Related Materials
January 3, 2017

9-06.5(3) High-Strength Bolts

In this section, “ASTM A325” is revised to read “ASTM F3125 Grade A325”, “ASTM A490” is revised to read “ASTM F3125 Grade A490”, and “ASTM F1852” is revised to read “ASTM F3125 Grade F1852”.

In the fifth paragraph, “ASTM-A325” is revised to read “ASTM F3125”.

9-06.12 Bronze Castings

In this section, “AASHTO M107” is revised to read “ASTM B22”.

9-06.16 Roadside Sign Structures

In the first paragraph, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

9-07.AP9

Section 9-07, Reinforcing Steel
August 1, 2016

9-07.1(1)A Acceptance of Materials

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

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

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

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

9-07.1(2) Bending

The first two sentences of the first paragraph are deleted and replaced with the following two new sentences:

> Steel reinforcing bars shall be cut and bent cold to the shapes shown on the Plans. Fabrication tolerances shall be in accordance with ACI 315.

9-10.AP9

Section 9-10, Piling
August 1, 2016

9-10.3 Cast-In-Place Concrete Piling

This section is revised to read:

> Reinforcement for cast-in-place concrete piles shall conform to Section 9-07.2.

9-11.AP9

Section 9-11, Waterproofing
January 3, 2017

This section (and all subsections), including title, is revised to read:

9-11 Waterproof Membrane

9-11.1 Asphalt for Waterproofing

Waterproof membrane shall be a sheet membrane conforming to ASTM D 6153 Type III, the puncture capacity specified below, and either the thin polymer sheet tensile stress or the geotextile and fabric grab tensile strength specified below:

Performance Properties	Test Method	Specification Requirements
Tensile Stress (for Thin Polymer Sheets)	ASTM D 882	75 pounds per inch min.
Grab Tensile Strength (for Geotextiles and Fabrics)	ASTM D 4632 (Woven or Nonwoven)	200 pounds min.
Puncture Capacity (For Thin Polymer Sheets, Geotextiles and Fabrics)	ASTM E 154	200 pounds min.

Waterproofing membrane will be accepted based on a Manufacturer's Certificate of Compliance with each lot of waterproof membrane.

9-11.2 Primer for Waterproof Membrane

The primer for the waterproof membrane shall be appropriate for bonding the sheet membrane to the bridge deck surface and shall be compatible with the membrane in accordance with the waterproof membrane manufacturer's recommendations.

9-14.AP9

Section 9-14, Erosion Control and Roadside Planting
August 7, 2017

9-14.4(2) Hydraulically Applied Erosion Control Products (HECPs)

The first paragraph is revised to read:

All HECPs shall be made of natural plant fibers unaltered by synthetic materials, and in a dry condition, free of noxious weeds, seeds, chemical printing ink, germination inhibitors, herbicide residue, chlorine bleach, rock, metal, plastic, and other materials detrimental to plant life.

The last sentence of the third paragraph is revised to read the following two sentences:

Under no circumstances will field mixing of additives or components be acceptable, with the exception of seed and water. The product shall be hydrated in accordance with the manufacturer's recommendations.

In Table 1 of the fourth paragraph, the following new row is inserted below the table heading:

These test requirements apply to the fully mixed product, including tackifiers, dyes, or other additives that may be included in the HECP final product in its sprayable form.

The last two paragraphs are revised to read:

If the HECP contains a dye to facilitate placement and inspection of the material, it shall be nontoxic to plants, animals, and aquatic life and shall not stain concrete or painted surfaces.

The HECP shall not be harmful to plants, animals, and aquatic life.

9-14.4(4) Wood Strand Mulch

The last paragraph is revised to read:

The Contractor shall provide a test report performed in accordance with WSDOT T 125 demonstrating compliance to this specification prior to acceptance. This product shall not be harmful to plants, animals, and aquatic life.

9-14.4(7) Tackifier

The first paragraph is supplemented with the following:

Tackifiers shall include a mulch tracer added to visible aid uniform application, and shall not be harmful to plants, animals, or aquatic life.

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

The Contractor shall provide test results documenting the tackifier and mulch tracer meets the requirements for Acute Toxicity, Solvents, and Heavy Metals as required in Table 1 in Section 9-14.4(2).

9-14.4(7)A Organic Tackifier

This section is revised to read:

Organic tackifiers shall be derived from natural plant sources and shall not be harmful to plants, animals, and aquatic life.

9-14.4(7)B Synthetic Tackifier

This section is revised to read:

Synthetic tackifiers shall not be harmful to plants, animals, and aquatic life.

9-14.5(2) Biodegradable Erosion Control Blanket

The first paragraph is revised to read:

Biodegradable erosion control blankets, including netting if present, shall be made of natural plant fibers unaltered by synthetic materials. All blanket material shall effectively

perform the intended erosion control function until permanent vegetation has been established, or for a minimum of 6 months, whichever comes first.

9-14.5(4)A Biodegradable Check Dams

This section is revised to read:

Biodegradable check dams shall meet the following requirements:

Wattle	Section 9-14.5(5)
Compost Sock	Section 9-14.5(6)
Coir Log	Section 9-14.5(7)

The Contractor may substitute a different biodegradable check dam as long as it complies with the following and is accepted by the Engineer:

1. Made of natural plant fiber unaltered by synthetic material.

2. Netting if present shall be made of natural plant fibers unaltered by synthetic materials. Materials shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

3. Straw bales shall not be used as check dams.

9-14.5(5) Wattles

This section is revised to read:

Wattles shall consist of cylinders of plant material such as weed-free straw, coir, wood chips, excelsior, or wood fiber or shavings encased within netting made of natural plant fibers unaltered by synthetic materials. Wattles shall be a minimum of 8 inches in diameter. Netting material shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials such as preservatives. Netting material shall be free from cuts, tears, or weak places and shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

If wood chip filler is used, it shall meet the material requirements as specified in Section 9-14.4(3). If straw filler is used, it shall meet the material requirements as specified in Section 9-14.4(1). If wood shavings are used, 80 percent of the fibers shall have a minimum length of 6 inches between 0.030 and 0.50 inches wide and between 0.017 and 0.13 inches thick.

Stakes for wattles shall be made of wood from untreated Douglas fir, hemlock, or pine species.

9-14.5(6) Compost Socks

This section is revised to read:

Compost socks shall consist of fabric made of natural plant fibers unaltered by synthetic materials. The compost sock shall be filled with Medium Compost as

specified in Section 9-14.4(8). Compost socks shall be at least 8 inches in diameter. The sock shall be clean, evenly woven; free of encrusted concrete or other contaminating materials; free from cuts, tears, broken or missing yarns; free of thin, open, or weak areas; and free of any type of preservative. Sock fabric shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

Stakes for compost socks shall be made of wood from untreated Douglas fir, hemlock, or pine species.

9-16.AP9

Section 9-16, Fence and Guardrail
January 17, 2017

9-16.3(3) Galvanizing

The first three sentences are deleted and replaced with the following single sentence:

W-beam or thrie beam rail elements and terminal sections shall be galvanized in accordance with AASHTO M 180, Class A, Type II.

9-20.AP9

Section 9-20, Concrete Patching Material, Grout, and Mortar
January 3, 2017

This section is supplemented with the following new subsection:

9-20.5 Bridge Deck Repair Material

Bridge deck repair material shall be either an ultra-low viscosity, two-part liquid, polyurethane-hybrid polymer concrete, or a pre-packaged cement based repair mortar, conforming to the following requirements:

1. Minimum compressive strength of 2,500 psi, in accordance with ASTM C 109.

2. Total soluble chloride ion content by mass of product shall conform to the limits specified in Section 6-02.3(2) for reinforced concrete.

3. Permeability of less than 2,000 coulombs at 56-days in accordance with AASHTO T 277.

If pre-packaged deck repair material does not include coarse aggregate, the Contractor shall extend the mix with coarse aggregate as recommended by the manufacturer.

9-23.AP9

Section 9-23, Concrete Curing Materials and Admixtures
January 3, 2017

9-23.9 Fly Ash

The first paragraph is revised to read:

Fly ash shall conform to the requirements of AASHTO M295 Class C or F including supplementary optional chemical requirements as set forth in Table 2.

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

The supplementary optional chemical limits in AASHTO M295 Table 2 do not apply to fly ash used in Controlled Density Fill.

9-23.12 Metakaolin

This section, including title, is revised to read:

9-23.12 Natural Pozzolan

Natural Pozzolans shall be either Metakaolin or ground Pumice and shall conform to the requirements of AASHTO M295 Class N, including supplementary optional chemical requirements as set forth in Table 2.

9-28.AP9

Section 9-28, Signing Materials and Fabrication
April 3, 2017

9-28.14(3) Aluminum Structures

This section is revised to read:

Welding of aluminum shall be in accordance with AWS D1.2/D1.2M, latest edition, Structural Welding Code – Aluminum.

Aluminum alloy filler metals utilized on anodized structures shall result in color matching to base metals.

9-29.AP9

Section 9-29, Illumination, Signal, Electrical
August 7, 2017

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

This section is supplemented with the following new subsections:

9-29.2(5) Testing Requirements

The Contractor shall provide for testing of junction boxes, cable vaults and pull boxes. Junction boxes, cable vaults and pull boxes shall be tested by an independent materials testing facility, and a test report issued documenting the results of the tests performed.

For each junction box, vault and pull box type, the independent testing laboratory shall meet the requirements of AASHTO R 18 for Qualified Tester and Verified Test Equipment. The test shall be conducted in the presence of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural, and each test sheet shall have the Professional Engineer's original signature, date of signature, original seal, and registration number. One copy of the test report shall be furnished to the Contracting Agency certifying that the box and cover meet or exceed the loading requirements for that box type, and shall include the following information:

1. Product identification.

2. Date of testing.

3. Description of testing apparatus and procedure.

4. All load deflection and failure data.

5. Weight of box and cover tested.

6. Upon completion of the required test(s) the box shall be loaded to failure or to the maximum load possible on the testing machine (70,000 pounds minimum).

7. A brief description of type and location of failure or statement that the testing machine reached maximum load without failure of the box.

9-29.2(5)A Standard Duty Boxes and Vaults

Standard Duty Concrete Junction Boxes, Cable Vaults, and Pull Boxes shall be load tested to 22,500 pounds. The test load shall be applied uniformly through a 10 by 10 by 1-inch steel plate centered on the lid. The test load shall be applied and released ten times, and the deflection at the test load and released state shall be recorded for each interval. At each interval the junction box shall be inspected for lid deformation, failure of the lid/frame welds, vertical and horizontal displacement of the lid/frame, cracks, and concrete spalling.

Concrete junction boxes will be considered to have withstood the test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or any impairment to the function of the lid.

2. Vertical or horizontal displacement of the lid frame.

3. Cracks wider than 0.012 inches that extend 12 inches or more.

4. Fracture or cracks passing through the entire thickness of the concrete.

5. Spalling of the concrete.

9-29.2(5)B Retrofit Security Lids for Standard Duty Concrete Junction Boxes

Security lids used to retrofit existing Standard Duty Concrete Junction Boxes shall be tested as follows:

1. The security lid shall be installed on any appropriately sized box that is currently approved on the Qualified Products List.

2. The security lid and box assembly shall be load tested in accordance with Section 9-29.2(5)A. After the ten load cycles but before loading to failure, the security lid shall be fully opened and removed to verify operability.

3. The locking mechanism(s) shall be tested as follows:

    a. The locking mechanism shall be cycled 250 times (locked, then unlocked again) at room temperature (60-80°F). If there is more than one identical locking mechanism, only one needs to be cycled in this manner.

    b. Temperature changes should be limited to no more than 60°F per hour.

    c. The security lid shall be cooled to and held at -30°F for 15 minutes. The locking mechanism shall then be cycled once to verify operation at this temperature.

    d. The security lid shall be heated to and held at 120-122°F for 15 minutes. The locking mechanism shall then be cycled once to verify operation at this temperature.

    e. The security lid shall be temperature adjusted to and held at 110°F and 95% humidity for 15 minutes. The locking mechanism shall then be cycled once to verify operation at this temperature and humidity.

9-29.2(5)C Standard Duty Non-Concrete Junction Boxes

Non-concrete Junction Boxes shall be tested as defined in the ANSI/SCTE 77 Tier 15 test method using the test load of 22,500 pounds (minimum) in place of the design load during testing. In addition, the Contractor shall provide a Manufacturer Certificate of Compliance for each non-concrete junction box installed.

9-29.2(5)D Heavy-Duty Boxes and Vaults

Heavy-Duty Junction Boxes, Cable Vaults, and Pull Boxes shall be load tested to 46,000 pounds. The test load shall be applied vertically through a 10 by 20 by 1-inch steel plate centered on the lid with an orientation both on the long axis and the short axis of the junction box. The test load shall be applied and released ten times on each axis. The deflection at the test load and released state shall be recorded for each interval. At each interval the test box shall be inspected for lid deformation, failure of the lid or frame welds, vertical and horizontal displacement of the lid frame, cracks, and concrete spalling. After the twentieth loading interval the test shall be terminated with a 60,000 pound load being applied vertically through the steel plate centered on the lid and with the long edge of steel plate orientated parallel to the long axis of the box.

Heavy-Duty Junction Boxes will be considered to have withstood the 46,000 pound test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or any impairment to the function of the lid.

2. Vertical or horizontal displacement of the lid frame.

3. Cracks wider than 0.012 inches that extend 12 inches or more.

4. Fracture or cracks passing through the entire thickness of the concrete.

5. Spalling of the concrete.

Heavy-Duty Junction Boxes will be considered to have withstood the 60,000 pound test if all of the following conditions are exhibited:

1. The lid is operational.

2. The lid is securely fastened.

3. The welds have not failed.

4. Permanent dishing or deformation of the lid is ¼ inch or less.

5. No buckling or collapse of the box.

9-29.2(1) Standard Duty and Heavy Duty Junction Boxes

This section, including title, is revised to read:

9-29.2(1) Junction Boxes

For the purposes of this Specification concrete is defined as portland cement concrete and non-concrete is all others.

The Contractor shall provide shop drawings for all components, hardware, lid, frame, reinforcement, and box dimensions. The shop drawings shall be prepared by (or under the supervision of) a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural. Each sheet shall carry the following:

1. Professional Engineer's original signature, date of signature, original seal, and registration number. If a complete assembly drawing is included which references additional drawing numbers, including revision numbers for those drawings, then only the complete assembly drawing is required to be stamped.

2. The initials and dates of all participating design professionals.

3. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.

Design calculations shall carry on the cover page, the Professional Engineer's original signature, date of signature, original seal, and registration number.

For each type of junction box, or whenever there is a change to the junction box design, a proof test, as defined in this Specification, shall be performed and new shop drawings submitted.

9-29.2(1)A Standard Duty Junction Boxes

This section is revised to read:

Standard Duty Junction Boxes are defined as Type 1, 2 and 8 junction boxes and shall have a minimum load rating of 22,500 pounds and be tested in accordance with Section 9-29.2(5). A complete Type 8 Junction Box includes the spread footing shown in the Standard Plans. All Standard Duty Junction Boxes placed in sidewalks, walkways, and shared use paths shall have slip resistant surfaces. Non-slip lids and frames shall be hot dip galvanized in accordance with AASHTO M111.

9-29.2(1)A1 Concrete Junction Boxes

The Standard Duty Concrete Junction Box steel frame, lid support, and lid shall be painted with a black paint containing rust inhibiters or painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3, or hot-dip galvanized in accordance with AASHTO M 111.

Concrete used in Standard Duty Junction Boxes shall have a minimum compressive strength of 6,000 psi when reinforced with a welded wire hoop, or 4,000 psi when reinforced with welded wire fabric or fiber reinforcement. The frame shall be anchored to the box by welding headed studs ⅜ by 3 inches long, as specified in Section 9-06.15, to the frame. The wire fabric shall be attached to the studs and frame with standard tie practices. The box shall contain ten studs located near the centerline of the frame and box wall. The studs shall be placed one anchor in each corner, one at the middle of each width and two equally spaced on each length of the box.

Materials for Type 1, 2, and 8 Concrete Junction Boxes shall conform to the following:

Materials	Requirement
Concrete	Section 6-02
Reinforcing Steel	Section 9-07
Fiber Reinforcing	ASTM C1116, Type III
Lid	ASTM A786 diamond plate steel
Slip Resistant Lid	ASTM A36 steel
Frame	ASTM A786 diamond plate steel or ASTM A36 steel
Slip Resistant Frame	ASTM A36 steel
Lid Support	ASTM A36 steel, or ASTM A1011 SS Grade 36 (or higher)
Handle & Handle support	ASTM A36 steel, or ASTM A1011 CS (Any Grade) or SS (Any Grade)
Anchors (studs)	Section 9-06.15
Bolts, Studs, Nuts, Washers	ASTM F593 or A193, Type 304 or 316, or Stainless Steel grade 302, 304, or 316 steel in accordance with approved shop drawing
Locking and Latching Mechanism Hardware and Bolts	In accordance with approved shop drawings

9-29.2(1)A2 Non-Concrete Junction Boxes

Material for the non-concrete junction boxes shall be of a quality that will provide for a similar life expectancy as portland cement concrete in a direct burial application.

Type 1, 2, and 8 non-concrete junction boxes shall have a Design Load of 22,500 pounds and shall be tested in accordance with Section 9-29.2(5). Non-concrete junction boxes shall be gray in color and have an open bottom design with approximately the same inside dimensions, and present a load to the bearing surface that is less than or equal to the loading presented by the concrete junction boxes shown in the Standard Plans. Non-concrete junction box lids shall include a pull slot and embedded 6 by 6 by ¼-inch steel plate, and shall be secured with two ½ inch stainless steel Penta-head bolts recessed into the cover. The tapped holes for the securing bolts shall extend completely through the box to prevent accumulation of debris. Bolts shall conform to ASTM F593, stainless steel.

9-29.2(1)B Heavy-Duty Junction Boxes

The first paragraph is revised to read:

Heavy-Duty Junction Boxes are defined as Type 4, 5, and 6 junction boxes and shall be concrete and have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure when tested in accordance with Section 9-29.2(5).

9-29.2(1)C Testing Requirements

This section is deleted in its entirety.

9-29.2(2) Small Cable Vaults, Standard Duty Cable Vaults, Standard Duty Pull Boxes, and Heavy Duty Pull Boxes

This section, including title, is revised to read:

9-29.2(2) Cable Vaults and Pull Boxes

Cable Vaults and Pull Boxes shall be constructed as a concrete box and as a concrete lid. The lids for Cable Vaults and Pull Boxes shall be interchangeable and both shall fit the same box as shown in the Standard Plans.

The Contractor shall provide shop drawings for all components, including concrete box, Cast Iron Ring, Ductile Iron Lid, Steel Rings, and Lid. In addition, the shop drawings shall show placement of reinforcing steel, knock outs, and any other appurtenances. The shop drawing shall be prepared by or under the direct supervision of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural. Each sheet shall carry the following:

1. Professional Engineer's original signature, date of signature, original seal, and registration number. If a complete assembly drawing is included which references additional drawing numbers, including revision numbers for those drawings, then only the complete assembly drawing is required to be stamped.

2. The initials and dates of all participating design professionals.

3. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.

Design calculations shall carry on the cover page, the Professional Engineer's original signature, date of signature, original seal, and registration number.

For each type of box or whenever there is a change to the Cable Vault or Pull box design, a proof test, as defined in this Specification, shall be performed and new shop drawings submitted.

9-29.2(2)A Small Cable Vaults, Standard Duty Cable Vaults, and Standard Duty Pull Boxes

This section's title is revised to read:

9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes

The first paragraph is revised to read:

Standard Duty Cable Vaults and Pull Boxes shall be concrete and have a minimum load rating of 22,500 pounds and be tested in accordance with Section 9-29.2(5). For the purposes of this Section, Small Cable Vaults are considered a type of Standard Duty Cable Vault.

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

Concrete for Standard Duty Cable Vaults and Pull Boxes shall have a minimum compressive strength of 4,000 psi.

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

All Standard Duty Cable Vaults and Pull Boxes placed in sidewalks, walkways, and shared-use paths shall have slip-resistant surfaces.

The fourth paragraph (up until the colon) is revised to read:

Materials for Standard Duty Cable Vaults and Pull Boxes shall conform to the following:

9-29.2(2)B Heavy-Duty Cable Vaults and Pull Boxes

The first paragraph is revised to read:

Heavy-Duty Cable Vaults and Pull Boxes shall be constructed of concrete having a minimum compressive strength of 4,000 psi, and have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure when tested in accordance with Section 9-29.2(5).

9-29.2(3) Structure Mounted Junction Boxes

The first and second paragraphs are revised to read:

Surface mounted junction boxes and concrete embedded junction boxes installed in cast-in-place structures shall be stainless steel NEMA 4X.

Concrete embedded junction boxes installed in structures constructed by slip forming shall be stainless steel NEMA 3R and shall be adjustable for depth, with depth adjustment bolts, which are accessible from the front face of the junction box with the lid installed.

9-29.3(1) Fiber Optic Cable

This section is revised to read:

All fiber optic cables shall be single mode fiber optic cables unless otherwise specified in the Contract. All fiber optic cables shall meet the following requirements:

1. Compliance with the current version of ANSI/ICEA S-87-640. A product data specification sheet clearly identifying compliance or a separate letter from manufacturer to state compliance shall be provided.

2. Cables shall be gel free, loose tube, low water peak, and all dielectric with no metallic component.

3. Cables shall not be armored unless specified in the Contract.

4. Cables shall be approved for mid-span entries and be rated by the manufacturer for outside plant (OSP) use, placement in underground ducts, and aerial installations.

5. Fiber counts shall be as specified in the Contract.

6. Fibers and buffer tubes shall be color coded in accordance with the current version of EIA/TIA-598.

7. Fibers shall not have any factory splices.

8. Outer Jacket shall be Type M (Medium Density Polyethylene). Outer jacket shall be free from holes, splits, blisters, or other imperfections and must be smooth and concentric as is consistent with the best commercial practice.

9. A minimum of one (1) rip cord is required for each cable.

10. Cable markings shall meet the following additional requirements:

    a. Color shall be white or silver.

    b. Markings shall be approximately 3 millimeters (118 mils) in height, and dimensioned and spaced to produce good legibility.

    c. Markings shall include the manufacturer's name, year of manufacture, the number of fibers, the words "OPTICAL CABLE", and sequential length marks.

d. Sequential length markings shall be in meters or feet, spaced at intervals not more than 1 meter or 2 feet apart, respectively.

e. The actual cable length shall not be shorter than the cable length marking. The actual cable length may be up to 1% longer than the cable length marking.

f. Cables with initial markings that do not meet these requirements will not be accepted and may not be re-marked.

11. Short term tensile strength shall be a minimum of 600 pounds (1bs). Long term tensile strength shall be a minimum of 180 pounds (1bs). Tensile strength shall be achieved using a fiberglass reinforced plastic (FRP) central member and / or aramid yarns.

12. All cables shall be new and free of material or manufacturing defects and dimensional non-uniformity that would:

    a. Interfere with the cable installation using accepted cable installation practices;

    b. Degrade the transmission performance or environmental resistance after installation;

    c. Inhibit proper connection to interfacing elements;

    d. Otherwise yield an inferior product.

13. The fiber optic cables shall be shipped on reels with a drum diameter at least 20 times the diameter of the cable, in order to prevent damage to the cable. The reels shall be substantial and constructed so as to prevent damage during shipment and handling. Reels shall be labeled with the same information required for the cable markings, with the exception that the total length of cable shall be marked instead of incremental length marks. Reels shall also be labeled with the type of cable.

This section is supplemented with the following new subsection:

9-29.3(1)B Multimode Optical Fibers

Where multimode fiber optic cables are specified in the Contract, the optical fibers shall be one of the following types, as specified in the Contract:

a. Type OM1, meeting the requirements of EIA/TIA 492-AAAA-A or ISO/IEC 11801. The fiber core diameter shall be 62.5 µm.

b. Type OM2, meeting the requirements of EIA/TIA 492-AAAB-A or ISO/IEC 11801. The fiber core diameter shall be 50 µm.

All multimode optical fibers shall have a maximum attenuation of 3.0 dB/km at 850nm and 1.0 dB/km at 1300nm. Completed cable assemblies shall be rated for 1000BaseLX Ethernet communications.

9-29.3(1)A Singlemode Fiber Optic Cable

This section is revised to read:

Single-Mode optical fibers shall be EIA/TIA 492-CAAB or ISO/IEC 11801 Type OS2, low water peak zero dispersion fibers, meeting the requirements of ITU-T G.652.D.

9-29.6 Light and Signal Standards

The third paragraph is revised to read:

Light standard, signal standards, slip base hardware and foundation hardware shall be hot dip galvanized in accordance with AASHTO M 111 and AASHTO M 232. Where colored standards are required, standards shall be powder-coated after galvanizing in accordance with Section 6-07.3(11). The standard color shall be as specified in the Contract.

9-29.6(1) Steel Light and Signal Standards

In the first paragraph, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

9-29.6(2) Slip Base Hardware

In this section, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

9-29.7(2) Fused Quick-Disconnect Kits

The table is supplemented with the following new row:

LED*	10A	10A	20A

The following footnote is inserted after the table:

* Applies to all LED luminaires, regardless of wattage. Fuses for LED luminaires shall be slow blow.

9-29.10 Luminaires

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

All luminaires shall be provided with markers for positive identification of light source type and wattage in accordance with ANSI C136.15-2011, with the exception that LED luminaires shall be labeled with the wattage of their conventional luminaire equivalents – the text “LED” is optional.

The table in the fourth paragraph is revised to read:

Conventional Lamp Wattage	Conventional Wattage Legend	Equivalent LED Legend
70	7	7E
100	10	10E
150	15	15E
175	17	17E
200	20	20E
250	25	25E

310	31	31E
400	40	40E
700	70	70E
750	75	75E
1,000	X1	X1E

9-29.13(10)C NEMA Controller Cabinets

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. Two light strips shall be provided. One light strip shall be ceiling mounted and oriented parallel to the door face. The second light strip shall be mounted under the lower shelf, such that the output terminal landings are illuminated. Lighting shall not interfere with the proper operation of any other ceiling or shelf mounted equipment. All lighting fixtures shall energize automatically when any door is opened. Each door switch shall be labeled “Light”.

9-29.13(10)D Cabinets for Type 170E and 2070 Controllers

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting, powered from the Equipment breaker on the Power Distribution Assembly. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. There shall be two light strips for each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted lighting is not permitted. One light strip shall be installed above the front of the rack, oriented parallel to the door face, and placed such that the front of the rack and the rack mounted equipment is illuminated. The second light strip shall be installed above the rear of the rack, oriented perpendicular to the door face, and placed such that the interior of the rack is illuminated. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures above a rack shall energize automatically when either door to that respective rack is opened. Each door switch shall be labeled “Light”.

9-29.13(12) ITS Cabinet

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting, powered from the Equipment breaker on the Power Distribution Assembly. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. There shall be two light strips for each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted lighting is not permitted. One light strip shall be installed above the front of the rack, oriented parallel to the door face, and placed such that the front of the rack and the rack mounted equipment is illuminated. The second light strip shall be installed above the rear of the rack, oriented perpendicular to the door face, and placed such that the interior of the rack is illuminated. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting

fixtures above a rack shall energize automatically when either door to that respective rack is opened. Each door switch shall be labeled “Light”.

9-29.25 Amplifier, Transformer, and Terminal Cabinets

Item 2C is revised to read:

c.	Transformer up to 12.5 KVA	20″	48″	24″
	Transformer 12.6 to 35 KVA	30″	60″	32″

The following new sentence is inserted before the last sentence of item number 10:

There shall be an isolation breaker on the input (line) side of the transformer, and a breaker array on the output (load) side.

9-30.AP9

Section 9-30, Water Distribution Materials
August 7, 2017

9-30.6(3) Service Pipes

This section is supplemented with the following new subsection:

9-30.6(3)C PEX-a Tubing

PEX-a tubing shall be a minimum of ¾-inch or a maximum 2-inch in diameter and shall be manufactured in accordance with AWWA C904 and ASTM F876. The tubing shall have a minimum materials designation code of 3306 in accordance with ASTM F876, a pressure rating of 200 psi at 73.4 degrees using a design factor of 0.63 as outlined in PPI TR-3, Part F-7, and shall have a minimum SDR of 9. Tubing color shall be blue in accordance with APWA Uniform color standards.

9-30.6(4) Service Fittings

This section is supplemented with the following new paragraph:

Fittings for PEX-a tubing shall meet the requirements of AWWA C904.

9-31.AP9

Section 9-31, Elastomeric Pads
August 7, 2017

This section, including title, is revised to read:

9-31 Fabricated Bridge Bearing Assemblies

9-31.1 Steel Plates and Bars

Steel plates and bars, including anchor array templates, shall conform to ASTM A 36.

Recessed steel surfaces retaining PTFE shall have an average surface roughness of 250-microinches or less.

Steel surfaces in contact with pre-formed fabric pad or polyether urethane disc shall have an average surface roughness of 250-microinches or less.

Steel surfaces in contact with stainless steel sheet, or with the bearing block of a pin bearing assembly, shall have an average surface roughness of 125-microinches or less.

All other steel surfaces in contact with other fabricated bridge bearing assembly components shall have an average surface roughness of 250-microinches or less.

9-31.2 Stainless Steel

Stainless steel sheet shall conform to ASTM A 240 Type 304L. Stainless steel in contact with PTFE shall be polished to a Number 8 mirror finish. Stainless steel sheet for fabric pad bearing assemblies shall have a thickness greater than or equal to 14-gage.

Stainless steel countersunk screws shall be hexagon socket type conforming to the geometric requirements of ANSI B 18.3 and shall conform to ASTM F 593 Type 304L.

9-31.3 Bearing Blocks and Keeper Rings

Bearing block forgings for pin bearing assemblies shall conform to Section 9-06.11, including AASHTO M 102 Supplemental Requirement S4. The grade shall be Grade F. The bearing block forging surfaces in contact with other pin bearing assembly components shall have an average surface roughness of 63-microinches or less. All other bearing block forging surfaces shall have an average surface roughness of 250-microinches or less.

Keeper ring forgings for pin bearing assemblies shall conform to Section 9-06.11, and the grade shall be Grade H. All keeper ring surfaces shall have an average surface roughness of 125-microinches or less.

9-31.4 Pin Assembly

Pins shall conform to ASTM A 276 UNS Designation 21800. The pin surfaces in contact with the bearing block shall have an average surface roughness of 63-microinches or less.

Nuts shall conform to ASTM A 563 Grade DH. Nuts with a thread diameter equal to or less than six-inches shall have a minimum Rockwell Hardness of HRc 24. Nuts with a thread diameter greater than six-inches shall have a Rockwell Hardness between HRc 20 and HRc 30.

Washers shall conform to ASTM A 572 Grade 50.

Cotter pins shall be stainless steel.

9-31.5 Welded Shear Connectors

Welded shear connectors shall conform to Section 9-06.15.

9-31.6 Bolts, Nuts and Washers

Bolts, nuts and washers shall conform to Section 9-06.5(3).

9-31.7 Anchor Array Rods, Nuts and Washers

Anchor array rods, nuts and washers shall conform to Section 9-06.5(4). The top 1'-0", minimum, of the exposed end of the anchor rods, and the associated nuts and washers, shall be galvanized in accordance with AASHTO M 232 or ASTM F 2329 as applicable.

Pipe sleeves for anchor array templates shall conform to ASTM A 53 Grade B Type E or S, black.

9-31.8 Bearing Pads

9-31.8(1) Elastomeric Pads

Elastomeric pads shall conform to the requirements of AASHTO M251 unless otherwise specified in the Plans or Special Provisions. The elastomer shall be low-temperature Grade 3 and shall not contain any form of wax. Unless otherwise specified in the Plans or Special Provisions, the elastomer shall have a shear modulus of elasticity of 165 psi at 73°F.

All elastomeric pads with steel laminates shall be cast as units in separate molds and bonded and vulcanized under heat and pressure. Corners and edges of molded pads may be rounded at the option of the Contractor. Radius at corners shall not exceed ⅜ inch, and radius of edges shall not exceed ⅛ inch. Elastomeric pads shall be fabricated to meet the tolerances specified in AASHTO M251.

Shims contained in laminated elastomeric pads shall be mill rolled steel sheets not less than 20 gage in thickness with a minimum cover of elastomer on all edges of:

¼ inch for pads less than or equal to 5 inches thick and,

½ inch for pads greater than 5 inches thick.

Steel shims shall conform to ASTM A1011, Grade 36, unless otherwise noted. All shim edges shall be ground or otherwise treated so that no sharp edges remain.

9-31.8(2) Polytetrafluoroethylene (PTFE)

PTFE shall be unfilled (100-percent virgin) PTFE or fiberglass fiber filled PTFE (or woven fabric PTFE for disc or spherical bearing assemblies) conforming to Section 18.8 of the AASHTO LRFD Bridge Construction Specifications, and the following additional requirements:

1. PTFE shall be unfilled (100-percent virgin) PTFE except where filled PTFE is specified in the Plans.

2. Filled PTFE shall be composed of PTFE resin uniformly blended with 15-percent maximum fiberglass fiber.

3. The substrate shall limit the flow (elongation) of the confined PTFE to not more than 0.009-inch under a pressure of 2,000 psi for 15-minutes at 78°F for a two-inch by three-inch test sample.

4. Unfilled PTFE shall have a hardness of 50 to 65 Durometer D, at 78°F, in accordance with ASTM D 2240.

5. The PTFE may be dimpled.

9-31.8(3) Pre-Formed Fabric Pad

Pre-formed fabric pads shall be composed of multiple layers of duck, impregnated and bound with high-quality oil resistant synthetic rubber, compressed into resilient pads. The pre-formed fabric pads shall conform to MIL C 882 and the following additional requirements:

1. The pre-formed fabric pad shall have a shore A hardness of 90 ± 5 in accordance with ASTM D 2240.

2. The number of plies shall be as required to produce the specified thickness after compression and vulcanization.

9-31.9 Polyether Urethane

Polyether urethane shall be a molded polyether urethane compound conforming to the following properties:

Physical Properties	**Specification**			
Hardness, Type D durometer	ASTM D 2240	45	55	65
Minimum tensile stress, ksi At 100-percent elongation At 200-percent elongation	ASTM D 412	 1.5 2.8	 1.9 3.4	 2.3 4.0
Minimum tensile strength, ksi	ASTM D 412	4.0	5.0	6.0
Minimum ultimate elongation, percent	ASTM D 412	350	285	220
Maximum compression set (22 hours at 158°F) Method B, percent	ASTM D 395	40	40	40

Required minimums for tensile stress at specific elongations, tensile strength, ultimate elongation, and compression set may be interpolated for durometer hardness values between 45 and 55, and 55 and 65.

9-31.10 Silicone Grease

Silicone grease for use with dimpled PTFE shall conform to SAE AS 8660.

9-31.11 Epoxy Gel

Epoxy gel shall be Type 1, Grade 3, Class A, B, or C, conforming to Section 9-26.1.

9-31.12 Resin Filler

Resin filler shall be a two-component, resin and catalyst, liquid thermoset material, with the following properties:

1. The viscosity of the resin-catalyst mixture shall be 35,000 ± 5,000cP at 75°F immediately after mixing.

2. The flash point shall be 100°F minimum.

3. After mixing, the resin-catalyst mixture shall be pourable for a minimum of 8-minutes at 60°F and shall harden in 15-minutes maximum. Heating of the mixture to a maximum temperature of 250°F after placement is permissible to obtain a full cure.

The properties of the cured resin-catalyst mixture shall be:

1. The fully cured compressive strength shall be 12,000 psi, minimum.

2. The maximum allowable shrinkage shall be 2-percent. To control shrinkage, an inert filler may be used in the resin provided the specified viscosity requirements are met.

3. The hardness shall be between 40 and 55 in accordance with ASTM D 2583.

The resin and catalyst components shall be supplied in separate containers.

9-35.AP9

Section 9-35, Temporary Traffic Control Materials
August 7, 2017

9-35.12 Transportable Attenuator

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

The transportable attenuator shall be mounted on, or attached to, a host vehicle that complies with the manufacturer's recommended weight range.

9-35.14 Portable Temporary Traffic Control Signal

The last sentence of the eighth paragraph is revised to read:

A highly retroreflective yellow strip, 1 inch wide, shall be placed around the perimeter of the face of all vehicle signal backplates to project a rectangular image at night toward oncoming traffic.

CITY OF TACOMA
TACOMA PUBLIC UTILITIES
TACOMA WATER

SPECIAL PROVISIONS FOR SPECIFICATION TW23-0193F

WATER DIVISION PROJECT MRP 2022-0037

Curran Road, Bingham Ave. E. and 47th Ave. E.

Table of Contents

INTRODUCTION....5
DESCRIPTION OF WORK....5
DEFINITIONS AND TERMS....6
1-01.2 Abbreviations....6
1-01.2(1) Associations and Miscellaneous....6
1-01.3 Definitions....6
1-03.3 Execution of Contract....6
1-04 SCOPE OF THE WORK....7
1-04.2 Coordination of Contract Documents, Plans, Special Provisions Specifications and Addenda....7
1-04.3 Requests for Information....7
1-04.4 Changes....7
1-04.4(1) Minor Changes....7
1-04.7 Differing Site Conditions (Changed Conditions)....8
1-05 CONTROL OF WORK....9
1-05.3 Plans and Drawings....9
1-05.5 Submittals....9
1-05.11 Final Inspection....10
1-05.13(1) Emergency Contact List....10
1-06 CONTROL OF MATERIAL....11
1-06.4 Handling and Storing Materials....11
1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC....11
1-07.6 Permits and Licenses....11
1-07.16(2) Vegetation Protection and Restoration....12
1-07.16(4) Archaeological and Historical Objects....12
1-07.18 Public Liability and Property Damage Insurance....12
1-07.23 Public Convenience and Safety....12
1-07.23(1) Construction Under Traffic....12
1-08 PROSECUTION AND PROGRESS....13
1-08.3 Progress Schedule....13
1-08.3(4) Measurement....14
1-08.3(5) Payment....14

1-08.5 Time for Completion 14
1-08.5(1) Hours of Work 15
1-08.5(2) Project Specific Working Hours 15
1-09 MEASUREMENT AND PAYMENT 16
1-09.1 Measurement of Quantities 16
1-09.6 Force Account 16
1-09.7 Mobilization 16
1-10 TEMPORARY TRAFFIC CONTROL 16
1-10.2(1)A Traffic Control Management 16
1-10.4 Measurement 16
1-10.4(1) Lump Sum Bid for Project (No Unit Items) 16
1-10.5 Payment 17
1-10.5(1) Lump Sum Bid for Project (No Unit Items) 17
2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS 17
2-02.3 Construction Requirements 17
2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters 17
2-02.4 Measurement 18
2-02.5 Payment 18
2-13 CONTROL AND MANAGEMENT OF CONTAMINATED MATERIALS 18
2-13.1 Construction Requirements 18
2-13.1(1) General 18
5-04 HOT MIX ASPHALT 19
5-04.3 Construction Requirements 19
5-04.3(3) Hot Mix Asphalt Pavers 20
5-04.3(3)A Material Transfer Device/Vehicle 20
5-04.3(7)A1 General 20
5-04.3(7)A2 Statistical or Nonstatistical Evaluation 20
5-04.3(8)A Acceptance Sampling and Testing – HMA Mixture 20
5-04.3(8)A1 General 20
5-04.3(10) Compaction 21
5-04.3(10) A General 21
5-04.3(10)B1 General 21
5-04.3(10)B2 Cyclic Density 22
5-04.3(13) Surface Smoothness 22
5-04.4 Measurement 22
5-04.5 Payment 23
5-04.5(1) Quality Assurance Price Adjustments 23
7-04 STORM SEWERS 23
7-04.3 Construction Requirements 23
7-04.4 Measurement 23
7-04.5 Payment 23
7-09 WATER MAINS 24
7-09.1 Description 24
7-09.1(1)C Gravel Backfill for Pipe Zone Bedding 24
7-09.1(1)D Pipe Zone Backfill 24
7-09.2 Materials 25
7-09.3 Construction Requirements 25

7-09.3(1) General 25
7-09.3(1) A Asbestos Cement Pipe 25
7-09.3(1)B Trench Foundation 27
7-09.3(5) Grade and Alignment 27
7-09.3(6) Existing Utilities 27
7-09.3(7) Trench Excavation 28
7-09.3(7)A Dewatering of Trench 28
7-09.3(7) C Extra Trench Excavation 28
7-09.3(8) Removal and Replacement of Unsuitable Materials 28
7-09.3(9) Bedding the Pipe 29
7-09.3(10) Backfilling Trenches 29
7-09.3(11) Compaction of Backfill 29
7-09.3(12) General Pipe Installation 30
7-09.3(14) Cutting Pipe 30
7-09.3(16) Cleaning and Assembling Joint 30
7-09.3(19)A Connections to Existing Mains 30
7-09.3(19) B Maintaining Service 31
7-09.3(21) Concrete Thrust Blocking 31
7-09.3(23) Hydrostatic Pressure Test 31
7-09.3(23) A Testing Extensions From Existing Mains 31
7-09.3(23) B Testing Section with Hydrants Installed 31
7-09.3(24) Disinfection of Water Mains 32
7-09.3(24)A Flushing 32
7-09.3(24) K Retention Period Flushing 32
7-09.3(24) N Final Flushing and Testing 32
7-09.4 Measurement 33
7-09.5 Payment 35
7-12 VALVES FOR WATER MAINS 38
7-12.4 Measurement 38
7-12.5 Payment 39
7-14 HYDRANTS 39
7-14.3(1) Setting Hydrants 39
7-14.3(2) A Hydrant Restraints 40
7-14.3(6) Hydrant Extensions 40
7-14.3(7) Removing Abandoned Hydrants 40
7-14.4 Measurement 40
7-14.5 Payment 40
7-15 SERVICE CONNECTIONS 41
7-17 SANITARY SEWERS 41
7-17.3 Construction Requirements 41
7-17.4 Measurement 42
7-17.5 Payment 42
7-18 SIDE SEWERS 42
7-18.3 Construction Requirements 42
7-18.4 Measurement 42
7-18.5 Payment 42

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL....43
8-01.3(1)B Erosion and Sediment Control (ESC) Lead 43
8-01.3(8) Street Cleaning.... 44
8-01.4 Measurement 44
8-01.5 Payment 44
8-02 ROADSIDE RESTORATION....44
8-02.3 Construction Requirements 44
8-02.3(4) Topsoil 44
8-02.3(4)A Topsoil Type A 44
8-22 PAVEMENT MARKING....46
8-22.1 Description.... 46
8-22.3 Construction Requirements 46
8-22.4 Measurement 46
8-22.5 Payment 46
9-03 AGGREGATES....46
9-03.21 Recycled Material.... 46
9-30 WATER DISTRIBUTION MATERIALS....47
9-30.1(1) Ductile Iron Pipe.... 47
9-30.1(3) Rubber Gaskets.... 47
9-30.2 Fittings.... 48
9-30.2(6) Restrained Joints.... 48
9-30.2(7) Bolted, Sleeve Type Couplings for Plain End Pipe.... 49
9-30.3(1) Gate Valves (3 inches to 16 inches).... 49
9.30.3(3) Butterfly Valves 50
9.30.3(4) Valve Boxes 50
9-30.3(8) Tapping Sleeve and Valve Assembly 50
9-30.5 Hydrants.... 51
9-30.5(2) Hydrant Dimensions 52
9-30.5(3) Hydrant Extensions.... 52
9-30.6 Water Service Connections 52

INTRODUCTION

April 1, 2020

The following special provisions shall be used in conjunction with the applicable sections of the 2020 M41-10 Washington State Department of Transportation Standard Specifications for Road, Bridge and Municipal Construction and the American Water Works Association (AWWA) Standard Specifications. State Standard Specifications are available through WSDOT, by calling (360) 705-7430, or may be downloaded, free of charge, from this location on the WSDOT home page:
www.wsdot.wa.gov/Publications/Manuals/M41-10.htm

Pipe and pipe appurtenances shall be installed according to "A Guide for the Installation of Ductile Iron Pipe" published by the Ductile Iron Pipe Research Association, except as modified by these specifications or the Engineer.

For further information relating to these Specifications please contact:

Prior to Contract Award: Project Engineer, Troy Saghafi, P.E., Water Distribution Engineering, (253) 345-8445.

After Contract Award: Phil Ringrose, Tacoma Water Construction Manager, (253) 208-3629.

Also visit the City of Tacoma, Department of Finance, Purchasing Division's website: www.TacomaPurchasing.org

DESCRIPTION OF WORK
(******)

The work to be performed under these Specifications consists of furnishing all labor, tools, and materials for constructing approximately 4,200 lineal feet of 8-inch, and 6-inch water mains together with all necessary valves, specials, etc., all in accordance with these specifications and approved plans. The work is located along 47th Avenue E and Bingham Ave E, between 128th St. E. and 120th St. E. This work is in the SE ¼ - Sec 12- T19N – R.3E and the SW ¼ - Sec 12- T19N- R3E-W.M., Pierce County, Washington.

All materials required and not listed herein, to be furnished by Tacoma Water, shall be furnished by the Contractor. The modifications to the water distribution system shown on the Water Division Plans will be constructed as a part of this contract. These Special Provisions are applicable to water distribution work only and supersede any conflicting provisions that may appear elsewhere in the contract or Standard Specifications in regard to the water distribution main facility scope of work. Proposal items within the Tacoma Water section of the proposal are applicable to the water main scope of work only and shall not be construed to apply to other subsections of the Contract.

END OF SECTION

DEFINITIONS AND TERMS

1-01.2 Abbreviations

1-01.2(1) Associations and Miscellaneous
This section is supplemented with the following:

DIPRA	Ductile Iron Pipe Research Association
EWO	Extra Work Order
LOI	Letter of Instruction
MRP	Main Replacement Project/Program
NSF	National Sanitation Foundation
RFI	Request for Information
TPU	Tacoma Public Utilities
WDP	Water Division Project

1-01.3 Definitions
This section is supplemented with the following:

Contracting Agency
Agency of Government that is responsible for the execution and administration of the contract to include: “City”, “City of Tacoma”, “Tacoma Public Utilities” and “Tacoma Water”.

END OF SECTION

1-03.3 Execution of Contract
This section is supplemented with the following:

A Pre-construction meeting will be scheduled by Phil Ringrose, Tacoma Water Construction Manager following review by TPU Legal, Finance Department, Small Business Enterprise Office, Contract and Awards Board, and award of contract by the Tacoma Public Utility Board. The meeting agenda will cover contract compliance, Safety, and construction. The Contractor is encouraged to have representatives from his/her sub-contractors and their on-site forepersons in attendance. Contact Phil Ringrose at (253) 208-3629 concerning questions.

In addition to the contract, performance bond, insurance and other documentation that is required during the contract execution process the Contractor shall submit the following construction documents prior to, or at, the preconstruction meeting.

____1. Approved Traffic Control Plan

____2. Materials Submittals

____3. Storage & Stockpile Site

____4. Emergency Contact List

____5. Unsuitable Disposal Site

____6. Construction Schedule (updated bi-weekly)

END OF SECTION

1-04 SCOPE OF THE WORK

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

Second paragraph is revised to read:

Any inconsistency in the parts of the contract regarding the water portion shall be resolved by the following order of precedence (e.g., 1 presiding over 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11; 2 presiding over 3, 4, 5, 6, 7, 8, 9, 10, and 11; and so forth):

1. Jurisdictional Right of Way Permits
2. Addenda
3. Proposal Form
4. Contract Plans/Drawings
5. Special Provisions
6. Standard Plans/Drawings
7. AWWA Standards
8. DIPRA Standards
9. General Provisions
10. Amendments to the Standard Specifications
11. Standard Specifications

1-04.3 Requests for Information

This section is added with the following:

Requests for Information (RFI) from the Contractor to Tacoma Water may be sent via facsimile directly to Phil Ringrose, Tacoma Water Construction Manager, fax number (253) 502-8694 or electronically to: pringrose@cityoftacoma.org.

Allow a minimum of five (5) working days from time of receipt by Tacoma Water for a response.

1-04.4 Changes

1-04.4(1) Minor Changes

This section is revised in its entirety with the following:

Minor changes, additional work, or extra work order (EWO) may be initiated by the Contactor or Tacoma Water. At the discretion of Tacoma Water, this procedure for Minor Changes, Additional Work, or Extra Work may be used in lieu of the more formal

procedure as outlined in Section 1-04.4, Changes. EWO's not covered by contract items will be paid for on a force account basis in accordance with Section 1-09.6 of the Standard Specifications or as a Letter of Instruction.

The Contractor must discuss any "extra work" that can be reasonably foreseen with the Tacoma Water Construction Inspector and/or Engineer prior to doing the work. The Contractor must submit the field copy extra work orders (EWO) to the Inspector and/or Engineer no later than the end of the next working day after the extra work was performed for review and recording. Formal EWO's may be sent via facsimile directly to Phil Ringrose, Tacoma Water Construction Manager, fax number (253) 502-8694 or electronically to: pringrose@cityoftacoma.org. The Formal EWO must be sent within five (5) working days of the date the work was performed.

The Formal EWO shall have as a minimum the following:

- Name of Contactor
- Date of Work
- Project Number
- Brief Description of Work
- Approximate location of work
- Contractor's Representative
- Name(s), Job Classification (s), Hour(s) on the extra work, Rate(s) of Pay
- Equipment(s) Used, Hour(s) on the extra work, Equipment Rental Rate(s)
- Extra material used with a copy of vendor's invoice.
- Equipment Rental copies
- Itemized cost showing mark up(s)

Do not include sales tax in the computation of the EWO as it will be calculated through the pay estimate.

Failure to submit the formal extra work orders during this time frame will result in non-payment for extra work. Field EWO's given to the Inspector does not constitute approval, only verification of documentation. Extra work orders will comply with the requirements of section 1-09.6.

1-04.7 Differing Site Conditions (Changed Conditions)
This section is supplemented with the following:

By entering the contract, the Contractor represents that he/she has inspected in detail the project site and has become familiar with all the physical and local conditions affecting the project and/or the project site. Any information provided by the City to the Contractor relating to existing conditions on, under, or to the project and/or site including but not limited to information pertaining to subsurface exploration and conditions, borings, test pits, tunnels and other conditions affecting the project site, represents only the opinion of the City as to the location, character, or quantity of such conditions shall draw his/her own conclusions from such information and make sure tests, reviews and analyses as he/she deems necessary to understand such conditions and to prepare the Proposal.

The City assumes no responsibility whatsoever with respect to the sufficiency or accuracy of such information and there is no guarantee either expressed or implied that the conditions indicated or otherwise found by the Contractor as a result of any

examination or exploration, are representative of those existing throughout the work and/or project site.

The Contractor shall carefully study and compare the contract documents and shall at once report to the City errors, inconsistencies or omissions discovered. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency, or omission in the contract documents without such notice to the City, the Contractor shall assume the risk and responsibility for such performance and shall bear an appropriate amount of the attributing costs for correction.

The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the contract documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the City at once.

END OF SECTION

1-05 CONTROL OF WORK

1-05.3 Plans and Drawings

This section is supplemented with the following:

Bidders can request one (1) full-size plan set by calling **Todd Honey at (253)-377-5846.** The requested plan set must be picked up by the bidder at Tacoma Water's permit counter.

1-05.5 Submittals

This section is added with the following:

Submittals must be approved by Tacoma Water and may be forwarded directly to **Craig West, Tacoma Water Engineering Construction Coordinator, electronically at cwest@cityoftacoma.org, or mailed to 3628 S. 35th St., Tacoma, WA 98409-3192. (253)405-8821.**

Before any material is shipped or installed, the Contractor shall furnish to the Engineer full details, shop drawings, dimensions, catalog cuts, schematic (elementary) diagrams, and other descriptive matter as required to fully describe the equipment proposed to be included in this contract. The names, addresses and phone numbers for the representative of each piece of equipment shall also be included.

Should any item which deviates from these Specifications be included, the deviation shall be clearly indicated and explained at the time of submittal.

The Contractor shall provide electronic copies of submittal information. Submittals shall be complete, neat, orderly, and indexed. The Contractor shall check submittals for number of copies, adequate identification, correctness, and compliance with the Plans and Specifications, and shall initial all copies. A copy of this Specification shall be included with the submittals. The Contractor shall revise and/or resubmit all submittal information until it is acceptable to the Engineer. After review, one set of submittals will be returned to the Contractor.

Review of submittal information by the Engineer shall not relieve the Contractor of responsibility for meeting the requirements of the Plans and Specifications, or for errors and omissions in submittals. Reviews by the City do not constitute an undertaking on the part of the city to assure or determine compliance with the Plans and Specifications.

The following is a summary of submittal requirements. This summary is not inclusive of all submittal requirements. The Contractor shall review each individual section in the applicable provisions or specifications, as noted below, for specific requirements.

Section	Description
1-10.4	Traffic Control Plan
5-04	Temporary HMA
5-04, 8-01	Street Cleaning with Power Sweeper and Vacuum Equip.
7-04, 7-17, 7-18	Storm, Sanitary, and Side Sewer Restoration
7-09	Concrete for Concrete Thrust Anchors
7-09	Pipe Submittals
7-09	Ductile Iron Fitting Submittals
7-09	Trench Compaction
7-09	Temporary Blow-Offs
7-12, 9-30.3(2)	Gate Valves
7-14	Fire Hydrants
8-01	Inlet Protection
9-03	Crushed Surfacing Top Course
7-12, 9-30.3	B/F Valves
9-30.2(6)	M.J. Restraining Gland

Table 1

1-05.11 Final Inspection
This section is supplemented with the following:

The Tacoma Water Construction Inspector will process a final inspection document (punch list) of outstanding items and forward to contractor. Final payment will not be processed until all items from punch list are complete to the satisfaction of the engineer and/or inspector.

1-05.13(1) Emergency Contact List
This section is supplemented with the following:

Agencies and telephone numbers:

Tacoma Water Emergency		***253-502-8344***
Troy Saghafi	Tacoma Water Project Engineer	253-208-3629
Phill Ringrose	Tacoma Water Construction Operations Manager	253-502-8742

Todd Honey	Tacoma Water Utilities Serv. Spec.	253-502-8295
James Southern	Tacoma Water Safety Office	253-606-2684
Tacoma Water Distribution LID/Engineering fax		253-502-8694
Utilities Underground Location Center		800-424-5555
Washington State Dept. of Labor and Industries		253-596-3895
Pierce Transit		253-581-8021
Puget Sound Energy-Gas		888-225-5773
Century Link Communications		800-573-1311
Joe Rempe	Tacoma Power	253-502-8290
Pierce Transit		253-581 8021
Elmhurst Mutual Power		253-531-4646
Scott Wright	Pierce County Right of Way Inspector	253-381-6315

END OF SECTION

1-06 CONTROL OF MATERIAL

1-06.4 Handling and Storing Materials

This section is supplemented with the following:

The Contractor shall obtain written approval for the storage site from property owner and provide a copy to Phil Ringrose, Tacoma Water's Construction Manager prior to start of construction. No gravel, topsoil, mulch, or any other item used in the construction of this project shall be stockpiled on existing or newly constructed streets or sidewalks. All costs to provide a stockpile site shall be incidental to the cost of the contract.

END OF SECTION

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.6 Permits and Licenses

This section is supplemented with the following:

Before beginning and during all phases of work, the Contractor shall obtain and comply with all provisions of the Pierce County Right of Way permit **# 24-1102** as issued for this project. A copy of the permit is attached to this specification in the attachments.

Traffic control plans shall be submitted to Pierce County, for review and comment. When using the WSDOT Standard "K" Plans, the street names are to be listed on the plans with construction start date and intended working hours.

Water used during construction can be obtained from an approved Tacoma Water fire hydrant. The Contractor will be billed for the water used and shall pay for a "Hydrant Use Permit" and make a deposit on the water meter. The Contractor shall contact the Water Permit Counter at (253) 502-8247, for information regarding water consumption fees, Hydrant Use Permit fees, meter deposits and approved Tacoma

Water hydrant locations. Permit fees and deposits shall be paid prior to using an approved Tacoma Water hydrant.

1-07.16(2) Vegetation Protection and Restoration
This section is supplemented with the following:

Care shall be taken when directed by the Field Inspector to save existing landscaping and trees. The Contractor shall remove any unnecessary debris and rocks and leave landscaping areas in a prepared fashion. Any necessary landscape restoration shall be completed by Tacoma Public Utility landscape crews.

1-07.16(4) Archaeological and Historical Objects
This section is supplemented with the following:

Whenever the Contractor identifies a situation that may involve the discovery of unanticipated cultural resources, the Contractor will immediately cease work and notify the City Inspector. Situations involving the discovery of unanticipated cultural resources include but are not limited to human skeletal remains, Anthropogenic soil horizons (areas showing the influence of humans on nature), occupational surfaces (areas showing evidence of human activity or habitation), midden (dunghill or refuse heap), stone tools or waste flakes (arrowheads or stone chips), bones, burned rocks, other food related material in association with stones tools or flakes, cluster of cans or bottles, tunnels, or logging or agricultural equipment more than 50 years old. The Contractor will take all steps necessary to protect and secure the suspected cultural resource until the City Inspector is able to assess the discovery and determine whether work can resume. Delays of greater than one hour will be considered standby time and will be compensated under the Force Account. If a significant delay is anticipated, the Inspector may direct the Contractor to temporarily abandon the excavation and move to a more distant location to resume work until the situation can be addressed. Tacoma Water will take responsibility for contacting the appropriate state and local agencies.

1-07.18 Public Liability and Property Damage Insurance
This section is deleted in its entirety:

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic
This section is supplemented with the following:

All traffic control devices must meet the requirements established by the Manual on Uniform Traffic Control Devices.

The Contractor shall prepare a traffic control plan and submit to the Pierce County Public Works Traffic Engineering for approval and a minimum of 3 working days prior to the start of work. The approved traffic control plan must be on site and accessible for inspection at all times by local law enforcement or inspectors. An approved copy of the traffic control plan shall be submitted to Phil Ringrose, Tacoma Water's Construction Manager, prior to start of construction.

Persons in charge of maintaining or establishing traffic control and channelization must have a certified flagger control card in their possession and must be on the site at all times or be represented by another knowledgeable certified person.

A flagger shall not be used to direct traffic flow through a signalized intersection against the signal indications. When flaggers are used near signalized intersections, care will be used to clear the intersection of traffic before the signal change. In some situations, the local Traffic Engineer may turn the signal to an all way stop for flagger control. Prior approval must be obtained from the local Traffic Engineer.

The Contractor may close non-arterial streets to through traffic, if allowed in the approved traffic control plan, provided that local access is maintained at all times with a minimum of a 20-foot-wide access lane. The Contractor shall coordinate any closures and cooperate with the various businesses and/or residences adjacent to the project site. A minimum of one access shall be maintained to all properties at all times.

Whenever, during the course of construction, it becomes necessary because of the nature of the work, for the Contractor to barricade any street or any part thereof, or to place any obstruction which will impede the flow of traffic in any public thoroughfare within and outside the project area, then the Contractor will be required to give notice of the intended interruption to traffic, setting forth the period and necessity.

The Contractor shall coordinate with the Traffic Engineer of the local jurisdiction on all matters pertaining to the movement of vehicular and pedestrian traffic past the project area.

Any permits required for obstruction or closure of thoroughfares shall be obtained by the Contractor at his/her expense.

The Contractor shall at all times exercise adequate precautions for the safety of all persons, including employees, in the performance of this contract and shall comply with all applicable provisions of federal, state, county and municipal safety laws and regulations.

Tacoma Water's Inspector and/or Engineer may advise the Contractor and the Public Utilities Safety Officer of any safety violations. It is the Contractor's responsibility to correct the violation. Failure to correct safety violations shall be grounds for a cease order from the Public Utilities Safety Officer, Engineer, or Inspector. Time and wages lost due to such safety shutdowns shall be at the sole cost of the Contractor. Time lost due to cease orders for safety violations will still be counted in the required number of days the Contractor has to complete the contract.

Any of the above actions by employees of the City of Tacoma shall in no way relieve the Contractor of his/her sole responsibility to provide the safety of all persons, including his/her employees.

1-08 PROSECUTION AND PROGRESS

1-08.3 Progress Schedule

This section is supplemented with the following:

The contract shall be completed in phases to allow Tacoma Water crews access to begin the service transfer process. All costs for phasing the work and completing the work as specified shall be included in the various bid items of the proposal.

Each phase of this project will be tested, sampled, flushed, and put into service in segments. This will allow Tacoma Water crews to start service transfers within that segment immediately following successful testing, sampling, and flushing on that segment. The Tacoma Water inspector will coordinate test sections and connections, to ensure customers are kept in service and fire protection is not diminished. The Contractor shall be required to make connections and install hydrants as sampled sections become available and services are transferred; not wait until all mainline is constructed.

Please note: Service transfer work by Tacoma Water will not commence until such time as the section of water main has been placed into service and the trench has been successfully backfilled, as demonstrated through receipt of successful compaction test results for that portion of water main to be placed in service.

For water service transfers:

- For water services two inches and smaller, the Contractor shall anticipate one working day per service for Tacoma Water crews to complete service transfers.
- For water services larger than 2-inches, the Contractor shall anticipate one- and one-half working days per service for Tacoma Water crews to complete service transfers.

1-08.3(4) Measurement

This section is supplemented with the following:

No specific unit of measurement shall apply to the lump sum item for “Project Coordination”.

1-08.3(5) Payment

This section is supplemented with the following:

“Project Coordination”, lump sum.

The lump sum price shall be full pay for all labor, equipment, material necessary to coordinate with the Lakewood Water District contractor.

1-08.5 Time for Completion

This section is supplemented with the following:

Time is of the essence for this contract; therefore, work shall commence within ten (10) calendar days of the “Notice to Proceed,” and all work shall be completed within **Sixty (60)** working days thereafter.

If the Contractor elects to start work prior to the expiration of the ten (10) calendar days-waiting period from the date of the official notice to proceed, no working days will be charged during this period.

1-08.5(1) Hours of Work
This section is added with the following:

Except in the case of emergency or unless otherwise approved by the Contracting Agency, the normal straight time working hours for the contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a 5-day work week. The normal straight time 8-hour working period for the contract shall be as specified in section 1-08.5(2) or established at the preconstruction conference or as specified by the jurisdictional right-of-way permit.

If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 7:00 a.m. or after 6:00 p.m. on any day, the Contractor shall apply in writing to the Engineer for permission to work such times. Permission to work longer than an 8-hour period between 7:00 a.m. and 6:00 p.m. is required. Such requests shall be submitted to the Engineer no later than seven (7) days prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Contracting Agency's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Contracting Agency or Engineer. These conditions may include but are not limited to: requiring the Engineer or such assistants as the Engineer may deem necessary to be present during the work; requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency employees who worked during such times, on non-Federal aid projects; considering the work performed on Saturdays, Sundays, and holidays as working days with regards to the contract time; and 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. Assistants may include, but are not limited to, survey crews; Water Distribution support personnel; inspectors; and other Contracting Agency employees when in the opinion of the Engineer, such work necessitates their presence.

1-08.5(2) Project Specific Working Hours
This section is added with the following:

Except as otherwise specified in section 1-08.5(1), this project's working hours shall be 8:00 a.m. to 4:30 p.m., Monday through Friday.

END OF SECTION

1-09 MEASUREMENT AND PAYMENT

1-09.1 Measurement of Quantities
This section is revised to read:

"Lump sum" items, except mobilization, shall be measured and paid on a pro-rated basis in accordance with water main installation progress as determined by the lineal feet of water main installed on each progress payment. Mobilization lump sum shall be paid in accordance with section 1-09.7.

1-09.6 Force Account
This section is supplemented with the following:

Tacoma Water has estimated the cost of the bid items for "Force Account", and "Force Account-Erosion/Water Pollution Control" and has entered the amounts in the bid proposal to become a part of the total bid by the Contractor. It is for the purpose of providing a common proposal for all bidders and for that purpose only.

1-09.7 Mobilization
This section is supplemented with the following:

Only one (1) mobilization shall be paid and is inclusive of all water and road restoration work.

END OF SECTION

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2(1)A Traffic Control Management
This section is supplemented with the following:

Traffic control plans (TCP) shall be submitted to Pierce County for review and comment. When using the WSDOT Standard "K" Plans, the street names are to be listed on the plans with construction start date, the intended working hours and the project number. The WSDOT Standard "K" Plans are available online at the Washington State Department of Transportation website.

Pierce County standard Traffic control plans may be found at:
http://www.piercecountywa.org/index.aspx?NID=1745

1-10.4 Measurement

1-10.4(1) Lump Sum Bid for Project (No Unit Items)
This section is supplemented with the following:

Temporary traffic control labor for this project per lump sum.

1-10.5 Payment

1-10.5(1) Lump Sum Bid for Project (No Unit Items)

This section is supplemented with the following:

"Project Temporary Traffic Control", lump sum.

The lump sum bid price for "Project Temporary Traffic Control" will include all labor, materials, signs, portable changeable message signs, barricades, flaggers, spotters, uniform police officers, etc. for all phases of construction. TCS labor is incidental to the contract.

END OF SECTION

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.3 Construction Requirements

This section is supplemented with the following:

Existing water mains, concrete anchors, and fittings (not limited to valves, ells, tees, reducers, and couplings) can be abandoned in place if no proposed utility conflict exists. Existing water mains that will be abandoned in place shall be plugged/capped at both ends of pipe.

In the event of a utility conflict, the cost of removal, haul, and disposal of existing water main will be reflected on the contract bid item on a per lineal foot basis (see section 7-09.4 & 7-09.5).

In the event of a utility conflict, the cost of removal, haul, and disposal of existing water fitting (not limited to valves, ells, tees, reducers, and couplings) and/or existing concrete anchor shall be incidental to the contract.

As indicated on the plans, existing fire hydrants salvaged from project shall be delivered by the contractor to the Tacoma Water Storeroom at South 35th and union Avenue, Tacoma, WA at no additional cost. Salvaged methods shall be used to keep material intact and undamaged.

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

This section is replaced in its entirety with the following:

Removal and disposal of existing pavement, sidewalks, curbs, and gutters includes all combinations and thicknesses. No additional compensation shall be made for varying combinations and thicknesses.

All costs for the removal and disposal of existing concrete curb, sidewalk, driveways, and alley approaches for the water main or related appurtenances shall be included in the unit contract bid price.

The contractor will be required to saw cut for Tacoma Water service transfers. Additional saw cutting may be necessary in the event that the cement concrete is

cracked, damaged, impacted by service transfer/renewal or as directed by the local jurisdiction. All costs shall be included in the unit contract bid price.

Any slurry generated by saw cutting shall be collected by a wet-vacuum and kept out of the storm sewer system. The contractor shall not violate the requirement of WSDOT Standard Specifications, 2020 M 41-10, section 1-07.5 (Fish and Wildlife and Ecology Regulations).

2-02.4 Measurement
This section is replaced in its entirety with the following:

Measurement for Removal and disposal of existing pavement, sidewalks, curbs, and gutters associated with the water main installation will be made by the square yard.

No measurement for removal and reclaiming salvaged material shall be made and shall be considered incidental to the contract.

2-02.5 Payment
This section is replaced in its entirety with the following:

"Removal and disposal of existing pavement, sidewalks, curbs, and gutters includes all thicknesses & combinations", per square yard.

"Removal and disposal of existing pavement, sidewalks, curbs, and gutters, includes all thicknesses & combinations", shall include all costs for saw cutting, wheel trenching, hydro hammering, chipping, grinding, etc., the existing street for main construction and hydrant laterals. The wheel trencher may be used for the thicker initial cuts for main/hydrant installation. Additional cuts to square up the permanent patch for concrete base and asphalt concrete will be made after trenching and pouring the concrete base, respectively, when applicable, and will encompass areas disturbed by service transfers. All costs for additional cuts shall be included in the unit contract bid price.

END OF SECTION

2-13 CONTROL AND MANAGEMENT OF CONTAMINATED MATERIALS
This section is added with the following:

2-13.1 Construction Requirements

2-13.1(1) General

Whenever the Contractor identifies a situation that may involve contaminated/hazardous wastes, the Contractor will immediately cease work and notify the City Inspector. Situations involving contaminated/hazardous wastes may be identified by uncharacteristic odors, soil appearance, texture, containers such as drums or cans and color. The inspector will seek the assistance of TPU environmental professionals to determine the next course of action. The Contractor will take all steps necessary to protect personnel until all risks are identified and safe work can resume. Delays of greater than one hour will be considered standby time and will be

compensated under the Force Account. If significant risks or contaminated/hazardous wastes are encountered requiring significant delays, the inspector may direct the Contractor to temporarily abandon the excavation and move to a more distant location to resume work until the situation can be addressed. Tacoma Water will take responsibility for sampling, testing and identification of proper disposal of all hazardous wastes.

A determination for method of disposal will be made upon receipt of sampling results. Excavated spoils will be the responsibility of the Contractor for proper disposal. All hazardous waste must be disposed in an appropriately licensed solid waste facility. The Contractor must identify the facility they will utilize prior to beginning work.

Transport and Disposal of Contaminated/Hazardous Waste includes all costs for the excavation, transportation and disposal of all excavated material which must be disposed in a solid waste landfill. Payment per ton will be determined by the actual weight delivered to the permitted landfill, which must be listed on the scale ticket from the landfill. The original weight ticket from the landfill must be delivered to the inspector or provided with invoice for payment.

There are no estimated numbers for this item, but the cost will be applied if any waste is encountered. This item is not considered for calculation of the total bid amount. Any costs under this item will be covered under the Force Account item.

END OF SECTION

5-04 HOT MIX ASPHALT

5-04.3 Construction Requirements

This section is supplemented with the following:

Prior to the first Hot Mix Asphalt (HMA) placement on the project, a pre-paving meeting will be held by the Construction Inspector, Contractor, and Paving Contractor representative. This meeting will establish the lines of communication and provide common knowledge of how the contractor will proceed and what the inspection staff will be expecting.

Two (2) inches of HMA shall be placed and maintained as temporary surfacing in open cut areas of streets, driveways and sidewalks as directed by the Inspector. Temporary HMA paving shall be done so that the entire pavement cut will receive a temporary patch by the conclusion of the day's work to allow resumption of normal traffic patterns. Temporary paving shall be placed such that it will hold up to heavy traffic for an extended period of time. All paving shall be saw-cut or neat spade prior to excavation.

The Contractor shall maintain a temporary patch while Tacoma Water personnel renew the services and transfer them to the new main, after which he/she shall start with additional street repairs. The Contractor shall make permanent street repairs for all pavement disturbed by Tacoma Water personnel during service renewal/transfer at the unit price bid in the Proposal for those items.

The Contractor shall inform himself/herself of Pierce County's requirements for surface repairs and adjustment of facilities. Adjustment of facilities and utility structures shall be incidental to the contract.

The bid item "HMA Cl. _____ PG_____, per ton" shall include all costs for labor, and materials to install HMA wedge curbing removed as part of this project.

The Contractor shall restore all drainage ditches, culverts and embankments disturbed by his/her operations. The cost and expense for such restorative work is incidental to the Contract. The permanent street repair will be made to the satisfaction of the local jurisdiction and to its standards as shown in the plans.

The Contractor shall confine his/her operations as much as possible, such that there is minimal damage to existing pavement.

It shall be the Contractor's responsibility to protect the edge of the paved roadway at all times. The expense for pavement repairs beyond the neat line of the trench due to over-excavation or damage to the roadway edge caused by heavy equipment, spoil cleanup or other operations of the Contractor shall be the responsibility of the Contractor.

No permanent street repairs will be made until the services are transferred to the new main. The removal of trench backfill for permanent street repairs will be incidental to the bid, including additional areas disturbed during the service transfers.

5-04.3(3) Hot Mix Asphalt Pavers

The second paragraph of this section is deleted:

5-04.3(3)A Material Transfer Device/Vehicle

This section is deleted:

5-04.3(7)A1 General

This section is supplemented with the following:

Verification of the mix design by the Contracting Agency is not required. The Contractor shall determine anti-strip requirements for HMA and provide data for anti-stripping.

The Contractor shall provide a mix design based upon 3 million ESAL's.

5-04.3(7)A2 Statistical or Nonstatistical Evaluation

This section is deleted:

5-04.3(8)A Acceptance Sampling and Testing – HMA Mixture

5-04.3(8)A1 General

The first paragraph is revised to read:

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

The second and third paragraphs are deleted.

The fourth sentence of the fourth paragraph is deleted.

5-04.3(10) Compaction

5-04.3(10) A General

This section is supplemented with the following:

During paving operations, a certified compaction testing agency shall be at the project site to take compaction test. Testing locations shall be identified by street name, approximate station, and centerline offsets. Minimum number of tests required shall be based on the criteria of 1 test per 150 lineal feet with a minimum of 2 tests per trench depth. On-site test results verifying proper compaction will be provided to both the inspector and the contractor prior to commencing the next lift. Copies of compaction tests results reports shall be provided to the Tacoma Water Construction Inspector within 24 hours. Compaction test results may be sent electronically to facsimile telephone number, (253) 502-8694, to the attention of Phil Ringrose, or emailed to pringrose@cityoftacoma.org. Compaction test results shall list the Tacoma Water Project No., Specification No., Date and Time of compaction test, and station of the compaction test location.

5-04.3(10)B1 General

This section is revised to read:

HMA mixture accepted by statistical or nonstatistical evaluation that is used in traffic lanes, including lanes for 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 minimum of 91.0-percent of the reference maximum density as determined by WSDOT FOP for AASHTO T 209. The specified level of density attained will be determined by the non-statistical evaluation of nuclear density tests taken on the day the mix is placed (after completion of the finish rolling).

Compaction tests will be performed at a minimum of 5 various locations, as determined by the Project Engineer, for each 400 tons placed. The locations will be determined by the stratified random sampling procedure conforming to WSDOT Test Method T 716. For an area in progress with a CPF less than 0.75, a new compaction sequence will begin at the Contractor's request after the Project Engineer is satisfied that material conforming to the Specifications can be produced. The Compaction Test Procedures will be with the Contractor by the Contracting Agency at the Pre-Construction Conference or a Pre-Paving Meeting, prior to the placement of HMA material on site.

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 Project 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 pre-leveling shall be thoroughly compacted. HMA that is used for pre-leveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Cores may be used as an alternate to the nuclear density gauge tests. When cores are taken by the Engineer at the request of the Contractor, the request shall be made by noon of the first working day following placement of the mix. The Engineer shall be reimbursed for the coring expenses.

At the start of paving, if requested by the Contractor, a compaction test section shall be constructed as directed by the Engineer to determine the compactibility of the mix design. Compactibility shall be based on the ability of the mix to attain the specified minimum density (91 percent of the maximum density determined by AASHTO T209). Following determination of compactibility, the Contractor is responsible for the control of the compaction effort. If the Contractor does not request a test section, the mix will be considered compactible.

HMA constructed under conditions other than 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 pre-leveling shall be compacted to the satisfaction of the Engineer.

5-04.3(10)B2 Cyclic Density

This section is deleted:

5-04.3(13) Surface Smoothness

The first paragraph is revised to read:

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 overlay shall not vary more than 1/8 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 overlay shall vary not more than 1/4 inch in 10 feet from the rate of transverse slope of the existing roadway grades.

5-04.4 Measurement

This section is supplemented with the following:

Temporary HMA Cl_____ PG_____, ___-inch minimum depth will be measured by the surface square yardage.

“HMA Cl. ____ PG _____pavement for permanent trench patch”, will be measured per ton.

5-04.5 Payment
This section is replaced in its entirety with the following:

“Temporary HMA Cl____ PG_____, ___-inch minimum depth, installed & removed”, per square yard.

The unit contract price per square yard for **“**Temporary HMA Cl____ PG_____, ___-inch minimum depth, installed & removed” shall be full compensation for all costs including mobilization, preparation, placement, compaction, maintenance, and removal in preparation for permanent street repairs.

“HMA Cl. _____ PG_____”, per ton.

The unit contract price per ton for “HMA Cl. _____ PG_____” shall be full compensation for all costs incurred for mobilization, preparation, trimming, pre-leveling, disposal, hot mix asphalt pavement, sweeping, tack coat, joint sealing, saw-cutting, pavement compaction tests and fog seals in accordance with the plan details, Pierce County Standard Plans, and WSDOT Standard Specifications, 2020 M41-10, section 5-04.

5-04.5(1) Quality Assurance Price Adjustments
This section is deleted.

END OF SECTION

7-04 STORM SEWERS

7-04.3 Construction Requirements
This section is supplemented with the following:

Storm sewers may be encountered at various locations throughout this project. Prior to the start of the storm sewer repair, the Inspector and/or contractor shall notify the Pierce County Inspector. C900 PVC, Ductile Iron or 3034 PVC may be used on storm line repairs. The repair of the storm sewer shall be made three feet outside of the water main trench. No additional compensation shall be made for the extended connection and material. Mechanical couplings (Romac or equivalent) shall be installed at both ends of the storm sewer restoration forming a rigid connection between the new and existing pipe. Rigid PVC slip couplings for PVC pipe and Romac mechanical style for concrete pipe only. Repair/replacement/restoration will be at the inspector’s discretion and the local jurisdiction.

7-04.4 Measurement
This section is revised to read:

Storm, Sanitary, and Side Sewer Restoration will be measured per each.

7-04.5 Payment
This section is revised to read:

“Storm, Sanitary, and Side Sewer Restoration”, per each.

"Storm, Sanitary, and Side Sewer Restoration", includes any work and materials required to remove and replace storm, sanitary, and side sewers shall be included in the bid item. This is a per each bid item that includes all costs but is not limited to pipe, fittings, pea gravel, labor, and equipment, etc. to repair sewers.

END OF SECTION

7-09 WATER MAINS

7-09.1 Description

The first paragraph is revised to read:

This work consists of constructing water mains 24-inch in diameter and smaller in accordance with the Plans, these Standard Specifications, the Special Provisions, and the Standard Plans, at the location shown on the Plans for Tacoma Water.

This section is supplemented with the following:

All pipe, fittings, valves, hydrants, and other materials to be installed and placed under these specifications are intended to form a durable section of the distribution system of ample strength and capacity for the operating pressures in the area covered for domestic, commercial and fire protection uses and must be completed in condition to supply potable water of the highest sanitary quality. All material must be selected, and the work planned and carried out to accomplish this purpose.

The cost of any item of work to be completed or materials to be furnished on the contract drawings or stated in the project specifications and having no special bid item in the Proposal, shall be considered included in the various bid items of the contract and no separate payment will be made. All materials required and not specifically listed herein to be furnished by Tacoma Water shall be furnished by the Contractor.

Any part of work not specifically covered by these specifications shall be in accordance with the American Water Works Association (AWWA) Standard Specifications and the Ductile Iron Pipe Research Association (DIPRA).

7-09.1(1)C Gravel Backfill for Pipe Zone Bedding

This section is supplemented with the following:

Aggregates will conform to the requirements for trench backfill.

7-09.1(1)D Pipe Zone Backfill

This section is revised to read:

Aggregates will conform to the requirements for trench backfill.

7-09.2 Materials
The item Trench Backfill is revised to read:

Trench Backfill shall meet the requirements of Section 9-03.9(3) for Crushed Surfacing Top Course. No recycled material shall be used for water main trench backfill.

This section is supplemented with the following:

All materials shall conform to American Water Works Association (AWWA) and the Ductile Iron Pipe Research Association (DIPRA).

All Push on Joint and Mechanical Joint rubber gaskets shall be styrene-butadiene rubber (SBR). All gaskets must conform to ANSI/AWWA C111-72 or revision thereof.

7-09.3 Construction Requirements

7-09.3(1) General
This section is supplemented with the following:

Trench Excavation shall be loaded directly onto trucks. Trench Excavation shall not be stockpiled along the trench or on paved streets, driveways, and sidewalks.

Alignment and grade stakes will be provided by Tacoma Water. The Contractor shall provide a minimum of 7 days working days' notice for staking by Tacoma Water. Request for survey shall be made through Phil Ringrose, Tacoma Water Construction Manager, (253) 208-3629. The Contractor shall use a string line to maintain true grade, and alignment between stakes. Use of electronic leveling devices for grade and alignment shall be at the discretion of the Inspector where string line is impractical.

7-09.3(1) A Asbestos Cement Pipe
This section is added with the following:

The existing water main system to be replaced under this contract is primarily constructed of asbestos-cement (AC) pipe. Included in this contract is the removal of AC pipe as needed. The majority of asbestos-cement (AC) pipe will be abandoned in place per the Pierce County Memorandum of Agreement. The contractor shall protect the existing AC main during construction as it shall remain in service until the new main is in service and water services have been transferred. If the existing AC main is in conflict with the proposed fire hydrant location(s), the fire hydrant(s) will not be installed until after the new main is in service, water services have been transferred and the AC main can be removed from service. At that time the Contractor shall remove a section of AC main and install the fire hydrant(s).

The bid item for "Asbestos cement Pipe removal and disposal plan" will consist of a submittal by the Contractor prior to the preconstruction meeting detailing the steps and procedures to be followed for removal, haul, and disposal of the asbestos cement (AC) pipe.

AC pipe shall be disposed of at a licensed solid waste disposal facility. Generally, removal will commence after the new mains are installed, in service, and water services have been transferred, however, some sections of AC pipe shall be removed while, making connections to existing mains, or to allow for the installation of the new main, and no additional payment will be made for remobilization of asbestos abatement and removal personnel and equipment. Records indicate the existing AC mains to be removed are 4-inch pipe; however, these mains are from an acquired system and may be different sizes.

It remains the responsibility of the Contractor to comply with all Federal, State, and local safety, health and environmental requirements when working with AC pipe.

Prior to the 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.

Puget Sound Clean Air Agency considers cement asbestos products to be friable. A 10-day waiting period and advance notification to the department in the form of filing a permit is necessary before the project starts. The Contractor will pay all fees associated with this permit. All permit fees for asbestos pipe removal and disposal shall be included as part of the bid item "Asbestos Cement Pipe Removal and Disposal Plan. Include all fees as part of the list of fees is outlined in Puget Sound Clean Air Agency Regulation lll Asbestos Control Standards SECTION 4.03 ASBESTOS NOTIFICATION REQUIREMENTS. The Contractor will agree to properly dispose of the asbestos material in accordance with Puget Sound Clean Air Agency Regulation lll Asbestos Control Standards SECTION 4.07 DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIAL part (d).

The Contractor will notify Washington Department of Labor and Industries for Asbestos Abatement Project no later than 10 calendar days prior to the start date. An online form for notification can be found on the Department of Labor and Industries website.

7-09.3(1)B Trench Foundation

This section is added with the following:

Trench areas found to be inadequate for a solid pipeline trench foundation shall be over excavated and quarry spalls shall be placed until an adequate foundation is accomplished then sand bedding. Note, the profile shows the invert elevation of the pipe, not the bottom of the trench.

7-09.3(5) Grade and Alignment

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

The depth of trenching for water mains shall be such as to give a minimum cover of 42 inches over the top of pipe unless otherwise specified on the plans, within these Special Provisions, or approved by the Engineer.

7-09.3(6) Existing Utilities

This section is supplemented with the following:

The lump sum bid item for of “Test Holes” is for the purpose of pre-determining and resolving conflicts with existing utilities and is required to be completed prior to the water main installation. Proper test holes cannot be accomplished until utility “one call” locates have established and maintained. The selection of methods materials or equipment used for test holes is at the discretion of the contractor. No additional compensation will be made for any particular or specialized equipment or technique utilized by the Contractor. The work shall include all techniques as necessary to field verify and locate all existing utilities, whether shown on the plans or located via one call utility locates, at all new main crossings. Test-hole excavation shall be done in the presence of the Construction Inspector. Test-hole data shall be provided to the inspector prior to main construction and adequate time given to the engineer to re-design if necessary. If the elevation/alignment of the existing utilities is in conflict with the new main installation, the elevation/alignment design will be adjusted by the engineer/inspector.

Additional compensation for any extra excavation required will be made to the contractor via the Trench Excavation and Disposal item as supplemented in these Special Provisions.

Sanitary side sewers and storm catch basin laterals that are unmarked or not locatable and are damaged during water main construction will be repaired and/or replaced as necessary. Prior to the start of the repair, the Inspector and/or contractor shall notify agency responsible for system and make repairs to their standards and make the repair available for the agencies inspection if required or requested. Repair/replacement/restoration will be at the inspector’s discretion and in accordance with sections 7-04, 7-17, 7-18 and the Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-8 and C1-9.

7-09.3(7) Trench Excavation

The third sentence of the second paragraph of this section is revised to read:

The minimum trench width shall be the nominal pipe diameter plus 16 inches. The maximum trench width shall not exceed 30-inches, or 1.5 times the outside diameter of the pipe plus 18-inchs, whichever is greater, unless otherwise approved by the Engineer to allow for proper construction of the pipeline, fittings, and other appurtenances.

7-09.3(7)A Dewatering of Trench

This section is supplemented with the following:

The Contractor is responsible for having proper and operational equipment for dewatering. The contractor will have operational de-watering equipment on site prior to main shutdown. The cost of all labor, equipment and materials for de-watering shall be included in the various bid items of the contract. No additional compensation will be made for dewatering.

The Contractor is responsible for keeping excavations free from water during construction and disposing of the water in a manner that will not cause injury to public or private property, or to cause a nuisance or a menace to the public. The Contractor shall maintain dry working conditions at all times and under all conditions. Groundwater flowing toward or into excavations shall be controlled to prevent sloughing of excavation walls, boils, uplift, and heave in the excavation, and to eliminate interference with orderly progress of construction. While the excavation is open, the water level shall continuously be maintained at least two (2) feet below the working level. The control of groundwater shall be such that softening of the bottom of excavations, or formation of "quick" conditions or "boils" during excavation, shall not occur. The Contractor is responsible for all foundation material required due to lack of dewatering efforts.

All costs associated with dewatering shall be incidental to Trench Excavation and Disposal, Section 7-09.3(8) of these specifications.

7-09.3(7) C Extra Trench Excavation

The 4th paragraph of this section is revised to read:

Additional excavations so required shall be classified as Extra Trench Excavation and Disposal.

7-09.3(8) Removal and Replacement of Unsuitable Materials

This section heading is revised to read:

"7-09.3(8) Trench Excavation and Disposal"

This section is supplemented with the following:

Unless specified elsewhere in the plans or special provisions the scope of this Contract shall include the export and disposal of 100% of all excavated materials and the import of 100% of all trench backfill material.

7-09.3(9) Bedding the Pipe

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

Pipe zone bedding shall conform to the requirements for Trench Backfill.

7-09.3(10) Backfilling Trenches

This section is supplemented by the following.

No recycled material shall be used for trench backfill. Unless otherwise specified, Tacoma Water will require full depth CSTC for trench backfill and compacted in accordance with the 2020 WSDOT Standard Specifications. The contractor will be required to provide a current proctor of material for compaction testing. Compaction testing will be paid under a separate bid item. CSTC shall also be placed in areas of existing rock surfacing disrupted by the water main construction and in any other areas where directed by the inspector and rolled with a power roller.

7-09.3(11) Compaction of Backfill

This section is supplemented by the following.

Backfill shall be compacted to at least 95-percent of maximum density as specified in Section 2-03.3(14) D.

At locations where paved streets, roadway shoulders, driveways, or sidewalks will be constructed or reconstructed over the trench, the backfill shall be spread in layers and compacted by mechanical tampers. In such cases, the backfill material shall be placed in successive layers not exceeding 12-inches in loose thickness (or as specified in Right of Way Permit), and each layer shall be compacted with mechanical tampers to the density specified herein. Mechanical tampers shall be of the impact type as approved by the Engineer.

Compaction test locations shall be at 150 linear foot intervals, with a minimum of two compaction test locations per trench, or as directed by the Engineer. **The Contractor shall perform compaction testing each day main is installed.**

At each compaction test location, compaction tests shall be taken on each compacted layer, starting 18-inches above the pipe, and finishing at the final ground surface. Each layer shall be compacted to 95% modified proctor density, as verified by compaction testing, before proceeding to place and compact the next layer. Compaction testing will be performed by a licensed testing company with trained personnel in the presence of the Tacoma Water Construction Inspector. Passing test will be based on a current proctor of material used. Costs incurred for any proctor test, and failed compaction test, are the responsibility of the Contractor.

Service transfer work by Tacoma Water will not commence until such time as the trench has been successfully backfilled, as demonstrated through receipt of successful compaction test results for that portion of water main placed in service.

7-09.3(12) General Pipe Installation
The first sentence of the first paragraph is revised to read:

Pipe shall be installed in accordance with the manufacturer's printed specifications and instructions, and to the standards of the AWWA and DIPRA for installing the type of pipe used.

7-09.3(14) Cutting Pipe
This section is supplemented with the following:

Short lengths of field cut pipe used for bell and spigot joints shall have a bevel of 30° from center and ¼" from the end.

7-09.3(16) Cleaning and Assembling Joint
This section is supplemented with the following:

Only food-grade pipe lubricant as specified by the pipe manufacturer for potable water shall be used on joints. It shall be delivered to the job in closed containers and shall be kept clean. Pipe lubricant shall be in accordance with AWWA C111/A21.11-95 paragraph. 4.4.4, and NSF/ANSI Standard 61, latest edition.

7-09.3(19)A Connections to Existing Mains
The section is supplemented with the following:

When connecting new mains to existing, the Contractor shall swab out all new material that will go into immediate service with a chlorine solution prior to installation. When shutdowns for connection are required, the contractor will coordinate and schedule with the inspector, a minimum of three working days prior to the scheduled time of shutdown, to allow 48-hour notification to all customers. Cancellations of the shutdown by the contractor after customer notification is made may result in a charge to the contractor for re-notification.

The Contractor is advised that existing valves used to shut down mains for connections are subject to leakage due to age and condition. The Contractor shall be prepared to deal with water from leaking valves encountered. No additional compensation will be made.

The Contractor is advised that only Tacoma Water crews may operate system valves.

The existing pipe shall be kept clean and free of debris as much as possible.

Coordination is an important part of this project so proper notification for shutdowns is necessary, such that they can be scheduled without causing delays to the Contractor or unanticipated interruption of service to Tacoma Water customers.

7-09.3(19) B Maintaining Service

The section is supplemented with the following:

Tacoma Water will furnish all labor and materials necessary to provide temporary (hi-line) mains and services when necessary or as determined by the Construction Inspector. The Contractor may have some down time waiting for services to be hi-lined. No extra compensation will be made to the Contractor for down time due to work by City forces. No time will be charged towards the contract's time of completion while services are transferred.

Where existing services are to be transferred from old to new mains, the work of the Contractor shall be so planned and coordinated with that of Tacoma Water that consumers will be shut off as briefly as possible.

7-09.3(21) Concrete Thrust Blocking

This section is supplemented with the following:

Concrete thrust blocking shall conform to Standard Drawing 17-56-1. Concrete used for Thrust blocking on mains eight inch and smaller shall meet the requirements of 6-02.3(4)B Jobsite Mixing, with a compressive strength at 28 days of a minimum 3,000 psi. Temporary thrust blocking may be revised or altered as approved by the Tacoma Water Construction Inspector.

7-09.3(23) Hydrostatic Pressure Test

This section is supplemented with the following:

Testing will only be accomplished with the approval and in the presence of the Tacoma Water Construction Inspector. The Tacoma Water Construction Inspector will provide his/her own set of pressure gauges. Testing will conform to DIPRA standards.

7-09.3(23) A Testing Extensions From Existing Mains

This section is supplemented with the following:

Testing will only be accomplished with the approval and in the presence of the Tacoma Water Construction Inspector. The Tacoma Water Construction Inspector will provide his/her own set of pressure gauges. Testing will conform to DIPRA standards.

7-09.3(23) B Testing Section with Hydrants Installed

This section is supplemented with the following:

Testing will only be accomplished with the approval and in the presence of the Tacoma Water Construction Inspector. The Tacoma Water Construction Inspector will provide his/her own set of pressure gauges. Testing will conform to DIPRA standards.

7-09.3(24) Disinfection of Water Mains
This section is supplemented with the following:

7-09.3(24)A Flushing
This section is revised to read:

In laying mains, care shall be taken to in-sure that the interior of the pipe is kept free of foreign matter or trench water. Upon completion of construction, the line shall be filled slowly under the direction of the Engineer and a pressure test conducted.

Sections of pipe to be disinfected shall first be flushed to remove any solids or contaminated material that may have become lodged in the pipe. If a hydrant is not installed at the end of the main, then a tap shall be provided large enough to develop a flow velocity of at least 2.5 fps in the water main.

Tacoma Water crews will flush, sample, and de-chlorinate newly installed water mains, The Contractor is advised that only Tacoma Water crews shall operate system valves.

Water for testing and sterilizing will be furnished without charge to the Contractor at such points as may be designated by the Inspector, in such quantities and at such times as will not interfere with service to Tacoma Water customers.

7-09.3(24) K Retention Period Flushing
This section is revised to read:

The chlorinated water resulting from the initial filling shall be retained in the line for a period of not less than 24 hours. After this period the chlorine residual at the pipe extremities and at other representative points shall be at least 25 ppm. After which Tacoma Water will remove the chlorinated water and thoroughly flush the line. Tacoma Water shall take initial bacterial test samples of water flowing in the line upon completion of the flushing.

A second set of bacterial test samples will be taken after a 24-hour retention period of the water remaining in the pipe after the initial flushing. Should the samples not test free of E coli and zero coli-form bacteria, the line shall be re-disinfected and re-flushed, at the expense of the Contractor, until two successive satisfactory samples are obtained.

Forty-eight hours is the minimum time required by the bacteriological laboratory to process samples.

7-09.3(24) N Final Flushing and Testing
The second paragraph is deleted:
This section is supplemented with the following.

The Tacoma Water Construction Inspector will determine location of sample stations and coordinate with Tacoma Water crews for installation. Corporation stops with copper pipe stubs will be installed by Tacoma Water crews at selected points along

the pipeline for use as sampling stations and points to release air and apply test pressure.

The sampling stations will be removed by Tacoma Water crews after bacterial tests and pressure tests are completed unless the station will be used for a new water service lateral. Installation and removal of sample stations will be coordinated with the Contractor. The water main Contractor shall complete any excavation required for installation and/or removal of the sample stations. The cost of all labor, equipment and materials involved in the installation and removal of sample stations shall be included in the various bid items of the contract.

Unless specified in the bid proposal or on the plans, Tacoma Water will furnish all labor and materials necessary to provide new services or to transfer present services to the new mains and to provide the required taps for testing and sterilizing.

Water for testing and sterilizing will be furnished without charge to the Contractor at such points as may be designated by the Inspector, in such quantities and at such times as will not interfere with service.

7-09.4 Measurement

The ninth paragraph is revised to read:

Trench shoring: The measurement of shoring will by the linear foot of pipe laid and shall be measured along the pipe through fittings, valves, and couplings. The single lineal foot measurement will be for both sides of the trench that is shored. Over-excavation to bypass the use of shoring/shielding is not considered a safety system and no payment will be made. Any extra quantities materials (pavement removal and replacement, trench excavation and disposal, trench backfill) attributed to over-excavation will not be paid for by Tacoma Water. Shoring/shielding requirements will be in accordance with WISHA standards and the 2020 M41-10 Washington State Department of Transportation Standard Specifications Section 7-09.3(7).

This section is supplemented with the following:

The bid item for removal and replacement of unsuitable material will be measured by the cubic yard and shall only cover the materials as removed as part of the trench excavation. Replacement of unsuitable materials shall be paid per the Trench backfill specification.

The unit prices bid in the Proposal shall include all the accessories, gaskets, follower glands, nuts, bolts, etc., necessary to complete the project on the approved plans.

Trench Excavation and Disposal: Measurement of trench excavation and disposal of unsuitable material will be by cubic yard based upon on the tonnage of trench backfill placed and accepted by the Engineer and calculated as follows:

$$\text{Trench Excavation (CY)} = \left(\frac{\text{Trench Backfill* (Ton) X 0.87)}}{\text{1.35 Ton/CY}}\right.$$

**Note: Trench Backfill shall be the total of ticketed sand, CSTC, Topsoil Type A, and quarry spalls.*

"_____-inch Ductile Iron Pipe, _____ Joint, ANSI/AWWA, C151, Special Thickness Class No. 52, installed (various sizes): Measurement for water mains will be by the linear foot measured along the pipe less fittings, valves, and couplings.

No specific unit of measurement shall apply to the lump sum item "Asbestos cement Pipe removal and disposal plan."

Removal and disposal of abandoned AC pipe, all sizes: Measurement for Removal and disposal of abandoned AC pipe, all sizes will be by the linear foot measured along the AC pipe removed.

Removal and disposal of abandoned DI pipe, all sizes: Measurement for Removal and disposal of abandoned DI pipe, all sizes will be by the linear foot measured along the DI pipe removed.

Mechanical Joint Fittings and couplings (various sizes and combinations): Measurement for fittings and couplings shall be per each.

Permanent Blow –Off Assemblies: Measurement for this item will be per each.

Temporary Blow -Off Assemblies, installed and removed: Measurement for this item will be per each.

Restraining Glands (various sizes): Measurement for these items will be per each.

Push-On Joint Restraining Gaskets (various sizes): Measurement for these items will be per each.

____-inch Transition couplings with ____-inch center ring ____ coating, and ____ bolts, ____ to ____ (various sizes): Measurement for these items will be per each.

____-inch End Cap Couplings, tapped ____-inch with ____-inch center ring ____ Coating, & ____ bolts (various sizes): Measurement for these items will be per each.

Concrete Thrust Anchors, in place: Measurement for this item will be per each.

Temporary Thrust Anchors, in place, install and remove: Measurement for this item will be per each. The use of blocking/preformed structures will be at the discretion of the inspector.

Crushed Surfacing Top Course (CSTC) for trench backfill and restoration: Measurement for this item shall be per ton. It is the Contractor's responsibility to provide gravel tickets to Tacoma Water's inspector daily as materials are delivered.

Trench Compaction Test (as directed by the inspector), shall be per each for passing compaction test as per section 7-09.3(11) and 2-03(14) D. Test will be performed by a licensed testing facility with trained personnel in the presence of the Tacoma Water Construction Inspector. Passing test will be based on a current proctor of material used. Costs incurred for any proctor test and failing compaction test are responsibility of the contractor.

Test Holes: No unit of measurement shall apply to the lump sum price for Test Holes.

Force Account: The item shall conform to Section 1-09.6 of the Standard Specifications.

7-09.5 Payment
This section is revised to read:

"Trench Excavation and Disposal Incl. Haul", per cubic yard.

The unit contract price for "Trench Excavation and Disposal" shall be full pay for all labor, equipment and materials required for excavating and disposal of unsuitable materials. Trench and disposal requirements will be in accordance with WSDOT Standard Specifications as modified in these Special Provisions.

"Trench shoring", per linear foot.

The single lineal foot measurement will be full pay for both sides of the trench that is shored. Over-excavation to bypass the use of a shoring/shielding is not considered a safety system and no payment will be made.

"____-inch Ductile Iron Pipe, _____ Joint ANSI/AWWA. C151 Special Thickness Class No. 52", per linear foot.

The unit contract price per linear foot for each size of "____-inch Ductile Iron Pipe, _____Joint ANSI/AWWA. C151 Special Thickness Class No. 52" shall be full pay for all work to complete the installation of the water main including but not limited to furnishing, laying, jointing pipe, gaskets, gland/bolt kits, testing, flushing, disinfecting the pipeline and cleanup.

Payment for restoration will be made under the applicable items shown in the Proposal. If no pay items for restoration are included in the Proposal, restoration shall be considered incidental to the work of constructing the water main, and all costs thereof shall be included in the unit contract price for "____-inch Ductile Iron Pipe, _____ Joint ANSI/AWWA. C151 Special Thickness Class No. 52".

"Asbestos cement Pipe removal and disposal plan", per lump sum.

The lump sum contract price for "Asbestos cement Pipe removal and disposal plan" shall be full pay for all costs, including but not limited to, preparing, submitting, revising, complying with testing requirements, and resubmitting revisions for the Asbestos Cement Pipe removal and disposal plan.

"Removal and disposal of abandoned AC pipe, all sizes", per linear foot.

The unit contract price per linear foot of "Removal and disposal of abandoned AC pipe, all sizes": shall be full pay for all work to complete the removal, abatement, haul, disposal, permitting and permit fees, documentation, material, personal protective equipment, and cleanup necessary to properly remove and dispose of AC pipe abandoned as part of this contract.

"Removal and disposal of abandoned DI pipe, all sizes", per linear foot.

The unit contract price per linear foot of "Removal and disposal of abandoned DI pipe, all sizes": shall be full pay for all work to complete the removal, and disposal of DI pipe abandoned as part of this contract.

"____-inch Ductile Iron Reducer, ____ M.J. with concrete anchor, (dwg. 17-56-1) in place", per each.

The unit contract price for "____-inch Ductile Iron Reducer, ____M.J. with concrete anchor, (dwg. 17-56-1) in place" shall be full pay for all labor, equipment and materials required for furnishing and installing these items including concrete anchor, gaskets, and gland/bolts kits.

"____-inch Ductile Iron (***fitting)***, M.J. _____ in place", per each.

The unit contract price for "____-inch Ductile Iron (***fitting)***, M.J. _____ in place" shall be full pay for all labor, equipment and materials required for furnishing and installing these items including gaskets and gland/bolts kits.

"____-inch Ductile Iron *(cap/plug)*, M.J., tapped ____-inch, installed & removed", per each.

The unit contract price for "____-inch Ductile Iron (***cap/plug)***, M.J., tapped ____-inch, installed & removed" shall be full pay for all labor, equipment and materials required for furnishing, installing, and removing these items including gaskets gland/bolts kits.

"____-inch Ductile Iron *(Cap/plug),* M.J., tapped ____-inch, in place", per each.

The unit contract price for "____-inch Ductile Iron (***cap/plug)***, M.J., tapped ____-inch, in place" shall be full pay for all labor, equipment and materials required for furnishing, and installing these items including gaskets gland/bolts kits.

"____-inch _____Tapping Sleeve, in place", per each.

The unit contract price for "____-inch _____Tapping Sleeve" shall be full pay for all labor, equipment and materials required for furnishing, and installing these items including gaskets gland/bolts kits.

"____-inch Transition Coupling with ____-inch center ring, ____coating, and ____ bolts, ____ to D.I.", per each.

The unit contract price for "____-inch Transition Coupling with ____-inch center ring, ____coating, and _____ bolts, ____ to D.I." shall be full pay for all labor, equipment and materials required for furnishing and installing these items.

"____-inch End Cap Coupling tapped ____-inch, with ____inch center ring, ___ coating, and ____bolts," per each.

The unit contract price for "____-inch End Cap Coupling tapped ____-inch, with ____inch center ring, ____coating, and ____bolts," shall be full pay for all labor, equipment and materials required for furnishing and installing these items.

"____-inch Blow-Off Assembly, in place", per each.

The unit contract price bid per each for "____-inch Blow-Off Assembly, in place" shall be full pay for all work to install the blow-off assembly per drawing 17-56-1, including but not limited to excavating, backfilling, laying and jointing pipe, pipe and fittings, valve box, meter box, and cleanup. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box.

"Temporary ____-inch Blow-Off Assembly, installed & removed", per each.

The unit contract price bid per each for "Temporary ____-inch Blow-Off Assembly, installed & removed" shall be full pay for all work to install the blow-off assembly per drawing 17-56-1, including but not limited to excavating, backfilling, laying and jointing pipe, pipe and fittings, gate valve, meter box, cleanup, and removal.

"____-inch Mechanical Joint Restraining Gland, in place", per each.

The unit contract price for "____-inch Mechanical Joint Restraining Gland, in place "shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item.

"____-inch Push-On Joint Restraining Gasket, in place", per each.

The unit contract price for "____-inch Push-On Joint Restraining Gasket, in place "shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item.

"_____-inch Ductile Iron Ell, ____°, MJ, in place"

The unit contract price for "____-inch Ductile Iron Ell, MJ, in place" shall be full pay for all labor, equipment and materials required for furnishing and installing.

"Concrete Thrust Anchor, in place", per each.

The unit contract price for "Concrete Thrust Anchor, in place "shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item.

"Temporary Concrete Thrust Anchor installed & removed", per each.

The unit contract price for "Temporary Concrete Thrust Anchor, installed & removed" shall be full pay for all labor, equipment and materials required for furnishing, installing, and removing the specified item.

"Crushed Surfacing Top Course for Trench Backfill", per ton.

The unit contract price for "Crushed Surfacing Top Course for Trench Backfill per section 9-03.9(3) of the _____WSDOT Standard Specifications, shoulder restoration, and road restoration as directed by the inspector" shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item including delivery, spreading, compacting, and rolling.

"Trench Compaction Test (as directed by the inspector)", per each.

The unit contract price for "Trench Compaction Test (as directed by the inspector)" shall be for passing compaction test as per sections 7-09.3(11), and 2-03(14) D. Testing will be performed by a licensed testing company with trained personnel in the presence of the Tacoma Water Construction Inspector and shall be measured per each passed test.

"Test Holes", per lump sum.

The lump sum contract price for "Test Holes" shall be full pay for all labor, equipment and materials required to perform the specified excavations including all flagging required to field verify existing utilities. Progress payment will be made based on the percentage completion of the total work encompassed within the lump sum item.

END

7-12 VALVES FOR WATER MAINS

7-12.4 Measurement

These sections are supplemented with the following:

Measurement for tapping gate valves will be separate per each.

Measurement for _____-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box, will be per each.

Measurement for _____- inch Butterfly Valve, M.J., ANSI/AWWA, C504, with C.I. Valve Box, will be per each.

Measurement for _____- inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box, will be per each.

Measurement for _____- inch Air/Vacuum release Valve, ASTM/AWWA, C512 with C.I. Valve Box and vent, will be per each.

7-12.5 Payment
These sections are supplemented with the following:

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

"_____-inch Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box", per each.

The unit bid price for "_____-inch Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box, in place, per each" shall be full pay for all labor, equipment and materials required to furnish and install valve. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box as well as labor and materials for Trench Excavation and disposal and Crushed Surfacing Top Course (CSTC) for trench backfill.

"_____-inch Butterfly Valve, M.J., ANSI/AWWA, C504, with C.I. Valve Box, per each.

The unit bid price for "_____-inch Butterfly Valve, M.J., ANSI/AWWA, C504, with C.I. Valve Box" shall be full pay for all labor, equipment and materials required to furnish and install valve. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box as well as labor and materials for Trench Excavation and disposal and Crushed Surfacing Top Course (CSTC) for trench backfill.

"_____-inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box", per each.

The unit contract price for "_____-inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box, in place" shall be full pay for all labor, equipment and materials required for furnishing, installing, and tapping. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box as well as labor and materials for Trench Excavation and disposal and Crushed Surfacing Top Course (CSTC) for trench backfill.

END OF SECTION

7-14 HYDRANTS

7-14.3(1) Setting Hydrants
The second paragraph is revised to read:

All hydrants shall be set on concrete blocks as shown on standard detail 17-56-1. The hydrant barrel drain shall waste into a pit of porous gravel material meeting

specification 9-03.12(5), situated at the base of the hydrant as shown on standard detail 17-56-1.

This section is supplemented with the following:

Hydrant installation will conform to AWWA and DIPRA standards and drawing 17-56-1. No barrel extensions will be approved for new installations. The Contractor is responsible for ensuring the proper bury of hydrant for grade is installed.

7-14.3(2) A Hydrant Restraints

This section is supplemented with the following:

Only approved restraining glands will be installed for hydrant restraints unless shackle rods are specified. No poured concrete thrust block will be placed on the back side of the fire hydrants. If the hydrant lateral is longer than one full length of pipe, either mechanical joint (MJ) pipe, approved push-on joint restraining gaskets or a ductile iron solid sleeve with restraining glands will be installed to ensure correct location and restraint of hydrant.

7-14.3(6) Hydrant Extensions

This section is revised to read:

No hydrant barrel extensions are approved on new installations.

7-14.3(7) Removing Abandoned Hydrants

This section is added with the following:

The contractor shall remove existing abandoned fire hydrants which were taken out of service by this project or as noted to be removed on plans. Abandoned fire hydrants shall be removed at the foot, laterals plugged, and fire hydrants delivered to the Tacoma Water Storeroom at South 35th Street and Union Avenue. All labor and equipment costs are incidental to the contract.

7-14.4 Measurement

This paragraph is supplemented with the following:

Measurement of “6-inch Hydrant, M.J., ____-ft. bury, with ____-inch _____ Threads & ___-inch Quick Connect Coupling”, will be made per each.

7-14.5 Payment

This paragraph is supplemented with the following:

“6-inch Hydrant, M.J., ____-ft. bury, with ____-inch _____ Threads & ___-inch Quick Connect Coupling”, per each.

The unit bid price for “6-inch Hydrant, M.J., ____-ft. bury, with ____-inch _____ Threads & ___-inch Quick Connect Coupling” shall be full pay for all labor, equipment and materials required for furnishing and installing the hydrant including drain rock and hydrant block as well as labor and materials for Trench Excavation and

disposal and Crushed Surfacing Top Course (CSTC) for trench backfill. Restraining glands, lateral pipe, tee, and valve will be paid under separate bid items.

END OF SECTION

7-15 SERVICE CONNECTIONS

This section is supplemented with the following:

There are approximately 12 water service transfers throughout the project. New mains will be tested and sampled in sections so Tacoma Water can commence with service transfers. Following the successful completion of sampling, the Contractor shall anticipate down time waiting for Tacoma Water crews to complete service transfers. The Contractor shall anticipate one working day per service for Tacoma Water crews to complete service transfers. All costs shall be included in the various bid items in the proposal and no extra compensation will be made to the Contractor for down time due to work by City forces. No time will be charged towards the contract's time of completion while services are transferred.

Please note: Service transfer work by Tacoma Water will not commence until such time as the section of water main has been placed into service and the trench has been successfully backfilled, as demonstrated through receipt of successful compaction test results for that portion of water main to be placed in service.

END OF SECTION

7-17 SANITARY SEWERS

7-17.3 Construction Requirements

This section is supplemented with the following:

Sanitary sewers may be encountered at various locations throughout this project. Prior to the start of the sanitary sewer repair, the Inspector and/or Contractor shall notify, Tacoma Public Works Inspector. C900 PVC shall be used on sanitary repairs. The repair of the sewer shall be made three feet outside of the water main trench or to the limits and material standards of Washington State Department of Ecology, Criteria for Sewer Works Design, section C1-9.1.4 If the sewer pipe falls into the unusual condition as specified by the Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-9.1.4 Unusual Conditions (Perpendicular), sub-section A, the sewer pipe shall comply with the requirements of a full length of pipe centered over the water main to the material standards of Table C1-4. No additional compensation shall be made for the extended connection and material. Mechanical couplings (Romac or equivalent) shall be installed at both ends of the sewer restoration forming a rigid connection between the new and existing pipe. Rigid PVC slip couplings for PVC pipe and Romac mechanical style for concrete pipe only. Repair/replacement/restoration will be at the inspector's discretion and in accordance with Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-8 and C1-9.

7-17.4 Measurement
This section is revised to read:

"Storm, Sanitary, and Side Sewer Restoration" will be measured per each.

7-17.5 Payment
This section is revised to read:

"Storm, Sanitary, and Side Sewer Restoration", per each.

The unit bid price for "Storm, Sanitary, and Side Sewer Restoration", includes all labor and materials required to remove and replace storm, sanitary, and side sewers. This is a per each bid item that includes all costs but is not limited to pipe, fittings, pea gravel, labor, and equipment, etc. to repair sewers, as well as labor and materials for Trench Excavation and disposal and Crushed Surfacing Top Course (CSTC) for trench backfill.

END OF SECTION

7-18 SIDE SEWERS

7-18.3 Construction Requirements
This section is supplemented with the following:

Side sewers may be encountered at various locations throughout this project. Prior to the start of the sanitary side sewer repair, the Inspector and/or Contractor shall notify Tacoma Public Works Inspector. C900 PVC shall be used on side sewer repairs. The repair of the side sewer shall be made three feet outside of the water main trench or to the limits and material standards of Washington State Department of Ecology, Criteria for Sewer Works Design, section C1-9.1.4 If the side sewer pipe falls into the unusual condition as specified by the Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-9.1.4 Unusual Conditions (Perpendicular), sub-section A, the side sewer pipe shall comply with the requirements of a full length of pipe centered over the water main to the material standards of Table C1-4. No additional compensation shall be made for the extended connection and material. Mechanical couplings (Romac or equivalent) shall be installed at both ends of the sewer restoration forming a rigid connection between the new and existing pipe. Rigid PVC slip couplings for PVC pipe and Romac mechanical style for concrete pipe only. Repair/replacement/restoration will be at the inspector's discretion and in accordance with Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-8 and C1-9.

7-18.4 Measurement
This section is revised to read:

"Storm, Sanitary, and Side Sewer Restoration", will be measured per each.

7-18.5 Payment
This section is revised to read:

"Storm, Sanitary, and Side Sewer Restoration", per each.

The unit bid price for "Storm, Sanitary, and Side Sewer Restoration", includes all labor and materials required to remove and replace storm, sanitary, and side sewers. This is a per each bid item that includes all costs but is not limited to pipe, fittings, pea gravel, labor, and equipment, etc. to repair sewers, as well as labor and materials for Trench Excavation and disposal and Crushed Surfacing Top Course (CSTC) for trench backfill.

END OF SECTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3(1)B Erosion and Sediment Control (ESC) Lead

This section is revised to read:

The Contractor shall identify the ESC Lead at the preconstruction meeting. The ESC Lead shall have, for the life of the contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by WSDOT's Statewide Erosion Control Coordinator.

The ESC Lead shall implement the Temporary Erosion and Sediment Control (TESC) plan. Implementation shall include, but not limited to:

1. Installing and maintaining all temporary erosion and sediment control Best Management Practices (BMPs) included in the TESC plan to assure continued performance of their intended function. Damaged or inadequate TESC BMPs shall be corrected immediately.
2. Inspecting all on-site erosion and sediment control BMPs at least once every five working days and each working day there is a runoff event. A TESC Inspection Report shall be prepared for each inspection and shall be included in the TESC file. A copy of each TESC Inspection Report shall be submitted to the Engineer no later than the end of the next working following the inspection. The report shall include, but not limited to:
    a. When where and how BMPs were installed, maintained, modified, and removed.
    b. Observations of BMP effectiveness and proper placement.
    c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal TESC plan inadequacies.

3. Updating and maintaining a TESC file on site includes, but not limited to:
    a. TESC Inspection Reports
    b. Temporary Erosion and Sediment Control (TESC) plan narrative.
    c. National Pollutant Discharge Elimination System construction permit (Notice of Intent)
    d. Other applicable permits.

Upon request, the file shall be provided to the Engineer for review.

8-01.3(8) Street Cleaning

This section is revised to read:

Self-propelled pickup and vacuum street sweepers shall be used, whenever required by the Engineer to prevent transport of sediment and other debris off the project site. Street sweepers without vacuums will not be allowed. Street sweepers shall be designed and operated to meet air quality standards.

8-01.4 Measurement

The sixth sentence is replaced with the following:

Street cleaning with self-propelled pickup and vacuum street sweeper equipment will be measured by the hour for the actual time spent cleaning pavement, as authorized by the Inspector. Time to move the equipment to or from the area on which street cleaning is required will not be measured.

8-01.5 Payment

The tenth sentence is replaced with the following:

"Street cleaning with Self-propelled pickup and vacuum street sweeper equipment", per hour.

The unit bid price for "Street cleaning with self-propelled pickup and vacuum street sweeper equipment" will be for a self-propelled pickup and vacuum street sweeper and operator.

END OF SECTION

8-02 ROADSIDE RESTORATION

8-02.3 Construction Requirements

8-02.3(4) Topsoil

This section is supplemented with the following:

A minimum of 6-inches of Topsoil Type A shall be placed in areas of roadside restoration or as directed by the Construction Inspector. It shall be placed in preparation for the Tacoma Public Utilities Landscaping crew to complete the roadside restoration.

8-02.3(4)A Topsoil Type A

This section is supplemented with the following:

Topsoil A shall meet the following specification: Planting soil shall consist of a natural sandy clay loam, sandy loam, or loamy sand humus-bearing soil containing no less than 55-percent or more than 15-percent organic matter as determined by the loss of ignition of oven-dried samples. The allowable pH range shall be 5.0 to 7.0. The soil shall be natural friable surface soil free of any material toxic to the plant growth; from subsoil; and from stones and other debris which would not pass through a 1-inch square opening. The maximum allowable percent of gravel retained on a 1/4-inch sieve and other foreign materials shall not exceed 10-percent by volume. The percentage of the soil passing through the following sieves shall be:

U.S. No. Sieve	Min.	Max.
#200	5	40
#120	20	60
# 60	50	100

This planting soil shall be placed to a maximum depth of 6-inches in all areas to be seeded as designated on the plans or as directed by the project manager.

Soil amendments shall be either organic or inorganic materials, such as: thoroughly soaked peat moss, fibrous sedge peat, woody or reed type peat, sludge, manure, well-rotted sawdust, or vermiculite, manufactured or processed for use in altering structural and textural properties of soil. Peat shall contain less than 20-percent of ash by dry weight. The manure shall be well decomposed cow waste and must be free of any material toxic to plant growth, free from noxious weed seeds and with a minimum of straw litter. When sawdust is used, either 4.5 pounds of ammonium sulfate or 3 pounds of ammonium nitrate shall be added to the topsoil mixture per cubic yard of sawdust. Any manufactured or processed soil amendment material shall pass through a 1/4-inch sieve, shall contain no substances harmful to plant growth, and shall be subject to approval by the project manager. All inorganic material containers shall clearly indicate both the type of amendment material and the volume. Soil amendments shall be either organic or inorganic materials, such as: thoroughly soaked peat moss, fibrous sedge peat, woody or reed type peat, sludge, manure, well-rotted sawdust, or vermiculite, manufactured or processed for use in altering structural and textural properties of soil. Peat shall contain less than 20-percent of ash by dry weight. The manure shall be well decomposed cow waste and must be free of any material toxic to plant growth, free from noxious weed seeds and with a minimum of straw litter. When sawdust is used, either 4.5 pounds of ammonium sulfate or 3 pounds of ammonium nitrate shall be added to the topsoil mixture per cubic yard of sawdust. Any manufactured or processed soil amendment material shall pass through a 1/4-inch sieve, shall contain no substances harmful to plant growth, and shall be subject to approval by the project manager. All inorganic material containers shall clearly indicate both the type of amendment material and the volume.

8-02.4 Measurement

8-02.5 Payment

END OF SECTION

8-22 PAVEMENT MARKING

8-22.1 Description
This section is supplemented with the following:

Installation of traffic lane markings will re-establish pre-construction markings.

8-22.3 Construction Requirements
This section is supplemented with the following:

The Contractor shall replace existing pavement markings that are disturbed by water main construction. Markings shall be equivalent to that existing prior to construction and shall include but not be limited to crosswalk marking, single and double yellow paint line, reflective lane markers, plastic traffic arrows, and plastic "ONLY" lettering. All traffic markings shall conform to Pierce County standards.

8-22.4 Measurement
This section is supplemented with the following:

The bid item "Traffic Lane Markings" will be measured per linear foot as measured along the construction centerline in areas where markings are replaced. One measurement may include multiple longitudinal lines, raised traffic markers (buttons), transverse lines, and symbol markings.

8-22.5 Payment
This section is supplemented with the following:

"Traffic Lane Markings", per linear foot.

The contract price per lump sum for "Traffic Lane Markings" shall be full pay for re-establishing all lane striping, stop lines, raised traffic markers (buttons) and turns arrows and includes all labor and material.

END OF SECTION

9-03 AGGREGATES

9-03.21 Recycled Material
This section is supplemented with the following:

No recycled material shall be used for trench backfill of water main.

END OF SECTION

9-30 WATER DISTRIBUTION MATERIALS

The first paragraph is revised to read:

This specification addresses pipe and appurtenances 24-inch in diameter and smaller. Water distribution material incorporated in the work shall be new. Prior to construction, the Contractor shall submit 3 copies of material submittals to the Engineer for approval.

9-30.1(1) Ductile Iron Pipe

This section is revised to read:

Ductile iron pipe shall be centrifugally cast and meet the requirements of AWWA C151. Ductile iron pipe shall have a cement mortar lining meeting the requirements of AWWA C104. Ductile iron pipe shall be a minimum of Special Thickness Class 52 and manufactured by the following:

- Tyton Joint:
  - McWane Cast Iron Pipe Company
  - Pacific States Cast Iron Pipe Company
  - U.S. Pipe and Foundry Company
- Fastite Joint: *
  - American Cast Iron Pipe Company
- Mechanical Joint:
  - McWane Cast Iron Pipe Company
  - American Cast Iron Pipe Company
  - Pacific States Cast Iron Pipe Company
  - U.S. Pipe and Foundry Company

Non-restrained joints shall be rubber gasket, push-on type, or mechanical type meeting the requirements of AWWA C111.

Restrained joints shall be as specified in Section 9-30.2(6).

**Note: When plans and specifications require push-on joints to be restrained with nitrile gaskets, only American Ductile Iron Pipe and Fastite Fast-Grip® restraining gaskets are allowed.*

9-30.1(3) Rubber Gaskets

This section is added with the following:

All gaskets furnished with pipe shall be styrene butadiene rubber (SBR), unless specified otherwise by the project engineer. When deemed necessary, "Nitrile" (NBR) gaskets will be required. When NBR gaskets are required, they must be color-coded and/or marked in color so as to be easily identifiable as nitrile. When nitrile push-on joint restraining gaskets are required, they shall be Fastite Fast-Grip® manufactured by American Cast Iron Pipe Company or approved equal. All gaskets must conform to

ANSI/AWWA C111. The gasket requirements for the specific project will be indicated on the face of the plan for the project.

9-30.2 Fittings
This section is revised to read:

Ductile iron flanges and flanged ductile iron spool pieces shall be in accordance with ANSI/AWWA C 115.

Gaskets for steel flanged joints shall be cloth inserted rubber made by Johns-Manville, JM-109 or approved equal.

Unless specified otherwise, all T-head bolts and nuts supplied for mechanical joint fittings, valves, sleeves, couplings, hydrants, tapping sleeves, etc., shall be made of high-strength, low alloy steel, conforming to ANSI/AWWA C111 (Corrosion-Resistant Steel "Cor-Ten"). All other bolts and nuts shall be hot dipped galvanized or electroplated and conform to ASTM A 307, Grade B.

All bolts shall be of sufficient length that, when assembled and tightened to proper torque, a minimum of one thread will extend outside of the nut.

Tie rods and nuts for hydrant laterals, etc., shall be made of high strength, low alloy steel conforming to ANSI/AWWA C111 ("Cor-Ten"), unless specified otherwise in the plans or Special Provisions.

All ductile iron fittings shall conform to the latest ANSI/AWWA C110 Specifications or ANSI/AWWA Cl53 for Mechanical Joint Compact Ductile Iron Class 350 fittings. All fittings shall have either cement-mortar lining conforming to ANSI/AWWA C104 or fusion bonded epoxy internal lining per ANSI/AWWA C153. Mechanical joint glands supplied with the above fittings shall be ductile iron in accordance with the above specifications. The mechanical joint fittings/pipe shall be installed, and the bolts tightened in the sequence and to the torque specified in DIPRA published by the Ductile Iron Pipe Research Association.

9-30.2(6) Restrained Joints
This section is supplemented with the following:

Mechanical joint restraint shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Joint flexibility shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53. Twist-off nuts, sized same as tee-head bolts, shall be used to insure proper actuating of restraining devices. 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 manufactured by:

- EBAA Iron, Inc., MEGALUG,
- Romac “RomaGrip”

- Uniflange Series 1400
- Tyler Union “TUFGrip Series 1000”
- or approved equal.

Tyton joint restraint shall be made with Field-Lok 350® restraining gaskets or approved equal. Fastite joint restraint shall be made with Fast-Grip® restraining gaskets or approved equal.

9-30.2(7) Bolted, Sleeve Type Couplings for Plain End Pipe
The first two sentences in this section are revised to read:

Bolted, sleeve-type couplings, reducing couplings, or transition couplings will be mechanical style flexible coupling meeting AWWA C219, with minimum 7- inch center ring, epoxy coating, and stainless-steel nuts and bolts.

End Cap Couplings will be mechanical style flexible coupling meeting AWWA C219, with minimum 7- inch center ring, epoxy coating, stainless steel nuts and bolts, and tapped 2-inch.

Couplings will be proper to type of pipe (e.g., D.I to C.I.)

9-30.3(1) Gate Valves (3 inches to 16 inches)
This section is revised to read:

The end flanges of flanged gate valves shall conform in dimensions and drilling to the Standard ANSI B16.1 for cast iron flanges and flanged fittings, Class 125 unless specifically provided otherwise in plans or supplementary specifications. The bolt holes shall straddle the vertical centerline.

All gate valves shall be resilient seat and shall comply with the ANSI/AWWA standard as listed below:
All Resilient Seat Gate Valves shall conform to the latest revision of AWWA Standard C-509/515 and be UL listed, FM approved. They shall be as manufactured by:

- American Flow "Series 2500"
- AVK-series 25 or 65
- Clow model "2638, 2639 and 2640"
- Kennedy model "KS-FW” and “KS-RW”
- M&H: Style “4067"
- M&H: Style “7000 series"
- Mueller Style "2360"
- NIBCO 619-RW Series
- US Pipe "Metroseal 250"
- East Jordan “Flowmaster”
- or approved equal.

All Resilient Seat Gate Valves shall meet the following requirements:

a. Shall have the body and bonnet coated with a fusion bonded epoxy coating meeting all the application and performance requirements of AWWA C-550.

b. All gate valve ends shall be as shown on the project drawing and conform to the applicable ANSI/AWWA standard. Flanged ends shall conform to ANSI B16.1 class 125 or C110 A21.10. Mechanical joint and push-on joint must conform to ANSI/AWWA C111, A21.11.

c. All gate valves, 16-inch and larger, shall be horizontal stem, equipped with machine cut cast steel gears, extended type grease case, and bypass, all in accordance with AWWA Standard C509/515.

d. All bonnet and packing nuts and bolts shall be stainless steel.

9.30.3(3) Butterfly Valves
This section is revised with the following:

All butterfly valves shall conform to ANSI/AWWA C504 for Rubber Seated Butterfly Valves, Class 150B.

All butterfly valves shall be manufactured by:

- Henry Pratt "Groundhog"
- M&H/Clow "4500"
- Mueller "Lineseal III"
- Or approved equal.

9.30.3(4) Valve Boxes
This section is revised to read:

Cast iron valve boxes and lids shall be as indicated on the attached Tacoma Water Drawing No. 17-56-1. All buried valves shall be provided with a valve box and lid with an extension of cast iron soil pipe as necessary. The Contractor shall maintain the location and provide access to all valves within the project. No valve shall remain buried during construction.

9-30.3(8) Tapping Sleeve and Valve Assembly
The fourth sentence is revised to read:

Valves specifically designed for tapping meeting the requirement of AWWA C500, and valves meeting the requirements of AWWA C509/C515 will be permitted. All nuts and bolts shall be stainless steel.
The sixth sentence is revised to read:

Tapping sleeves shall be ductile iron, mechanical joint type or the fabricated steel type, whichever is specified in the bid proposal.

This section is supplemented with the following:

The fabricated steel sleeves shall have epoxy coating and stainless-steel bolts and shall be:

- Model JCM 412 manufactured by JCM Industries*

- Model JCM 414 manufactured by JCM Industries
- Model FTS 420 manufactured by Romac Industries, Inc*
- SST III manufactured by Romac Industries, Inc.
- Smith Blair Style 623
- or approved equal.

*Models JCM 412 and FTS 420 will only be allowed when tapping ductile iron pipe and the size of the tap is ***less than half*** of the size of the pipe being tapped.

Ductile iron, mechanical joint sleeves shall be:

- Model H-615 manufactured by Mueller Co.
- Model H-619 manufactured by Mueller Co.
- or approved equal.

9-30.5 Hydrants
This section is revised to read:

Fire hydrants furnished under these Specifications shall conform to the ANSI/AWWA C502, Specifications for Dry-Barrel Fire Hydrants, with the following limitations and exceptions, and be installed per Tacoma Water Drawing 17-56-1.

a. **Drawings** - Drawings of adequate size showing principal dimensions, material and finish shall be furnished with the bid for fire hydrants not listed below as acceptable.
b. **Make –**
   - Clow “Medallion”
   - Kennedy “Guardian K81D”
   - M&H 929, “Reliant” (casting date of 1997 or later.)
   - Mueller "Super Centurion 250"
   - U.S. Pipe "M-94”
   - Waterous “Pacer/WB67-250, Tacoma”
c. **Capacity -** Standard size - two-hose and one-pumper nozzle.
d. **Size -** Standard size shall be 5-1/4-inch main valve with 6-inch inlet bell. All hose nozzles shall be 2-1/2 inches. Unless otherwise indicated in the special Provisions and/or the Drawings, all pumper nozzles and quick connect fittings shall be as specified on standard drawing 17-56-1.
e. **Length -** Contractor shall verify proper depth of bury of fire hydrant prior to installation.
f. **Hydrant Inlet -** All hydrants shall be provided with mechanical joint inlet.
g. **Operating Mechanism -** All moving contact surfaces shall be bronze on bronze or bronze on iron or steel as may be approved by the Superintendent. The hydrants shall have the main valve seat threaded into a bronze sub-seat in the shoe of the hydrant to permit easy removal of the main valve seat. The bronze sub seat shall be; threaded into the shoe of the fire hydrant, or the sub seat shall be attached to the shoe of the fire hydrant independently from the barrel to shoe connection.
h. **Direction of Opening -** All hydrants shall open by turning the operating nut to the left (counter-clockwise).

i. **Hydrant Barrels -** All hydrant barrels shall have a flange located at least 2 inches above the finished grade line and flanged extension sections shall be available in increments of 6 inches.

j. **Operating Nuts for Stem and Nozzle Caps -** The operating stem and cap nut shall be pentagonal in shape. The pentagon shall measure 1.35 inches from the point to the flat, at the base of the nut and 1.23 inches at the top. The faces shall be tapered uniformly, and the height of the nut shall not be less than 1.0 inches. The point to the flat dimension shall be measured to the theoretical point where the faces would intersect were there no rounding off of the corners. All nozzles shall be fitted with cast iron threaded caps with operating nut of the same design and proportions as the stem nut. Caps shall be threaded to fit the corresponding nozzles and shall be fitted with suitable gaskets for positive water tightness.

k. **Fire Hydrant Quick Connect Coupling –** The fire hydrant quick Connect Coupling (aka Storz Coupling) shall be in compliance with the latest version of "NFPA 1963, for non-threaded Metal-Faced Hydrant Connections". The size of the Quick Connect Coupling and hydrant pumper nozzle threads will be as shown on standard drawing 17-56-1.

l. **Nuts and Bolts-** All nuts and bolts below ground level shall be stainless steel.

9-30.5(2) Hydrant Dimensions

This section is replaced with the following table:

Hydrant connection D.I. Pipe ins. dia.	6-inch
Standard, minimum dia.	6-7/8 inch
Length of 4.5 ft. bury, hydrant from bottom of hydrant connection to sidewalk ring.	4 feet, 8 inches
Valve opening minimum dia.	5-1/4 inches
Hose Nozzles-number and size	2 - 2-1/2-inch
Thread (Nat. Board Fire Underwriters)	7-1/2 per inch
Outside dia. Finished	3-1/16 inch
Dia. at root of thread	2.8715 inch
Pattern of thread	60° V thread
Total length of threaded male Nipple	1-inch
Pumper Nozzles-number and size	1 - 4-inch
Thread, outside dia. finished (with .02" cut off top)	5.09-inch
Dia. at root of thread (with .02" left in valley)	4.74-inch
Threads (Tacoma Std.)	4 per inch
Pattern of thread-modified	60° V thread
Total length of threaded male nipple	1-1/8-inch

9-30.5(3) Hydrant Extensions

This section is revised to read:

No hydrant barrel extensions are approved on new installations.

9-30.6 Water Service Connections

This section does not apply to the contract.

END OF SECTION

Section 5

City of Tacoma General Provisions

GENERAL PROVISIONS

(Revised October 8, 2024)

SECTION I - BIDDING REQUIREMENTS

SECTION I REQUIREMENTS ARE BINDING ON ALL RESPONDENTS.

1.01 USE AND COMPLETION OF CITY PROPOSAL SHEETS

A. Respondent's Proposal

Each Respondent must bid exactly as specified on the Proposal sheets. All proposals must remain open for acceptance by the City for a period of at least 60 calendar days from the date of opening of the bids.

B. Alterations of Proposals Not Allowed

Proposals that are incomplete or conditioned in any way contain alternatives or items not called for in the General Provisions and Specifications, or not in conformity with law may be rejected as being nonresponsive. The City cannot legally accept any proposal containing a substantial deviation from these Specifications.

C. Filling Out City Proposal Sheets

All proposals must be completed using the proposal sheets and forms included with this specification, and the prices must be stated in figures either written in ink or typewritten. No proposal having erasures or interlineations will be accepted unless initialed by the Respondent in ink.

1.02 CLARIFICATION OF PROPOSAL FOR RESPONDENT

If a prospective Respondent has any questions concerning any part of the Proposal, he/she may submit a written request for answer of his/her questions. Any interpretation of the Proposal will be made by an Addendum duly issued and mailed or delivered to each prospective Respondent. Such addendum must be acknowledged in the proposal. The City of Tacoma will not be responsible for any other explanation or interpretation of the bid documents.

1.03 RESPONDENT'S BOND OR CERTIFIED CHECK

Each bid for construction must be accompanied either by a certified or cashier’s check for 5 percent of the total amount bid, including tax, payable to the City Treasurer, or an approved bid bond, by a surety company authorized to do business in the State of Washington, for 5 percent of the total amount bid. The person legally authorized to sign the bid must sign all bid bonds. The approved bid bond form attached to these Specifications should be used: no substantial variations from the language thereof will be accepted.

If a bid bond is used, the 5 percent may be shown either in dollars and cents, or the bid bond may be filled in as follows, "5 percent of the total amount of the accompanying proposal."

The check of the successful Respondent will be returned after award of the Contract, acceptance of the Payment and Performance Bond and City's receipt of the signed Contract. The checks of all other Respondents will be returned immediately upon the award of the Contract. Bid bonds will not be returned.

1.04 DELIVERY OF PROPOSALS TO THE CITY’S PURCHASING OFFICE

A. Proposal packages must be received by the City’s Procurement and Payables Division in SAP Ariba (unless another form of delivery is stated), prior to the scheduled time and date stated in the Solicitation.

B. Supplier is solely responsible for timely delivery of its Submittal.

C. Submittals received after the time stated in the solicitation will not be accepted.

D. For purposes of determining whether a Submittal has been timely received in SAP Ariba, the City's Procurement and Payables Division will rely on the submittal clock in SAP Ariba.

1.05 LICENSES/PERMITS

A. Suppliers, if applicable, must have a Washington state business license at the time of Submittal and throughout the term of the Contract. Failure to include a Washington state business license may be grounds for rejection of the Submittal or cancellation of contract award. Information regarding Washington state business licenses may be obtained at http://bls.dor.wa.gov.

B. Upon award, it is the responsibility of the Supplier to register with the City of Tacoma's Tax and License Division, 733 South Market Street, Room 21, Tacoma, WA 98402-3768, 253-591-5252, https://www.cityoftacoma.org/government/city_departments/finance/tax_and_license/. Supplier shall obtain a business license as is required by Tacoma Municipal Code Subtitle 6C.20.

C. During the term of the Contract, Supplier, at its expense, shall obtain and keep in force any and all necessary licenses and permits.

1.06 CONTRACTOR'S STATE REGISTRATION NUMBER

Contractors for construction or public works construction are required to be licensed by the state. If the provisions of Chapter 18.27 of the Revised Code of Washington apply to the Respondent, then the Respondent's Washington State Contractor's Registration No. must accompany the bid.

1.07 BID IS NONCOLLUSIVE

The Respondent represents by the submission of the Proposal that the prices in this Bid are neither directly nor indirectly the result of any formal or informal agreement with another Respondent.

1.08 EVALUATION OF BID

A. Price, Experience, Delivery Time and Responsibility

In the evaluation of bids, the Respondent's experience, delivery time, quality of performance or product, conformance to the specifications and responsibility in performing other contracts (including satisfying all safety requirements) may be considered in addition to price. In addition, the bid evaluation factors set forth in City Code Section 1.06.262 may be considered by the City. Respondents who are inexperienced or who fail to properly perform other contracts may have their bids rejected for such cause.

B. Prequalified Electrical Contractor

Certain types of electrical construction require special expertise, experience, and prequalification of the Contractor (or subcontractor) by the City. In such cases, the Respondent must be prequalified or the Respondent must subcontract with a City prequalified electrical contractor for the specialty work.

C. Insertions of Material Conflicting with Specifications

Only material inserted by the Respondent to meet requirements of the Specifications will be considered. Any other material inserted by the Respondent will be disregarded as being nonresponsive and may be grounds for rejection of the Respondent's Proposal.

D. Correction of Ambiguities and Obvious Errors

The City reserves the right to correct obvious errors in the Respondent's proposal. In this regard, if the unit price does not compute to the extended total price, the unit price shall govern.

1.09 WITHDRAWAL OF BID

A. Prior to Bid Opening

Any Respondent may withdraw his/her Proposal prior to the scheduled bid opening time by delivering a written notice to the City’s Procurement and Payables Office. The notice may be submitted in person or by mail; however, it must be received by the City’s Procurement and Payables Office prior to the time of bid opening.

B. After Bid Opening

No Respondent will be permitted to withdraw his/her Proposal after the time of bid opening, as set forth in the Call for Bids, and before the actual award of the Contract, unless the award of Contract is delayed more than sixty (60) calendar days after the date set for bid opening. If a delay of more than 60 calendar days does occur, then the Respondent must submit written notice withdrawing his/her Proposal to the Purchasing Manager.

1.10 OPENING OF BIDS

At the time and place set for the opening of bids, all Proposals, unless previously withdrawn, will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Proposal.

1.11 CITY COUNCIL/PUBLIC UTILITY BOARD FINAL DETERMINATION

The City Council or Public Utility Board of the City of Tacoma shall be the final judge as to which is the lowest and best bid in the interest of the City of Tacoma. The City reserves the right to reject any and all bids, waive minor deviations or informalities, and if necessary, call for new bids.

1.12 RESPONDENT'S REFUSAL TO ENTER INTO CONTRACT

Any Respondent who refuses to enter into a Contract after it has been awarded to the Respondent will be in breach of the agreement to enter the Contract and the Respondent's certified or cashier’s check or bid bond shall be forfeited.

1.13 TAXES

A. Include In Proposal All Taxes

Respondent shall include in his/her Proposal all applicable local, city, state, and federal taxes. It is the Respondent's obligation to state on his/her Proposal sheet the correct percentage and total applicable Washington State and local sales tax. The total cost to the City including all applicable taxes may be the basis for determining the low Respondent.

B. Federal Excise Tax

The City of Tacoma is exempt from federal excise tax. Where applicable, the City shall furnish a Federal Excise Tax Exemption certificate.

C. City of Tacoma Business and Occupation Tax

Sub-Title 6A of the City of Tacoma Municipal Code (TMC) provides that transactions with the City of Tacoma, may be subject to the City of Tacoma's Business and Occupation Tax. It is the responsibility of the Respondent awarded the Contract to register with the City of Tacoma's Department of Tax and License, 733 South Market Street, Room 21, Tacoma, WA 98402-3768, telephone 253-591-5252. The City's Business and Occupation Tax amount shall not be shown separately but shall be included in the unit and/or lump sum prices bid.

1.14 FIRM PRICES/ESCALATION

Except as specifically allowed by the Special Provisions, only firm prices will be accepted.

1.15 AWARD

A. Construction and/or Labor Contracts

Unless specifically noted in the Special Provisions or Proposal sheets, all construction and/or labor contracts will be awarded to only one Respondent.

B. Supply/Equipment Contracts

The City reserves the right to award an equipment or supply contract for any or all items to one or more Respondents as the interests of the City will be best satisfied.

1.16 INCREASE OR DECREASE IN QUANTITIES

The City of Tacoma reserves the right to increase or decrease the quantities of any items under this Contract and pay according to the unit prices quoted in the Proposal (with no adjustments for anticipated profit).

1.17 EXTENSION OF CONTRACT

Contracts resulting from this specification shall be subject to extension by mutual agreement per the same prices, terms and conditions.

1.18 PAYMENT TERMS

A. Prices will be considered as net 30 calendar days if no cash discount is shown. Payment discount periods of twenty (20) calendar days or more if offered in the submittal, will be considered in determining the apparent lowest responsible submittal. Discounts will be analyzed in context of their overall cumulative effect. Invoices will not be processed for payment nor will the period of cash discount commence until receipt of a properly completed invoice and until all invoiced items are received and satisfactory performance of the Contractor has been attained. If an adjustment in payment is necessary due to damage or dispute, the cash discount period shall commence on the date final approval for payment is authorized.

B. ePayable/Credit Card Acceptance. Submittals offering ePayable/Credit card acceptance may be compared against submittals offering a prompt payment discount to evaluate the overall cumulative effect of the discount against the advantage to the City of the ePayable/Credit card acceptance, and may be considered in determining the apparent lowest responsible submittal.

1.19 PAYMENT METHOD – EPAYABLES – CREDIT CARD ACCEPTANCE – EFT/ACH ACCEPTANCE

A. Payment methods include:

- EPayables (Payment Plus). This is payment made via a virtual, single use VISA card number provided by the City's commercial card provider. Suppliers accepting this option will receive "due immediately" payment terms. Two options for acceptance are available to suppliers. Both are accompanied by an emailed advice containing complete payment details:
    - Straight-through processing (buyer initiated). Immediate, exact payments directly deposited to supplier accounts by the City's provider bank; the supplier does not need to know card account details.
    - Supplier retrieves card account through the secure, on-line portal provided via email notifications sent by the City's commercial card provider.
- Credit card. Tacoma's VISA procurement card program is supported by standard bank credit suppliers and requires that merchants abide by the VISA merchant operating rules. It provides "due immediately" payment terms.
    - Suppliers must be PCI-DSS compliant (secure credit card data management) and federal FACTA (sensitive card data display) compliant.
    - Suppliers must be set up by their card processing equipment provider (merchant acquirer) as a minimum of a Level II merchant with the ability to pass along tax, shipping and merchant references information.
- Electronic Funds Transfer (EFT) by Automated Clearing House (ACH). Standard terms are net 30 for this payment method.
- Check or other cash equivalent. Standard terms are net 30 for this payment method.

B. The City's preferred method of payment is by ePayables (Payment Plus) followed by credit card (aka procurement card). Suppliers may be required to have the capability of accepting the City's ePayables or credit card methods of payment**. The City of Tacoma will not accept price changes or pay additional fees when ePayables (Payment Plus) or credit card is used.**

C. The City, in its sole discretion, will determine the method of payment for goods and/or services as part of the Contract.

1.20 COOPERATIVE PURCHASING

The Washington State Interlocal Cooperative Act RCW 39.34 provides that other governmental agencies may purchase goods and services on this solicitation or contract in accordance with the terms and prices indicated therein if all parties are agreeable.

1.21 PUBLIC DISCLOSURE: PROPRIETARY OR CONFIDENTIAL INFORMATION

A. Respondent's Submittals, all documents and records comprising any Contract awarded to Respondent, and all other documents and records provided to the City by Respondent are deemed public records subject to disclosure under the Washington State Public Records Act, Chapter 42.56 RCW (Public Records Act). Thus, City may be required, upon request, to disclose the Contract and documents or records related to it unless an exemption under the Public Records Act or other laws applies. In the event CITY receives a request for such disclosure, determines in its legal judgment that no applicable exemption to disclosure applies; and Respondent has complied with the requirements to Respondent has complied with the requirements to mark records considered confidential or proprietary

as such requirements are stated below, City agrees to provide Respondent 10 days written notice of impending release. Should legal action thereafter be initiated by Respondent to enjoin or otherwise prevent such release, all expense of any such litigation shall be borne by Respondent, including any damages, attorneys' fees or costs awarded by reason of having opposed disclosure. City shall not be liable for any release where notice was provided and Respondent took no action to oppose the release of information.

B. If Respondent provides City with records or information that Respondent considers confidential or proprietary, Respondent must mark all applicable pages or sections of said record(s) as "Confidential" or "Proprietary." Further, in the case of records or information submitted in response to a Request for Proposals, an index must be provided indicating the affected pages or sections and locations of all such material identified Confidential or Proprietary. Information not included in the required index will not be reviewed for confidentiality or as proprietary before release. If Supplier fails to so mark or index Submittals and related records, then the City, upon request, may release said record(s) without the need to satisfy the requirements of subsection A above; and Respondent expressly waives its right to allege any kind of civil action or claim against the City pertaining to the release of said record(s). Submission of materials in response to City's Solicitation shall constitute assent by Respondent to the foregoing procedure and Respondent shall have no claim against the City on account of actions taken pursuant to such procedure.

1.22 FEDERAL AID PROJECTS

The City of Tacoma in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, part 21, nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR, part 26, will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

SECTION II - CONTRACT REQUIREMENTS

2.01 CONTRACTOR'S RESPONSIBILITY

A. Contract Documents

The Respondent to whom the Contract is awarded, hereinafter called the Contractor, shall enter into a Contract with the City of Tacoma, , within 10 days after receipt from the City of Tacoma of a properly prepared Contract. In addition, the Contractor will do all things required to promptly perform this Contract pursuant to the terms of this Contract. Certain contracts for supplies, goods or equipment may use the City Purchase Order in place of a formal contract document.

B. Surety Bonds

Except as modified by the Special Provisions, the Respondent to whom the Contract is awarded shall provide a payment and performance bond, including power of attorney, for 100 percent of the amount of his/her bid (including sales taxes), to insure complete performance of the Contract including the guarantee. The bonds must be executed by a surety company licensed to do business in the State of Washington. For a supply-type contract, a cashier's check or cash may be substituted for the bonds; however, this cash or cashier's check must remain with the City through the guarantee period and any interest on said amount shall accrue to the City.

C. Independent Contractor

Contractor is an independent contractor; no personnel furnished by the Contractor shall be deemed under any circumstances to be the agent or servant of the City. Contractor shall be fully responsible for all acts or omissions of Subcontractors and its and their suppliers and of persons employed by them, and shall be specifically responsible for sufficient and competent supervision and inspection to assure compliance in every respect with the Contract. There shall be no contractual relationship between any Subcontractors or supplier and the City arising out of or by virtue of this agreement. No provision of the Contract is intended or is to be construed to be for the benefit of any third party.

2.02 CONFLICTS IN SPECIFICATIONS

Anything mentioned in the Specifications and not shown on the Drawings and anything on the Drawings and not mentioned in the Specifications shall be of like effect and shall be understood to be shown and/or mentioned in both. In case of differences between Drawings and Specifications, the Specifications shall govern. In addition, in the event of any conflict between these General Provisions, the Special Provisions, the Technical Provisions and/or the Proposal pages, the following order of precedence shall control:

1. Proposal pages prevail if they conflict with the General, Special or Technical Provisions.
2. Special Provisions prevail if they conflict with the General Provisions and/or Technical Provisions.
3. Technical Provisions prevail if they are in conflict with the General Provisions.

In case of discrepancy of figures between Drawings, Specifications or both, the matter shall immediately be submitted to the Engineer for determination. Failure to submit the discrepancy issue to the Engineer shall result in the Contractor's actions being at his/her own risk and expense. The Engineer shall furnish from time to time such detailed drawings and other information as he/she may consider necessary.

2.03 INSPECTION

A. Of the Work

All materials furnished and work done shall be subject to inspection.

The Inspector administering the Contract shall at all times have access to the work wherever it is in progress or being performed, and the Contractor shall provide proper facilities for such access and inspection. Such inspection shall not relieve the Contractor of the responsibility of performing the work correctly, utilizing the best labor and materials in strict accordance with the Specifications of this Contract. All material or work approved and later found to be defective shall be replaced without cost to the City of Tacoma.

B. Inspector's Authority

The inspector shall have power to reject materials or workmanship which do not fulfill the requirements of these Specifications, but in case of dispute the Contractor may appeal to the Director or Superintendent, whose decision shall be final. The word “Director” means the Director of the City of Tacoma General Government department that is administering the contract. The word "Superintendent" means the Superintendent of the City of Tacoma, Department of Public Utilities Division that is administering the contract.

The Contract shall be carried out under the general control of the representative of the particular City Department or Division administering the Contract, who may exercise such control over the conduct of the work as may be necessary, in his or her opinion, to safeguard the interest of the City of Tacoma. The Contractor shall comply with all orders and instructions given by the representative of the particular Department or Division administering the Contract in accordance with the terms of the Contract.

Provided, that for the purposes of construction contracts, such control shall only apply (a) to the extent necessary to ensure compliance with the provisions of this contract, and (b) to the extent necessary to fulfill any nondelegable duty of the City for the benefit of third parties not engaged in promoting the activity of this contract.

Nothing herein contained, however, shall be taken to relieve the Contractor of his/her obligations or responsibilities under the Contract.

2.04 FEDERAL, STATE AND MUNICIPAL REGULATIONS

All federal, state, municipal and/or local regulations shall be satisfied in the performance of all portions of this Contract. The Contractor shall be solely responsible for all violations of the law from any cause in connection with work performed under this Contract.

2.05 INDEMNIFICATION

A. Indemnification

Contractor acknowledges that pursuant to the terms of this agreement, Contractor is solely and totally responsible for the safety of all persons and property in the performance of this Contract. To the greatest extent allowed by law, Contractor assumes the risk of all damages, loss, cost, penalties and expense and agrees to indemnity, defend and hold harmless the City of Tacoma, from and against any and all liability which may accrue to or be sustained by the City of Tacoma on account of any claim, suit or legal action made or brought against the City of Tacoma for the death of or injury to persons (including Contractor's or subcontractor's employees) or damage to property involving Contractor, or subcontractor(s) and their employees or agents, arising out of and in connection with or incident to the performance of the Contract including if the City is found to have a nondelegable duty to see that work is performed with requisite care, except for injuries or damages caused by the sole negligence of the City. In this regard, Contractor recognizes that Contractor is waiving immunity under industrial Insurance Law, Title 51 RCW. This indemnification extends to the officials, officers and employees of the City and also includes attorney's fees and the cost of establishing the right to indemnification hereunder in favor of the City of Tacoma. In addition, within the context of competitive bidding laws, it is agreed that this indemnification has been mutually negotiated. Provided however, this provision is intended to be applicable to the parties to this agreement and it shall not be interpreted to allow a Contractor's employee to have a claim or cause of action against Contractor.

B. Limitation of Liability for Primarily Supply-Type Contracts

In all contracts where the total cost of the supply of materials and/or equipment constitute at least 70 percent of the total contract price (as determined by the City), the City agrees that it will not hold the contractor, supplier or manufacturer liable for consequential damages for that part of the contract related to the manufacture and/or design of the equipment, materials or supplies.

2.06 CONTRACTOR'S INSURANCE

A. During the course and performance of a Contract, Contractor will provide proof and maintain the insurance coverage in the amounts and in the manner specified in the City of Tacoma Insurance Requirements as is applicable to the services, products, and deliverables provided under the Contract. The City of Tacoma Insurance Requirements document, if issued, is fully incorporated into the Contract by reference.

B. Failure by City to identify a deficiency in the insurance documentation provided by Contractor or failure of City to demand verification of coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor’s obligation to maintain such insurance.

2.07 ASSIGNMENT AND SUBLETTING OF CONTRACT

C. Assignment

The Contract shall not be assigned except with the consent of the Superintendent or his/her designee.

Requests for assignment of this contract must be in writing with the written consent of the surety, and the request must show the proposed person or organization to which the contract is assigned is capable, experienced and equipped to perform such work. The proposed substitute person or organization may be required to submit to the City information as to his/her experience, financial ability and give statements covering tools, equipment, organization, plans and methods to fulfill any portion of the Contract prior to approval of assignment.

D. Subletting

The Contract shall not be sublet except with the written consent of the Superintendent or his/her designee. In the event that a prequalified electrical contractor is necessary to perform certain portions of the work, such work may be subcontracted with a City prequalified electrical contractor for the type of work involved.

Requests for subletting of this Contract must be in writing with the written consent of the Surety, and the request must show the proposed person or organization to which the Contract is sublet is capable, experienced and equipped to perform such work. The proposed substitute person or organization may be required to submit to the City information as to his experience, financial ability and give statements covering tools, equipment, organization, plans and methods to fulfill any portion of the Contract prior to approval of subletting.

The written consent approving the subletting of the Contract shall not be construed to relieve the Contractor of his/her responsibility for the fulfillment of the Contract. The Subcontractor shall be considered to be the agent of the Contractor and the Contractor agrees to be responsible for all the materials, work and indebtedness incurred by the agent.

A subcontractor shall not sublet any portion of a subcontract for work with the City without the written consent of the City.

2.08 DELAY

E. Extension of Time

With the written approval of the Superintendent or his/her designee, the Contractor may be granted additional time for completion of the work required under this Contract, if, in the Superintendent's opinion the additional time requested arises from unavoidable delay.

F. Unavoidable Delay

Unavoidable delays in the prosecution of the work shall include only delays from causes beyond the control of the Contractor and which he/she could not have avoided by the exercise of due care, prudence, foresight and diligence. Delay caused by persons other than the Contractor, Subcontractors or their employees will be considered unavoidable delays insofar as they necessarily interfere with the Contractor's completion of the work, and such delays are not part of this Contract.

Unavoidable delay will not include delays caused by weather conditions, surveys, measurements, inspections and submitting plans to the Engineer of the particular Division involved in administering this Contract.

2.09 GUARANTEE

A. Guarantee for Construction, Labor or Services Contract

Neither the final certificate of payment or any provision in the Contract Documents, nor partial or entire occupancy of the premises by the City, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The City will give notice of observed defects with reasonable promptness.

If it has been discovered, before payment is required under the terms of the Contract, that there is a failure to comply with any of the terms and provisions of this Contract, the City has the right and may withhold payment.

In case of a failure of any part of the work, materials, labor and equipment furnished by the Contract or to fully meet all of the requirements of the Contract, the Contractor shall make such changes as may be necessary to fully meet all of the specifications and requirements of this Contract. Such changes shall be made at the Contractor's sole cost and expense without delay and with the least practicable inconvenience to the City of Tacoma. Rejected material and equipment shall be removed from the City's property by and at the expense of the Contractor.

B. Guarantee for Supply Contracts

Unless a longer period is specified, the supplier and/or manufacturer of the supplies, materials and/or equipment furnished pursuant to this Contract agrees to correct any defect or failure of the supplies, materials and/or equipment which occurs within one year from the date of: (1) test energization if electrical or mechanical equipment; (2) commencement of use if supplies or materials, provided, however, said guarantee period shall not extend beyond eighteen months after date of receipt by the City. All of the costs (including shipping, dismantling and reinstallation) of repairs and/or corrections of defective or failed equipment, supplies and/or material is the responsibility of the supplier and/or manufacturer.

When the supplier is not the manufacturer of the item of equipment, supplier agrees to be responsible for this guarantee and supplier is not relieved by a manufacturer's guarantee.

C. Guarantee Period Extension

The Contract guarantee period shall be suspended from the time a significant defect is first documented by the City until the work or equipment is repaired or replaced by Contractor and accepted by the City. In addition, in the event less than ninety (90) days remain on the guarantee period (after recalculating), the guarantee period shall be extended to allow for at least ninety (90) days from the date the work or equipment is repaired or replaced and accepted by the City.

2.10 DEDUCTIONS FOR UNCORRECTED WORK

If the City of Tacoma deems it expedient to correct work not done in accordance with the terms of this Contract, an equitable deduction from the Contract price shall be made.

2.11 CITY OF TACOMA'S RIGHT TO TERMINATE CONTRACT

A. Termination for Convenience

1. Supplies. The City may terminate a Contract for supplies at any time upon prior written notice to Contractor. Upon the effective date of termination specified in such notice, and payment by the City, all conforming supplies, materials, or equipment previously furnished hereunder shall become its property.

2. Services. The City may terminate a Contract for services at any time, with or without cause, by giving 10-business day's written notice to Supplier. In the event of termination, all finished and unfinished work prepared by Supplier pursuant to the Contract shall be provided to the City. In the event City terminates the Contract due to the City's own reasons and without cause due to Supplier's actions or omissions, the City shall pay Supplier the amount due for actual work and services necessarily performed under the Contract up to the effective date of termination, not to exceed the total compensation set forth in the Contract.

B. Termination for Cause

1. The City may terminate a Contract for either services or supplies in the event of any material breach of any of the terms and conditions of the Contract if the Contractor's breach continues in effect after written notice of breach and 30 days to cure such breach and fails to cure such breach

2. Bankruptcy. If the Contractor should be adjudged as bankrupt, or makes a general assignment for the benefit of creditors, or a receiver should be appointed on account of his/her insolvency, or if he/she or any of his/her subcontractors should violate any of the provisions of the Contract, or if the work is not being properly and diligently performed, the City of Tacoma may serve written notice upon the Contractor and Surety, executing the Payment and Performance Bond, of its intention to terminate the Contract; such notice will contain the reasons for termination of the Contract, and unless within 10 days after the serving of such notice, such violation shall cease and an arrangement satisfactory to the City of Tacoma for correction thereof shall be made, the Contract shall, upon the expiration of said I 0 days, cease and terminate and all rights of the Contractor hereunder shall be forfeited. In the event the Contract is terminated for cause, Contractor shall not be entitled to any lost profits resulting therefrom.

3. Notice. In the event of any such termination for cause, the City of Tacoma shall immediately send (by regular mail or other method) written notice thereof to the Surety and the Contractor. Upon such termination the Surety shall have the right to take over and perform the Contract, provided however, the Surety must provide written notice to the City of its intent to complete the work within 15 calendar days of its receipt of the original written notice (from the City) of the intent to terminate. Upon termination and if the Surety does not perform the work, the City of Tacoma may take over the work and prosecute the same to completion by any method it may deem advisable, for the account of and at the expense of the Contractor, and the Contractor and the Surety shall be liable to the City of Tacoma for all cost occasioned to the City of Tacoma thereby. The City of Tacoma may without liability for doing so, take possession of and utilize in completing the work, such materials, equipment, plant and other property belonging to the Contractor as may be on the site of the work and necessary therefore.

2.12 LIENS

In the event that there are any liens on file against the City of Tacoma, the City of Tacoma shall be entitled to withhold final or progress payments to the extent deemed necessary by the City of Tacoma to properly protect the outstanding lien claimants until proper releases have been filed with the City Clerk.

2.13 LEGAL DISPUTES

A. General

Washington law shall govern the interpretation of the Contract. The state or federal courts located in Pierce County Washington shall be the sole venue of any mediation, arbitration, or litigation arising out of the Contract.

Respondents providing submittals from outside the legal jurisdiction of the United States of America will be subject to Tacoma's City Attorney's Office (CAO) opinion as to the viability of possible litigation pursuant to a contract resulting from this Specification. If it is the opinion of the CAO that any possible litigation would be beyond reasonable cost and/or enforcement, the submittal may be excluded from evaluation.

B. Attorney Fees

For contracts up to $250,000, which become the subject of litigation or arbitration, the substantially prevailing party may be entitled to reasonable attorney fees, as provided in RCW 39.04.240. Provided, however, the attorney fee hourly rate for the City of Tacoma's assistant city attorneys is agreed to be $150 per hour or the same as the hourly rate for Contractor's legal counsel, whichever is greater.

2.14 DELIVERY

Prices must be quoted F.O.B. destination, freight prepaid and allowed with risk of loss during transit remaining with Contractor/Supplier (unless otherwise stated in these Specifications) to the designated address set forth in these Specifications.

Deliveries shall be between 9:00 a.m. and 3:30 p.m.; Monday through Friday only (except legal holidays of the City of Tacoma).

Legal holidays of the City of Tacoma are:

New Year's Day	January I
Martin Luther King's Birthday	3rd Monday in January
Washington's Birthday	3rd Monday in February
Memorial Day	Last Monday in May
Juneteenth	June 19
Independence Day	July 4
Labor Day	1st Monday in September
Veteran's Day	November 11
Thanksgiving Day	4th Thursday of November
Day after Thanksgiving	4th Friday of November
Christmas Day	December 25

When any of these holidays occur on Saturday or Sunday, the preceding Friday or the following Monday, respectively, is a legal holiday for the City of Tacoma.

2.15 PACKING SLIPS AND INVOICES

A. Packing slips and shipping notices shall be sent to the specific City Division or Department receiving the item(s) at the address stated in City's Solicitation or as otherwise stated in the Contract and include complete description of items, contents of items if crated or cased, quantity, shipping point, carrier, bill of lading number and City of Tacoma purchase order.

B. Each invoice shall show City of Tacoma purchase order number, release number if applicable, quantity, unit of measure, item description, unit price and extended price for each line if applicable, services and deliverables provided if applicable. Line totals shall be summed to give a grand total to which sales tax shall be added, if applicable.

1. For transactions conducted in SAP Ariba, invoices shall be submitted through Ariba.
2. For invoices paid by ACH or by check, unless stated otherwise, invoices shall be electronically submitted by email with corresponding PO number listed in the subject line to accountspayable@cityoftacoma.org.

3. For invoices paid by credit card, invoices shall also display the last name of the cardholder and last four digits (only) of the card number (e.g., Jones/6311). Unless stated otherwise, invoices shall be electronically submitted by email with corresponding PO number listed in the subject line to (do not combine different POs into one invoice or charge) to pcardadmin@cityoftacoma.org.

2.16 APPROVED EQUALS

A. Unless an item is indicated as "No substitute", special brands, when named, are intended to describe the standard of quality, performance or use desired. Equal items will be considered by the City, provided that the respondent specifies the brand and model, and provides all descriptive literature, independent test results, product samples, local servicing and parts availability to enable the City to evaluate the proposed "equal".

B. The decision of the City as to what items are equal shall be final and conclusive. If the City elects to purchase a brand represented by the respondent to be an "equal", the City's acceptance of the item is conditioned on the City's inspection and testing after receipt. If, in the sole judgment of the City, the item is determined not to be an equal, the item shall be returned at the respondent's expense.

C. When a brand name or level of quality is not stated by the respondent, it is understood the offer is exactly as specified. If more than one brand name is specified, respondents must clearly indicate the brand and model/part number being bid.

2.17 ENTIRE AGREEMENT

This written contract represents the entire Agreement between the parties and supersedes any prior oral statements, discussions or understandings between the parties.

2.18 CODE OF ETHICS

The City's Code of Ethics, Chapter 1.46, Tacoma Municipal Code, provides ethical standards for City personnel and prohibits certain unethical conduct by others including respondents and contractors. Violation of the City's Code of Ethics will be grounds for termination of this contract.

2.19 FEDERAL FINANCIAL ASSISTANCE

If federal funds, including FEMA financial assistance to the City of Tacoma, will be used to fund, pay or reimburse all or a portion of the Contract, Contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives and the following clauses will be incorporated into the Contract:

A. EQUAL EMPLOYMENT OPPORTUNITY During the performance of this Contract, Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

1. Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3. The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other

employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

6. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

7. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

8. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (B)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (B)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

3. Withholding for unpaid wages and liquidated damages. The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (B)(2) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (B)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (B)(1) through (4) of this section.

C. CLEAN AIR ACT

1. Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

2. Contractor agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

D. FEDERAL WATER POLLUTION CONTROL ACT

1. Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

2. Contractor agrees to report each violation to the City, understands, and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

E. DEBARMENT AND SUSPENSION

1. This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

2. Contractor must comply with 2 C.F.R. pt. 180, subpart C and2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

3. This certification is a material representation of fact relied upon by the City. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

4. Contractor agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

F. BYRD ANTI-LOBBYING AMENDMENT

1. Contractors who apply or bid for an award of $100,000 or more shall file the required certification with City. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the City.

2. If applicable, Contractor must sign and submit to the City the following certification:

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap.38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor’s Authorized Official

_____

Name and Title of Contractor’s Authorized Official

_____Date

G. PROCUREMENT OF RECOVERED MATERIALS

1. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

   a. Competitively within a timeframe providing for compliance with the contract performance schedule;

   b. Meeting contract performance requirements; or

   c. At a reasonable price.

2. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.

3. Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

[Section III is for contracts that involve construction and/or labor, and are not applicable to contracts solely for material/supply purchases.]

GENERAL PROVISIONS

SECTION III - CONSTRUCTION AND/OR LABOR CONTRACTS

SECTION III REQUIREMENTS APPLY ONLY TO CONSTRUCTION AND/OR LABOR CONTRACTS AND ARE IN ADDITION TO APPLICABLE REQUIREMENTS CONTAINED IN SECTION II CONTRACT REQUIREMENTS.

3.01 RESPONDENT'S DUTY TO EXAMINE

The Respondent agrees to be responsible for examining the site(s) and to have compared them with the Specifications and Contract Drawings, and to be satisfied as to the facilities and difficulties attending the execution of the proposed Contract (such as uncertainty of weather, floods, nature and condition of materials to be handled and all other conditions, obstacles and contingencies) before the delivery of his/her Proposal. No allowance will be subsequently made by the City on behalf of the Respondent by reason of any error or neglect on Respondent's part, for such uncertainties as aforesaid.

3.02 PERMITS

Except when modified by the Special Provisions, the Contractor shall procure and pay for all permits and licenses necessary for the completion of this Contract including those permits required by the City of Tacoma. The City will obtain county or state road crossing permits if required. In the event a necessary permit is not obtained, the Contractor will not be permitted to work on items subject to said permit and any delays caused thereby will not be subject to extra compensation or extensions.

3.03 NOTIFICATION OF OTHER GOVERNMENTAL AGENCIES AND UTILITIES WHEN UNDERGROUND WORK IS INVOLVED

The Contractor shall notify all other affected governmental agencies and utilities whenever underground work is done under the terms of this Contract. The Contractor is required to obtain permission of the appropriate public and private utilities and governmental agencies before performing underground work pursuant to the terms of this Contract. The Contractor is required to call "one call" at 1-800-424-5555 for all work involving excavation or digging more than 12 inches beneath ground or road surface.

The City may have indicated on the plans and specifications the existence of certain underground facilities that are known to the City department responsible for this Contract. It is the Contractor's responsibility to fully comply with the Underground Utility Locate Law, Chapter 19.122 RCW. If the site conditions are "changed or differing" as defined by RCW 19.122.040(l), the Contractor may pursue the party responsible for not properly marking or identifying the underground facility. The Contractor agrees not to file any claim or legal action against the City (department responsible for this Contract) for said "changed or differing" conditions unless said City department is solely responsible for the delay or damages that the Contractor may have incurred.

3.04 TRENCH EXCAVATION BID ITEM

In the event that "trench excavation" in excess of four feet requires a safety system pursuant to Washington State law and safety shoring, sloping, sheeting, or bracing is used, a separate bid item should be set forth in the Proposal for this work. If a separate bid item is not set forth in the Proposal pages, said installed safety system shall be paid at $3.00 per lineal foot of trench, which unit price includes both sides of the trench.

3.05 SAFETY

A. General

The Contractor shall, at all times, exercise adequate precautions for the safety of all persons, including its employees and the employees of a Subcontractor, in the performance of this Contract and shall comply with all applicable provisions of federal, state, county and municipal safety laws and regulations. It is the Contractor's responsibility to furnish safety equipment or to contractually require Subcontractors to furnish adequate safety equipment relevant to their responsibilities.

The Contractor shall obtain the necessary line clearance from the inspector before performing any work in, above, below or across energized Light Division circuits.

The Inspector and/or Engineer may advise the Contractor and the Safety Officer of any safety violations. It is the Contractor's responsibility to make the necessary corrections. Failure to correct safety violations is a breach of this Contract and, as such, shall be grounds for an order from the Safety Officer, Inspector or Engineer to cease further work and remove from the job site until the condition is corrected. Time and wages lost due to such safety shutdowns shall not relieve the Contractor of any provisions of Section 3.14 of this Specification and shall be at the sole cost of the Contractor. The purpose of this authority to stop work is to enforce the contract and not to assume control except to the extent necessary to ensure compliance with the provisions of this contract.

Any of the above actions by employees of the City of Tacoma shall in no way relieve the Contractor of his/her responsibility to provide for the safety of all persons, including his/her employees.

B. Work Hazard Analysis Report

The Contractor will be required to complete a work hazard analysis report. This report shall outline how the Contractor proposes to satisfy all safety laws and regulations involved in performing the work. This report shall be completed and submitted to the City Safety Officer before the pre-construction conference. A copy of the report shall be maintained at the work site (accessible to the supervisor).

3.06 PROTECTION OF WORKERS AND PROPERTY

The Contractor shall erect and maintain good and sufficient guards, barricades and signals at all unsafe places at or near the work and shall, in all cases, maintain safe passageways at all road crossings, and crosswalks, and shall do all other things necessary to prevent accident or loss of any kind.

The Contractor shall protect from damage all utilities, improvements, and all other property that is likely to become displaced or damaged by the execution of the work under this Contract.

The Contractor is responsible for all roads and property damaged by his/her operations as shall be determined by the Engineer administering this Contract. The Contractor shall be responsible for repairing all damage to roads caused by his/her operations to the satisfaction of the particular governmental body having jurisdiction over the road.

3.07 CONTRACTOR - SUPERVISION AND CHARACTER OF EMPLOYEES

A. Superintendent to Supervise Contractor's Employees

The Contractor shall keep on his/her work, during its progress, a competent superintendent and any necessary assistants, all of whom must be satisfactory to the City of Tacoma. The Contractor's superintendent shall not be changed except with the consent of the City of Tacoma, unless the Contractor's superintendent proves to be unsatisfactory to the Contractor and ceases to be in his/her employ. The Contractor's superintendent shall represent the Contractor in his/her absence and all directions given to him/her shall be binding as if given to the Contractor directly. The Contractor shall give efficient supervision to the work, using his/her best skill and attention.

B. Character of Contractor's Employees

The Contractor shall employ only competent, skillful, faithful and orderly persons to do the work, and whenever the Engineer administering the Contract shall notify the Contractor in writing that any person on the work is, in his or her opinion, incompetent, unfaithful, disorderly or otherwise unsatisfactory, the Contractor shall forthwith discharge such persons from the work and shall not again employ him or her on this Contract.

3.08 CONTRACTOR'S COMPLIANCE WITH THE LAW

A. Hours of Labor

The Contractor and Subcontractors shall be bound by the provisions of RCW Chapter 49.28 (as amended) relating to hours of labor. Except as set forth in the Special Provisions, eight (8) hours in any calendar day shall constitute a day's work on a job performed under this Contract.

In the event that the work is not performed in accordance with this provision and in accordance with the laws of the State of Washington, then this Contract may be terminated by the City of Tacoma for the reason that the same is not performed in accordance with the public policy of the State of Washington as defined in said statutes.

B. Prevailing Wages

If federal, state, local, or any applicable law requires Supplier to pay prevailing wages in connection with a Contract, and Supplier is so notified by the City, then Supplier shall pay applicable prevailing wages.

If applicable, a Schedule of Prevailing Wage Rates and/or the current prevailing wage determination made by the Secretary of Labor for the locality or localities where the Contract will be performed is attached and made of part of the Contract by this reference. If prevailing wages do apply to the Contract, Supplier and its subcontractors shall:

1. Be bound by and perform all transactions regarding the Contract relating to prevailing wages and the usual fringe benefits in compliance with the provisions of Chapter 39.12 RCW, as amended, the Washington State Prevailing Wage Act and/or the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable, including the federal requirement to pay wages not less than once a week,

2. Ensure that no worker, laborer or mechanic employed in the performance of any part of the Contract shall be paid less than the prevailing rate of wage specified on that Schedule and/or specified in a wage determination made by the Secretary of Labor (unless specifically preempted by federal law, the higher of the Washington state prevailing wage or federal Davis-Bacon rate of wage must be paid)and Additionally, in compliance with applicable federal law, contractors are required to pay wages not less than once a week.

3. Immediately upon award of the Contract, contact the Department of Labor and Industries, Prevailing Wages section, Olympia, Washington and/or the federal Department of Labor, to obtain full information, forms and procedures relating to these matters. Per such procedures, a Statement of Intent to Pay Prevailing Wages and/or other or additional documentation required by applicable federal law, must be submitted by Contractor and its subcontractors to the City, in the manner requested by the City, prior to any payment by the City hereunder, and an Affidavit of Wages Paid and/or other or additional documentation required by federal law must be received or verified by the City prior to final Contract payment. In the event any dispute arises as to what are the prevailing rates of wages for work of a similar nature and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the State of Washington, Department of Labor and industries whose decision shall be final, conclusive and binding on all parties involved in the dispute.

3.09 COPELAND ANTI-KICKBACK ACT

For contracts subject to Davis Bacon Act the following clauses will be incorporated into the Contract:

A. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

B. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

C. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

3.10 CHANGES

A. In Plans or Quantities

The City of Tacoma, without invalidating this Contract, or any part of this Contract, may order extra work or make reasonable changes by altering, adding to or deducting from the materials, work and labor and the Contract sum will be adjusted accordingly. All such work and labor shall be executed under the conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. When work or bid items are deducted, reduced or eliminated, it is agreed that no payment will be made to Contractor for anticipated profit.

B. Extra Work

Any claim or order for extra materials, work and labor made necessary by alterations or additions to the plans or by other reasons for which no price is provided in this Contract, shall not be valid unless the Contractor and Engineer administering the Contract have agreed upon a price prior to commencing extra work, and the agreement has been signed by the Contractor and approved by the Superintendent or his/her designee, and approved by the payment and performance bond surety.

C. Extra Work - No Agreed Price

If it is impracticable to fix an increase in price definitely in advance, the order may fix a maximum price which shall not under any circumstances, be exceeded, and subject to such limitation, such alteration, modification, or extra shall be paid for at the actual necessary cost as determined by the City of Tacoma, which cost (including an allowance for profit) shall be determined as the sum of the following items (1) to (7) inclusive:

(1) Labor, computed at regular wage scale, including premium on compensation insurance and charge for social security taxes, and other taxes, pertaining to labor; no charge for premium pay shall be allowed unless authorized by the Engineer administering the Contract;

(2) The proportionate cost of premiums on comprehensive general liability and other insurance applicable to the extra work involved and required under this Contract;

(3) Material, including sales taxes pertaining to materials;

(4) Plant and equipment rental, to be agreed upon in writing before the work is begun; no charge for the cost of repairs to plant or equipment will be allowed;

(5) Superintendence, general expense and profit computed at 20 percent of the total of paragraphs (1) to (4) inclusive;

(6) The proportionate cost of premiums on bonds required by this Contract, computed by 1 1/2 percent of the total of paragraphs (1) to (5) inclusive.

(7) The City of Tacoma reserves the right to furnish such materials as it may deem expedient, and no allowance will be made for profit thereon.

Whenever any extra work is in progress, for which the definite price has not been agreed on in advance, the Contractor shall each day, report to the Engineer the amount and cost of the labor and material used, and any other expense incurred in such extra work on the preceding day, and no claim for compensation for such extra work will be allowed unless such report shall have been made.

The above-described methods of determining the payment for work and materials shall not apply to the performance of any work or the furnishing of any material, which, in the judgment of the Engineer administering the Contract, may properly be classified under items for which prices are established in the Contract.

D. Claims for Extra Work

If the Contractor claims that any instructions by drawings or otherwise, involve extra cost under this Contract, he/she shall give the City of Tacoma written notice thereof within 30 days after receipt of such instruction, and in any event before proceeding to execute the work, except in an emergency endangering life or property, and the procedures governing the same shall be as provided for immediately above in this paragraph. The method in these paragraphs is the only method available to the Contractor for payment of claims for extra work performed under the terms of this Contract.

3.11 CLEANING UP

The Contractor shall at all times, at his/her own expense, keep the premises free from accumulation of waste materials or debris caused by any workers or the work, at the completion of the work the Contractor shall remove all his waste materials from and about the site and all his/her equipment, sanitary facilities and surplus materials. In the case of dispute, the City of Tacoma may remove the debris and charge the cost to the Contractor as the City of Tacoma shall determine to be just. All material that is deposited or placed elsewhere than in places designated or approved by the Engineer administering the Contract will not be paid for and the Contractor may be required to remove such material and deposit or place it where directed.

3.12 PROGRESS PAYMENT

Progress payments will be made up to the amount of ninety-five percent (95%) of the actual work completed as shall be determined by the Engineer administering the Contract.

The Contractor may request that an escrow account be established as permitted by law, in which event the Contractor will earn interest on the retained funds.

When the time for construction, services and/or installation will exceed thirty (30) days, the Contractor may request, by invoice, to be paid a progress payment based on percentage of work completed. The Engineer will review and approve the progress payment request on a monthly basis.

3.13 FINAL PAYMENT

The final payment of five percent (5%) of the Contract price shall be approved on final acceptance of the work under this Contract by the Superintendent or his/her designee. In addition, before final payment is made, the Contractor shall be required to:

A. Provide a certificate from the Washington State Department of Revenue that all taxes due from the Contractor have been paid or are collectible in accordance with the provisions of Chapter 60.28 and Title 82 of the Revised Code of Washington;

B. Provide the General Release to the City of Tacoma on the form set forth in these Contract documents;

C. Provide a release of any outstanding liens that have been otherwise filed against any monies held or retained by the City of Tacoma;

D. File with the City Director of Finance, and with the Director of the Washington State Department of Labor and Industries, on the state form to be provided, an affidavit of wages paid;

E. File with the City Director of Finance, on the state form to be provided, a statement from the State of Washington, Department of Labor and Industries, certifying that the prevailing wage requirements have been satisfied.

F. File with the City Director of Finance, on the state form to be provided, a statement of release from the Public Works Contracts Division of the State of Washington, Department of Labor and Industries, verifying that all industrial insurance and medical aid premiums have been paid.

If there is a fee assessed to the City for any certificate, release or other form required by law, the contractor agrees that the fee amount may be passed on to the Contractor and deducted from the monies paid to the Contractor.

3.14 FAILURE TO COMPLETE THE WORK ON TIME

Should the completion of the work required under the Contract be delayed beyond the expiration of the period herein set for the completion of said work, or such extension of said period as may be allowed by reason of unavoidable delays, there shall be deducted from the total Contract price of work, for each calendar day by which such completion shall be delayed beyond said period of such extension thereof the sum of $300 or a sum of money as set forth hereinafter in these Specifications, as the amount of such deduction per calendar day.

Said sum shall be considered not as a penalty, but as liquidated damages, which the City will suffer by reason of the failure of the Contractor to perform and complete the work within the period, herein fixed or such extensions of said period as may be allowed by reason of unavoidable delays.

Any money due or to become due the Contractor may be retained by the City to cover said liquidated damages, and should such money not be sufficient to cover such damages, the City shall have the right to recover the balance from the Contractor or his/her Sureties.

The filing of any bid for the work herein contemplated shall constitute acknowledgment by the Respondent that he/she understands, agrees and has ascertained that the City will actually suffer damages to the amount hereinabove fixed for each and every calendar day during which the completion of the work herein required shall be delayed beyond the expiration of the period herein fixed for such completion or such extension of said period as may be allowed by reason of unavoidable delays.

3.15 CITY RESERVES RIGHT TO USE FACILITIES PRIOR TO ACCEPTANCE

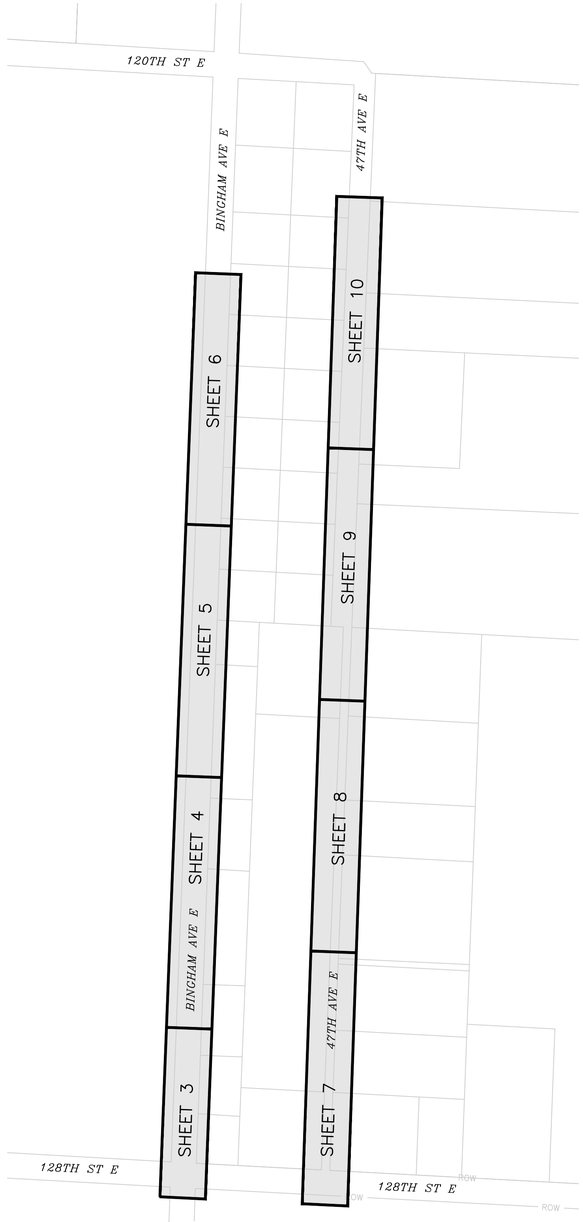
The City of Tacoma hereby reserves the right to use the facilities herein contracted prior to final acceptance under this Contract. The use of said facilities, as mentioned herein, shall not be construed as a waiver or relinquishment of any rights that the City of Tacoma has under this Contract.

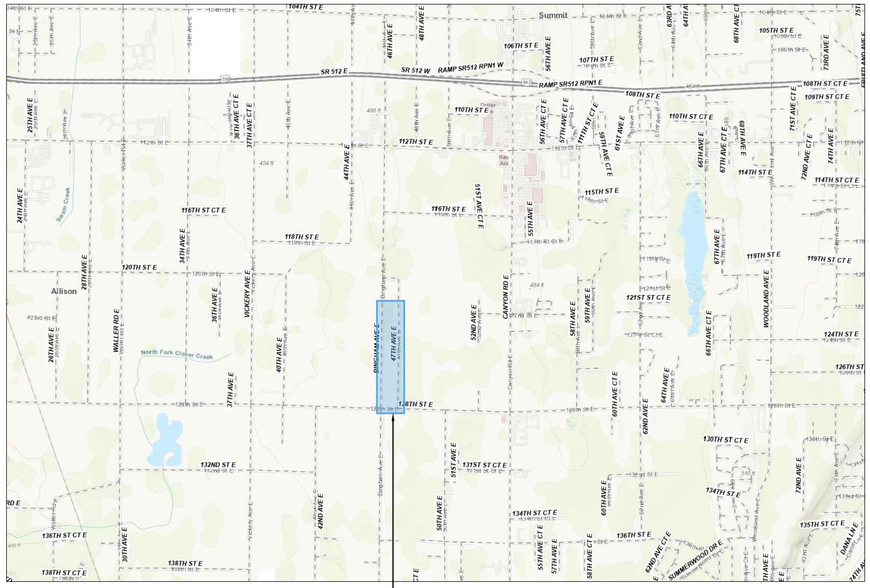
3.16 LIST OF SUBCONTRACTORS

Bid proposals for construction, alteration or repair of any building or other public works that may exceed $1,000,000 including tax shall satisfy the following requirement: Respondent shall submit as part of the bid, the names of the subcontractors, with whom the respondent, if awarded the contract, will subcontract performance of the work of heating, ventilation and air conditioning, plumbing as described in chapter 18.106 RCW, and electrical as described in chapter 19.28 RCW, or to name itself for the work. The respondent shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the respondent must indicate which subcontractor will be used for which alternate. Failure to comply with this provision or the naming of two or more subcontractors to perform the same work shall require the City (pursuant to state law RCW 39.30.060) to determine that respondent's bid is nonresponsive; therefore, the bid will be rejected.

Attachments

MAIN REPLACEMENT PROJECT 2022-0037
BINGHAM AVE E AND 47TH AVE E





SHEET 1	COVER SHEET	
SHEET 2	LEGEND & ABBREVIATIONS	
SHEET 3	BINGHAM AVE E	128TH ST E TO STA 13+50
SHEET 4	BINGHAM AVE E	STA 13+50 TO STA 19+50
SHEET 5	BINGHAM AVE E	STA 19+50 TO STA 24+50
SHEET 6	BINGHAM AVE E	STA 24+50 TO STA 30+54
SHEET 7	47TH AVE E	128TH ST E TO STA 55+50
SHEET 8	47TH AVE E	STA 55+50 TO STA 61+50
SHEET 9	47TH AVE E	STA 61+50 TO STA 67+50
SHEET 10	47TH AVE E	STA 67+50 TO STA 70+64

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
55625
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

TOPOGRAPHY INFORMATION WAS PROVIDED BY
TACOMA WATER JEH

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
COVER SHEET FOR
BINGHAM AVE E & 47TH AVE E

DATE 01/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: 2216ED3D331486...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: N/A
VERT: N/A

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 1 OF 10

LINETYPES

EXISTING	PROPOSED	DESCRIPTION
		CURB
		BUILDING LINE
X	X	FENCE
		GUARDRAIL
		RAILROAD TRACKS
		RETAINING WALL
		CENTERLINE
ROW	P/ROW	RIGHT OF WAY
		EASEMENT
		CULVERT
D	D	DITCH
		SIDE SEWER
14"SS	14"SS	SANITARY SEWER
16"FM	16"FM	FORCED SANITARY
20"SD	20"SD	STORM DRAIN
10"G	10"G	GAS
TEL	TEL	TELEPHONE
FO	FO	FIBER OPTIC
TV	TV	TELEVISION (CATV)
PWR	PWR	POWER
SL	SL	STREETLIGHT
TS	TS	TRAFFIC SIGNAL
JUT	JUT	JOINT UTILITY TRENCH
EX 12" AC MAIN	EX 12" AC MAIN	DISTRIBUTION MAINS
EX 58" STL MAIN	EX 58" STL MAIN	TRANSMISSION MAINS

WATER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		BYPASS
		CHECK VALVE
		OPEN VALVE
		CLOSED VALVE
478 PRV 251	478 PRV 251	PRESSURE REDUCING VALVE (PRV)
		TEE
		11-1/4" ELL
		22-1/2" ELL
		45° ELL
		90° ELL
		CROSS
	1:1	VERTICAL ELL W/ CONCRETE ANCHOR
8929		WATER SERVICE
		SAMPLE STATION
NOT USED		CONCRETE ANCHOR
		REDUCER W/CONCRETE ANCHOR
		BLOW OFF ASSEMBLY
		CAP
		PLUG
		SOLID SLEEVE
		TRANSITION COUPLING
		END CAP COUPLING
		6" FIRE HYDRANT
	NOT USED	4" FIRE HYDRANT

OTHER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
B	B	BOLLARD
FO	FO	FIBER OPTIC MANHOLE
FO	FO	FIBER OPTIC VAULT
G	G	GAS MANHOLE
		GAS VALVE
		MONUMENT
P	P	POWER MANHOLE
		POWER POLE
		POWER POLE ANCHOR
P	P	POWER VAULT
		RAILROAD SIGN
		SANITARY MANHOLE
SHRUB	SHRUB	SHRUB
		SPRINKLER HEAD
		STORM CATCH BASIN
		STORM MANHOLE
		STREETLIGHT
SL	SL	STREETLIGHT JB
T	T	TELEPHONE JB
T	T	TELEPHONE MANHOLE
T	T	TELEPHONE POLE
TV	TV	TELEVISION JB
		TRAFFIC SIGNAL
TS	TS	TRAFFIC SIGNAL JB
		TREES (CLASS 0–LESS THAN 12")
	NOT USED	TREES (CLASS I–12" UP TO BUT NOT INCLUDING 36")
	NOT USED	TREES (CLASS II–36" UP TO BUT NOT INCLUDING 72")
	NOT USED	TREES (CLASS III–72" UP TO BUT NOT INCLUDING 127")
	NOT USED	TREES (CLASS IV–127" OR MORE – TREE HEIGHT OF 30' OR LESS)
	NOT USED	TREES (CLASS V–127" OR MORE – TREE HEIGHT GREATER THAN 30')

PAVEMENT

- EXISTING CRUSHED ROCK/GRAVEL
- EXISTING COBBLE STONE/PAVER
- EXISTING ASPHALT/OIL MAT
- EXISTING CONCRETE
- LANDSCAPING
- APPROX PAVEMENT RESTORATION LIMITS
- PAVEMENT RESTORATION
- WATER MAIN

ABBREVIATIONS

A	ANGLE
ABAN	ABANDONED
AC	ASBESTOS CEMENT
APP'D	APPROVED
APPROX	APPROXIMATELY
ASPH	ASPHALT
AVE	AVENUE
B/F	BUTTERFLY
B/O	BLOW OFF
B/O ASSY	BLOW OFF ASSEMBLY
BLVD	BOULEVARD
BM	BENCH MARK
BNSF	BURLINGTON NORTHERN SANTA FE RAILWAY
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CI	CAST IRON
CL	CENTERLINE OR CLASS
CO	CLEAN OUT
CON	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
COT	CITY OF TACOMA
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CT	COURT
CULV	CULVERT
CY	CUBIC YARD
D	DELTA
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
DWY	DRIVEWAY
E	EAST
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EQ	EQUATION
EVC	END VERTICAL CURVE
EX	EXISTING
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FLG	FLANGE
FM	FORCE MAIN
FT	FOOT
GALV	GALVANIZED
GIS	GEOGRAPHIC INFORMATION SYSTEM
GM	GAS METER
GND	GROUND
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HP	HIGH PRESSURE
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
IP	INTERMEDIATE PRESSURE
JB	JUNCTION BOX
JUT	JOINT UTILITY TRENCH
L	LENGTH
LC	LENGTH OF CHORD
LF	LINEAR FEET
LEB	LARGE END BELL
LES	LARGE END SPIGOT
LID	LOCAL IMPROVEMENT DISTRICT
MAX	MAXIMUM
MH	MANHOLE
MIC	MON IN CASE
MIL	MILLIMETER
MIN	MINIMUM
MJ	MECHANICAL JOINT
MON	MONUMENT
MRP	MAIN REPLACEMENT PROJECT
N	NORTH
N/A	NOT APPLICABLE
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PC	PIERCE COUNTY
PC	PRIVATE CONTRACT
PC	POINT OF CURVE
PE	POLYETHYLENE
PG	PERFORMANCE GRADE
PI	POINT OF HORIZONTAL INTERSECTION
PKWY	PARKWAY
PL	PLACE
PLS	PLASTIC
PRJ	PROJECT
PROP	PROPOSED
P/ROW	PROPOSED RIGHT OF WAY
PRP	PUBLIC ROAD PROJECT
PRV	PRESSURE REDUCING VALVE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PWA	PUBLIC WORKS ADMINISTRATION
R	RADIUS
R	RANGE
R/R	RAILROAD
ROW	RIGHT OF WAY
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
S	SOUTH
SAN	SANITARY
SBM	SURFACE BRASS MON
SEB	SMALL END BELL
SEC	SECTION
SES	SMALL END SPIGOT
SP	SPECIAL
SSB	SUB SURFACE BRASS
SSS	SUB SURFACE STONE
ST	STREET
STL	STEEL
SW	SIDEWALK
T	TANGENT
T	TOWNSHIP
TEMP	TEMPORARY
TL	TRUE LENGTH
TYP	TYPICAL
UG	UNDERGROUND
UNK	UNKNOWN
VERT	VERTICAL
VC	VERTICAL CURVE
W	WEST
W/	WITH
WDP	WATER DIVISION PROJECT
WM	WILLAMETTE MERIDIAN
WO	WORK ORDER
YR	YEAR

STANDARD NOTES

THERE SHALL BE NO SUBSTITUTION OF MATERIALS WITHOUT PRIOR APPROVAL OF TACOMA WATER.

ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH TACOMA WATER DWG 17-56-1.

ALL VALVE BOXES AND TOPS SHALL BE MANUFACTURED IN ACCORDANCE WITH TACOMA WATER DWG 17-56-1.

ALL VALVE BOXES INSTALLED IN PAVING REQUIRE A 36" DIAMETER CONCRETE PAD, 6" THICK WITH 1-1/2" HMA CLASS 3/8" PG 64-22 PATCH PER TACOMA WATER DWG 17-56-1.

THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

USE SHORT LENGTHS OF PIPE AS REQUIRED BY THE INSPECTOR TO MAINTAIN PROPER GRADE AND ALIGNMENT.

CONTRACTOR TO REMOVE EXISTING FIRE HYDRANTS AT THE FOOT, PLUG END OF ABANDONED HYDRANT LATERAL AND RETURN HYDRANTS TO THE TACOMA WATER STOREROOM AT SOUTH 35TH STREET AND UNION AVENUE, TACOMA, WA. INCIDENTAL TO CONTRACT.

CONTRACTOR TO REMOVE EXISTING VALVE BOXES ABANDONED BY THIS PROJECT. INCIDENTAL TO CONTRACT.

CONTRACTOR TO PROTECT EXISTING MAINS AS THEY WILL REMAIN IN SERVICE UNTIL TESTING, SAMPLING AND SERVICE TRANSFERS ARE COMPLETE.

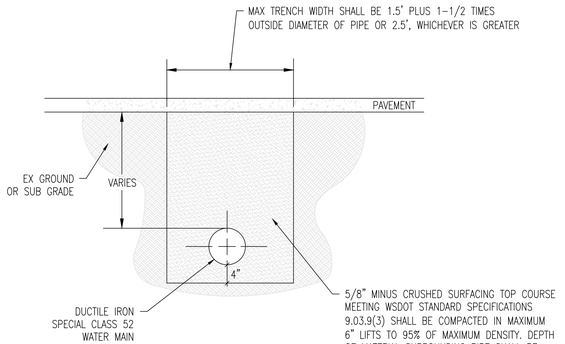
ALL OTHER NEW UTILITIES DESIGNED WITHIN THE PROJECT MUST MAINTAIN A 5' MIN SEPARATION FROM ALL TACOMA WATER STRUCTURES. PERPENDICULAR CROSSINGS ARE ALLOWED WITH A MIN OF 6" OF VERTICAL SEPARATION AND 5' HORIZONTAL FROM GATE VALVES, WATER METERS, FIRE HYDRANTS, AND ALL OTHER WATER APPURTENANCES.

THE CONTRACTOR WILL MAINTAIN ACCESS TO THE JOB SITE AT ALL TIMES. THE ACCESS MUST ALLOW ALL TACOMA WATER SUPPORT STAFF TO SAFELY ACCESS THE SITE. IF THE ACCESS IS DEEMED INACCESSIBLE TO SUPPORT STAFF, ALL TACOMA WATER WORK WILL CEASE UNTIL THE ACCESS DEEMED ACCESSIBLE BY TACOMA WATER.

TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED IN PART BASED ON DATA OBTAINED BY OTHERS. ALTHOUGH THIS INFORMATION IS BELIEVED TO BE ACCURATE, TACOMA WATER DOES NOT TAKE RESPONSIBILITY FOR ANY ERRORS THAT MAY RESULT BASED ON USE OF THIS DATA.

PHASE 1 OF WATER MAIN INSTALLATION WILL START WITH THE MAIN ON 47TH AVE E. OTHERWISE, THERE WILL NOT BE A WAY TO FEED THE SERVICES IN THIS AREA FOR THE DURATION OF THIS PROJECT.

ALL SIDE SEWER STUBS MUST BE AT LEAST 10' FROM WATER SERVICES/FIRE HYDRANTS. WHEN NOT POSSIBLE, SIDE SEWERS MUST BE CONSTRUCTED ACCORDING TO THE PROVISIONS OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY CRITERIA FOR SEWAGE WORKS DESIGN (ORANGE BOOK), AND APPROVED BY THE ENGINEER.



TYPICAL WATER MAIN TRENCH SECTION

NOT TO SCALE

CALL 2 BUSINESS DAYS BEFORE YOU DIG 811 "It's the Law" www.callbeforeyoudig.com

TROY A. SAGHAFI — STATE OF WASHINGTON — 55625 — REGISTERED PROFESSIONAL ENGINEER — 10/02/2024

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER — TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
LEGEND & ABBREVIATIONS FOR
BINGHAM AVE E

DATE 01/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED — DocuSigned by: 221E639E931496...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE HORIZ: N/A VERT: N/A

DRAWING NO 2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 2 OF 10

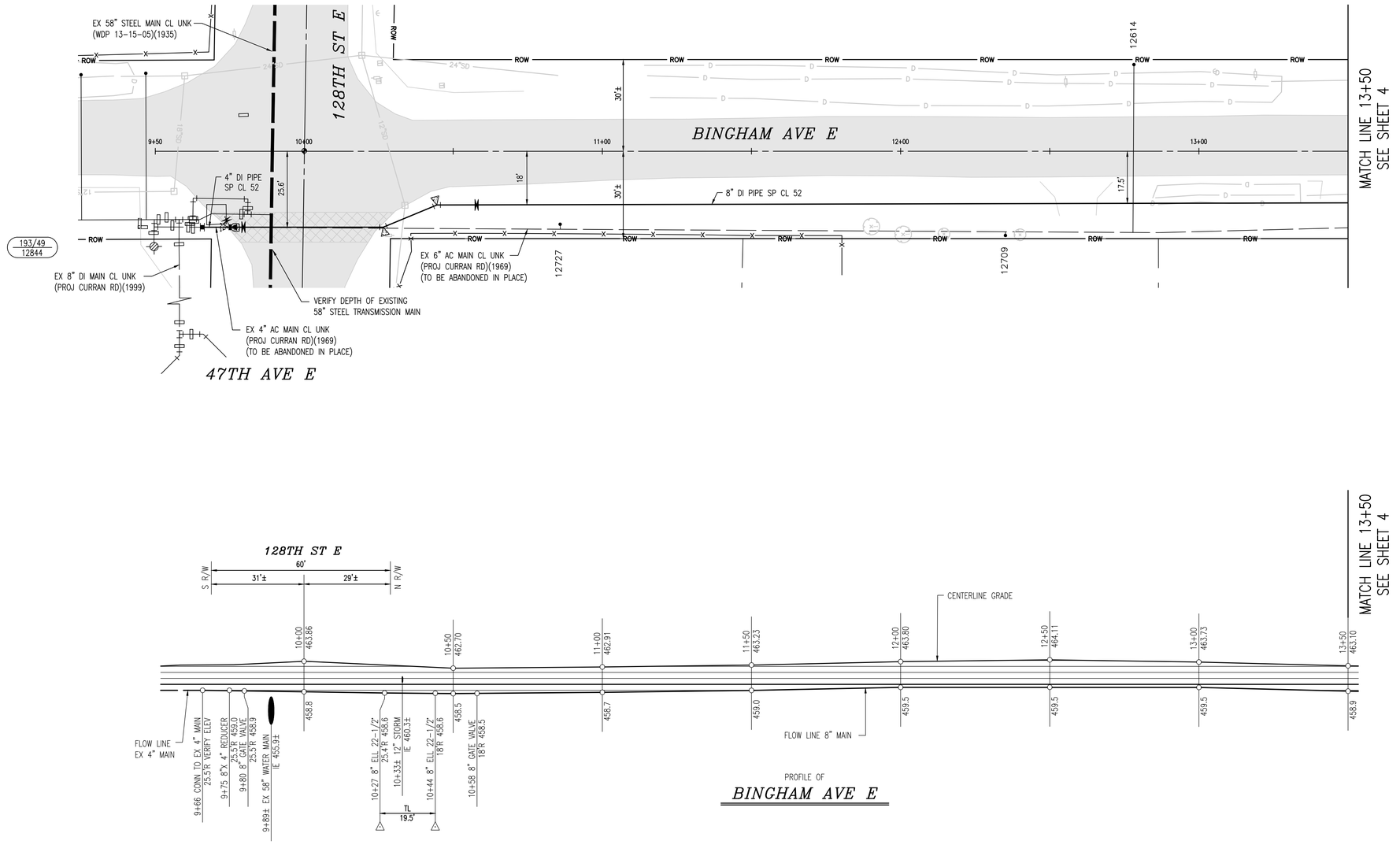
BINGHAM AVE E

SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

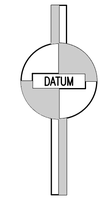
CONTRACTOR TO VERIFY LOCATION, ELEV AND OD OF EX 4" AC MAIN AND MAKE THE CONNECTION AFTER FLUSHING, SAMPLING, AND TESTING ARE COMPLETE.

2-8" GATE VALVE MJ
2-8" ELL MJ 22-1/2"
8"X 4" REDUCER MJ
4" TRANSITION COUPLING W/7" CENTER RING (AC TO DI)
2-CONCRETE ANCHOR

4" TEMP PLUG MJ TAPPED 2"
2" TEMP B/O ASSEMBLY (DWG 17-56-1)
TEMP CONCRETE ANCHOR



PROFILE OF
BINGHAM AVE E



NGVD29

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

CONTRACTOR	
SUPPLIER	
PIPE	
HYDRANTS	
VALVES	

INSPECTOR	
PRE-CONSTRUCTION	
PERMIT NUMBER	
ACTIVATE PERMIT	
START	
FILL MAIN	
PRESSURE TEST	
FLUSHED	
SAMPLES LOGGED IN BOOK	
1ST SET OF SAMPLES	
2ND SET OF SAMPLES	
MAIN IN SERVICE	
PROJECT COMPLETION LETTER	
HYDRANT DATA SHEETS	
B/O DATA SHEETS	
FINAL CHECK	
CLOSE PERMIT	
YEARLY PROJECTS INSPECTORS OFFICE	

PHASES

SECTION	START	FILL	TEST	IN SERVICE

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

A FREE SERVICE
CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
DocuSigned by:
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
128TH ST E TO STA 13+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: 221EE0CE0D1149A...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 3 OF 10

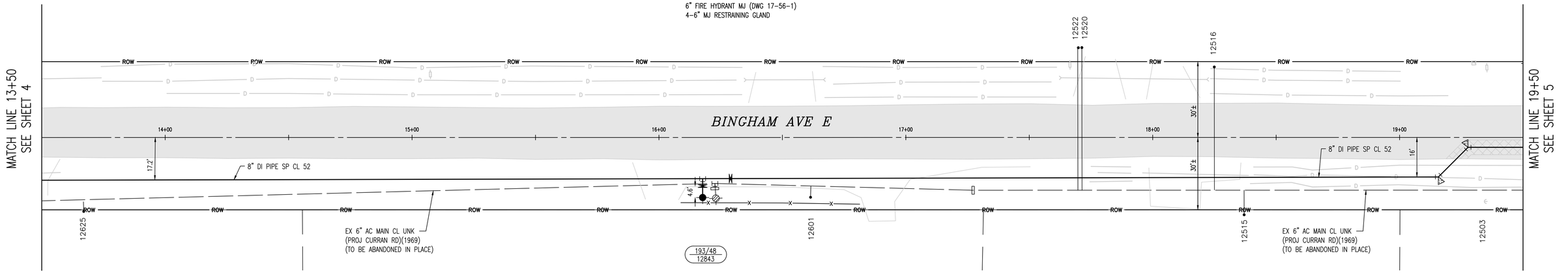
BINGHAM AVE E

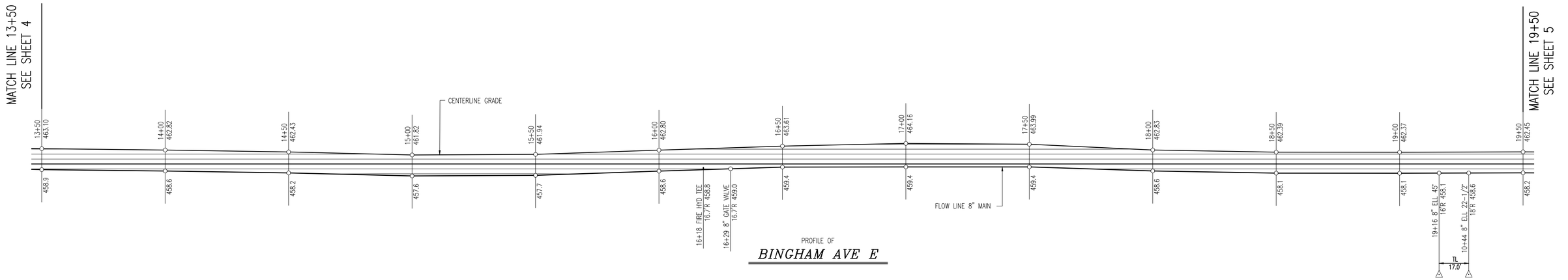
SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

2-8" ELL MJ 45°
2-CONCRETE ANCHOR

8" GATE VALVE MJ

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND





PROFILE OF
BINGHAM AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
STA 13+50 TO STA 19+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee 221E6E93BE931486
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

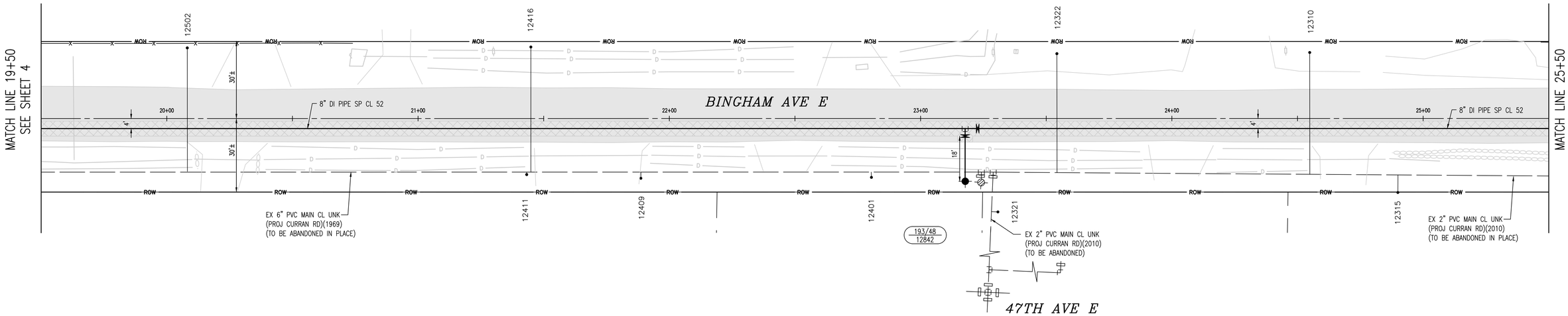
SHEET 4 OF 10

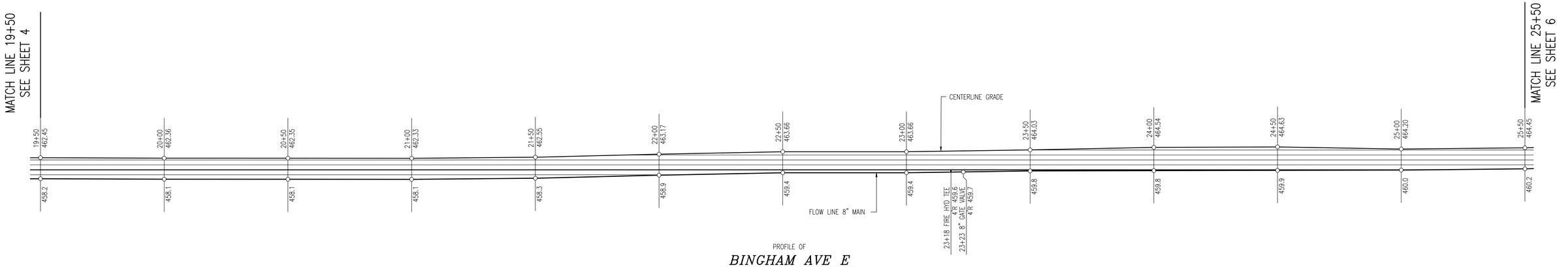
BINGHAM AVE E

SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

8" GATE VALVE MJ

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND





PROFILE OF
BINGHAM AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
55625
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
STA 19+50 TO STA 25+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 5 OF 10

BINGHAM AVE E

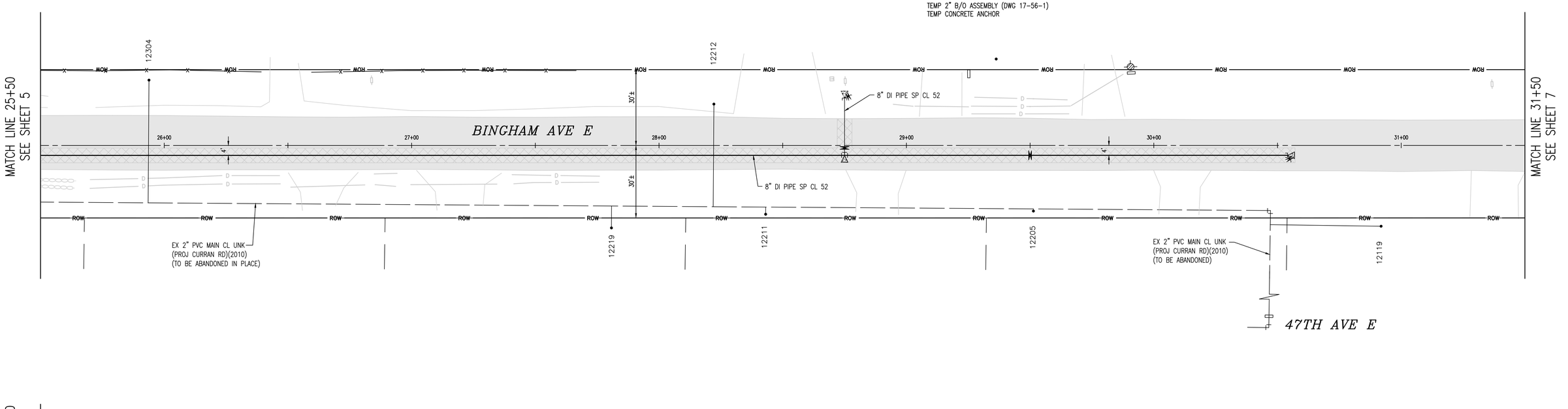
SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

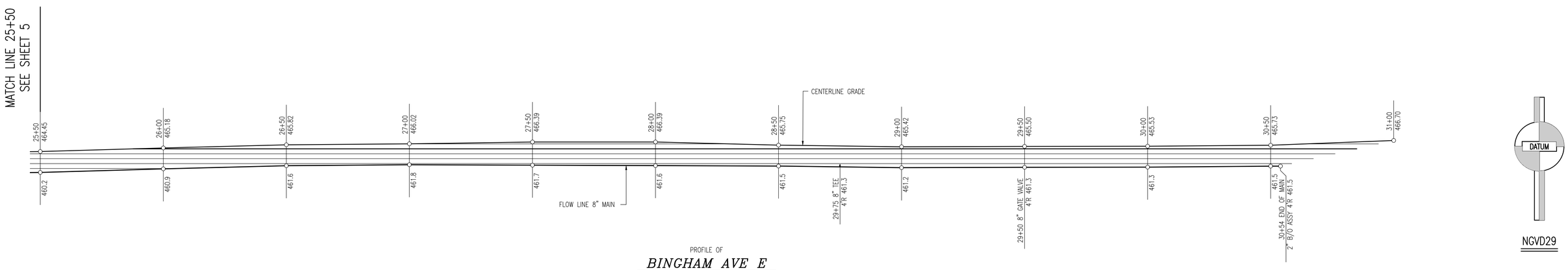
8" GATE VALVE MJ
8" TEE MJ
3-8" MJ RESTRAINING GLAND
2-8" PUSH ON JOINT RESTRAINING GASKET
CONCRETE ANCHOR

TEMP 8" CAP MJ TAPPED 2"
TEMP 2" B/O ASSEMBLY (DWG 17-56-1)
TEMP CONCRETE ANCHOR

8" GATE VALVE MJ

8" CAP MJ TAPPED 2"
3-8" MJ RESTRAINING GLAND
2" B/O ASSEMBLY (DWG 17-56-1)
CONCRETE ANCHOR





PROFILE OF
BINGHAM AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60
SCALE IN FEET

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
25+50 TO STA 30+54

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 6 OF 10

47TH AVE E

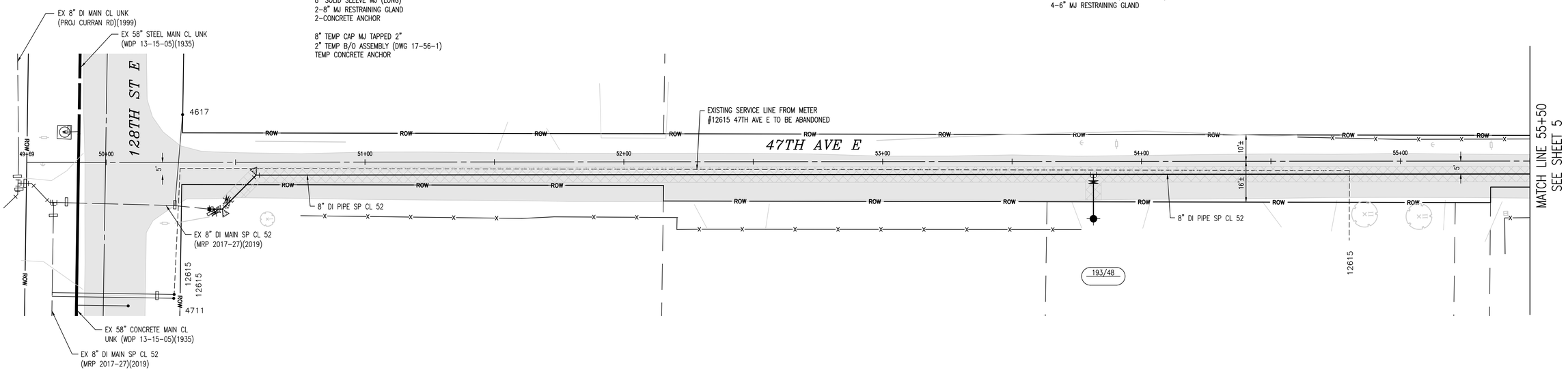
SE1/4-SEC12-T19N-R3E-WM

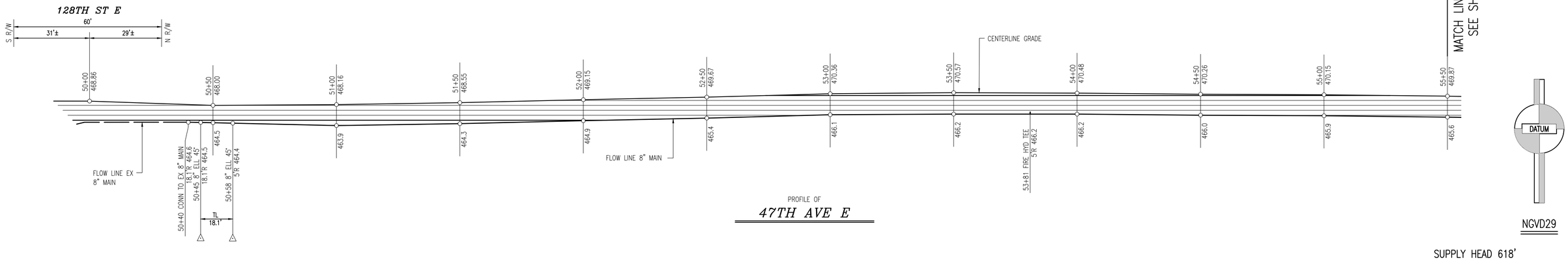
CONTRACTOR TO VERIFY LOCATION, ELEV AND OD OF EX 8" DI MAIN. REMOVE EX 8" CAP AND B/O ASSEMBLY AND MAKE THE CONNECTION AFTER FLUSHING, SAMPLING, AND TESTING ARE COMPLETE.

8" GATE VALVE MJ
2-8" ELL MJ 45°
8" SOLID SLEEVE MJ (LONG)
2-8" MJ RESTRAINING GLAND
2-CONCRETE ANCHOR

8" TEMP CAP MJ TAPPED 2"
2" TEMP B/O ASSEMBLY (DWG 17-56-1)
TEMP CONCRETE ANCHOR

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND





PROFILE OF
47TH AVE E

NGVD29

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

A FREE SERVICE
CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
128TH ST E TO STA 55+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Lee Forslund
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

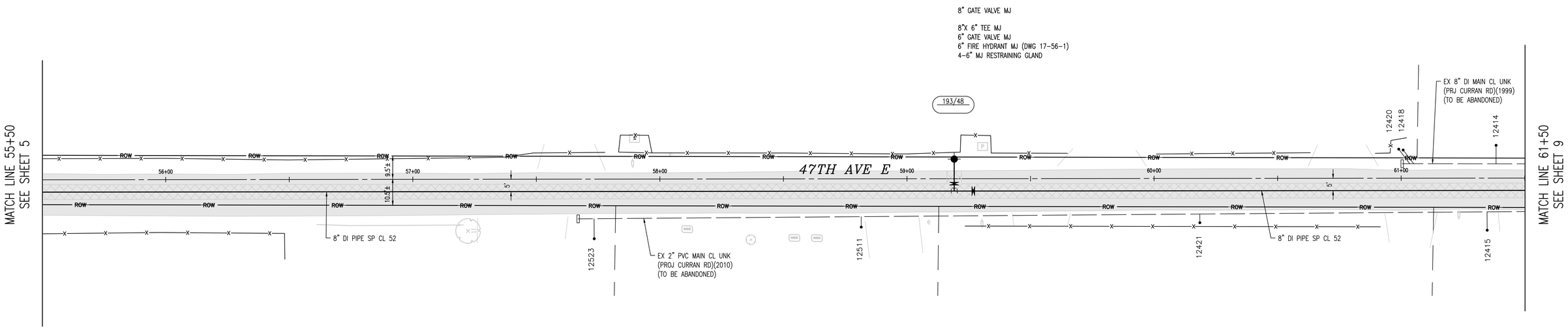
DRAWING NO
2022-0037

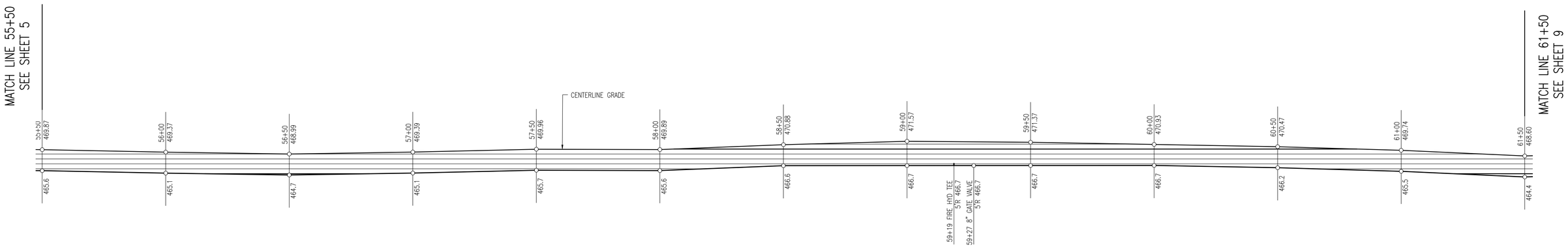
WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 7 OF 10

47TH AVE E

SE1/4-SEC12-T19N-R3E-WM





PROFILE OF

47TH AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
22562
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
STA 55+50 TO STA 61+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Tenny Fosdick 2A16E0B8E0314B6...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

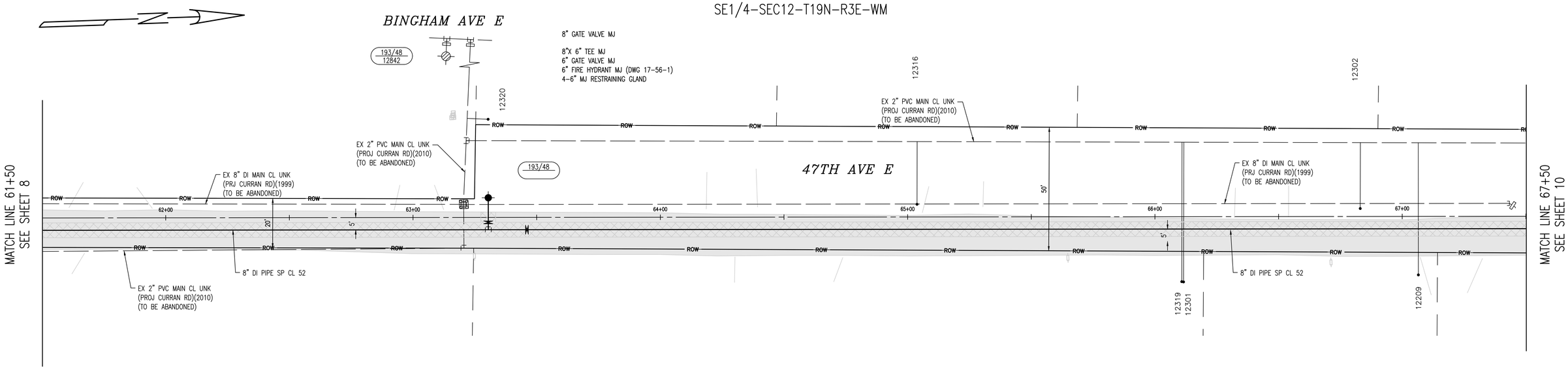
DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 8 OF 10

47TH AVE E

SE1/4-SEC12-T19N-R3E-WM



PROFILE OF
47TH AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
Registered by:
Troy Saghafi
21456/6/2024E1456
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY
PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
STA 61+50 TO STA 67+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee 321AE6A30E831A8A...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

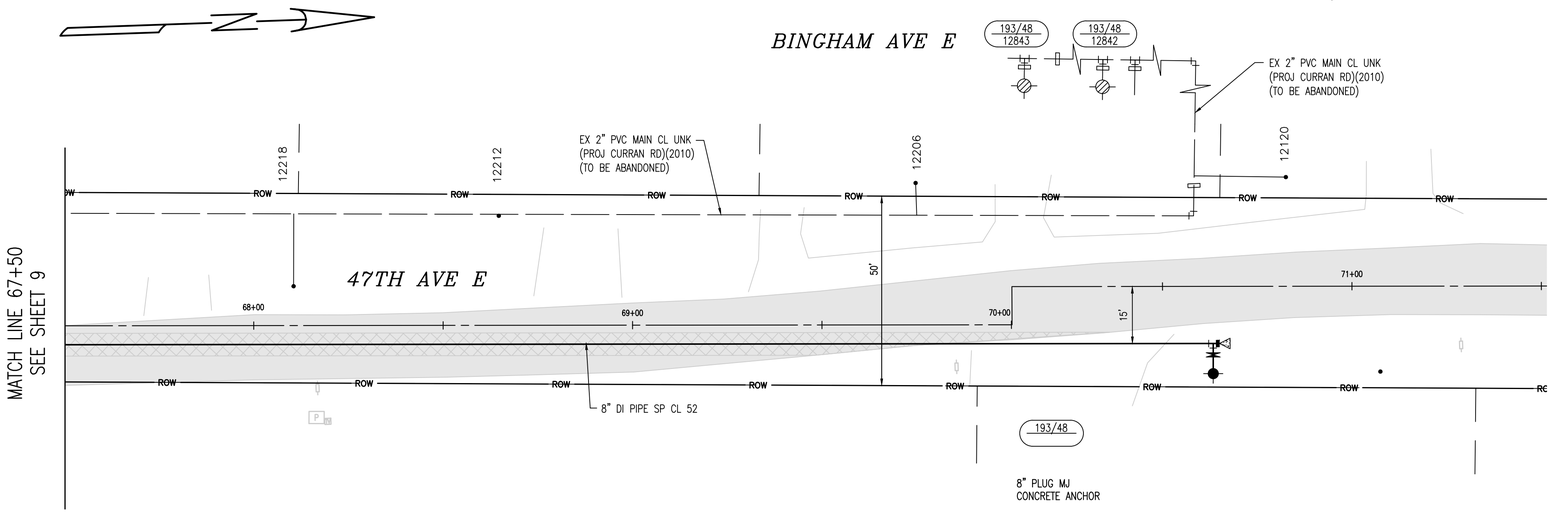
DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 9 OF 10

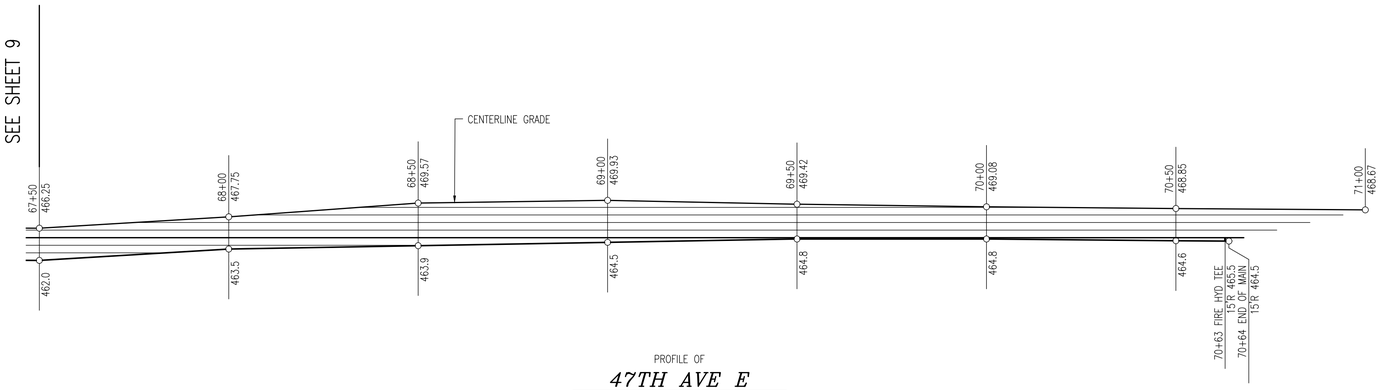
47TH AVE E

SE1/4-SEC12-T19N-R3E-WM

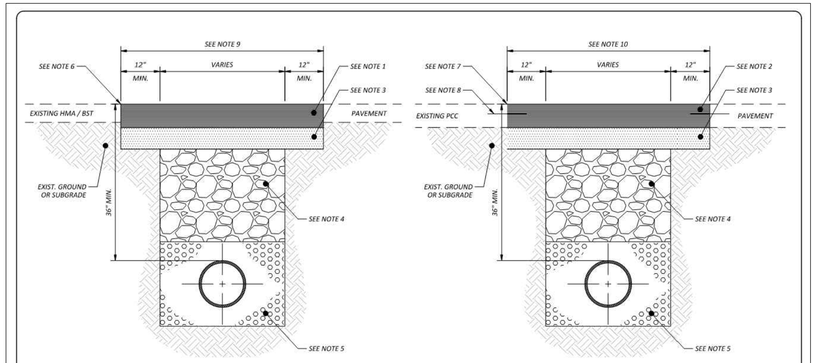


8" PLUG MJ
CONCRETE ANCHOR

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND



PROFILE OF
47TH AVE E



DETAIL FOR HOT MIX ASPHALT (HMA) / BST PAVEMENT UTILITY ROAD CUTS

DETAIL FOR PORTLAND CEMENT CONCRETE PAVEMENT UTILITY ROAD CUTS

(SEE STANDARD DRAWING PC.A7.2 FOR NOTES AND PERMEABLE PAVEMENT ALTERNATIVES)

(NOT TO SCALE)

Pierce County
Planning & Public Works
Office of the County Engineer

APPROVED BY:
COUNTY ENGINEER
10/17/2022
DATE

UTILITY PATCH

SHEET 1 OF 2

STANDARD DRAWING PC.A7.1

NOTES:

1) *HOT MIX ASPHALT (HMA) CL. 1/2 IN. PG 64-22, WITH MINIMUM COMPACTED DEPTH OF 3" OR EXISTING PAVEMENT DEPTH PLUS 1", WHICHEVER IS GREATER. PLACE IN LIFTS WITH A MAXIMUM COMPACTED DEPTH OF 3" PER WSDOT STANDARD SPECIFICATIONS 5-04, AND MACHINE ROLL FLUSH WITH EXISTING PAVEMENT.*
2) *PORTLAND CEMENT CONCRETE PAVEMENT WITH A STANDARD PAVING SECTION EQUAL TO THE EXISTING PAVEMENT DEPTH. PLACE PER WSDOT STANDARD SPECIFICATIONS 5-05. THE ENGINEER MAY SPECIFY THE DESIGN AGE. ANY ASPHALT CONCRETE COVERING THE PORTLAND CEMENT CONCRETE SHALL BE CUT BACK AN ADDITIONAL 4" AND REPLACED WITH HMA CL. 1/2 IN. PG 64-22, COMPACTED TO A DEPTH EQUAL TO THAT OF THE EXISTING ASPHALT CONCRETE PAVEMENT, OR PUT CSBC AS PREFERRED ALTERNATIVE.*
3) *CRUSHED SURFACING TOP COURSE MATCH EXISTING 2" MINIMUM DEPTH, COMPACTED TO 95% MAXIMUM DENSITY.*
4) *IMPORTED OR NATIVE MATERIAL COMPACTED TO 95% MAXIMUM DENSITY. THE MATERIAL SHALL BE ESSENTIALLY FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT READILY AND SHALL MEET THE FOLLOWING TEST REQUIREMENTS:*

SIEVE SIZE	*PERCENT PASSING*
4" SQUARE	*100*
2" SQUARE	*75-100*
U.S. No. 4	*22-100*
U.S. No. 200	*0-10*
DUST RATIO: % PASSING U.S. No. 200 / % PASSING U.S. No. 40	*2/3 MAX.*
SAND EQUIVALENT	*30 MIN.*

ALL PERCENTAGES ARE BY WEIGHT.
THE MATERIAL RETAINED ON A U.S. No. 4 SIEVE SHALL CONTAIN NOT MORE THAN 0.20 PERCENT BY WEIGHT OF WOOD WASTE. ANY NATIVE MATERIAL USED SHALL BE TESTED FOR COMPACTION AND/OR GRADATION AS REQUIRED BY THE ENGINEER.

5) *BEDDING MATERIAL COMPACTED TO 95% MAXIMUM DENSITY SHALL CONSIST OF CRUSHED, PROCESSED, OR NATURALLY OCCURRING GRANULAR MATERIAL. IT SHALL BE FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT AND SHALL MEET THE FOLLOWING SPECIFICATIONS FOR GRADING AND QUALITY:*

SIEVE SIZE	*PERCENT PASSING*
1-1/2" SQUARE	*100*
1" SQUARE	*75-100*
5/8" SQUARE	*50-100*
U.S. No. 4	*20-80*
U.S. No. 40	*3-24*
U.S. No. 200	*10.0 MAX*
SAND EQUIVALENT	*35 MIN.*

IF, IN THE OPINION OF THE ENGINEER, THE NATIVE GRANULAR MATERIAL IS FREE FROM WOOD WASTE, ORGANIC MATERIAL, AND OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS, BUT OTHERWISE DOES NOT CONFORM TO THE SPECIFICATIONS FOR GRADING AND SAND EQUIVALENT, IT MAY BE USED FOR PIPE BEDDING FOR RIGID PIPES, PROVIDED THE NATIVE GRANULAR MATERIAL HAS A MAXIMUM DIMENSION OF 1-1/2 INCHES. DEPTH OF MATERIAL SURROUNDING PIPE SHALL BE ADEQUATE TO SUPPORT THE PIPE AND TRENCH.

BEDDING MATERIAL FOR SANITARY SEWERS -
PEA GRAVEL BEDDING SHALL BE A CLEAN, SOUND, FREE DRAINING, AND GRANULAR MATERIAL CONFORMING TO THE FOLLOWING GRADATION:

SIEVE SIZE	*PERCENT PASSING*
3/4" SQUARE	*100*
3/8" SQUARE	*90-100*
U.S. No. 4	*50-100*
U.S. No. 10	*0-95*
U.S. No. 20	*0-85*
U.S. No. 40	*0-55*
U.S. No. 100	*0-10*
U.S. No. 200	*0-3*

ALL PERCENTAGES ARE BY WEIGHT.

6) *NEAT, UNIFORM AND VERTICAL CUT (TYPICAL BOTH SIDES). CLEAN AND HEAT EDGES AND TACK WITH EMULSIFIED ASPHALT. SEAL JOINT WITH HOT ASPHALT CEMENT.*
7) *NEAT, UNIFORM AND VERTICAL CUT (TYPICAL BOTH SIDES).*
8) *DRILL 7/8"Ø TO 1"Ø X 12" HOLE AND SET #5 X 24" EPOXY-COATED TIE BARS WITH EPOXY RESIN INTO THE EXISTING PAVEMENT PARALLEL TO ROADWAY CENTER LINE ALONG THE TRANSVERSE VERTICAL CUT SPACED AT 18" ON CENTER (TYPICAL BOTH SIDES).*
9) *MINIMUM RESTORATION LIMITS FOR HMA UNLESS OTHERWISE DETERMINED BY THE ENGINEER. IF ANY PORTION OF A LONGITUDINAL PAVEMENT CUT AFFECTS A WHEEL TRACK AS DETERMINED BY THE ENGINEER, THE ENTIRE LANE SHALL BE REMOVED AND REPLACED. WHEREVER AN EXISTING PATCH OR CRACK IS IN CLOSE PROXIMITY TO THE NEW CUT, THE ENGINEER MAY REQUIRE REMOVAL OF THE EXISTING PATCH OR CRACK AND ANY INTERVENING PAVEMENT. DEPTH OF REPLACEMENT ASPHALT SHALL BE IN ACCORDANCE WITH NOTE 1.*
10) *MINIMUM RESTORATION LIMITS FOR PCC UNLESS OTHERWISE DETERMINED BY THE ENGINEER. REMOVE ENTIRE PANEL UNLESS WIDTH OF REMAINING PANEL PORTION IS GREATER THAN 50% OF THE EXISTING PANEL WIDTH. IF ANY PORTION OF A LONGITUDINAL PAVEMENT CUT AFFECTS A WHEEL TRACK AS DETERMINED BY THE ENGINEER, THE ENTIRE LANE SHALL BE REMOVED AND REPLACED. WHEREVER AN EXISTING PATCH OR CRACK IS IN CLOSE PROXIMITY TO THE NEW CUT, THE ENGINEER MAY REQUIRE REMOVAL OF THE EXISTING PATCH OR CRACK AND ANY INTERVENING PAVEMENT. IF THE ENTIRE PANEL IS NOT REMOVED, FOLLOW ASPHALT CONCRETE UTILITY PATCH PROCEDURES WITH AN ASPHALT CONCRETE PAVING DEPTH EQUAL TO THE DEPTH OF THE EXISTING PAVEMENT.*
11) *ALL PERMANENT FINAL PATCHES SHALL BE RECTANGULAR OR CIRCULAR IN SHAPE AND CONSTRUCTED TO BE PARALLEL AND PERPENDICULAR TO THE ROAD CENTERLINE.*
12) *CONTROLLED DENSITY FILL (CDF) SHALL BE REQUIRED ON ROADWAYS WHERE DIFFICULT SUBSURFACE CONDITIONS ARE ANTICIPATED AND SHALL BE PLACED IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS 2-09.3(1)E.*
13) *FOR PERMEABLE PAVEMENT ALTERNATIVES SEE PIERCE COUNTY STORMWATER MANAGEMENT AND SITE DEVELOPMENT MANUAL. MINIMUM RESTORATION LIMITS DETERMINED BY THE ENGINEER.*

(SEE STANDARD DRAWING PC.A7.1 FOR DETAIL DRAWINGS)

Pierce County
Planning & Public Works
Office of the County Engineer

APPROVED BY:
COUNTY ENGINEER
10/17/2022
DATE

UTILITY PATCH

SHEET 2 OF 2

STANDARD DRAWING PC.A7.2

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
Troy Saghafi
55625
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
STA 67+50 TO STA 70+64

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee 221653B5B3314B6...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013293

SHEET 10 OF 10

Class B/C Utility Right-Of-Way Permit

FOR COUNTY USE ONLY

Class C Work

Expiration Date: 7/29/2025
(Permit is void if not activated before above date)

NOTIFY before starting work by 8:30 a.m. the previous business day

Date Permit Activated _____

Contractor _____

Contact Name _____

Phone ( ) _____

Date Reported Completed _____

Pierce County

Address:
Tacoma Mall Plaza
2702 South 42nd Street, Ste 109
Tacoma, Washington 98409-7322

Email: pcutilrowpermit@piercecountywa.gov
Permit Office (253) 798-4824
or (253) 798-3214

FOR COUNTY USE ONLY

Permit Number 24-1102

Date Application Received 10/28/2024

Class B Work - Non-UGS Only

NOTIFY before starting work by 3:00 p.m. the previous business day

Expiration Date: _____
(Permit is void if not activated before above date)

Start Date: _____

Expiration Date: _____

Complete Date: _____

Moratorium End Date n/a

PLEASE SELECT ONE: ☑ UGS ☐ Non-UGS ☐ Sewer Project ☐ Emergency **Other** _____

PERMITTEE

Name Tacoma Public Utilities-Water Work Order # _____

Address 3628 South 35th Street City Tacoma State Wa Zip 98409-3192

WORK PERMITTED

Permission to perform the following work in Pierce County Right-of-Way is hereby granted subject to all provisions on this form

Tacoma Water crews to install 4220' of 8" ductile iron water main, fittings, and hydrants.

Est. Working Days 20

Total Utility Installation 4220 **ft.**

Est. Initial Pavement Cut:

Length 2844 **ft.** **Width** 3 **ft.**

Related CRP# _____

WORK LOCATION

Section 12 Township 19N Range 3E

ADDRESS or STREET & AVENUE of right-of-way From 128th St E on Bingham Ave E and From 128th St E on 47th Ave E.

PERMITTEE'S ACCEPTANCE

The undersigned has read, understands, and accepts the terms, conditions, fees and liquidated damages set forth on this document.

Name Todd Honey Signature _____ Date 10/18/2024

Title Utility Service Specialist Phone (253) 377-5846 Email: thoney@cityoftacoma.org

COUNTY USE ONLY

WORK CONDITIONS

Area Inspector: [ ] **Josh Kotulan (253) 732-2355** ☑ **Scott Wright (253) 381-6315**

[ ] **Push** utilities under the road [ ] **Provide** compaction testing [ ] **Cut** NO pavement [ ] **Bunch** with existing cables

[X] **Schedule a preconstruction meeting with the inspector before starting any work.**

[ ] **A preconstruction meeting is required with owner/developer and all utilities.**

[ ] **A permit from the Department of Natural Resources will be required if any monuments are disturbed or removed.**

[X] P.C. inspector to mark final restoration limits.

[ ] **Memorandum of Agreement for Abandoned Utility and "As-Built" survey of abandoned utility required within 90 days of work completion.**

[X] **Contact Traffic Signal Office at 798-8000 if digging withing 500' of traffic signal.**

[X] **Activate** the permit before expiration date (see top). Activation must be received the previous business day by the time noted above before starting work.

[X] **Notify** Permit Office when work is completed in the right-of-way.

[X] **Notify** the inspector if there are any problems complying with any of these conditions.

[X] **Notify** the One Call Center at (800) 424-5555 at least two business days before excavating.

[X] **Comply** with all of the conditions and provisions on the reverse side of this form.

[X] **Comply** with the "*Manual on Accommodating Utilities in Pierce County Rights-of-Way,"- Sixth Edition.*

[X] **Keep a copy of this permit and approved plans at the worksite at all times.**

[ ] **In accordance with the franchise, the utility is responsible for all damages due to failure to relocate in a timely manner.**

FEES

All fees are estimated. Billing will reflect charges incurred during permitted work. **Cutting of new pavement is not allowed.**

Permit Fee Total $ 2,100.00

B Work = UGS is exempt; Non-UGS is $500* ***Payment must be made prior to permit issuance.**

C Work = (100 LF to 500 LF or 15 SF to 150 SF) UGS is $875; Non-UGS is $1,100*

C Work = (> 500 LF or 150 SF) UGS is $2,100; Non-UGS is $3,250*

COUNTY'S APPROVAL

The undersigned is authorized by the County Engineer to issue this permit.

Name: Corina Alvarez Signature _____ Date 10/30/2024

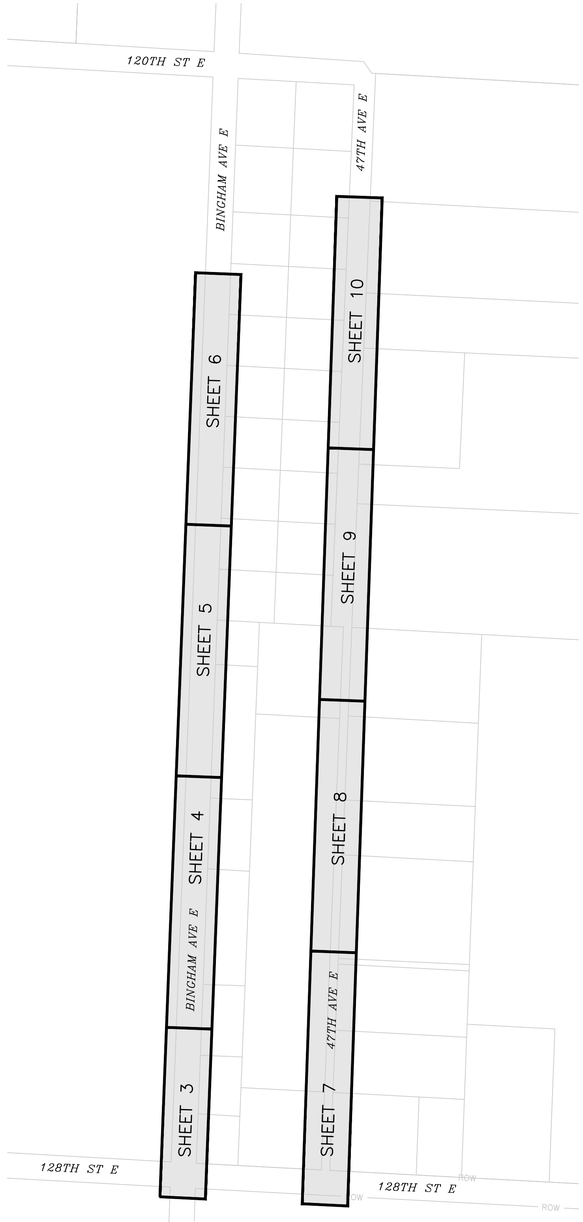
INSPECTORS COMMENTS

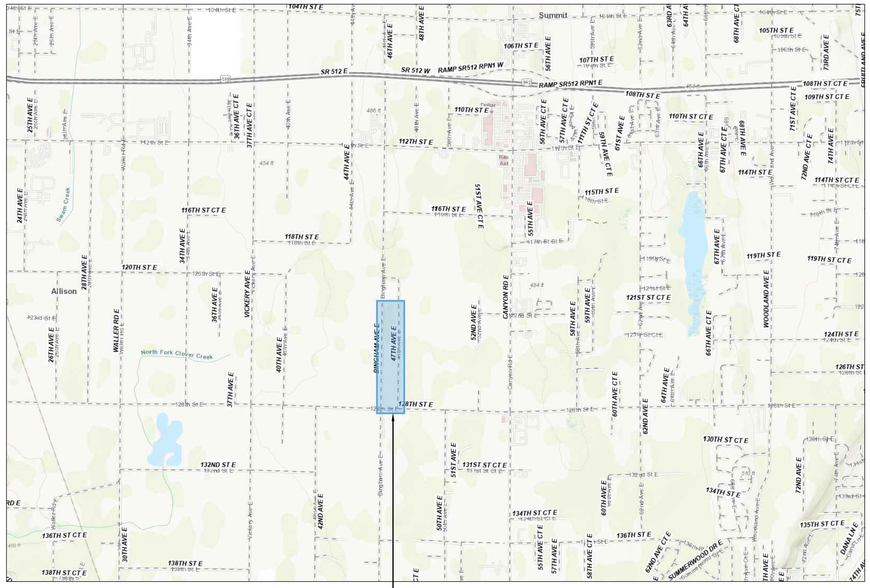
Work is physically complete and accepted: Signature _____ Date _____

1. **Restoration Requirements** *Unless otherwise directed or approved by the Engineer or this Permit, the Permittee shall:*
   a. **Trench--**Provide at least 36 inches of cover over the top of any underground pipe or conduit installed in the County right-of-way. Cover is measured from the top of the pipe to the existing groundline. Backfill trenches in the pavement area with 2-1/2" minus imported or native gravel base per patch details PC.A7.1 and PC.A7.2. Each lift shall be compacted to 95% of maximum dry density as determined by ASTM D1557.
   b. **Steel Plates--**Steel plates may be placed over unfinished portions of work at the end of each day if approved by the Engineer. Steel plates must be anchored with bolts and shimmed at all edges. Permittee shall be responsible for maintaining steel plates, associated anchors, and asphalt shims 24 hours a day, 7 days a week. Permittee shall provide and maintain appropriate signage for steel plating.
   c. **Pavement--**Restore any pavement cuts using hot mix asphalt (HMA) CL ½ Inch, PG 64-22, per patch details PC.A7.1 or PC.A7.2. Place either hot mix asphalt permanent patch or cold mix asphalt temporary patch immediately after backfilling any trench in the pavement area. Any temporary restoration shall be made permanent within 30 working days from the date of the temporary restoration. Cut pavement in rectangular or circular shapes, constructed to be parallel with and perpendicular to the road centerline.
   d. **Right-of-Way--**Remove all rubbish, debris, and surplus material from the County right-of-way that was left due to the work. Cleanup excavation and debris material concurrently with the burying operation whether by plowing or trenching. At no time shall there be debris and excavation material extending along a line for more than 500 feet. Restore right-of-way as near as possible to its original state before the permitted work began. Place crushed rock on any roadway shoulders that are disturbed during construction. Complete all work within the indicated number of working days.
2. **General Requirements--***Unless otherwise directed or approved by the Engineer or this Permit, the Permittee shall:*
   a. **Traffic Control**--Maintain at least one lane of traffic at all times unless a road closure permit has been obtained. Place traffic signs in accordance with the latest edition of the *"Manual on Uniform Traffic Control Devices"* or as directed by the Engineer. Erect, maintain, and provide proper lighting on such barriers and warning signs during the progress of the work as may be necessary or as may be directed by the Engineer for the protection of the traveling public. Make no excavation and place no obstacle within the limits of a County road in such a manner as to interfere with the travel over said road.
   b. **Working Hours--**Perform the work only from 7:00 a.m. to 6:00 p.m. on non-holiday weekdays, Monday through Friday, except for emergencies, or as otherwise approved by the Engineer. County holidays include January 1, 3rd Monday in January, 3rd Monday in February, last Monday in May, July 4, 1st Monday in September, November 11, 4th Thursday and Friday in November, and December 25. When a holiday falls on a Saturday or Sunday, the preceding Friday or the following Monday is observed, respectively. Requests for working after hours shall be submitted to the Engineer at least one week before the after-hours work is scheduled to begin. The Permittee shall sign an "After-Hours Memorandum Agreement" to reimburse the County for any overtime costs incurred by the County for inspection of the work after hours.
   c. **Miscellaneous--**Provide a performance bond in the amount set by the Engineer for the County's benefit to insure compliance with all terms and conditions of this Permit. Provide an insurance policy approved by the Pierce County Risk Management Department prior to starting the work. Comply with the latest edition of the Washington State Electrical Code, Washington State Department of Transportation Standards and Standard Specifications for Road and Bridge Construction, Civil Aeronautics Administration specifications, and all other applicable laws and regulations. Perform the Work to the satisfaction of the Engineer. Any of the work not completed according to the provisions set forth in this Permit, may be completed by the County and charged to the Permittee.
3. **Other Conditions**
   a. In accepting this Permit, the Permittee agrees to protect the County and save it harmless from all claims, actions or damages of every kind a description which may accrue to or be suffered by any person or person, corporation or property by reason of the performance of any such work, character of materials used or manner or installation, maintenance and operation or by the improper occupancy of right-of-way or public place or public structure, and in case any suit or action is brought against said County for damages arising out of any of the above causes, the petitioner, his successors or assigns will upon notice to him or them of commencement of such action, defend the same at his or their own sole cost and expense and will satisfy judgment after the said suit or action shall have finally been determined if adverse to the County.
   b. If the work done under this Permit interferes with the drainage of the County roads, or causes damage, the Permittee shall wholly and at his own expense make such provision as the Engineer may direct to take care of said drainage and/or damage.
   c. The Engineer hereby reserves the right to order the change of location or the removal of any structure or structures authorized by this Permit, at any time. Said change or removal shall be made at the sole expense of the Permittee.
   d. All permitted changes, reconstruction or relocation by the Permittee shall be done in such manner as will cause the least interference with any County work. The County shall in no way be held liable for any damage to the Permittee by reason of any such work by the County, its agents or representatives, or by the exercise of any rights by the County upon the roads, streets, public places or structures in question.
   e. The Permittee recognizes and agrees that it is responsible for and will make at its own expense any changes that may be required in the location of any utility constructed under this Permit due to any reconstruction, improvement, or maintenance of the roadway and/or other appurtenances including drainage facilities within the right-of-way and/or any damage that may be done the roadway or right-of-way or user of the road that may in any way be attributed by the Engineer to the utility installation or operation.
   f. This Permit or privilege shall not be deemed or held to be an exclusive one and shall not prohibit the County from granting other permits or franchise rights like or other nature to public or private utilities, nor shall it prevent the County from using any of its roads, streets, or public places, or affect its right to full supervision and control over all or any part of them, none of which is hereby surrendered.
   g. The Engineer may revoke, annul, change, amend, amplify, or terminate this Permit or any of the conditions herein enumerated if Permittee fails to comply with any or all of its provisions, requirements and regulations as herein set forth.
   h. In accepting this Permit, the Permittee agrees that any damage or injury done to the property of the Permittee or any expense incurred by him through the operation of a contractor, working for the County, or of any County employee, shall be at the sole expense of the Permittee.
4. **Definitions**

   a. *Engineer* The Pierce County Engineer or an authorized representative.
   b. *Permittee* The party or parties to whom this permit is issued, or their successors and/or assigns.
   c. *County* The County of Pierce.
   d. *Work* The work herein contemplated and approved by this Permit.

MAIN REPLACEMENT PROJECT 2022-0037
BINGHAM AVE E AND 47TH AVE E





SHEET 1	COVER SHEET	
SHEET 2	LEGEND & ABBREVIATIONS	
SHEET 3	BINGHAM AVE E	128TH ST E TO STA 13+50
SHEET 4	BINGHAM AVE E	STA 13+50 TO STA 19+50
SHEET 5	BINGHAM AVE E	STA 19+50 TO STA 24+50
SHEET 6	BINGHAM AVE E	STA 24+50 TO STA 30+54
SHEET 7	47TH AVE E	128TH ST E TO STA 55+50
SHEET 8	47TH AVE E	STA 55+50 TO STA 61+50
SHEET 9	47TH AVE E	STA 61+50 TO STA 67+50
SHEET 10	47TH AVE E	STA 67+50 TO STA 70+64

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
55625
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

TOPOGRAPHY INFORMATION WAS PROVIDED BY
TACOMA WATER JEH

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
COVER SHEET FOR
BINGHAM AVE E & 47TH AVE E

DATE 01/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: 2216ED3D331486...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: N/A
VERT: N/A

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 1 OF 10

LINETYPES

EXISTING	PROPOSED	DESCRIPTION
		CURB
		BUILDING LINE
X	X	FENCE
		GUARDRAIL
		RAILROAD TRACKS
		RETAINING WALL
		CENTERLINE
ROW	P/ROW	RIGHT OF WAY
		EASEMENT
		CULVERT
D	D	DITCH
		SIDE SEWER
14"SS	14"SS	SANITARY SEWER
16"FM	16"FM	FORCED SANITARY
20"SD	20"SD	STORM DRAIN
10"G	10"G	GAS
TEL	TEL	TELEPHONE
FO	FO	FIBER OPTIC
TV	TV	TELEVISION (CATV)
PWR	PWR	POWER
SL	SL	STREETLIGHT
TS	TS	TRAFFIC SIGNAL
JUT	JUT	JOINT UTILITY TRENCH
EX 12" AC MAIN	EX 12" AC MAIN	DISTRIBUTION MAINS
EX 58" STL MAIN	EX 58" STL MAIN	TRANSMISSION MAINS

WATER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		BYPASS
		CHECK VALVE
		OPEN VALVE
		CLOSED VALVE
478 PRV 251	478 PRV 251	PRESSURE REDUCING VALVE (PRV)
		TEE
		11-1/4" ELL
		22-1/2" ELL
		45° ELL
		90° ELL
		CROSS
	1:1	VERTICAL ELL W/ CONCRETE ANCHOR
8929		WATER SERVICE
		SAMPLE STATION
NOT USED		CONCRETE ANCHOR
		REDUCER W/CONCRETE ANCHOR
		BLOW OFF ASSEMBLY
		CAP
		PLUG
		SOLID SLEEVE
		TRANSITION COUPLING
		END CAP COUPLING
		6" FIRE HYDRANT
	NOT USED	4" FIRE HYDRANT

OTHER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
B	B	BOLLARD
FO	FO	FIBER OPTIC MANHOLE
FO	FO	FIBER OPTIC VAULT
G	G	GAS MANHOLE
		GAS VALVE
		MONUMENT
P	P	POWER MANHOLE
		POWER POLE
		POWER POLE ANCHOR
P	P	POWER VAULT
		RAILROAD SIGN
		SANITARY MANHOLE
SHRUB	SHRUB	SHRUB
		SPRINKLER HEAD
		STORM CATCH BASIN
		STORM MANHOLE
		STREETLIGHT
SL	SL	STREETLIGHT JB
T	T	TELEPHONE JB
T	T	TELEPHONE MANHOLE
T	T	TELEPHONE POLE
TV	TV	TELEVISION JB
		TRAFFIC SIGNAL
TS	TS	TRAFFIC SIGNAL JB
		TREES (CLASS 0–LESS THAN 12")
	NOT USED	TREES (CLASS I–12" UP TO BUT NOT INCLUDING 36")
	NOT USED	TREES (CLASS II–36" UP TO BUT NOT INCLUDING 72")
	NOT USED	TREES (CLASS III–72" UP TO BUT NOT INCLUDING 127")
	NOT USED	TREES (CLASS IV–127" OR MORE – TREE HEIGHT OF 30' OR LESS)
	NOT USED	TREES (CLASS V–127" OR MORE – TREE HEIGHT GREATER THAN 30')

PAVEMENT

- EXISTING CRUSHED ROCK/GRAVEL
- EXISTING COBBLE STONE/PAVER
- EXISTING ASPHALT/OIL MAT
- EXISTING CONCRETE
- LANDSCAPING
- APPROX PAVEMENT RESTORATION LIMITS
- PAVEMENT RESTORATION
- WATER MAIN

ABBREVIATIONS

A	ANGLE
ABAN	ABANDONED
AC	ASBESTOS CEMENT
APP'D	APPROVED
APPROX	APPROXIMATELY
ASPH	ASPHALT
AVE	AVENUE
B/F	BUTTERFLY
B/O	BLOW OFF
B/O ASSY	BLOW OFF ASSEMBLY
BLVD	BOULEVARD
BM	BENCH MARK
BNSF	BURLINGTON NORTHERN SANTA FE RAILWAY
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CI	CAST IRON
CL	CENTERLINE OR CLASS
CO	CLEAN OUT
CON	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
COT	CITY OF TACOMA
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CT	COURT
CULV	CULVERT
CY	CUBIC YARD
D	DELTA
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
DWY	DRIVEWAY
E	EAST
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EQ	EQUATION
EVC	END VERTICAL CURVE
EX	EXISTING
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FLG	FLANGE
FM	FORCE MAIN
FT	FOOT
GALV	GALVANIZED
GIS	GEOGRAPHIC INFORMATION SYSTEM
GM	GAS METER
GND	GROUND
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HP	HIGH PRESSURE
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
IP	INTERMEDIATE PRESSURE
JB	JUNCTION BOX
JUT	JOINT UTILITY TRENCH
L	LENGTH
LC	LENGTH OF CHORD
LF	LINEAR FEET
LEB	LARGE END BELL
LES	LARGE END SPIGOT
LID	LOCAL IMPROVEMENT DISTRICT
MAX	MAXIMUM
MH	MANHOLE
MIC	MON IN CASE
MIL	MILLIMETER
MIN	MINIMUM
MJ	MECHANICAL JOINT
MON	MONUMENT
MRP	MAIN REPLACEMENT PROJECT
N	NORTH
N/A	NOT APPLICABLE
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PC	PIERCE COUNTY
PC	PRIVATE CONTRACT
PC	POINT OF CURVE
PE	POLYETHYLENE
PG	PERFORMANCE GRADE
PI	POINT OF HORIZONTAL INTERSECTION
PKWY	PARKWAY
PL	PLACE
PLS	PLASTIC
PRJ	PROJECT
PROP	PROPOSED
P/ROW	PROPOSED RIGHT OF WAY
PRP	PUBLIC ROAD PROJECT
PRV	PRESSURE REDUCING VALVE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PWA	PUBLIC WORKS ADMINISTRATION
R	RADIUS
R	RANGE
R/R	RAILROAD
ROW	RIGHT OF WAY
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
S	SOUTH
SAN	SANITARY
SBM	SURFACE BRASS MON
SEB	SMALL END BELL
SEC	SECTION
SES	SMALL END SPIGOT
SP	SPECIAL
SSB	SUB SURFACE BRASS
SSS	SUB SURFACE STONE
ST	STREET
STL	STEEL
SW	SIDEWALK
T	TANGENT
T	TOWNSHIP
TEMP	TEMPORARY
TL	TRUE LENGTH
TYP	TYPICAL
UG	UNDERGROUND
UNK	UNKNOWN
VERT	VERTICAL
VC	VERTICAL CURVE
W	WEST
W/	WITH
WDP	WATER DIVISION PROJECT
WM	WILLAMETTE MERIDIAN
WO	WORK ORDER
YR	YEAR

STANDARD NOTES

THERE SHALL BE NO SUBSTITUTION OF MATERIALS WITHOUT PRIOR APPROVAL OF TACOMA WATER.

ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH TACOMA WATER DWG 17-56-1.

ALL VALVE BOXES AND TOPS SHALL BE MANUFACTURED IN ACCORDANCE WITH TACOMA WATER DWG 17-56-1.

ALL VALVE BOXES INSTALLED IN PAVING REQUIRE A 36" DIAMETER CONCRETE PAD, 6" THICK WITH 1-1/2" HMA CLASS 3/8" PG 64-22 PATCH PER TACOMA WATER DWG 17-56-1.

THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

USE SHORT LENGTHS OF PIPE AS REQUIRED BY THE INSPECTOR TO MAINTAIN PROPER GRADE AND ALIGNMENT.

CONTRACTOR TO REMOVE EXISTING FIRE HYDRANTS AT THE FOOT, PLUG END OF ABANDONED HYDRANT LATERAL AND RETURN HYDRANTS TO THE TACOMA WATER STOREROOM AT SOUTH 35TH STREET AND UNION AVENUE, TACOMA, WA. INCIDENTAL TO CONTRACT.

CONTRACTOR TO REMOVE EXISTING VALVE BOXES ABANDONED BY THIS PROJECT. INCIDENTAL TO CONTRACT.

CONTRACTOR TO PROTECT EXISTING MAINS AS THEY WILL REMAIN IN SERVICE UNTIL TESTING, SAMPLING AND SERVICE TRANSFERS ARE COMPLETE.

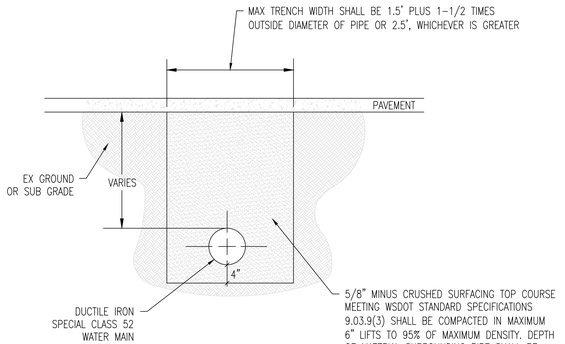
ALL OTHER NEW UTILITIES DESIGNED WITHIN THE PROJECT MUST MAINTAIN A 5' MIN SEPARATION FROM ALL TACOMA WATER STRUCTURES. PERPENDICULAR CROSSINGS ARE ALLOWED WITH A MIN OF 6" OF VERTICAL SEPARATION AND 5' HORIZONTAL FROM GATE VALVES, WATER METERS, FIRE HYDRANTS, AND ALL OTHER WATER APPURTENANCES.

THE CONTRACTOR WILL MAINTAIN ACCESS TO THE JOB SITE AT ALL TIMES. THE ACCESS MUST ALLOW ALL TACOMA WATER SUPPORT STAFF TO SAFELY ACCESS THE SITE. IF THE ACCESS IS DEEMED INACCESSIBLE TO SUPPORT STAFF, ALL TACOMA WATER WORK WILL CEASE UNTIL THE ACCESS DEEMED ACCESSIBLE BY TACOMA WATER.

TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED IN PART BASED ON DATA OBTAINED BY OTHERS. ALTHOUGH THIS INFORMATION IS BELIEVED TO BE ACCURATE, TACOMA WATER DOES NOT TAKE RESPONSIBILITY FOR ANY ERRORS THAT MAY RESULT BASED ON USE OF THIS DATA.

PHASE 1 OF WATER MAIN INSTALLATION WILL START WITH THE MAIN ON 47TH AVE E. OTHERWISE, THERE WILL NOT BE A WAY TO FEED THE SERVICES IN THIS AREA FOR THE DURATION OF THIS PROJECT.

ALL SIDE SEWER STUBS MUST BE AT LEAST 10' FROM WATER SERVICES/FIRE HYDRANTS. WHEN NOT POSSIBLE, SIDE SEWERS MUST BE CONSTRUCTED ACCORDING TO THE PROVISIONS OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY CRITERIA FOR SEWAGE WORKS DESIGN (ORANGE BOOK), AND APPROVED BY THE ENGINEER.



TYPICAL WATER MAIN TRENCH SECTION

NOT TO SCALE

CALL 2 BUSINESS DAYS BEFORE YOU DIG 811 "It's the Law" www.callbeforeyoudig.com

TROY A. SAGHAFI — STATE OF WASHINGTON — 55625 — REGISTERED PROFESSIONAL ENGINEER — 10/02/2024

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER — TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
LEGEND & ABBREVIATIONS FOR
BINGHAM AVE E

DATE 01/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED — DocuSigned by: 221E639E931496...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE HORIZ: N/A VERT: N/A

DRAWING NO 2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 2 OF 10

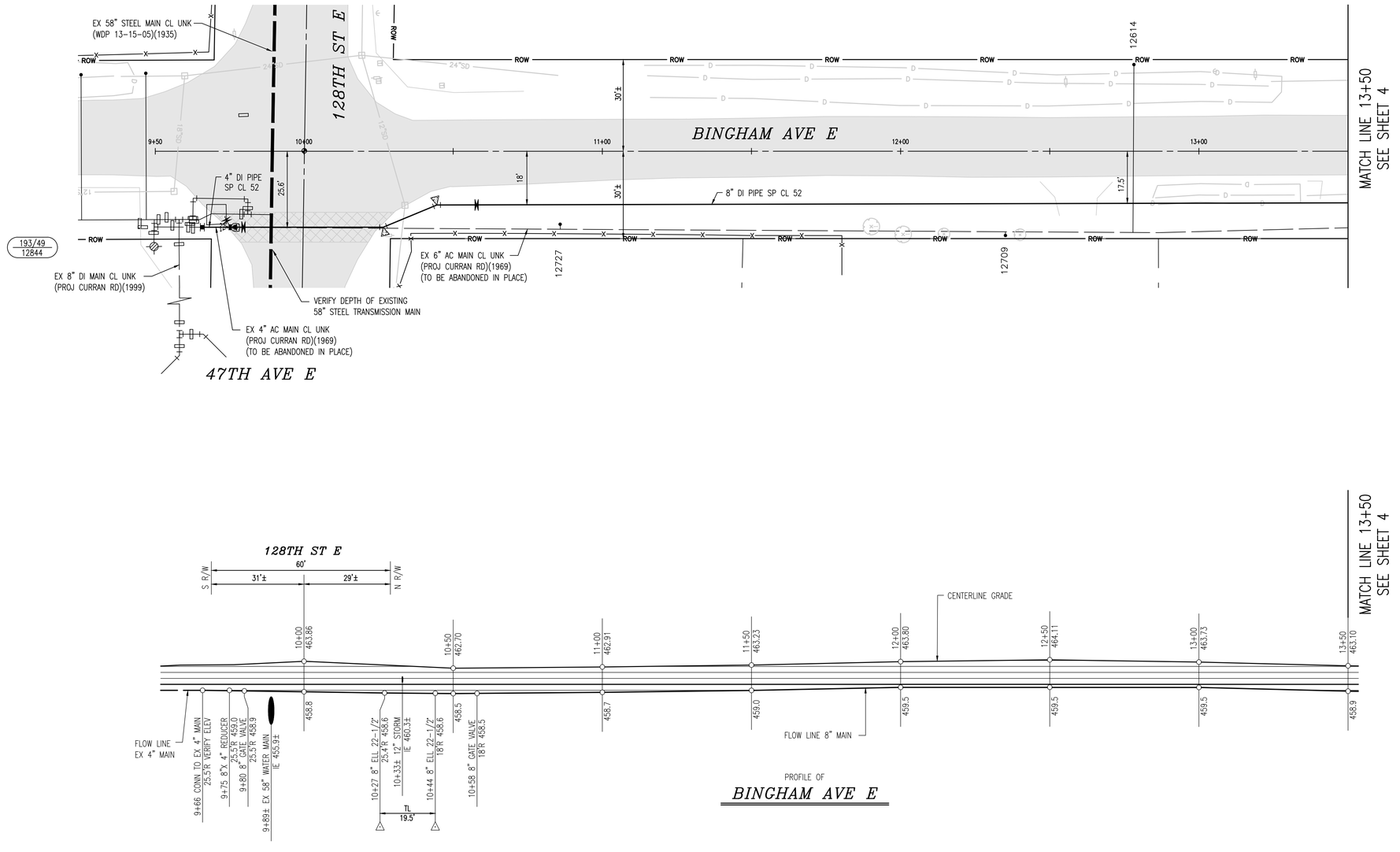
BINGHAM AVE E

SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

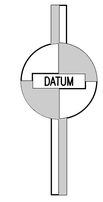
CONTRACTOR TO VERIFY LOCATION, ELEV AND OD OF EX 4" AC MAIN AND MAKE THE CONNECTION AFTER FLUSHING, SAMPLING, AND TESTING ARE COMPLETE.

2-8" GATE VALVE MJ
2-8" ELL MJ 22-1/2"
8"X 4" REDUCER MJ
4" TRANSITION COUPLING W/7" CENTER RING (AC TO DI)
2-CONCRETE ANCHOR

4" TEMP PLUG MJ TAPPED 2"
2" TEMP B/O ASSEMBLY (DWG 17-56-1)
TEMP CONCRETE ANCHOR



PROFILE OF
BINGHAM AVE E



NGVD29

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

CONTRACTOR	
SUPPLIER	
PIPE	
HYDRANTS	
VALVES	

INSPECTOR	
PRE-CONSTRUCTION	
PERMIT NUMBER	
ACTIVATE PERMIT	
START	
FILL MAIN	
PRESSURE TEST	
FLUSHED	
SAMPLES LOGGED IN BOOK	
1ST SET OF SAMPLES	
2ND SET OF SAMPLES	
MAIN IN SERVICE	
PROJECT COMPLETION LETTER	
HYDRANT DATA SHEETS	
B/O DATA SHEETS	
FINAL CHECK	
CLOSE PERMIT	
YEARLY PROJECTS INSPECTORS OFFICE	

PHASES

SECTION	START	FILL	TEST	IN SERVICE

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

A FREE SERVICE
CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
DocuSigned by:
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
128TH ST E TO STA 13+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: 221EE0CE0D1149A...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 3 OF 10

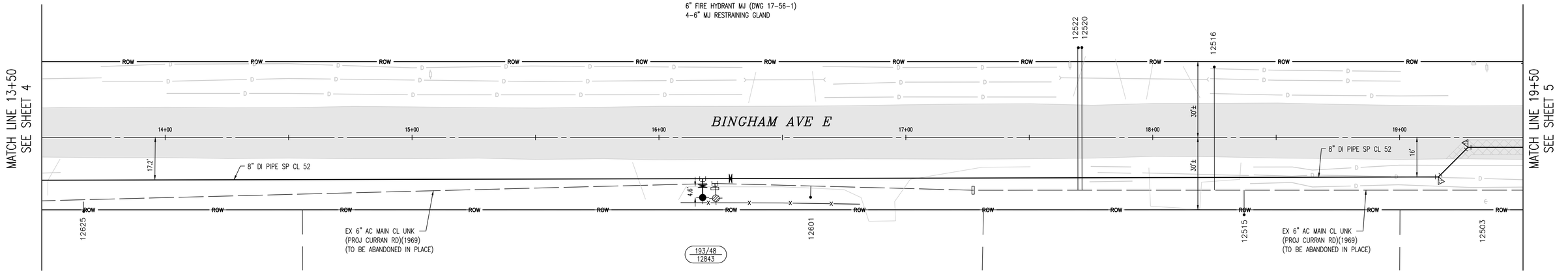
BINGHAM AVE E

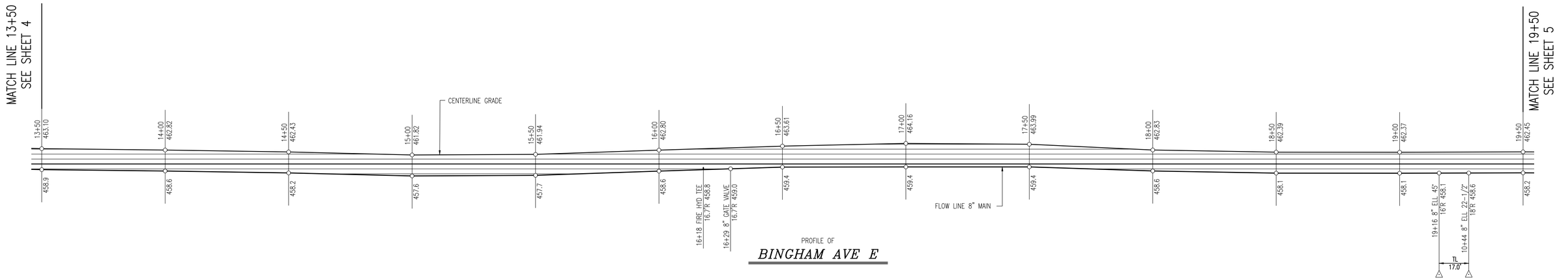
SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

2-8" ELL MJ 45°
2-CONCRETE ANCHOR

8" GATE VALVE MJ

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND





PROFILE OF
BINGHAM AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
STA 13+50 TO STA 19+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee 221E6E93BE931486
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

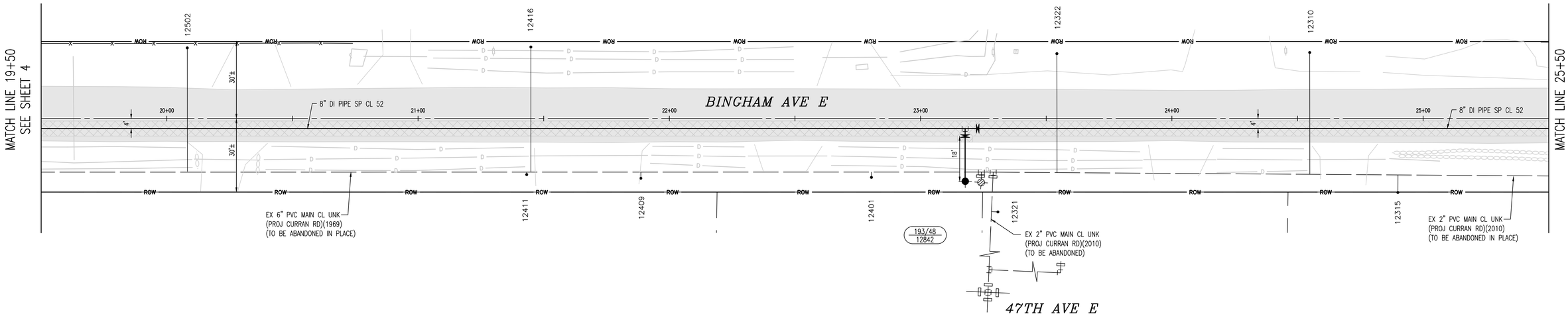
SHEET 4 OF 10

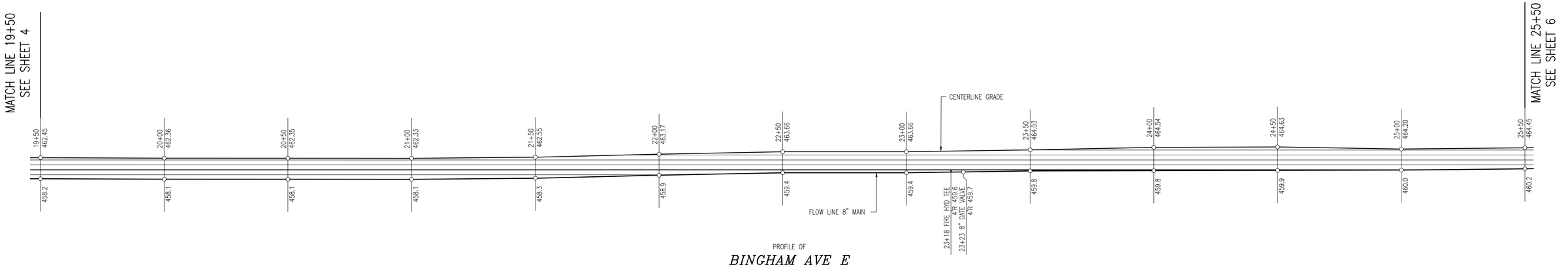
BINGHAM AVE E

SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

8" GATE VALVE MJ

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND





PROFILE OF
BINGHAM AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
55625
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
STA 19+50 TO STA 25+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 5 OF 10

BINGHAM AVE E

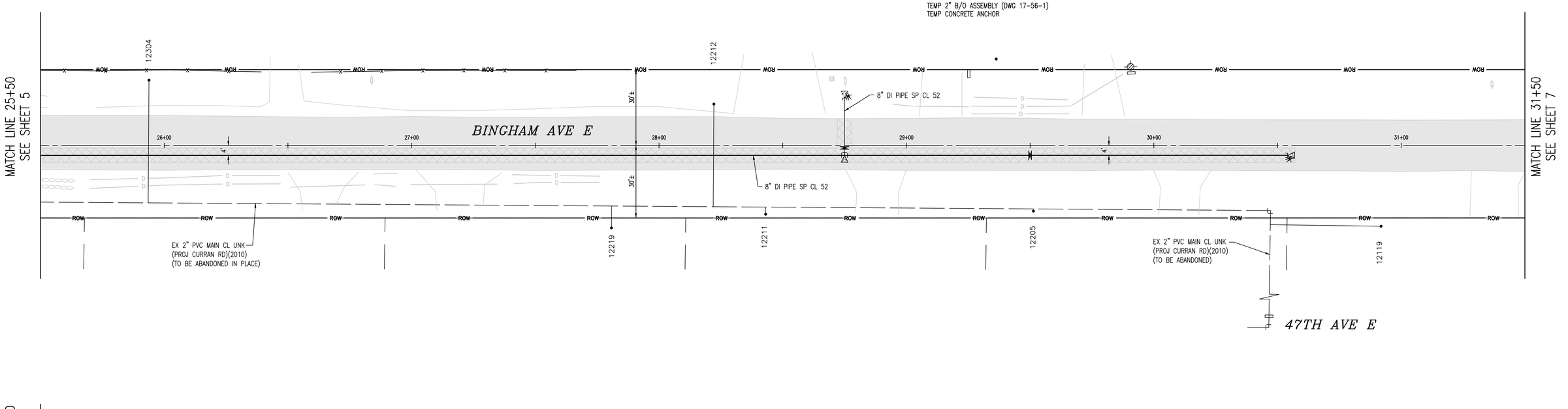
SW1/4-SEC12-T19N-R3E-WM
SE1/4-SEC12-T19N-R3E-WM

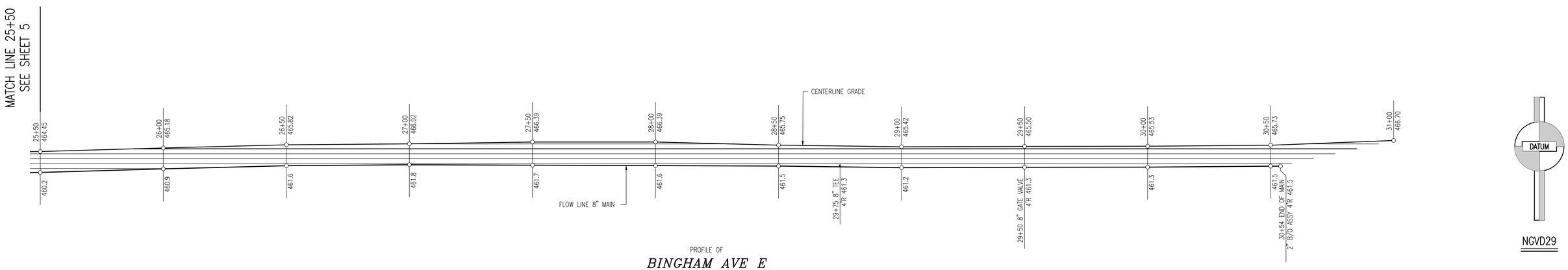
8" GATE VALVE MJ
8" TEE MJ
3-8" MJ RESTRAINING GLAND
2-8" PUSH ON JOINT RESTRAINING GASKET
CONCRETE ANCHOR

TEMP 8" CAP MJ TAPPED 2"
TEMP 2" B/O ASSEMBLY (DWG 17-56-1)
TEMP CONCRETE ANCHOR

8" GATE VALVE MJ

8" CAP MJ TAPPED 2"
3-8" MJ RESTRAINING GLAND
2" B/O ASSEMBLY (DWG 17-56-1)
CONCRETE ANCHOR





PROFILE OF
BINGHAM AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60
SCALE IN FEET

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/47, 193/48 | BLUE BOOK 3A

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
BINGHAM AVE E
25+50 TO STA 30+54

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 6 OF 10

47TH AVE E

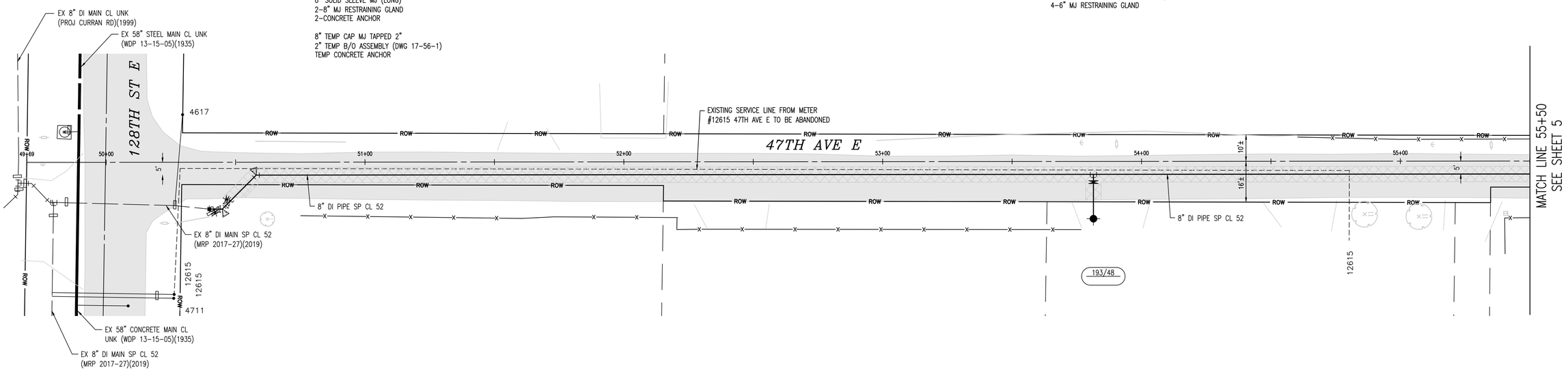
SE1/4-SEC12-T19N-R3E-WM

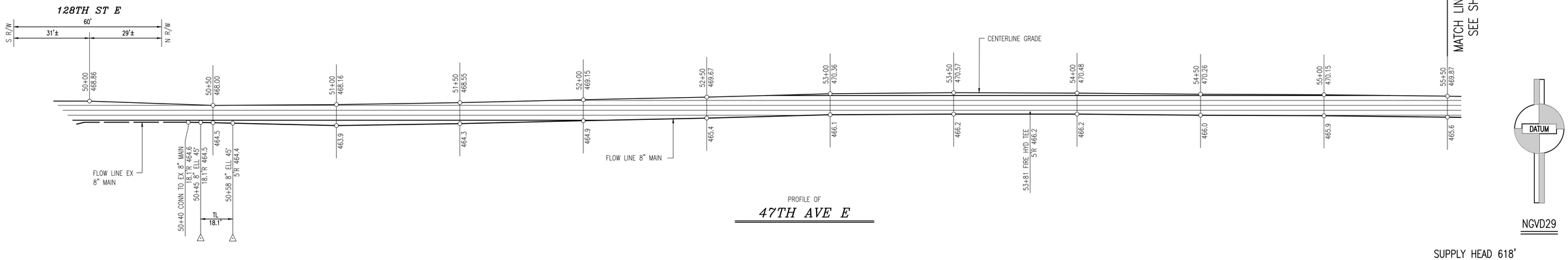
CONTRACTOR TO VERIFY LOCATION, ELEV AND OD OF EX 8" DI MAIN. REMOVE EX 8" CAP AND B/O ASSEMBLY AND MAKE THE CONNECTION AFTER FLUSHING, SAMPLING, AND TESTING ARE COMPLETE.

8" GATE VALVE MJ
2-8" ELL MJ 45°
8" SOLID SLEEVE MJ (LONG)
2-8" MJ RESTRAINING GLAND
2-CONCRETE ANCHOR

8" TEMP CAP MJ TAPPED 2"
2" TEMP B/O ASSEMBLY (DWG 17-56-1)
TEMP CONCRETE ANCHOR

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND





PROFILE OF
47TH AVE E

NGVD29

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

A FREE SERVICE
CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
128TH ST E TO STA 55+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Lee Forslund
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

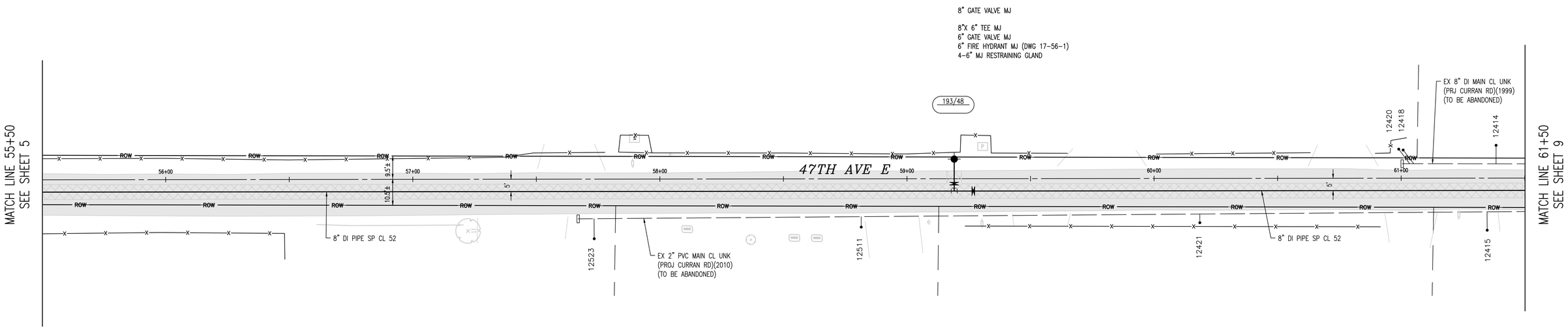
DRAWING NO
2022-0037

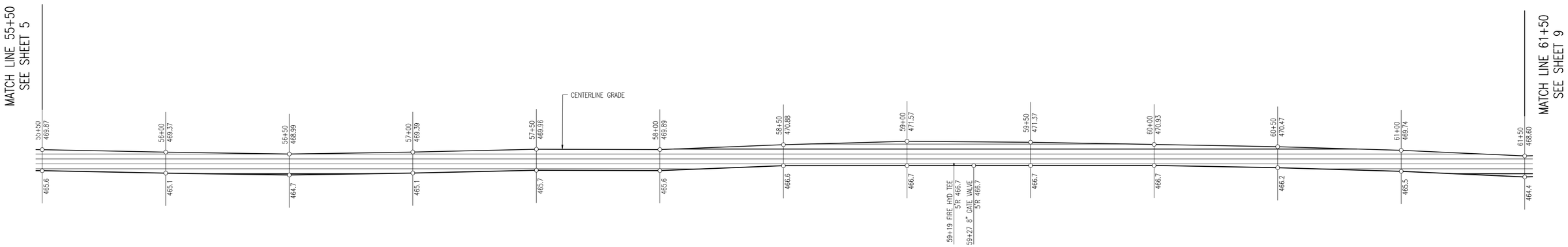
WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 7 OF 10

47TH AVE E

SE1/4-SEC12-T19N-R3E-WM





PROFILE OF

47TH AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
22562
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
STA 55+50 TO STA 61+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Tenny Fosdick 2A16E0B8E0314B6...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

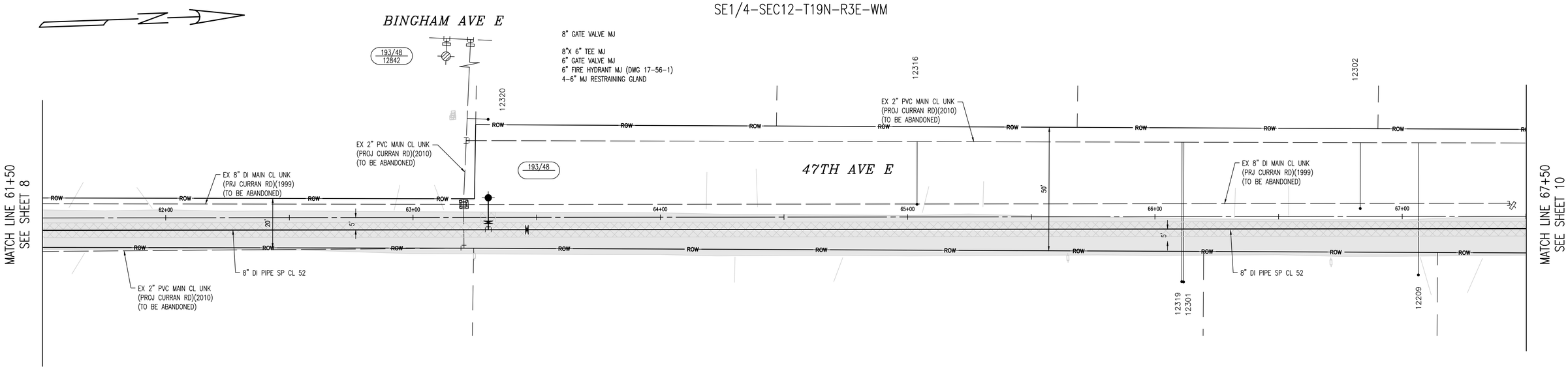
DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 20000133293

SHEET 8 OF 10

47TH AVE E

SE1/4-SEC12-T19N-R3E-WM



PROFILE OF
47TH AVE E

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
Registered by:
Troy Saghafi
21456/6/2024E1456
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY
PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
STA 61+50 TO STA 67+50

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee 321AE6A30E831A8A...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

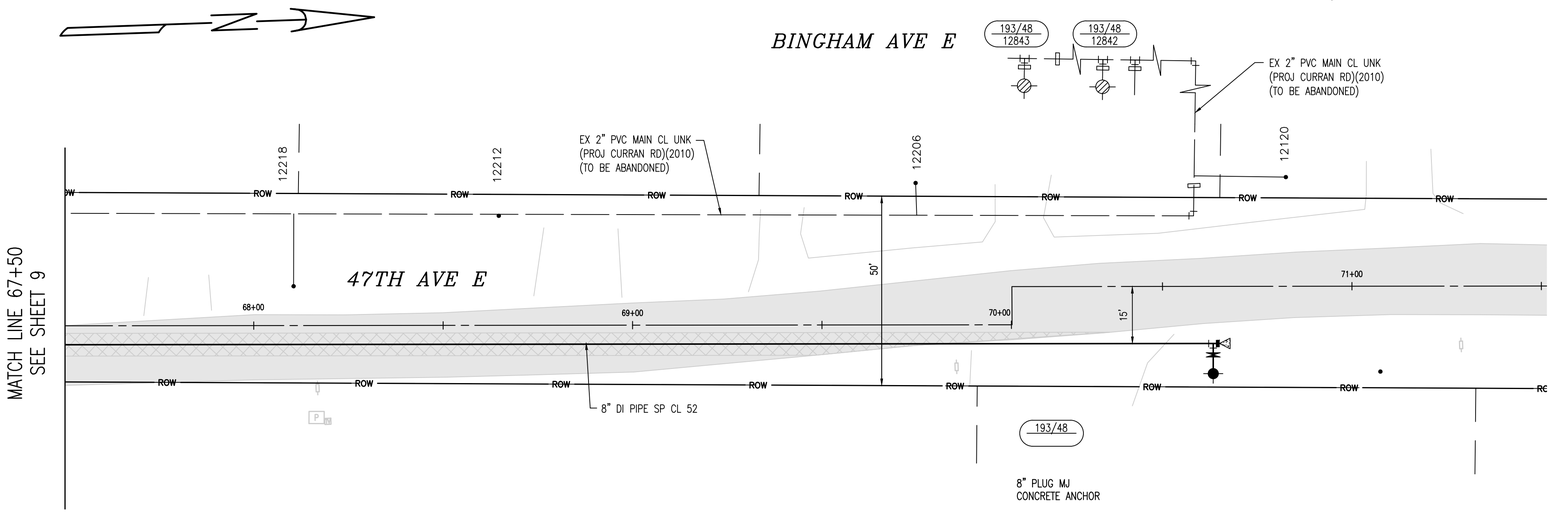
DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013329 3

SHEET 9 OF 10

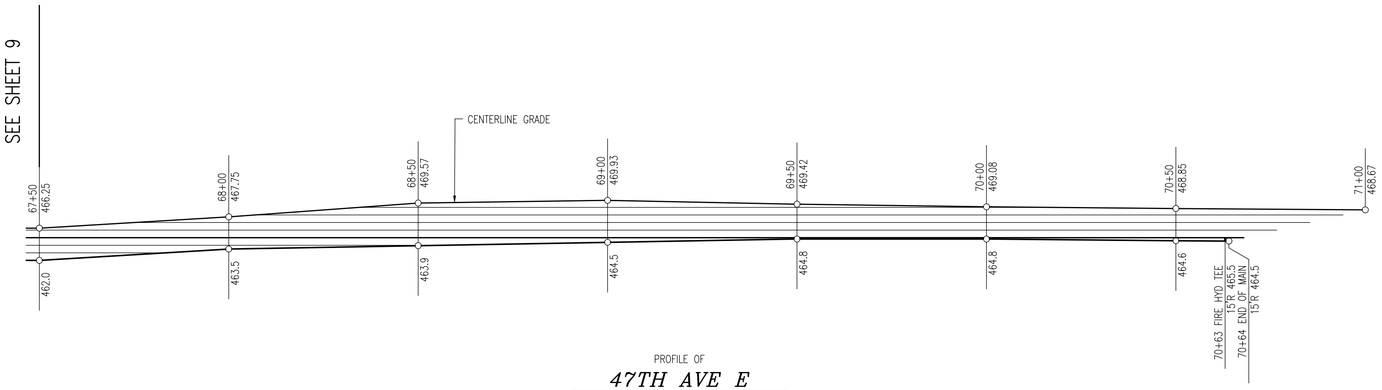
47TH AVE E

SE1/4-SEC12-T19N-R3E-WM

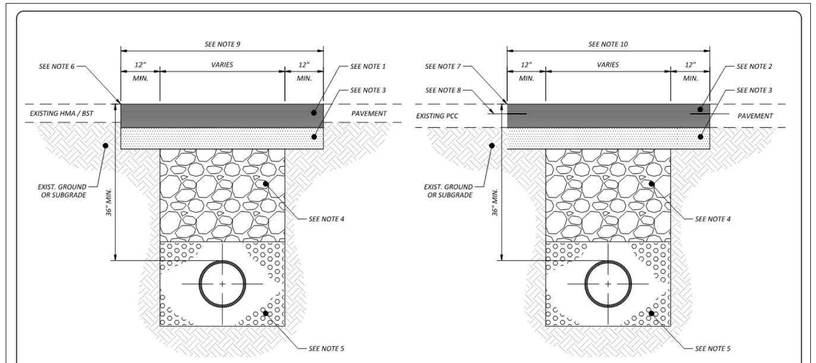


8" PLUG MJ
CONCRETE ANCHOR

8"X 6" TEE MJ
6" GATE VALVE MJ
6" FIRE HYDRANT MJ (DWG 17-56-1)
4-6" MJ RESTRAINING GLAND



PROFILE OF
47TH AVE E



DETAIL FOR HOT MIX ASPHALT (HMA) / BST PAVEMENT UTILITY ROAD CUTS

DETAIL FOR PORTLAND CEMENT CONCRETE PAVEMENT UTILITY ROAD CUTS

(SEE STANDARD DRAWING PC.A7.2 FOR NOTES AND PERMEABLE PAVEMENT ALTERNATIVES)

(NOT TO SCALE)

Pierce County
Planning & Public Works
Office of the County Engineer

APPROVED BY:
COUNTY ENGINEER
10/17/2022
DATE

UTILITY PATCH

SHEET 1 OF 2

STANDARD DRAWING PC.A7.1

NOTES:

1) *HOT MIX ASPHALT (HMA) CL. 1/2 IN. PG 64-22, WITH MINIMUM COMPACTED DEPTH OF 3" OR EXISTING PAVEMENT DEPTH PLUS 1", WHICHEVER IS GREATER. PLACE IN LIFTS WITH A MAXIMUM COMPACTED DEPTH OF 3" PER WSDOT STANDARD SPECIFICATIONS 5-04, AND MACHINE ROLL FLUSH WITH EXISTING PAVEMENT.*
2) *PORTLAND CEMENT CONCRETE PAVEMENT WITH A STANDARD PAVING SECTION EQUAL TO THE EXISTING PAVEMENT DEPTH. PLACE PER WSDOT STANDARD SPECIFICATIONS 5-05. THE ENGINEER MAY SPECIFY THE DESIGN AGE. ANY ASPHALT CONCRETE COVERING THE PORTLAND CEMENT CONCRETE SHALL BE CUT BACK AN ADDITIONAL 4" AND REPLACED WITH HMA CL. 1/2 IN. PG 64-22, COMPACTED TO A DEPTH EQUAL TO THAT OF THE EXISTING ASPHALT CONCRETE PAVEMENT, OR PUT CSBC AS PREFERRED ALTERNATIVE.*
3) *CRUSHED SURFACING TOP COURSE MATCH EXISTING 2" MINIMUM DEPTH, COMPACTED TO 95% MAXIMUM DENSITY.*
4) *IMPORTED OR NATIVE MATERIAL COMPACTED TO 95% MAXIMUM DENSITY. THE MATERIAL SHALL BE ESSENTIALLY FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT READILY AND SHALL MEET THE FOLLOWING TEST REQUIREMENTS:*

SIEVE SIZE	*PERCENT PASSING*
4" SQUARE	*100*
2" SQUARE	*75-100*
U.S. No. 4	*22-100*
U.S. No. 200	*0-10*
DUST RATIO: % PASSING U.S. No. 200 / % PASSING U.S. No. 40	*2/3 MAX.*
SAND EQUIVALENT	*30 MIN.*

ALL PERCENTAGES ARE BY WEIGHT.
THE MATERIAL RETAINED ON A U.S. No. 4 SIEVE SHALL CONTAIN NOT MORE THAN 0.20 PERCENT BY WEIGHT OF WOOD WASTE. ANY NATIVE MATERIAL USED SHALL BE TESTED FOR COMPACTION AND/OR GRADATION AS REQUIRED BY THE ENGINEER.

5) *BEDDING MATERIAL COMPACTED TO 95% MAXIMUM DENSITY SHALL CONSIST OF CRUSHED, PROCESSED, OR NATURALLY OCCURRING GRANULAR MATERIAL. IT SHALL BE FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT AND SHALL MEET THE FOLLOWING SPECIFICATIONS FOR GRADING AND QUALITY:*

SIEVE SIZE	*PERCENT PASSING*
1-1/2" SQUARE	*100*
1" SQUARE	*75-100*
5/8" SQUARE	*50-100*
U.S. No. 4	*20-80*
U.S. No. 40	*3-24*
U.S. No. 200	*10.0 MAX*
SAND EQUIVALENT	*35 MIN.*

IF, IN THE OPINION OF THE ENGINEER, THE NATIVE GRANULAR MATERIAL IS FREE FROM WOOD WASTE, ORGANIC MATERIAL, AND OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS, BUT OTHERWISE DOES NOT CONFORM TO THE SPECIFICATIONS FOR GRADING AND SAND EQUIVALENT, IT MAY BE USED FOR PIPE BEDDING FOR RIGID PIPES, PROVIDED THE NATIVE GRANULAR MATERIAL HAS A MAXIMUM DIMENSION OF 1-1/2 INCHES. DEPTH OF MATERIAL SURROUNDING PIPE SHALL BE ADEQUATE TO SUPPORT THE PIPE AND TRENCH.

BEDDING MATERIAL FOR SANITARY SEWERS -
PEA GRAVEL BEDDING SHALL BE A CLEAN, SOUND, FREE DRAINING, AND GRANULAR MATERIAL CONFORMING TO THE FOLLOWING GRADATION:

SIEVE SIZE	*PERCENT PASSING*
3/4" SQUARE	*100*
3/8" SQUARE	*90-100*
U.S. No. 4	*50-100*
U.S. No. 10	*0-95*
U.S. No. 20	*0-85*
U.S. No. 40	*0-55*
U.S. No. 100	*0-10*
U.S. No. 200	*0-3*

ALL PERCENTAGES ARE BY WEIGHT.

6) *NEAT, UNIFORM AND VERTICAL CUT (TYPICAL BOTH SIDES). CLEAN AND HEAT EDGES AND TACK WITH EMULSIFIED ASPHALT. SEAL JOINT WITH HOT ASPHALT CEMENT.*
7) *NEAT, UNIFORM AND VERTICAL CUT (TYPICAL BOTH SIDES).*
8) *DRILL 7/8"Ø TO 1"Ø X 12" HOLE AND SET #5 X 24" EPOXY-COATED TIE BARS WITH EPOXY RESIN INTO THE EXISTING PAVEMENT PARALLEL TO ROADWAY CENTER LINE ALONG THE TRANSVERSE VERTICAL CUT SPACED AT 18" ON CENTER (TYPICAL BOTH SIDES).*
9) *MINIMUM RESTORATION LIMITS FOR HMA UNLESS OTHERWISE DETERMINED BY THE ENGINEER. IF ANY PORTION OF A LONGITUDINAL PAVEMENT CUT AFFECTS A WHEEL TRACK AS DETERMINED BY THE ENGINEER, THE ENTIRE LANE SHALL BE REMOVED AND REPLACED. WHEREVER AN EXISTING PATCH OR CRACK IS IN CLOSE PROXIMITY TO THE NEW CUT, THE ENGINEER MAY REQUIRE REMOVAL OF THE EXISTING PATCH OR CRACK AND ANY INTERVENING PAVEMENT. DEPTH OF REPLACEMENT ASPHALT SHALL BE IN ACCORDANCE WITH NOTE 1.*
10) *MINIMUM RESTORATION LIMITS FOR PCC UNLESS OTHERWISE DETERMINED BY THE ENGINEER. REMOVE ENTIRE PANEL UNLESS WIDTH OF REMAINING PANEL PORTION IS GREATER THAN 50% OF THE EXISTING PANEL WIDTH. IF ANY PORTION OF A LONGITUDINAL PAVEMENT CUT AFFECTS A WHEEL TRACK AS DETERMINED BY THE ENGINEER, THE ENTIRE LANE SHALL BE REMOVED AND REPLACED. WHEREVER AN EXISTING PATCH OR CRACK IS IN CLOSE PROXIMITY TO THE NEW CUT, THE ENGINEER MAY REQUIRE REMOVAL OF THE EXISTING PATCH OR CRACK AND ANY INTERVENING PAVEMENT. IF THE ENTIRE PANEL IS NOT REMOVED, FOLLOW ASPHALT CONCRETE UTILITY PATCH PROCEDURES WITH AN ASPHALT CONCRETE PAVING DEPTH EQUAL TO THE DEPTH OF THE EXISTING PAVEMENT.*
11) *ALL PERMANENT FINAL PATCHES SHALL BE RECTANGULAR OR CIRCULAR IN SHAPE AND CONSTRUCTED TO BE PARALLEL AND PERPENDICULAR TO THE ROAD CENTERLINE.*
12) *CONTROLLED DENSITY FILL (CDF) SHALL BE REQUIRED ON ROADWAYS WHERE DIFFICULT SUBSURFACE CONDITIONS ARE ANTICIPATED AND SHALL BE PLACED IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS 2-09.3(1)E.*
13) *FOR PERMEABLE PAVEMENT ALTERNATIVES SEE PIERCE COUNTY STORMWATER MANAGEMENT AND SITE DEVELOPMENT MANUAL. MINIMUM RESTORATION LIMITS DETERMINED BY THE ENGINEER.*

(SEE STANDARD DRAWING PC.A7.1 FOR DETAIL DRAWINGS)

Pierce County
Planning & Public Works
Office of the County Engineer

APPROVED BY:
COUNTY ENGINEER
10/17/2022
DATE

UTILITY PATCH

SHEET 2 OF 2

STANDARD DRAWING PC.A7.2

SUPPLY HEAD 618'

20 10 0 20 40 60

SCALE IN FEET

DATUM

NGVD29

CALL
2 BUSINESS DAYS
BEFORE YOU DIG
811
"It's the Law"
www.callbeforeyoudig.com

TROY A. SAGHAFI
STATE OF WASHINGTON
Troy Saghafi
55625
REGISTERED
PROFESSIONAL ENGINEER
10/02/2024

FINAL PAVEMENT RESTORATION LIMITS TO BE DETERMINED BY PIERCE COUNTY INSPECTOR IN FIELD.

NO	REVISION	DATE	BY	APP'D
3				
2				
1				

REFERENCE

FIELD BOOK | MAP NO. 193/48 | BLUE BOOK 3A

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

MAIN REPLACEMENT PROJECT 2022-0037
WATER MAINS AND FIRE HYDRANTS FOR
47TH AVE E
STA 67+50 TO STA 70+64

DATE 03/24
DESIGNED TAS
DRAWN RJE
CHECKED TAS

APPROVED DocuSigned by: Terry Forshee 221653B5B3314B6...
PLANNING & ENGINEERING DIVISION
10/04/2024

SCALE
HORIZ: 1"=20'
VERT: 1"=10'

DRAWING NO
2022-0037

WBS # WTR-00560-15 | SURVEYING | ENGINEERING WTR-00560-15-01 | INSPECTION 2000013293

SHEET 10 OF 10

SIGN SPACING = X (1)

TYPE OF ROADWAY	POSTED SPEED	SIGN SPACING (FT)
RURAL ROADS AND URBAN ARTERIALS	45 MPH	500 ±
RURAL ROADS AND URBAN ARTERIALS	35 / 40 MPH	350 ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL, AND BUSINESS DISTRICTS	25 / 30 MPH	200 ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

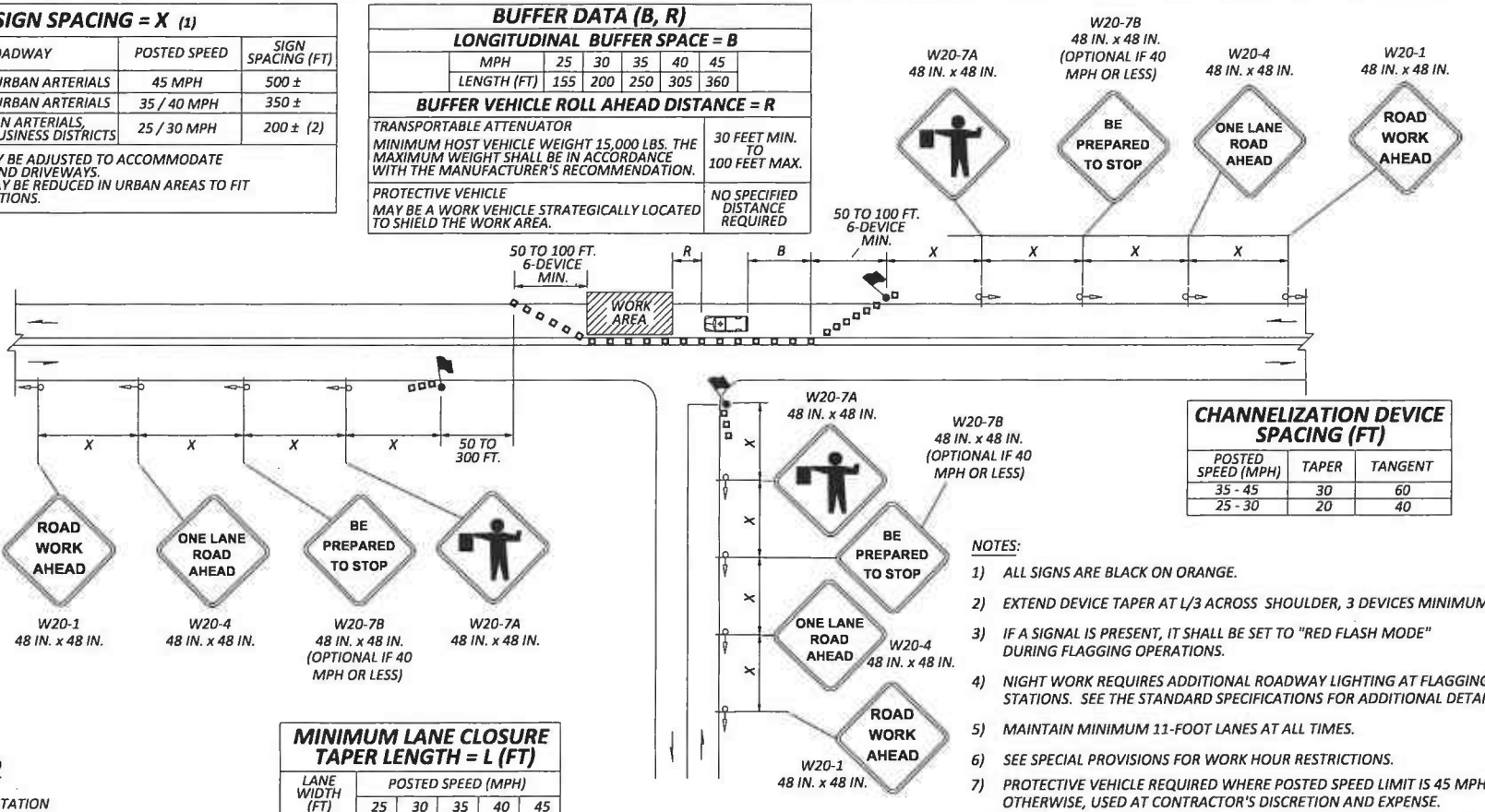
BUFFER DATA (B, R)

LONGITUDINAL BUFFER SPACE = B

MPH	25	30	35	40	45
LENGTH (FT)	155	200	250	305	360

BUFFER VEHICLE ROLL AHEAD DISTANCE = R

TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED



CHANNELIZATION DEVICE SPACING (FT)

POSTED SPEED (MPH)	TAPER	TANGENT
35 - 45	30	60
25 - 30	20	40

MINIMUM LANE CLOSURE TAPER LENGTH = L (FT)

LANE WIDTH (FT)	POSTED SPEED (MPH)				
	25	30	35	40	45
10	105	150	205	270	450
11	115	165	225	295	495
12	125	180	245	320	540

LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE (SEE NOTE 7)

NOTES:

1) ALL SIGNS ARE BLACK ON ORANGE.
2) EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER, 3 DEVICES MINIMUM.
3) IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" DURING FLAGGING OPERATIONS.
4) NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
5) MAINTAIN MINIMUM 11-FOOT LANES AT ALL TIMES.
6) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
7) PROTECTIVE VEHICLE REQUIRED WHERE POSTED SPEED LIMIT IS 45 MPH. OTHERWISE, USED AT CONTRACTOR'S DISCRETION AND EXPENSE.
8) LANE CLOSURES REQUIRE 72-HOUR PUBLIC NOTICE VIA PCMS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. COORDINATE PCMS MESSAGE WITH PIERCE COUNTY TRAFFIC ENGINEERING.

(NOT TO SCALE)

Pierce County
Planning & Public Works
Office of the County Engineer

APPROVED BY:
COUNTY ENGINEER

10/17/2022
DATE

ONE LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

STANDARD DRAWING PC.K4.1

SIGN SPACING = X (1)

TYPE OF ROADWAY	POSTED SPEED	SIGN SPACING (FT)
RURAL ROADS AND URBAN ARTERIALS	45 MPH	500 ±
RURAL ROADS AND URBAN ARTERIALS	35 / 40 MPH	350 ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL, AND BUSINESS DISTRICTS	25 / 30 MPH	200 ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM SHOULDER TAPER LENGTH = L/3 (FT)

SHOULDER WIDTH (FT)	POSTED SPEED (MPH)				
	25	30	35	40	45
8	40	40	60	90	120
10	40	60	90	90	180

USE A 3-DEVICE TAPER FOR SHOULDERS LESS THAN 8 FEET WIDE

CHANNELIZATION DEVICE SPACING (FT)

POSTED SPEED (MPH)	TAPER	TANGENT
35 - 45	30	60
25 - 30	20	40

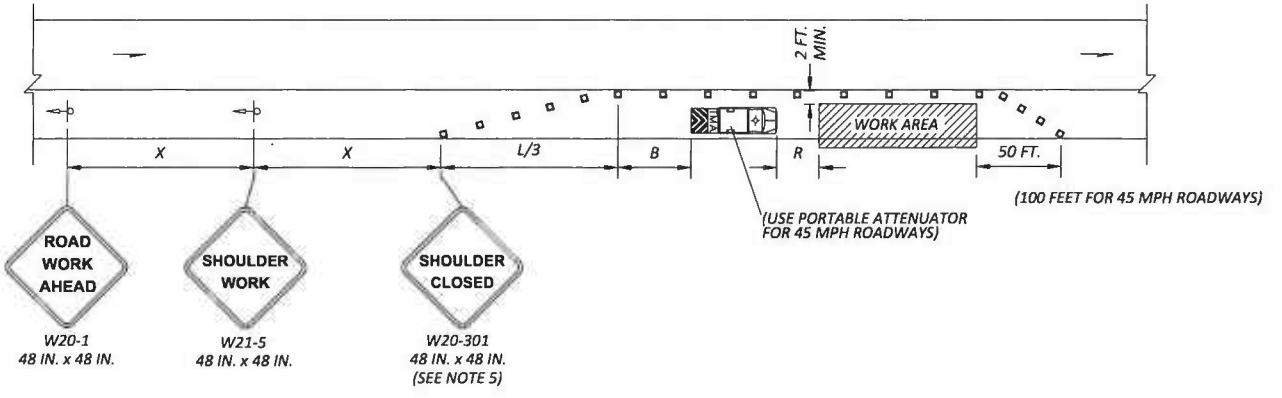
BUFFER DATA (B, R)

LONGITUDINAL BUFFER SPACE = B

MPH	25	30	35	40	45
LENGTH (FT)	155	200	250	305	360

BUFFER VEHICLE ROLL AHEAD DISTANCE = R

TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED



NOTES:

1) NO ENCROACHMENT IN TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
2) DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20 FEET ON CENTER.
3) ALL SIGNS ARE BLACK ON ORANGE.
4) NO FLAGGERS OR SPOTTERS.
5) IF USED, PLACE SIGN IN ADVANCE OF WORK ZONE IN ACCORDANCE WITH THE SIGN SPACING TABLE. SHIFT ALL OTHER SIGNS ACCORDINGLY.
6) MAINTAIN MINIMUM 11-FOOT LANES AT ALL TIMES.
7) SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE OR PORTABLE ATTENUATOR

(NOT TO SCALE)

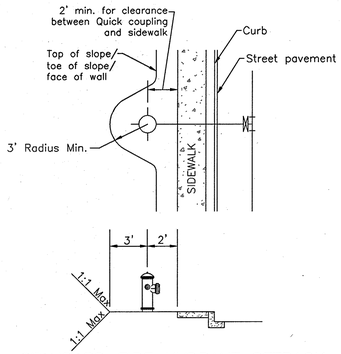
Pierce County
Planning & Public Works
Office of the County Engineer

APPROVED BY:
COUNTY ENGINEER

10/17/2022
DATE

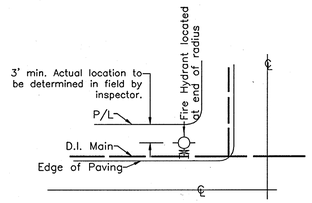
SHOULDER CLOSURE

STANDARD DRAWING PC.K3.1



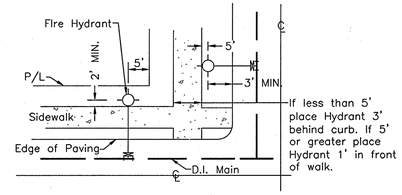
STANDARD FIRE HYDRANT SETBACK

Not to Scale



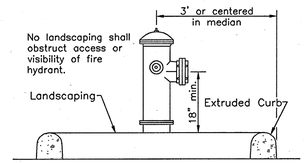
TYPICAL FIRE HYDRANT LOCATION
PIERCE COUNTY

Not to Scale



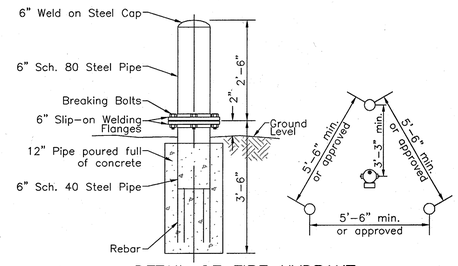
TYPICAL FIRE HYDRANT LOCATION
CITY OF TACOMA

Not to Scale



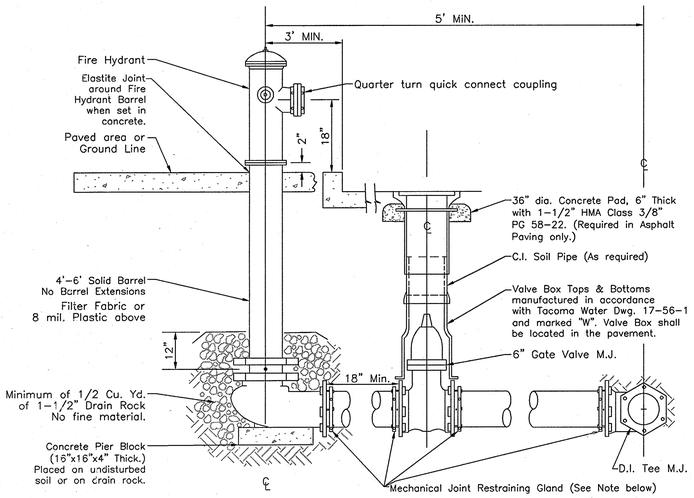
FIRE HYDRANT
LANDSCAPING DETAIL

Not to Scale



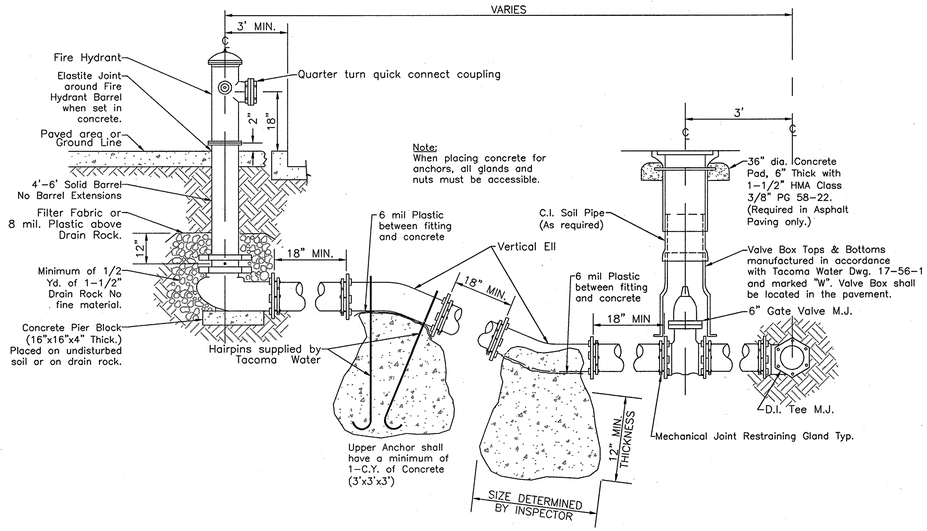
DETAIL OF FIRE HYDRANT
GUARD POST

Not to Scale



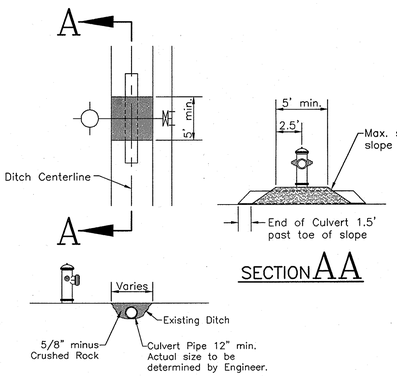
STANDARD FIRE HYDRANT SETTING

Not to Scale



>6' BURY FIRE HYDRANT SETTING

Not to Scale



SECTION AA

FIRE HYDRANT DITCH DETAIL

Not to Scale

FIRE HYDRANT NOTES:

All Fire Hydrants shall be provided with Pumper nozzle and Quarter turn quick connect coupling threads of the size and types indicated by the local jurisdiction unless specified otherwise by Tacoma Water. Jurisdictional sizing shall be as follows:

Bonny Lake	4-1/2" NST w/ 5" Stortz
Cumberland	4-1/2" NST w/ 5" Stortz
Enumclaw	4-1/2" NST w/ 5" Stortz
Federal Way/ Fire Dist #39	4" Tacoma w/ 4" Stortz
Fife	4" Tacoma w/ 5" Stortz
Fircrest	4" Tacoma w/ 5" Stortz
Lakewood	4-1/2" NST w/ 5" Stortz
Orting	4-1/2" NST w/ 5" Stortz
Puyallup	4" Tacoma w/ 5" Stortz
Pierce County, Unincorporated	4-1/2" NST w/ 5" Stortz
Ruston	4" Tacoma w/ 5" Stortz
Tacoma	4" Tacoma w/ 5" Stortz
University Place	4" Tacoma w/ 5" Stortz

The quarter turn quick connect coupling must be provided with a suction gasket. A minimum of 30 foot pounds, using the wrench described in chapter 4 of the NFPA Standard 1963-93 or 40 foot pounds measured from the center of the cap, is required to remove blind cap from the coupling. The blind cap of the quick connect coupling, must be connected to the barrel section of the fire hydrant with vinyl coated cable (304 stainless steel, 7X7 strand with clear vinyl coating, cable diameter to be 3/32 inch bare and 3/16 inch finished). The cable length will be determined by the Water Division construction inspector. Couplings provided with a locking mechanism on the body of the coupling must be identified by a red cable connecting the blind cap to the body of the coupling.

M.J. Pipe with Mechanical Joint Restraining Glands or push on joint pipe with push on restraining gaskets are required between Fire Hydrant and Gate where distance is greater than one pipe length.

Fire Hydrant locations inside Tacoma City Limits shall be 2' behind the sidewalk. If the back of the sidewalk is less than 3' from the property line, the Fire Hydrant location shall be 1' in front of the sidewalk.

If Fire Hydrant bury is greater than (6) six feet, vertical ells shall be used to bring bury to a minimum of (4) four feet. Deviations may be permitted based on field conditions as determined by inspector.

Landscaping of any sort shall not obstruct acess or visibility of fire hydrant.

LINDA A. McCREA
STATE OF WASHINGTON
22463
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES: 5/30/07

NO.	REVISION	DATE	BY	APP'D.
3	Add sheet 2	4/06	JJA	
2	Changed Fire Hydrant notes.	6/03	JJA	
1	Change Megalug note	4/01	JJA	HLP

REFERENCE

FIELD BOOK | MAP NO.

TACOMA WATER
TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

STANDARD DETAILS

DATE 6-9-99
DESIGNED J.J.A.
DRAWN STAFF
CHECKED

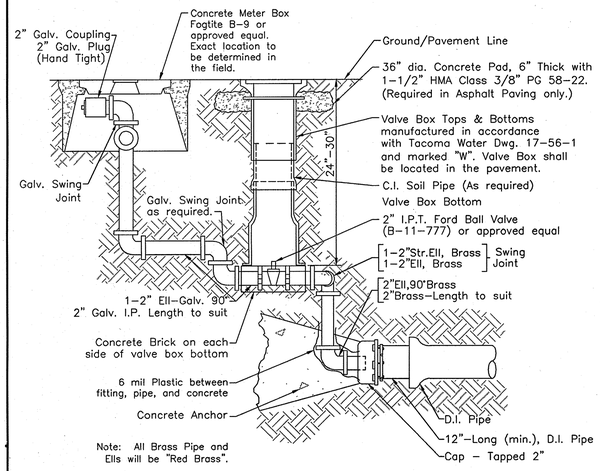
APPROVED Linda McCrea
DISTRIBUTION MANAGER

SCALE
HORIZ: N/A
VERT: N/A

DRAWING NO.
17-56-1

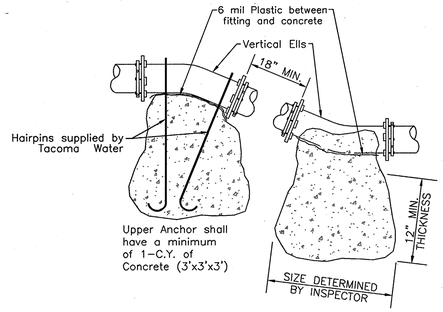
WBS # | Surveying | Engineering | Inspection

SHEET 1 OF 2



DETAIL OF 2" BLOW-OFF ASSEMBLY

Not to Scale



VERTICAL ELL W/CONCRETE ANCHOR

Not to Scale

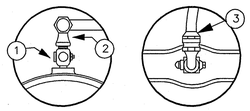
① Corporation Stop.
AWWA thread (C.C./Mueller) inlet by Increased Male Iron Pipe outlet with internal driving thread. Teflon Joint Compound on male threads.
Approved: A.Y. McDonald 3121; Ford F-800; Mueller H-10003.

② Quarter Bend Coupling.
1-inch Female Iron Pipe thread inlet by 3/4-inch copper flare thread.
Approved: A.Y. McDonald 4779; Ford L-12-43; Mueller H-15475.

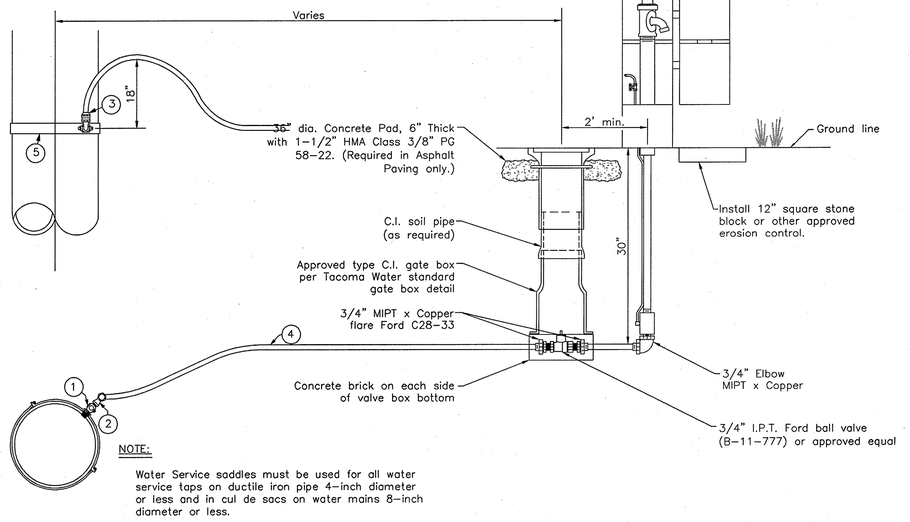
③ Straight Coupling.
3/4-inch Female Copper Flair thread inlet by Compression connection, copper tube size O.D. Internal Copper Friction Washer.
Approved: Mueller H-15071.

④ Copper Tubing.
3/4-inch, seamless, type "K", ASTM B-88.

⑤ Clamp, Service, Pipe diameter by 3/4-inch in CC outlet, Ductile Iron Body, Double Stainless Steel Straps, with 5/8-inch bolts, for service taps.
Approved: Ford, FS202-979XCC3; Robar, 2406XBX3/4"CCDS; Romac, 202SX9.62X3/4"CC; JMC, 404-0963/4"CC; Smith Blair, 317-101007-003.



Fittings 1, 2, and 3 enlarged to show detail

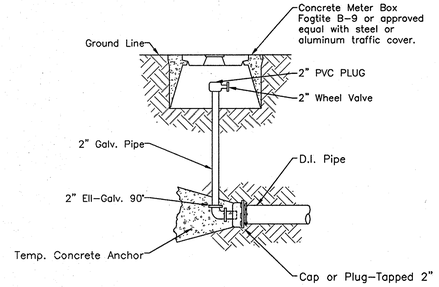


NOTE:

Water Service saddles must be used for all water service taps on ductile iron pipe 4-inch diameter or less and in cul de sacs on water mains 8-inch diameter or less.

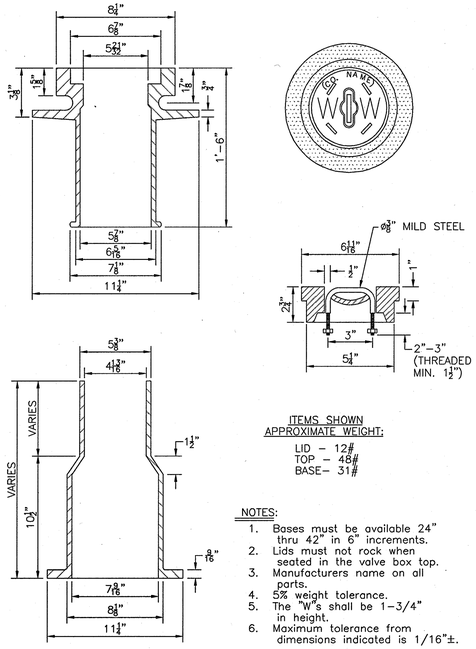
PERMANENT SAMPLING STATION

Not to Scale



TEMPORARY BLOW-OFF DETAIL

Not to Scale



ITEMS SHOWN APPROXIMATE WEIGHT:

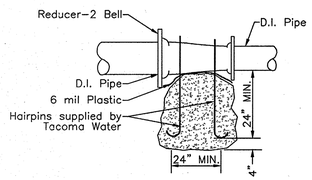
LID - 12#
TOP - 48#
BASE- 31#

NOTES:

1. Bases must be available 24" thru 42" in 6" increments.
2. Lids must not rock when seated in the valve box top.
3. Manufacturers name on all parts.
4. 5% weight tolerance.
5. The "W"s shall be 1-3/4" in height.
6. Maximum tolerance from dimensions indicated is 1/16"±.

STANDARD GATE BOX DETAIL

Not to Scale



REDUCER W/CONCRETE ANCHOR

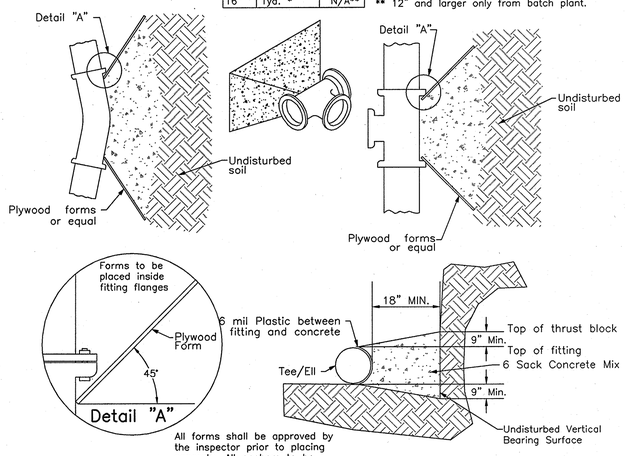
Not to Scale

MAIN SIZE	MINIMUM ANCHOR SIZE*	60# Bag
6"	1/4yd.*	15 Bags
8"	1/3yd.*	20 Bags
12"	3/4yd.*	N/A**
16"	1yd. *	N/A**

1 cubic yard = Approx. 61 bags of ready mix using 60# bags
1 60# bag = .44 cubic foot

* The actual size shall be based on the soil bearing strength and appropriate safety factor based on DIPRA guidelines as determined by the inspector.

** 12" and larger only from batch plant.



All forms shall be approved by the inspector prior to placing concrete. All anchors to be approved prior to backfilling.

THRUST BLOCK DETAIL

Not to Scale

NO.	REVISION	DATE	BY	APP'D.
3	Add sheet 2	4/06	JJA	
2	Changed Fire Hydrant notes.	6/03	JJA	
1	Change Megalug note	4/01	JJA	HLP

REFERENCE

FIELD BOOK | MAP NO.

LINDA A. McCREA — STATE OF WASHINGTON — 22453 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES: 5/30/07

TACOMA WATER — TACOMA PUBLIC UTILITIES

CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION

STANDARD DETAILS

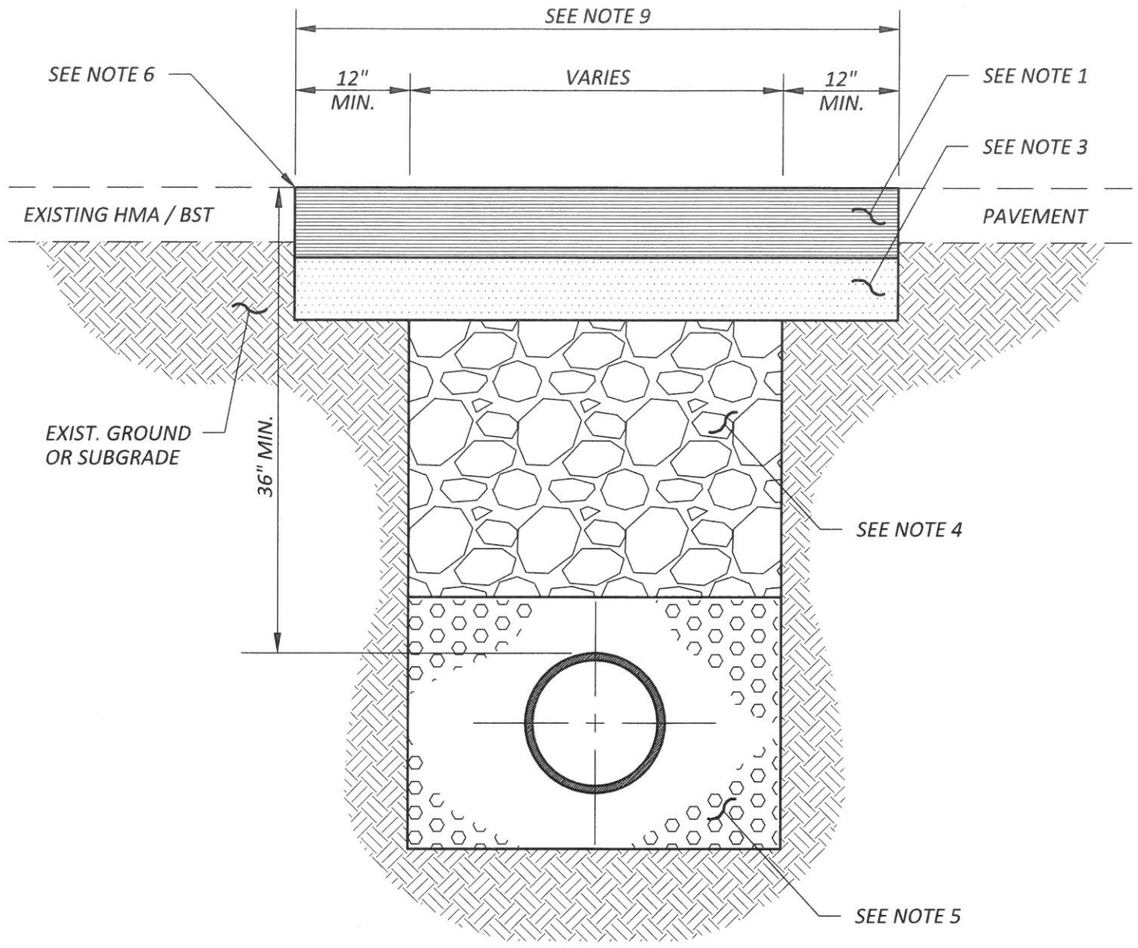
DATE 6-9-99
DESIGNED J.J.A.
DRAWN STAFF
CHECKED

APPROVED Linda McCrea
DISTRIBUTION MANAGER

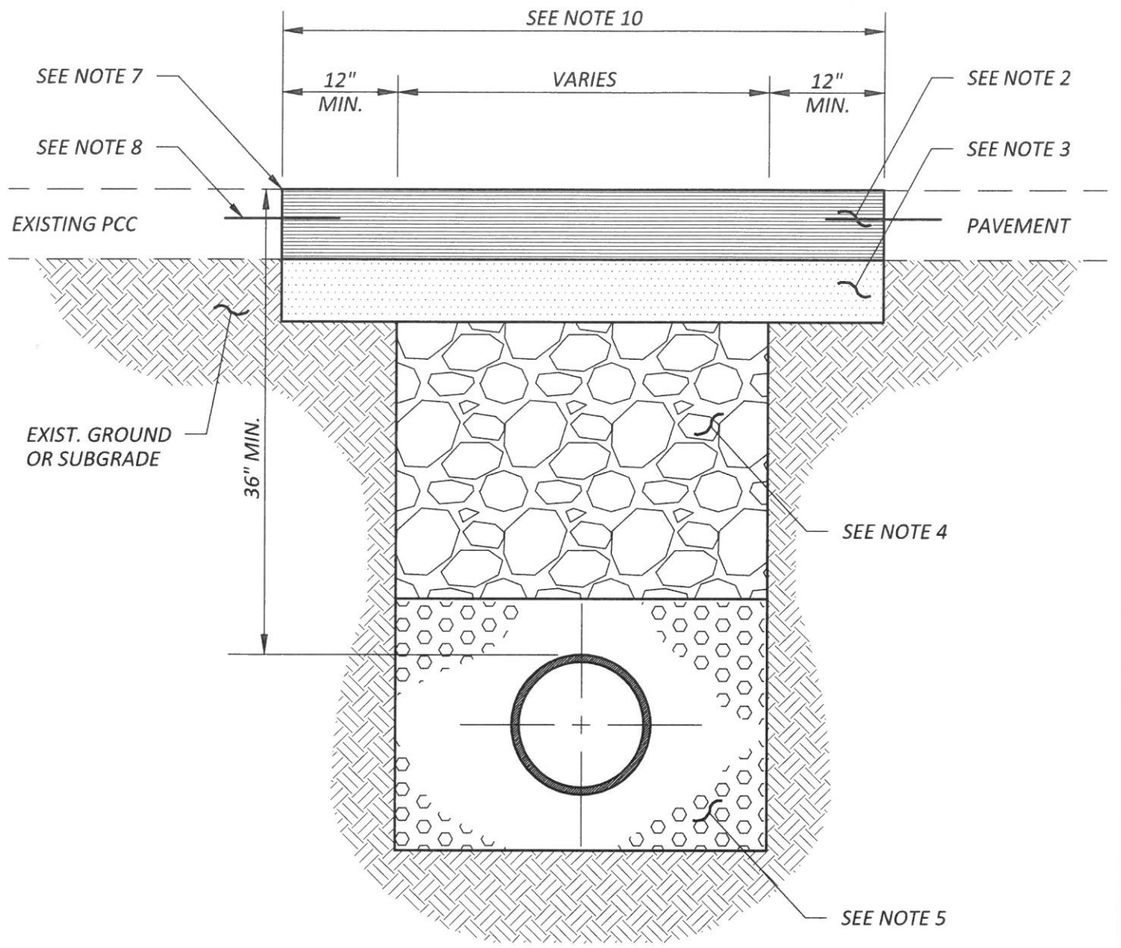
SCALE HORIZ: N/A VERT: N/A
DRAWING NO. 17-56-1

WBS # | Surveying | Engineering | Inspection

SHEET 2 OF 2



DETAIL FOR HOT MIX ASPHALT (HMA) / BST PAVEMENT UTILITY ROAD CUTS



DETAIL FOR PORTLAND CEMENT CONCRETE PAVEMENT UTILITY ROAD CUTS

(SEE STANDARD DRAWING PC.A7.2 FOR NOTES AND PERMEABLE PAVEMENT ALTERNATIVES)

(NOT TO SCALE)

Pierce County

Public Works
Office of the County Engineer
Tacoma Mall Office Building
4301 South Pine Street, Suite 628
Tacoma, Washington 98409-7207
An APWA Accredited Agency

BRIAN D. STACY
STATE OF WASHINGTON
24671
REGISTERED PROFESSIONAL ENGINEER

BRIAN D. STACY, P.E.
COUNTY ENGINEER
12-22-16

Office of the County Engineer

UTILITY PATCH

SHEET 1 OF 2

PC.A7.1

NOTES:

1) HOT MIX ASPHALT (HMA) CL. 1/2 IN. PG 64-22, WITH MINIMUM COMPACTED DEPTH OF 3" OR EXISTING PAVEMENT DEPTH PLUS 1", WHICHEVER IS GREATER. PLACE IN LIFTS WITH A MAXIMUM COMPACTED DEPTH OF 3" PER WSDOT STANDARD SPECIFICATIONS 5-04, AND MACHINE ROLL FLUSH WITH EXISTING PAVEMENT.

2) PORTLAND CEMENT CONCRETE PAVEMENT WITH A STANDARD PAVING SECTION EQUAL TO THE EXISTING PAVEMENT DEPTH. PLACE PER WSDOT STANDARD SPECIFICATIONS 5-05. THE ENGINEER MAY SPECIFY THE DESIGN AGE. ANY ASPHALT CONCRETE COVERING THE PORTLAND CEMENT CONCRETE SHALL BE CUT BACK AN ADDITIONAL 4" AND REPLACED WITH HMA CL. 1/2 IN. PG 64-22, COMPACTED TO A DEPTH EQUAL TO THAT OF THE EXISTING ASPHALT CONCRETE PAVEMENT, OR PUT CSBC AS PREFERRED ALTERNATIVE.

3) CRUSHED SURFACING TOP COURSE MATCH EXISTING 2" MINIMUM DEPTH, COMPACTED TO 95% MAXIMUM DENSITY.

4) IMPORTED OR NATIVE MATERIAL COMPACTED TO 95% MAXIMUM DENSITY. THE MATERIAL SHALL BE ESSENTIALLY FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT READILY AND SHALL MEET THE FOLLOWING TEST REQUIREMENTS:

SIEVE SIZE	PERCENT PASSING
4" SQUARE	100
2" SQUARE	75-100
U.S. No. 4	22-100
U.S. No. 200	0-10
DUST RATIO: % PASSING U.S. No. 200 / % PASSING U.S. No. 40	2/3 MAX.
SAND EQUIVALENT	30 MIN.

ALL PERCENTAGES ARE BY WEIGHT.
THE MATERIAL RETAINED ON A U.S. No. 4 SIEVE SHALL CONTAIN NOT MORE THAN 0.20 PERCENT BY WEIGHT OF WOOD WASTE. ANY NATIVE MATERIAL USED SHALL BE TESTED FOR COMPACTION AND/OR GRADATION AS REQUIRED BY THE ENGINEER.

5) BEDDING MATERIAL COMPACTED TO 95% MAXIMUM DENSITY SHALL CONSIST OF CRUSHED, PROCESSED, OR NATURALLY OCCURRING GRANULAR MATERIAL. IT SHALL BE FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT AND SHALL MEET THE FOLLOWING SPECIFICATIONS FOR GRADING AND QUALITY:

SIEVE SIZE	PERCENT PASSING
1-1/2" SQUARE	100
1" SQUARE	75-100
5/8" SQUARE	50-100
U.S. No. 4	20-80
U.S. No. 40	3-24
U.S. No. 200	10.0 MAX
SAND EQUIVALENT	35 MIN.

IF, IN THE OPINION OF THE ENGINEER, THE NATIVE GRANULAR MATERIAL IS FREE FROM WOOD WASTE, ORGANIC MATERIAL, AND OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS, BUT OTHERWISE DOES NOT CONFORM TO THE SPECIFICATIONS FOR GRADING AND SAND EQUIVALENT, IT MAY BE USED FOR PIPE BEDDING FOR RIGID PIPES, PROVIDED THE NATIVE GRANULAR MATERIAL HAS A MAXIMUM DIMENSION OF 1-1/2 INCHES. DEPTH OF MATERIAL SURROUNDING PIPE SHALL BE ADEQUATE TO SUPPORT THE PIPE AND TRENCH.

BEDDING MATERIAL FOR SANITARY SEWERS -
PEA GRAVEL BEDDING SHALL BE A CLEAN, SOUND, FREE DRAINING, AND GRANULAR MATERIAL CONFORMING TO THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING
3/4" SQUARE	100
3/8" SQUARE	90-100
U.S. No. 4	50-100
U.S. No. 10	0-95
U.S. No. 20	0-85
U.S. No. 40	0-55
U.S. No. 100	0-10
U.S. No. 200	0-3

ALL PERCENTAGES ARE BY WEIGHT.

6) NEAT, UNIFORM AND VERTICAL CUT (TYPICAL BOTH SIDES). CLEAN AND HEAT EDGES AND TACK WITH EMULSIFIED ASPHALT. SEAL JOINT WITH HOT ASPHALT CEMENT.

7) NEAT, UNIFORM AND VERTICAL CUT (TYPICAL BOTH SIDES).

8) DRILL 7/8"Ø TO 1"Ø X 12" HOLE AND SET #5 X 24" EPOXY-COATED TIE BARS WITH EPOXY RESIN INTO THE EXISTING PAVEMENT PARALLEL TO ROADWAY CENTER LINE ALONG THE TRANSVERSE VERTICAL CUT SPACED AT 18" ON CENTER (TYPICAL BOTH SIDES).

9) MINIMUM RESTORATION LIMITS FOR HMA UNLESS OTHERWISE DETERMINED BY THE ENGINEER. IF ANY PORTION OF A LONGITUDINAL PAVEMENT CUT AFFECTS A WHEEL TRACK AS DETERMINED BY THE ENGINEER, THE ENTIRE LANE SHALL BE REMOVED AND REPLACED. WHEREVER AN EXISTING PATCH OR CRACK IS IN CLOSE PROXIMITY TO THE NEW CUT, THE ENGINEER MAY REQUIRE REMOVAL OF THE EXISTING PATCH OR CRACK AND ANY INTERVENING PAVEMENT. DEPTH OF REPLACEMENT ASPHALT SHALL BE IN ACCORDANCE WITH NOTE 1.

10) MINIMUM RESTORATION LIMITS FOR PCC UNLESS OTHERWISE DETERMINED BY THE ENGINEER. REMOVE ENTIRE PANEL UNLESS WIDTH OF REMAINING PANEL PORTION IS GREATER THAN 50% OF THE EXISTING PANEL WIDTH. IF ANY PORTION OF A LONGITUDINAL PAVEMENT CUT AFFECTS A WHEEL TRACK AS DETERMINED BY THE ENGINEER, THE ENTIRE LANE SHALL BE REMOVED AND REPLACED. WHEREVER AN EXISTING PATCH OR CRACK IS IN CLOSE PROXIMITY TO THE NEW CUT, THE ENGINEER MAY REQUIRE REMOVAL OF THE EXISTING PATCH OR CRACK AND ANY INTERVENING PAVEMENT. IF THE ENTIRE PANEL IS NOT REMOVED, FOLLOW ASPHALT CONCRETE UTILITY PATCH PROCEDURES WITH AN ASPHALT CONCRETE PAVING DEPTH EQUAL TO THE DEPTH OF THE EXISTING PAVEMENT.

11) ALL PERMANENT FINAL PATCHES SHALL BE RECTANGULAR OR CIRCULAR IN SHAPE AND CONSTRUCTED TO BE PARALLEL AND PERPENDICULAR TO THE ROAD CENTERLINE.

12) CONTROLLED DENSITY FILL (CDF) SHALL BE REQUIRED ON ROADWAYS WHERE DIFFICULT SUBSURFACE CONDITIONS ARE ANTICIPATED AND SHALL BE PLACED IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS 2-09.3(1)E.

13) FOR PERMEABLE PAVEMENT ALTERNATIVES SEE PIERCE COUNTY STORMWATER MANAGEMENT AND SITE DEVELOPMENT MANUAL. MINIMUM RESTORATION LIMITS DETERMINED BY THE ENGINEER.

(SEE STANDARD DRAWING PC.A7.1 FOR DETAIL DRAWINGS)

Pierce County
Public Works
Office of the County Engineer
Tacoma Mall Office Building
4301 South Pine Street, Suite 628
Tacoma, Washington 98409-7207
An APWA Accredited Agency

BRIAN D. STACY STATE OF WASHINGTON 24671 REGISTERED PROFESSIONAL ENGINEER
5-10-18

BRIAN D. STACY, P.E.
COUNTY ENGINEER
Office of the County Engineer

UTILITY PATCH

SHEET 2 OF 2

PC.A7.2